COMPENDIUM

COMPENDIUM OF BEST PRACTICES

12th Edition of FICCI

WATER AWARDS 2024

Recognizing Excellence in
Water Management & Conservation

FICCI Federation House Tansen Marg New Delhi - 110001 Website - www.ficci.com

This report is a compilation of best practices received as part of the 12th Edition of FICCI Water Awards. The case studies of the awardees are published in the report.

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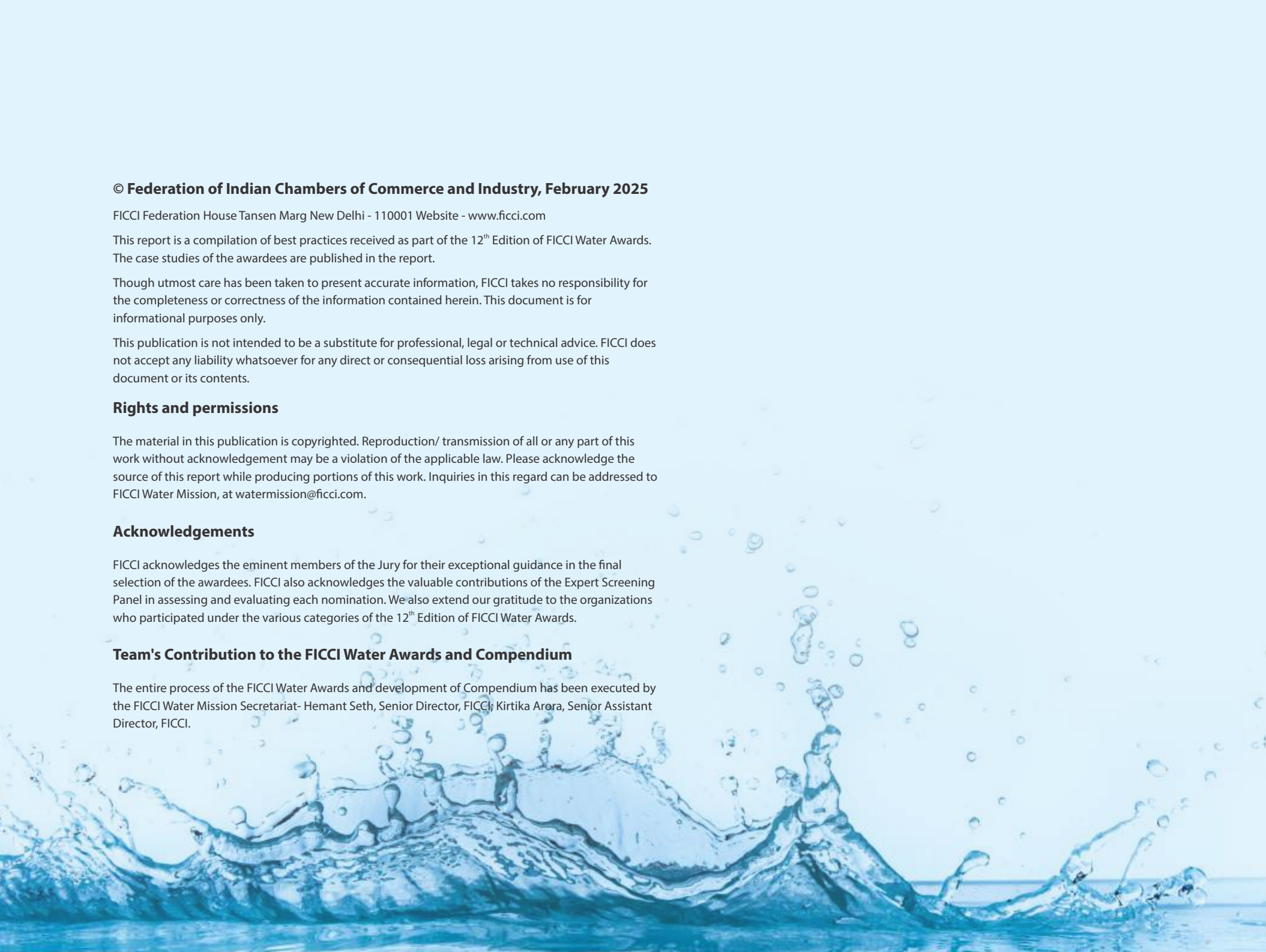
Acknowledgements

FICCI acknowledges the eminent members of the Jury for their exceptional guidance in the final selection of the awardees. FICCI also acknowledges the valuable contributions of the Expert Screening Panel in assessing and evaluating each nomination. We also extend our gratitude to the organizations who participated under the various categories of the 12th Edition of FICCI Water Awards.

Team's Contribution to the FICCI Water Awards and Compendium

The entire process of the FICCI Water Awards and development of Compendium has been executed by the FICCI Water Mission Secretariat- Hemant Seth, Senior Director, FICCI; Kirtika Arora, Senior Assistant Director, FICCI.



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FOREWORD

The lack of availability of clean and sufficient water is often associated with a range of issues from polluted water resources to an increasing demand for water due to a growing population, poor agricultural practices, and erratic rainfall patterns. It is estimated that water scarcity is likely to experience further aggravation as the population increases, over the next few decades. Thus, it becomes imperative that water issues are not considered in isolation, and a more holistic approach to water management is attempted.

Water reuse is one such option that can help significantly increase water supplies. Recycling and reuse of wastewater are central to a circular economy approach and offer a strategic direction to address both the supply and demand side of water management. A transition to circularity of water use could create significant synergies for the wide adoption of water reuse as an alternate water supply for different end-user segments.

Concerns about water in the private sector are rising rapidly. Industry and corporates are proactively managing scarce water resources in a sustainable manner. They are becoming more aware and understand the complexities of their role, and the interconnections of their impact on water and groundwater and are working towards creating shared value for themselves and society.

FICCI has been working steadily to promote water conservation and sustainable water management within its member companies through the FICCI Water Mission which was constituted in 2011 to promote awareness, thought leadership, policy advocacy and best practice sharing in sustainable water management with a special focus on water use efficiency, urban wastewater management and corporate water stewardship. The annual Water Awards instituted by the Mission recognizes exemplary contribution in the areas of industrial water use efficiency, urban wastewater management, community initiatives by industry, NGO initiatives in water, and innovations in water technology.

This Compendium of Best Practices serves as a valuable resource, showcasing exemplary case studies that demonstrate water use efficiency and sustainable water management. By sharing successful strategies and solutions, the compendium not only educates stakeholders but also encourages new participants to engage in the ongoing conversation about effective water management in the future. The case studies featured in the compendium represent award-winning efforts and are intended to inspire others to adopt similar best practices in their own operations.

I am deeply grateful to the esteemed Jury of the FICCI Water Awards for their invaluable contribution and for consistently raising the standard of these prestigious Awards. I also extend my sincere thanks to the Expert Screening Panel for their meticulous scrutiny and technical evaluations. I would like to express my heartfelt appreciation to all the organizations that submitted nominations for the Awards and congratulate the winners for setting exemplary benchmarks for others to follow. While only a select few can be honoured each year, the Awards process itself is enlightening, showcasing the wide array of remarkable initiatives undertaken by both industry and NGOs across India. Each nomination serves as a case study, highlighting the positive impact made by forward-thinking companies and organizations in advancing sustainable water management in the country.

Naina Lal Kidwai

Past President, FICCI
Chair, FICCI Water Mission

SPECIAL MESSAGE BY CHAIR OF JURY

All over the world, countries are moving beyond the mid-20th century high cost, high energy, command-and-control paradigm of water management and governance. This is because the old assumptions of stationarity are no longer valid in this era of the Anthropocene and climate change. The past is no longer a reliable indicator of what is to come. Changing patterns and intensity of precipitation, as also rates of discharge of rivers, show that it can no longer be assumed that the water cycle operates within an

invariant range of predictability. This demands an emphasis on agility, resilience and flexibility as the foundational principles of water management, so that there could be an adequate response to the heightened uncertainty and unpredictability of the future, based on new design - driven approaches, which are able to foresee incalculable outcomes and provide novel, alternative solutions to be experimented with and tested out in practice.

There is a growing recognition that we need to focus on nature-based solutions for the problems facing humanity. Such solutions have been shown to be economically viable and socially appropriate, based as they are on collective action by concerned stakeholders. They leverage the power of Nature to find cost-effective, sustainable solutions to the emerging water crisis, which deepens by the day.

The Committee to draft the new National Water Policy, which I had the privilege to Chair, has also placed great emphasis on the need to acknowledge the profound inter-connectedness and inter-dependence that characterises the world we live in and to be humble in our approach to natural systems, showing them the respect, they deserve and recognise that prakriti rakshati rakshita (Nature protects those who protect her).

The FICCI Water Mission is a unique initiative to recognise and showcase precisely these kinds of best practices and innovations. There are many unsung heroes who are making original but unrecognised contributions in this direction. This compendium will give you a glimpse into some of this work, which is showcased here after a very rigorous process of scrutiny and appraisal. The aim of the Water Awards Jury has been to reward those efforts that embody truly cutting-edge innovation, while also providing the best chances of replication on a large scale.

I heartily congratulate the winners and hope that FICCI Water Awards will continue to make this invaluable contribution in moving India towards a 21st century paradigm of water management and governance.

Dr Mihir Shah

Chair of Jury- FICCI Water Awards 2024

MESSAGE

Water scarcity is a critical global issue affecting millions of people and ecosystems around the world. According to the United Nations and the World Resources Institute, by 2030, global freshwater demand is projected to exceed supply by 40%, driven by climate change, population growth, and urbanization. Its availability is crucial not only for human survival but also for the growth and sustainability of industries across the globe.

As we face the growing challenges of climate change, urbanization, and rising demand, the need to conserve water has never been more urgent.

Industries play a significant role in water consumption, often being one of the largest users in local ecosystems. The reality of this consumption is accompanied by an immense responsibility — to use water resources efficiently and responsibly, ensuring that future generations can access clean, safe water. Intensive efforts are being made by industry to conserve water in its ecosystem by using different innovations and technologies through direct operations, supply chain and wider basin health. We have shining examples from industry and other organisations undertaking exemplary work in sustainable water management.

FICCI, through its Water Mission, plays a pivotal role in advocating water sustainability by engaging with its member companies. The FICCI Water Awards, an integral part of this mission, aim to raise awareness and honour exceptional contributions toward sustainable water management.

This compendium highlights the best practices and innovative approaches employed by the FICCI Water Award winners, offering valuable, replicable models to tackle water scarcity challenges. Congratulations to the winners, and sincere thanks to the Jury, Screening Panel, participating organizations, and the FICCI Water Mission secretariat for their unwavering commitment.

Let us draw inspiration from these remarkable endeavours and collaborate to build a water-secure future for all.

Jyoti Vij

Director General
FICCI

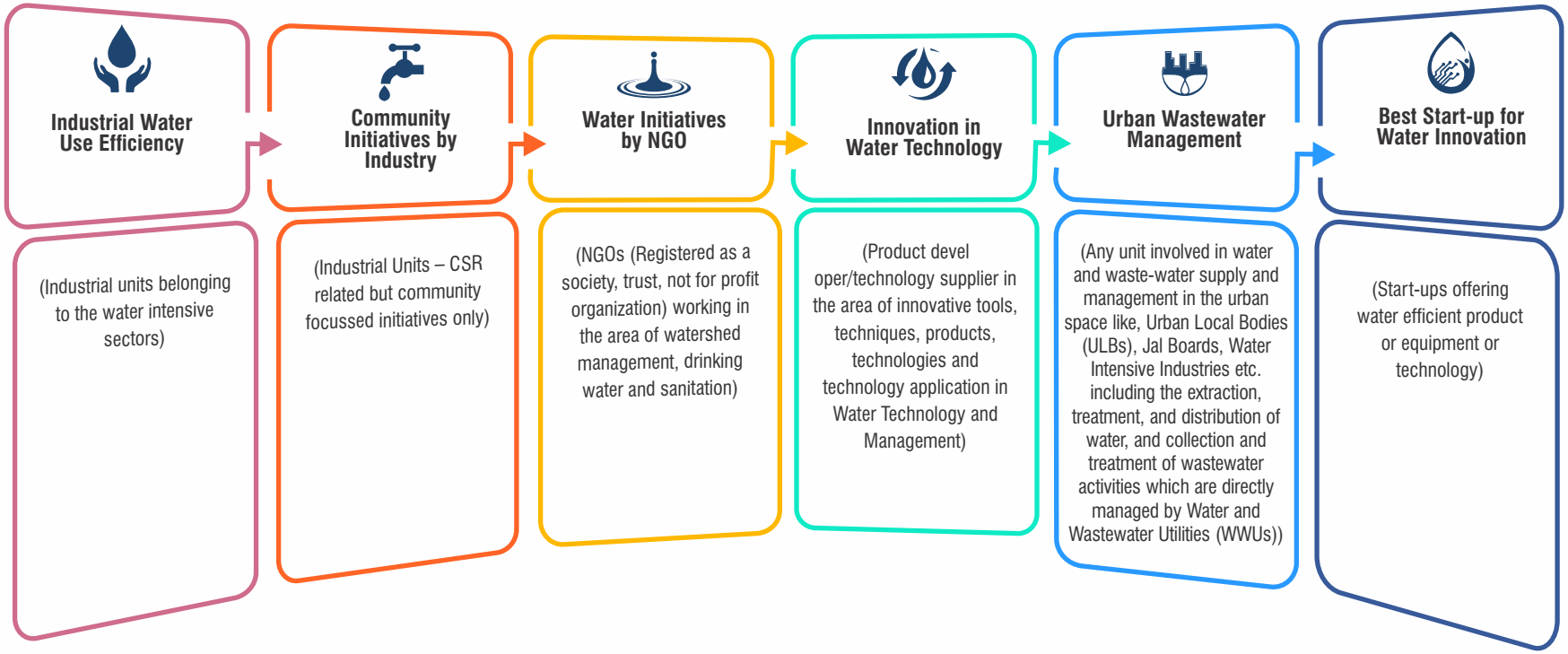

FICCI
WATER AWARDS
CATEGORIES

FICCI WATER AWARDS

FICCI launched the Annual Water Awards in 2012. The awards were initiated with the following objectives:

- To recognize efforts and leadership in the area of water efficiency and conservation; and
- To develop a knowledge base on sustainable water management practices adopted by different stakeholders and disseminate best practices for encouraging their adoption.

AWARDS CATEGORIES



SELECTION PROCESS

PHASE 1
Call for Applications

The call for awards is put up through print different categories are received. A standard template for sending information is developed for every category. Through its network and database, FICCI Water Secretariat reached out to organizations working in the areas of water and wastewater.

PHASE 2
Preliminary Screening

Initial screening by the FICCI Water Secretariat, to ensure adherence to eligibility criteria.

PHASE 3
Expert Screening Panel

The expert screening panel screened each nomination to check the authenticity of the data and information presented. Then the expert panel presented the screened applications to the jury at its first meeting.

PHASE 4
Jury Meeting

Each application under all the six categories were presented by the Experts Panel to the Jury. Jury upon thorough review and discussion over three meetings, shortlisted applicants to make presentation to the Jury and answer additional questions.

PHASE 5
Final Awardees Selected

Post the presentation with the shortlisted applicants, the Jury finalized the winners in each category in forth & final meeting.


WATER AWARDS
THROUGH THE
YEARS

2023

1. Nayara Energy Ltd. (1st Prize) in the Community Initiatives by Industry Category
2. Grasim Industries Ltd. (Unit- Cellulosic Division Vilayat) (1st Prize) in the Industrial Water Use Efficiency Category
3. NTPC Ltd., Muzaffarpur Thermal Power Station, Kanti (Joint 2nd Prize) in the Industrial Water Use Efficiency Category
4. Century Enka Ltd., Pune (Maharashtra) (Joint 2nd Prize) in the Industrial Water Use Efficiency Category
5. ECOSTP Technologies Pvt. Ltd. (1st Prize) in the Innovation in Water Technology Category
6. NTPC Ltd.- Simhadri Super Thermal Power Plant, Visakhapatnam (2nd Prize) in the Innovation in Water Technology Category
7. Naturesani Pvt. Ltd. (Special Jury's Award) in the Innovation in Water Technology Category
8. Srijan India (1st Prize) in the Water Initiatives by NGO Category
9. Seventy One Percent Analytics Pvt. Ltd. (BluCred) (1st Prize) in the Best Startup for Water Innovation Category
10. Waterlab Solutions Pvt. Ltd. (Joint 2nd Prize) in the Best Startup for Water Innovation Category
11. Tellus Habitat Pvt. Ltd. (Joint 2nd Prize) in the Best Startup for Water Innovation Category






2023

Winners of the Water Awards being felicitated by Mr. G Asok Kumar, Director General, NMCG, Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India; Ms. Naina Lal Kidwai, Chairperson, FICCI Water Mission and Past President, FICCI; Mr. Shailesh Pathak, Secretary General, FICCI and Mr. Shraman Jha, Co-Chair, FICCI Water Mission & CEO, Hindustan Unilever Foundation

2022

1. 1Hindustan Unilever Ltd., (Khamgaon Factory) (1st Prize) in the Community Initiatives by Industry Category
2. 2Coastal Gujarat Power Ltd. (2nd Prize) in the Community Initiative by Industry Category
3. 3Talwandi Sabo Power Ltd. (Special Jury's Award) in the Community Initiatives by Industry Category
4. 4Honda Motorcycle & Scooter India Private Ltd., (Narsapura) (1st Prize) in the Industrial Water Use Efficiency Category
5. 5Hindalco Industries Ltd.- (Belagavi Works) (2nd Prize) in the Industrial Water Use Efficiency Category
6. 6The Energy and Resources Institute (TERI) (1st Prize) in the Innovations in Water Technology Category
7. 7Taylormade Renewables Ltd. (2nd Prize) in the Innovation in Water Technology Category
8. 8Centre for Environment Concerns (Special Jury's Award) in the Innovation in Water Technology Category
9. 9The City Administration of Aurangabad (AMC & ASCDCL) (Special Jury's Award) in the Urban Water and Wastewater Management Category

2022

Winners of the Water Awards being felicitated by Mr G Asok Kumar, Director General, NMCG, Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India; Dr Mihir Shah, Chair of Jury - FICCI Water Awards 2022, Distinguished Professor, Shiv Nadar University; Ms Naina Lal Kidwai, Chairperson, FICCI Water Mission, and Past President, FICCI; and Ms Jyoti Vij, Additional Director General , FICCI.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2021

1. 1.Tata Steel Ltd. (1st Prize) in the Industrial Water Use Efficiency Category
2. 2.Vardhman Fabrics (2nd Prize) in the Industrial Water Use Efficiency Category
3. 3.Asian Paints Khandala (Joint 3rd Prize) in the Industrial Water Use Efficiency Category
4. 4.Delhi International Airport Limited (Joint 3rd Prize) in the Industrial Water Use Efficiency Category
5. 5.Green Lantern Engineering Pvt. Ltd. (1st Prize) in the Innovation in Water Technology Category
6. 6.Himmotthan- Tata Trusts, Dehradun (1st Prize) in the Water Initiatives by NGOs Category
7. 7.Bio-me Solutions (2nd Joint Prize) in the Water Initiatives by NGOs Category
8. 8.People's Service Society Palakkad (2nd Joint Prize) in the Water Initiatives by NGOs Category
9. 9.Watershed Organisation Trust (WOTR) (2nd Joint Prize) in the Water Initiatives by NGOs Category
10. 10.Primove Infrastructure Development Consultants Pvt. Ltd. (1st Prize) in the Urban Wastewater Management Category
11. 11.CWAS-CEPT University (2nd Prize) in the Urban Wastewater Management Category
12. 12Digital EcoInnovision (1st Prize) in the Best Start-up in Water Innovation Category
13. 13NMCG , Special Jury's Award


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2021

Winners of the Water Awards being felicitated virtually by Mr Gajendra Singh Shekhawat, Hon'ble Minister of Jal Shakti, Government of India; Mr Pankaj Kumar, Secretary, Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India; Mr Sanjiv Mehta, President, FICCI and CEO & MD, Hindustan Unilever Limited; Dr Mihir Shah, Chair of Jury - FICCI Water Awards 2021, Distinguished Professor, Shiv Nadar University; Ms Naina Lal Kidwai, Chairperson, FICCI Water Mission, and Past President, FICCI; Ms Reshma Anand, Co-Chair, FICCI Water Mission and CEO, Hindustan Unilever Foundation; and Ms Rita Roy Choudhury, Assistant Secretary General, FICCI.


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2020

1. 1.Tagros Chemicals India Private Limited (Joint 1st Prize) in the Industrial Water Use Efficiency Category
2. 2.Trident Limited (Joint 1st Prize) in the Industrial Water Use Efficiency Category
3. 3.ITC Limited (1st Prize) in the Community Initiatives by Industry Category
4. 4.Daiki Axis India Private Limited (1st Prize) in the Innovation in Water Technology Category
5. 5.Konark Fixtures Limited (2nd Prize) in the Innovation in Water Technology Category
6. 6.JS Water Energy Life Co. Private Limited (3rd Prize) in the Innovation in Water Technology Category
7. 7.Water Resources Department (WRD) Rajasthan (Special Jury's Award) in the Innovation in Water Technology Category
8. 8.Aga Khan Rural Support Programme (1st Prize) in the Water Initiatives by NGOs Category
9. 9.Jan Jagran Kendra (2nd Prize) in the Water Initiatives by NGO Category
10. 10.Vishvaraj Environment Private Limited (1st Prize) in the Urban Wastewater Management Category
11. 11.Vadodara Municipal Corporation (Special Jury's Award) in the Urban Wastewater Management Category


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Winners of the Water Awards being felicitated virtually by Mr Pankaj Kumar, Secretary, Department of Water Resources, River development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India; Mr Rajiv Ranjan Mishra, Director General, National Mission for Clean Ganga, Department of Water Resources, River development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India; Dr Mihir Shah, Chair of Jury - FICCI Water Awards 2020, Distinguished Professor, Shiv Nadar University; Ms Naina Lal Kidwai, Chairperson, FICCI Water Mission, and Past President, FICCI; Mr Mukund Vasudevan, Co-Chair, FICCI Water Mission and Managing Director & Country Head, Ecolab India and Ms Rita Roy Choudhury, Assistant Secretary General, FICCI.

2019

1. 1.Arvind Limited (1st Prize) in the Industrial Water Use Efficiency Category
2. 2.SSP Private Limited (1st Prize) in the Innovation in Water Technology Category
3. 3.Water, Sanitaation and Hygiene (WASH) Institute (Joint 1st Prize) in Water Initiatives by NGO Category
4. 4.Pratiks Enviro Foundation (Joint 1st Prize) Water Initiatives by NGO Category

Winners of the Water Awards being felicitated by Mr Gajendra Singh Shekhawat, Hon'ble Minister, Ministry of Jal Shakti; Mr U P Singh, Secretary, Department of Water Resources, River development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India; Dr Mihir Shah, Chair of Jury - FICCI Water Awards 2019, Distinguished Professor, Shiv Nadar University; Ms Naina Lal Kidwai, Chairperson, FICCI Water Mission, and Past President, FICCI; Mr Mukund Vasudevan, Co-Chair, FICCI Water Mission and Managing Director & Country Head, Ecolab India and Ms Rita Roy Choudhury, Assistant Secretary General, FICCI.

2018

1. 1.ITC Maurya (1st Prize) in the Industrial Water Use Efficiency Category
2. 2.HSBC (1st Prize) in the Community Initiatives by Industry Category
3. 3.Transchem Agritech Private Limited (1st Prize) in the Innovation in Water Technology Category
4. 4.WATSAN Envirotech Private Limited (1st Prize) in the Innovation in Water Technology Category
5. 5.NTPC Ltd (3rd Prize) in the Innovation in Water Technology Category
6. 6.Surat Municipal Corporation (1st Prize) in the Urban Wastewater Management Category

Winners of the Water Awards being felicitated by Shri U P Singh, Secretary, Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India; Dr Mihir Shah, Chair of Jury - FICCI Water Awards 2018, President, Bharat Rural Livelihood Foundation, and Former Member, Planning Commission; Ms Naina Lal Kidwai, Chairman, FICCI Water Mission, and Past President FICCI and Ms Rita Roy Choudhury, Assistant Secretary General, FICCI.

2017

1. Sterlite Copper Vedanta Ltd (1st Prize) in the Industrial Water Use Efficiency Category
2. Aga Khan Rural Support Programme (1st Prize) in the Water Initiatives by NGOs Category
3. Akhil Bhartiya Samaj Sewa Sansthan (2nd Prize) in the Water Initiatives by NGOs Category
4. Hindustan Ecosoftt Pvt Limited (1st Prize) in the Innovation in Water Technology Category
5. Technorbital Advanced Materials Pvt Limited (2nd Prize) in the Innovation in Water Technology Category
6. SM Sehgal Foundation (3rd Prize) in the Innovation in Water Technology Category

Winners of the Water Awards being felicitated by Shri Parameswaran Iyer, Secretary (DWS), Ministry of Drinking Water & Sanitation, Government of India, Dr Amarjeet Singh, Secretary, Ministry of Water Resources, Government of India; Dr Mihir Shah, Chair of Jury - FICCI Water Awards 2017, President, Bharat Rural Livelihood Foundation, and Former Member, Planning Commission; Ms Naina Lal Kidwai, Chairman, FICCI Water Mission, and Past President FICCI and Ms Rita Roy Choudhury, Assistant Secretary General, FICCI

2016

1. ITC Ltd. Saharanpur, Winners, Industrial Water Efficiency Category
2. TATA Motors Ltd., 1st Runner - Up, Industrial Water Efficiency Category
3. ITC Ltd. Jalahobli, 2nd Runner - Up, Industrial Water Efficiency Category
4. ITC Ltd., Winners, Community Initiatives by Industry Category
5. Self Employed Women's Association (SEWA), Winners, Water Initiatives by NGOs Category
6. Group Photograph for the FICCI Water Awardees for 2016

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Winners of the Water Awards being felicitated by Shri Shashi Shekhar, Former Secretary, Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India; Dr Mihir Shah, Chairman of Jury, FICCI Water Awards 2016; Ms Naina Lal Kidwai, Past President, FICCI; Dr Didar Singh, Former Secretary General, FICCI; Ms Rita Roy Choudhury, Assistant Secretary General, FICCI.

2015

1. 1.ITC Munger (1st Prize), Industrial Water Use Efficiency Category
2. 2.Ambuja Cements Ltd (2nd Prize), Industrial Water Use Efficiency Category
3. 3.Infosys Limited, Bangalore (3rd Prize), Industrial Water Use Efficiency Category
4. 4.Ambuja Cements Foundation (1st Prize), Community initiatives by the Industries Category
5. 5.Ultratech Cement Ltd (2nd Prize), Community initiatives by the Industries Category
6. 6.Ramkrishna Jaidayal Dalmia Seva Sansthan (1st Prize), Initiatives by NGOs Category
7. 7.SIRUTHULI and Watershed Organization Trust (joint 2nd Prize), Initiatives by NGOs Category
8. 8.Sanjeevani Institute for Empowerment and Development (3rd Prize), Initiatives by NGOs Category

Winners of the Water Awards being felicitated by Ms Jyotsna Suri, Past President, FICCI.

2013

1. 1.Noamundi Iron Ore Mine - Tata Steel Limited, Winners, Industrial Water Use Efficiency Category
2. ITC Ltd – Bangalore, 1st Runner-Up, Industrial Water Use Efficiency Category
3. JSW Steel Limited, Vijayanagar Works, 2nd Runner Up, Industrial Water Use Efficiency Category
4. Ambuja Cement Foundation, Winners, Community Initiative by Industry Category
5. ITC Limited, 1st Runner Up, Community Initiative Category
6. Vikram Cement Works, 2nd Runner Up, Community Initiative by Industry Category
7. IRRAD (An Initiative of S. M. Sehgal Foundation), Winners, Initiatives by NGOs Category
8. Watershed Organisation Trust, 1st Runner Up, Initiatives by NGOs Category
9. KGDS RE Pvt. Ltd., DST & NIOT, Winners, Innovation in Water Technology Category
10. Ortho Clinical Diagnostic, J&J Company, 1st Runner Up, Innovation in Water Technology Category

Winners of the Water Awards being felicitated by Shri Montek Singh Ahluwalia, Former Deputy Chairman of the Planning Commission, Government of India, Ms Naina Lal Kidwai, Chairman, FICCI Water Mission, and Past President, FICCI and Mr Atul Singh, Group President, Asia Pacific, The Coca-Cola Company.


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2012

1. 1.Essar Steel India Limited, Hazira, Winner, Industrial Water Use Efficiency Category
2. ITC Limited, 1st Runner Up, Industrial Water Use Efficiency Category
3. Tata Chemicals Limited, Winners, Community Initiatives Category
4. Hindustan Unilever Limited, 1st Runner Up, Community Initiatives Category
5. HSIL Limited, Winners, Innovation Category

Winners of the Water Awards being felicitated by Shri Montek Singh Ahluwalia, Former Deputy Chairman of the Planning Commission, Government of India, Smt Shiela Dikshit, Former Chief Minister of Delhi, Ms Naina Lal Kidwai, Chairman, FICCI Water Mission, Past President, FICCI and Dr Arbind Prasad, Former Director General, FICCI.


FICCI WATER
AWARDS
2024

CHAIR OF JURY

Dr Mihir Shah
Chair of Jury

JURY MEMBERS

Prof A K Gosain
Professor, Department of Civil Engineering, Indian Institute of Technology- Delhi

Dr Himanshu Kulkarni
Founder Trustee and Executive Director
Advanced Center for Water Resources Development and Management (ACWADAM)

Mr V K Madhavan
Chief Executive
WaterAid India

EXPERT SCREENING PANEL

Dr. Sujit Kumar Sinha
Former Director, Atal Bhujal Yojna
Central Ground Water Board
Ministry of Jal Shakti
Government of India

Mr. Depinder Kapur
Director, Water Program
Centre for Science and Environment

CHAIR OF JURY, FICCI WATER AWARDS 2024

DR MIHIR SHAH

Chair of Jury – FICCI Water Awards 2024 Distinguished Professor,
Shiv Nadar University, Chair, National Coalition for Natural Farming
Former Member, Planning Commission

Dr. Mihir Shah is one of India's leading scholars, practitioners and policy-makers on water management and rural livelihoods. From 2009 to 2014 he was Member, Planning Commission, Government of India, handling the portfolios of Water Resources, Rural Development and Panchayati Raj. From 2019 to 2021 he chaired the Government of India's Committee to draft the new National Water Policy. This is the first time ever that a person from outside government was asked to chair this committee.

An economist by training, Dr Shah wrote a much-acclaimed doctoral dissertation at the Centre for Development Studies, Kerala. After teaching for some years at the Centre, he resigned to explore fresh terrain beyond the ivory towers of conventional academia, which culminated in 1990 in the formation of Samaj Pragati Sahayog (SPS), headquartered in a remote tribal village of Madhya Pradesh. Inspired by the life and work of Baba Amte, SPS is today one of India's largest grass-roots initiatives for water and livelihood security. As part of Team SPS, Dr. Shah lived and worked with India's tribal communities for over three decades, in the hinterlands of central India, forging a new paradigm of inclusive and sustainable development, which strengthens democracy at the grass-roots, based on the leadership of women.

Dr. Shah is a Founding Signatory of the Geneva Actions on Human Water Security, 2017. He was a Member of the International Steering Committee of the CGIAR Research Program on Water, Land and Ecosystems (WLE) from 2012 to 2018.

Dr. Shah has addressed audiences on his life's work all over the world from Stanford University to the World Bank in Washington, the OECD in Paris, the Arctic Circle in Iceland, Chatham House and University College, London and University of Cambridge, England, UNESCO-IHE, Delft, International Institute for Applied Systems Analysis, Austria, the EAT Forum, Stockholm, Rachel Carson Centre, Munich, Himalayan University Consortium, Chengdu, China, International Water Management Institute, Colombo, the Asian Development Bank, Manila, the Asian Institute of Technology, Bangkok and the Singapore Water Week. He was the Keynote Speaker at the Global Water Summit at Rome in 2012 and the International EcoSummit Congress at Montpellier in 2016.

JURY MEMBERS

PROF A K GOSAIN

Professor, Department of Civil Engineering, Indian Institute of Technology- Delhi

Dr. Ashvani K. Gosain, is Professor Emeritus in the area of Water Resources Engineering and GIS

Technologies from Indian Institute of Technology Delhi. Prof. Gosain pioneered the climate change impact assessment on Indian water resources incorporated in the NATCOM I & II – the National Communications made to the UNFCCC. Presently he has been associated with the Forth Communication focussing on the adaptation options to be used for the water sector. He has also been reviewer for AR4 and AR5 of IPCC.

Prof. Gosain has served on many prestigious assignments within and outside the country. Thirty five students have completed their Ph.D. under his supervision. Prof Gosain served as member on the Task Group on "Water, Agriculture and Food Security" constituted for formulation of India's new Science, Technology, and Innovation Policy (STIP 2020). Prof. Gosain contributed to the formulation of the Ganga River Basin Management Plan (GRBMP), of which he was the Team Leader of the Water Resources Management group. He has also formulated the Drainage Master Plan of NCT of Delhi for the Delhi Government. He is part of the expert committees appointed by the National Green Tribunal to suggest solutions to deal with the ever increasing pollution levels in Ganga and Yamuna. He has to his distinction formulation of the Ganga Act on behalf of the Ministry of Water Resources, River Development & Ganga Rejuvenation (now Jal Shakti), as a member of the committee. Presently he is leading an ambitious research project "Water Security and Sustainable Development for NCT of Delhi" funded by Global Challenge Research Fund of UK. Prof Gosain has been conferred with the Global Excellence Award 2021 in Water Sector by the Energy & Environment Foundation. Prof Gosain is also Founder & Director of INRM (Integrated Natural Resource Management) Consultants, a company incubated by IIT Delhi. Prof Gosain has served as Head of the Civil Engineering Department and the Computer Services Centre of IIT Delhi.

DR HIMANSHU KULKARNI

Founder Trustee and Executive Director, Advanced Center for Water Resources Development and Management (ACWADAM)

Dr. Himanshu Kulkarni leads ACWADAM, a not-for-profit knowledge institution and think-tank working on groundwater since 1998. He is a hydrogeologist by qualification and has been working on aquifers and groundwater across India's diverse groundwater typology for more than 35 years. ACWADAM has partnered with a variety of organisations on piloting and mainstreaming the ideas of participatory groundwater management and springshed development across India, neighbouring Nepal, Bhutan, Vietnam and has begun work in Africa. ACWADAM's work under Dr Kulkarni has followed the principle of bringing communities closer to their aquifers and managing groundwater as a common pool resource through the process of Aquifer-based Participatory Groundwater Management. He has, through ACWADAM, steered the concept of hydrogeology based 'springshed' management that has now become so important from local to national levels in India and its neighbouring regions.

Dr Kulkarni has, before co-founding ACWADAM, worked at Pune University for 13 years, after which he also worked with the corporate sector for a couple of years. Through ACWADAM's collaboration with educational institutions, Dr Kulkarni works as adjunct faculty and course advisor at Shiv Nadar University for the post-graduate course on Water Science and Policy. He is also visiting faculty and a member of the Board of Studies at TISS, Mumbai. He is also on the BOS of one of Pune's and India's oldest institutions, the Fergusson College in Pune. He actively continues to teach, guide and mentor students, also publishing his key research findings while working at the grassroots and in policy domains. He has supervised 2 PhDs and many post-graduate dissertations. Dr Kulkarni continues to advise various State Government Agencies and the Central Government. He has held many advisory positions on various committees of the Government. He was also a member of the committee that is drafting India's new National Water Policy during 2019-20. Dr Kulkarni has anchored several international action research collaborations in the subject of groundwater, particularly in his lead role at ACWADAM. He has also been on several juries for water related awards in India.

MR V K MADHAVAN

Chief Executive WaterAid India

Madhavan has spent fifteen of the last three decades living and working in rural India. First in the desert districts of North-Western Rajasthan with the Urmul Rural Health Research and Development Trust till 1998 and then from 2004 to 2012 in the Kumaun Himalayas with the Central Himalayan Rural Action Group (CHIRAG). In the interim period, Madhavan worked on policy issues with ActionAid, worked as an independent consultant and then on women's leadership and governance with the Hunger Project. Since May 2016, Madhavan has been the Chief Executive of WaterAid India. In the past three decades, Madhavan has worked on an integrated rural development – community health; primary education; investing in young people and particularly adolescent girls; natural resource management – community forestry, watershed development, recharge of springs, water conservation, drinking water and on-farm and off-farm livelihoods

JURY MEMBERS

Dr. Sujit Kumar Sinha
Former Director, Atal Bhujal Yojna, Central Ground Water Board Ministry of Jal Shakti, Government of India

Shri S.K. Sinha is an alumnus of University of Roorkee (now IIT, Roorkee), did M. Tech in Applied Geology in 1984. Further, in the year 1996, he perused Master of Hydrology at IIT Roorkee as a sponsored officer from Govt. of India. He started his career in Central Ground Water Board, Ministry of water Resources, Govt. of India in 1988, worked for more than 32 years in Government as ground water professional in various capacities in different parts of India. He superannuated from Government service in Sept 2020 and presently associated with "Atal Bhujal Yojana" as Team Leader and Advisor appointed by WAPCOS, The Atal Bhujal Yojana is one of the flagship schemes of Ministry of Jal Shakti, Govt. of India.

He has vast experience in dealing with various aspects of ground water in different terrains of India. He is an accomplished professional and researcher in the Water Resources Sector in general and ground water domain in particular.

He is visiting faculty at IIT, Delhi, IIT Roorkee and RGNGWTRI, training institute of CGWB, Raipur. He has been invited by UN, IAEA, Vienna and other International Agencies as an expert on ground water during various international programs. Shri Sinha is widely travelled with versatile experience of working in various facets of ground water management which includes Ground water exploration in alluvium & Hard rock areas, estimation of ground water resources, sustainable development and management of ground water, Artificial recharge to ground water.

Mr. Depinder Kapur
Director, Water Program
Centre for Science and Environment

Depinder Kapur is Director Water Program, at Center for Science and Environment. A senior development and WASH expert, he has worked previously with the national government, with international and national development agencies including WaterAid, CARE, Oxfam, WSSCC, SPWD and AKRSP. Has led research and advocacy initiatives in livelihoods and WASH and contributed to the development of urban capacity development frameworks and approaches and also taught briefly at Shiv Nadar University(Water Science Policy course).


AWARDEES
2024

AWARDEES 2024

Category 1

Industrial Water Use Efficiency

1st Prize

Apollo Tyres

2nd Prize

Hindalco Industries Ltd.(Unit Birla Copper Dahej)

Special Jury's Award

Diageo (United Spirits Ltd.- Goa)

ITC Royal Bengal & ITC Sonar

Category 2

Innovation in Water Technology

1st Prize

SmarterHomes Technologies Pvt. Ltd.

Category 3

Community Initiatives by Industry

1st Prize

IndusInd Bank Ltd. (Livolink Odisha Project)

Category 4

Water Initiatives by NGO

1st Prize

People's Action for National Integration (PANI)

2nd Prize

Earth Brigade Foundation

Category 5

Urban Wastewater Management

1st Prize

Vishvaraj Environment Pvt. Ltd.

Category 6

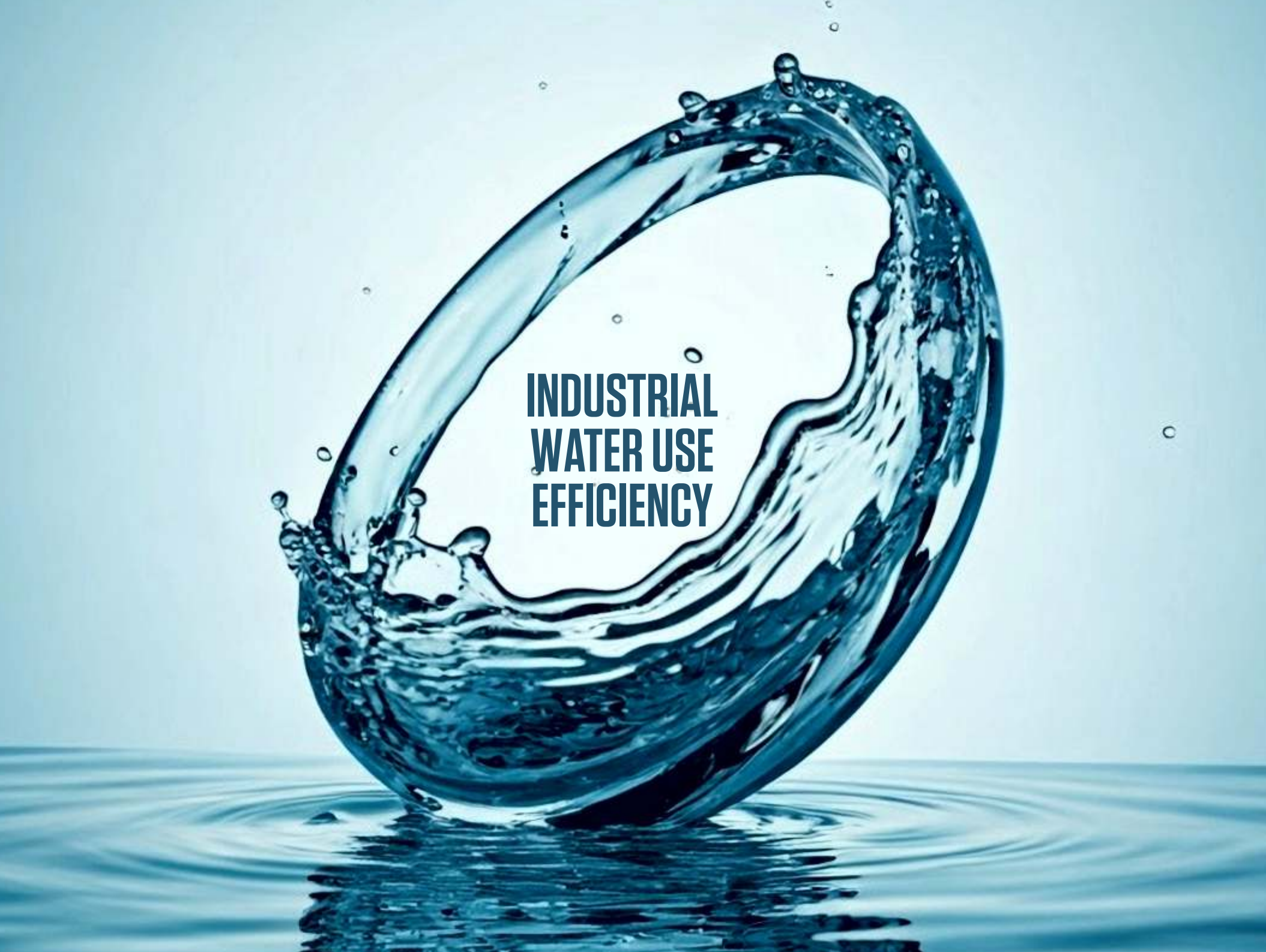
Best Startup for Water Innovation

Special Jury's Award

Liquiclear Technologies Pvt. Ltd.

FICCI WATER AWARDS 2024 CATEGORIES

- **Industrial Water Use Efficiency**
- **Community Initiatives by Industry**
- **Innovation in Water Technology**
- **Water Initiatives by NGO**
- **Urban Water and Wastewater Management**
- **Best Start-up in Water innovation**


INDUSTRIAL
WATER USE
EFFICIENCY

M/S APOLLO TYRES LTD.

1st PRIZE

Mr. C Thomas Mathew
Unit Head – Chennai Plant

Water conservation is a key element of the sustainability journey at Apollo Tyres Ltd (ATL) and it must be integrated into our daily lives rather than being an occasional thought. We should consistently explore ways to practise water conservation in all aspects of our lives. Since water is crucial for our existence, let's dedicate ourselves to learn more about, how we can protect and preserve it, ensuring it remains pure and safe for future generations.

Brief message from CEO and long-term goals:

Sustainability is identified as one of the drivers in achieving ATL's strategic business objectives, with water conservation and management serving as integral components of our sustainability endeavours. Water Efficiency Management System ISO 46001:2019 was implemented in the year 2023 to sustain and improve the water efficiency. A well-defined water policy and roadmap, aimed at attaining plant water efficiency goals, have been formulated and disseminated to employees and stakeholders through various communication platforms such as Sustainability Newsletters, Monthly Communication Meetings, and Daily Work Management (DWM) sessions. These channels are instrumental in educating and engaging employees and stakeholders in water efficiency improvement efforts.

7R strategy is (Reduce, Reuse, Recycle, Rethink, Refuse, Regenerate, Replace) used in our process to improve our water efficiency. Zero Liquid Discharge plant, digitalization and automation of water treatment plant, technological upgradation of treatment systems, online water quality monitoring and daily work management resulted in reduction of 52% of fresh water in FY 24 against the base year of FY19.

Beyond our operational boundaries, we are committed to water related initiatives, including renovating and augmenting rainwater harvesting capacities in neighbouring villages to bolster underground water tables. Additionally, we extend support by establishing purified drinking water plants to ensure nearby communities have access to clean and safe water. Our dedication to water conservation has yielded significant benefits, both tangible and intangible.

As the next step in our water conservation journey, we are focusing on the following initiatives.

- Pioneering technological enhancements in the tyre manufacturing process to reduce water consumption. (Use of nitrogen curing in place of hot water-based curing).

- Augmenting the rainwater recharging through percolation pits and increasing the utilization of roof top rainwater by enhancing the storage capacity.

We are confident that these initiatives will facilitate continual enhancement of our water performance, propelling us towards new heights in water management achievements and remain steadfast in our pursuit of continuous improvement in water conservation to achieve even greater milestones in the future.

Water Management through 7R Methodologies

Chennai Plant

Water Management Strategy

Act

- Creation of Standards to sustain and Improve.
- Conduct water use review
- Corrective measures for deviations.
- Periodical revision of Water Management documents

Check

Measurement & Monitoring

- Measure & Monitor the results of water efficiency management plan results
- Evaluation of Regulatory Compliance
- Leveraging Measurement System
- Management Review for Sustainability Indicators

ISO 46001:2019 Framework

Plan

- Creation of Standards to sustain and Improve.
- Conduct water use review
- Corrective measures for deviations.
- Periodical revision of Water Management documents

Do

Enablers

- Implement water efficiency management action plan Water Saving projects- QC/QCC Approach
- Communication of Objective and Targets to all stake holders
- Participation - Internal/External Sustainability events
- Competency improvement of Team members
- Implement Rainwater harvesting

Methodology – 3M Principles

Measure

SCADA for WTP, ETP/STP

Electromagnetic Flowmeter with data logging system

Inhouse Laboratory for WTP, ETP/STP

Monitor

Online Water Quality Monitoring for WTP, Cooling towers & ETP/STP

Log Note & SCADA with Alarm Annunciation system

Water MIS Circulation - Daily

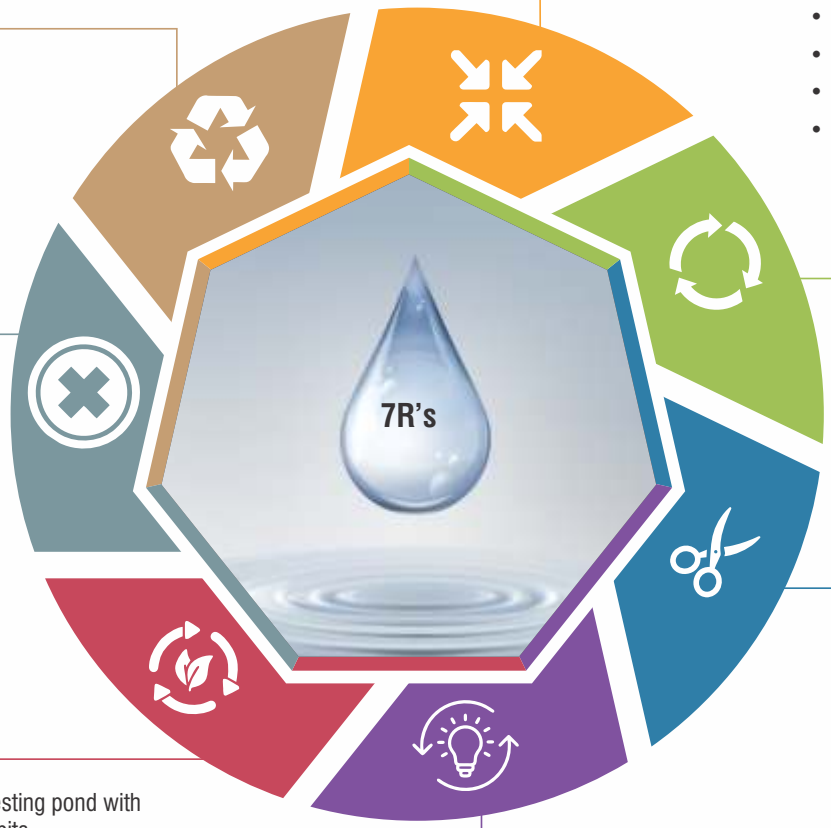
Manage

DWM Corner for Daily review

Review Mechanism

Plant Head	Monthly review
Department Head	Weekly review
Section Head/ Execution Team	Daily MIS

7R Strategy



Reduce

- Level based Auto make up water system for cooling towers.
- 3D Trasar Auto blowdown system for cooling tower
- Sensor based foam type filter taps in cafeteria & washrooms
- Sensor based urinals for washrooms
- Variable operating pressure for sanitation & Drinking water system as per demand

Reuse

- RO Rejects usage for sanitation purpose
- Roof top rainwater storage and usage to process
- 100% recovery of hot water from process
- Recovery of steam condensate from process
- AHU condensate water reused to cooling towers

Replace

- Conversion of Hot water-based curing to Nitrogen – Project initiated.

Rethink

- Usage of Municipal treated sewage water inplace of Lake water

Regenerate

- Rainwater harvesting pond with water recharge pits
- Rainwater percolation pits

Refuse

- Air cooled condenser in place of water cooled condenser for steam turbine.
- Evaporative cooling systems to adiabatic system – Under Consideration.

Recycle

- In-house Effluent treatment plant & sewage treatment plant with Zero Liquid Discharge
- Decentralized filter backwash treatment plant.
- Oil filtration system in ETP/STP

Innovative Projects

Curing condensate flash steam Heat &water recovery

Before

Process steam condensate main drain Flash steam venting to atmosphere

After

Spray chamber installed to recover the heat wand water from venting steam

Water Savings

15500 KL/ Year

139 lakhs /Year

Investment

90 lakhs

1 Year

ETP/STP RO Recovery improvement

Before

Not Applicable

After

ETP/STP installed with three stage RO treatment process. Effluent/Sewage recycling up to 95% and remaining 5% is sent to Multiple Effect Evaporator (MEE)

Fourth stage RO system is provided to recycle the effluent/ sewage further up to 97% and achieve the feed TDS of 40000 PPM to operate MEE effectively

Water Savings

1440 KL/ Year, MEE operation cost reduction 50%

24 Lakhs /Year

Investment

45 lakhs

2 Years

Recycle: Wastewater Recycling Treatment Plant

Industrial & Domestic effluents collected from the plant is treated in Effluent Treatment Plant (ETP) & Sewage Treatment Plant (STP) with Zero Liquid Discharge system

Effluent Treatment Plant

Sewage Treatment Plant

Zero Liquid Discharge System

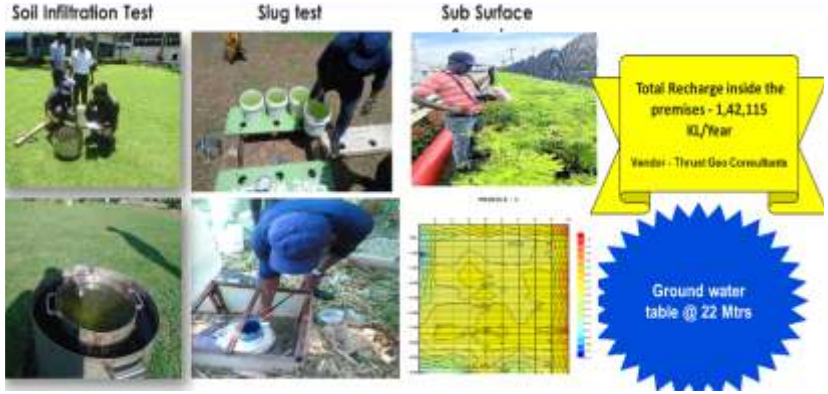
Water Recycled & used for process

Process	Treatment
WTP RO Rejects	Used for Toilet Flushing
Process Effluents, RO Chemical Cleaning, DM Regeneration	Effluent Treatment Plant with with common tertiary treatment by Multiple Effect Evaporator and ATFD
Domestic Effluents	Sewage Treatment Plant with common tertiary treatment by Multiple Effect Evaporator and ATFD
ETP Sludge	Sent to RE Sustainability authorised by Tamil Nadu Pollution Control Board
MEE Salt	Sent to RE Sustainability authorised by Tamil Nadu Pollution Control Board

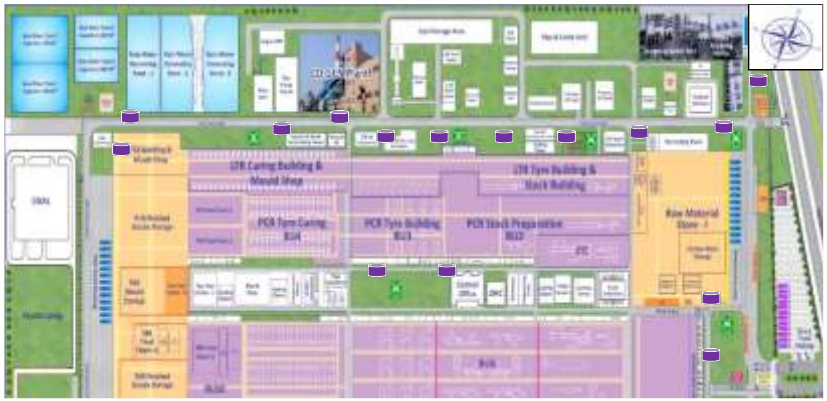
Regenerate : Rainwater Harvesting

Rainwater Harvesting (RWH) Pond

Rainwater Potential Survey



Rainwater Harvesting (RWH) Pits

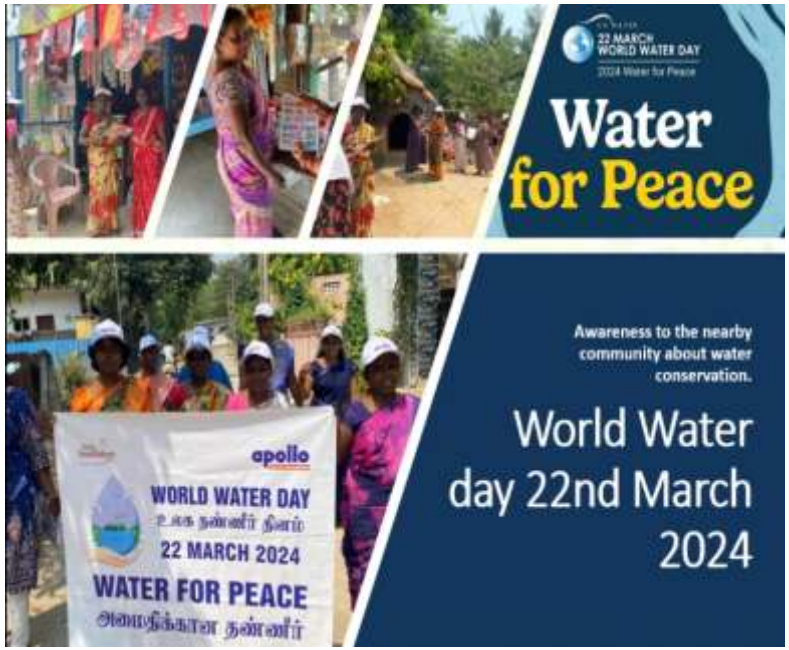


Rainwater Percolation Pits

Online Ground water table monitoring

Awareness

32 Employees of Apollo Tyres Chennai plant, volunteered for cycling 16 kms to and for to create an awareness on water conservation and School awareness at Primary school at Vallakottai village, Kancheepuram district.



HINDALCO INDUSTRIES LTD.
(Unit Birla Copper Dahej)

2nd PRIZE

Mr. Rohit Pathak
Senior President
CEO Copper Business

"Water is what makes Earth habitable and creates and sustains Life. We, as Hindalco, have reduced our fresh water consumption by 60% in the last three years by our Reducing & Recycling efforts."

Brief message from CEO and long-term goals:

Water is found everywhere on Earth, from the polar ice caps to steamy geysers and wherever water flows on this planet, we can be sure to find life. Our industry's inherent dependence on water makes us prone to water-related challenges and potential operational disruptions. Guided by Aditya Birla Group's, Water Stewardship Policy and Hindalco's Environment Policy, we have undertaken positive strides towards minimising such risks and achieving effective water management. We are aligned to the NITI Aayog's water neutrality framework of 3M+7R (Map, Monitor, Measure + Reduce, Recycle, Recover, Replenish, Recharge, Rejuvenate, Recognise/Respect) to systematically reduce our specific water consumption.

At our plants, we have a Water Task Force (WTF) responsible for identifying the critical water-related focus areas, managing the physical, regulatory, and water-related risks, and developing a mitigation plan.

Our Dahej plant located in the Special Economic Zone (SEZ) of the Gujarat Industrial Development Corporation (GIDC) lies in a water stress area. GIDC withdraws water from the Narmada River which supplies to all the industries in the SEZ. To reduce dependency on surface water, GIDC initiated a common desalination project to use seawater. Hindalco has invested ₹114 crore in the desalination project against 10% share in the project. The project uses an RO membrane to recover industrial-grade water which is then stored in a reservoir and withdrawn by various industries.

We achieved a significant 60% reduction in freshwater consumption. This was primarily due to the commissioning of the desalination plant with GIDC, and the commissioning of a 2,000 KLD Tertiary water recycling unit plant with sea water RO membrane and a thermal evaporation system. In FY 2024-25, we have taken 2 major water related projects.

1. Township STP upgradation (Conventional to MBR) with a capacity of 1,200 KLD. Once this project is commissioned, we will be able to use township STP treated water in our processes.

2. 2. Green Tank project (2,400 KLD) is mainly to take care of the blowdown from all cooling towers. On completion of the project, we will be able to use 2,400 KLD water in our processes. As a result of these 2 major water projects, we will be able to achieve a reduction of 3,600 KLD of freshwater intake from GIDC.

We have effectively reduced our specific water consumption by 7.6% reduction in FY24 as compared to last years.

Through thoughtful water conservation initiatives, we pledged our unwavering commitment to environment stewardship and sustainable practices.

Name of the Initiative: Reduction, Recycle & Reuse of water for long term sustainable goal

Location: Dahej

The Initiative/Innovation

1. **Effluent Treatment Plant Reverse Osmosis:** They have 5.4 MLD reverse osmosis plant followed by pressurized ultrafiltration for recycling of ETP treated water. Approximately 4.5 MLD effluent is generated from various sections of plant, and all are collected in raw water collection tank. further it is treated in primary treatment unit with dosing of lime milk ferrous sulfate and poly. ETP treated water collected in lagoon and sent it to reverse osmosis plant for recycle. RO permeates water utilizing in various plant operations and RO rejects sent to tertiary water recycling unit to achieve zero liquid discharge.
2. **Tertiary Water Recycling Unit (TWRU):** They have installed 2 MLD water recycling units including Mechanical Vapour Recompression Evaporator (MVRE). The major parts of TWRU are High-Rate Solid Contact Clarifier (HRSCC), Submerged Ultrafiltration, Sea water RO, MVRE. RO permeate water further utilized as soft water in cooling tower.
3. **ETP Treated Water:** They have rotary drum vacuum dryer for ETP sludge dewatering purposes. They are using approximately 1000 KLD ETP treated water in cleaning of RVDF cloth.
4. **Cooling Tower Blowdown water:** They are using approximately 1.5 MLD colling tower blowdown water after primary treatment in granulation process.

5. **Sewage Treatment Plant:** 500 KLD sewage treatment plant with Membrane bioreactor technology. They are using approximately 300 KLD STP treated water as process water in plants.

6. **Rainwater Conservation:** Birla Copper is located near sea and ground water level is approximately 2m from surface. So, ground water recharge is not viable. However, they have constructed a pond (64800 m3) for rainwater harvesting and the area has been developed as recreation centre for community. The pond relates to storm water drain and water collected in pond during rain fall. The length of pond is 180m, width is 180m and depth is 2m.

7. **Awareness Activities & Training:** They have celebrated many events related with water conservation in plant & township also. Awareness session and training program organized in plant and township on world water day. Nukkad Natak and Pani Bachao rally organized in township. Birla Copper has a water taskforce which deals with driving water saving projects and water management initiatives. Review meetings are conducted monthly to track the progress. On world environment day, awareness session and training program organized in plant and township.

Impact:

1. Reduction in freshwater consumption
2. Reduction in effluent generation
3. Maximize effluent recycling percentage
4. Overall water conservation

DIAGEO
(United Spirits Ltd.- Goa)

SPECIAL JURY'S AWARD

DIAGEO
India

Ms. Hina Nagarajan
Managing Director & CEO

"Preserving water for Life is a key priority under our Spirit of Progress ESG action plan and we are delighted by the tremendous progress we have made across our water stewardship initiatives. We are on track to achieve our water-use efficiency target of 40% through several process and technology change initiatives in distillery and packaging. At Diageo India, we continue to stay committed to our goals and believe that partnerships, collective action and collaboration are key to achieving a net positive water impact."

Brief message from CEO and long-term goals:

Diageo's 'Spirit of Progress', ESG action plan is key to achieving our growth ambition and is a commercial imperative. underpinned by our commitment to doing business responsibly. One of the pillars of this plan is driving 'Grain to Glass Sustainability, where our focus is to build a resilient supply chain, while supporting communities in adapting to the changing realities of climate change.

Water Stewardship is an important part of driving 'Grain to Glass Sustainability, and we are committed to addressing water challenges by focussing on three key areas: replenishment, use-efficiency, and collective action.

Water Replenishment: Over the past three years, Diage India has replenished over 1.1 million cubic meters of water in water-stressed areas, exceeding our target by 25% and reaching this milestone three years ahead of our 2026 goal. Our efforts on water replenishment also extend to Water, Sanitation, and Hygiene (WASH) initiatives. In partnership with CSRBOX Foundation, we've built 264 WASH facilities in Hardoi, Uttar Pradesh- providing clean water and sanitation for over 12,000 people across eight villages. Beyond this, we've increased access to clean drinking water across villages in Maharashtra, Uttar Pradesh, Odisha, and Rajasthan, delivering more than 13,000 litres of clean water per hour. We will continue to further drive our water replenishment initiatives ahead of our 2026 goals.

Water use Efficiency: We have significantly improved water-use efficiency, reducing consumption by 44% across our distilleries and 31% in packaging since 2020 against the target of 40% by 2030. These improvements reflect our ongoing efforts to reduce water usage across all operations.

Collective Action: As founding partners of 'The Godavari Initiative', we are addressing broader systemic water risks. By working on collective water stewardship, shaping policies, and

collaborating with stakeholders, we aim to enhance water availability and management in stressed water basins. The initiative is spread across 55,350 sq. kms of catchment area, will benefit 23 million people across 9 districts in the state of Maharashtra.

Our efforts and progress in driving Water Stewardship have earned us global recognition. In FY23, our Alwar distillery became the first in Asia to achieve the prestigious Alliance for Water Stewardship (AWS) Certification. Endorsements like these reinforce our commitments to ensuring sustainable water use and water quality improvement.

Name of the Organization : United spirits Limited (Diageo India)

Location : Bethora, Ponda- Goa

Name of the Initiative : Water Consumption Reduction through Sustainable and Innovative Practices to achieve society 2030 Goals (Preserve Water for Life).

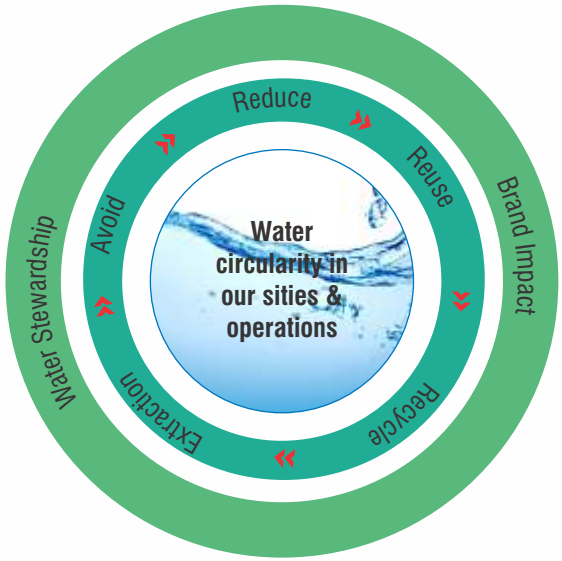
Brief about the Initiative: Reduce water use in their operations with a 40% improvement in water use efficiency in water stressed areas and 30% improvement across the company.

DIAGEO INDIA VISION

- Water is the basis of life and our most precious resource. The increasing concern about the scarcity of freshwater resources across the globe is alarming, thus they are taking measures to replenish more water than they consume by 2026.
- It is our collective responsibility to restore the natural world on which life depends. They are committed to pioneering grain-to-glass sustainability as part of our 'Society 2030: Spirit of Progress' plan. An important part of this goal is to become sustainable by design, eliminating waste from their value chain, developing solutions to reuse materials and creating innovative solutions to grow sustainably.
- Their continued long-term success depends on the people and planet around us. Their pioneering grain-to-glass sustainability work is divided into three areas - Preserve Water for Life, Accelerate to a Low Carbon World and Become Sustainable by Design

Matra Bhumi

WATER POSITIVITY



** L/L Liters of water consumed per Liter of Alcohol Produced*

GOA PLANTS INIATIVES TOWARDS WATER POSITIVE

Water Replenishment

Restore

- **Improve Water use** efficiency of Goa Operations to less than 30 L/L* (from 75 L/L F20)
- **Avoid/ Eliminate** Water dependent Operation
- Waterless Cooling
- Air wash for Bottling
- Enhance Water **Recycle and Reuse**
- Within and outside the process
- **Reduce** / **Conserve** Water use
- Within and outside the process
- **Harvest** Rainwater
- Within – Harvest and use for Process
- Water Recharging

High gravity mashing...

High gravity mashing generates concentrated wort, reducing water use in mashing/lautering compared to traditional brewing, aiding in water conservation during brewing.

Air-cooled condensers.....

Air-Cooled Condensers for Reduced Water Usage: Air-cooled condensers or adiabatic cooling system replace water-cooled systems, cutting water usage in cooling towers due to evaporation.

UFRO SYSTEM...

Utilization of Treated Effluent via UFRO Systems: Treated effluent, filtered via UFRO, is reused in processes, lowering freshwater demand and supporting sustainable water management.

Condensate Recovery...

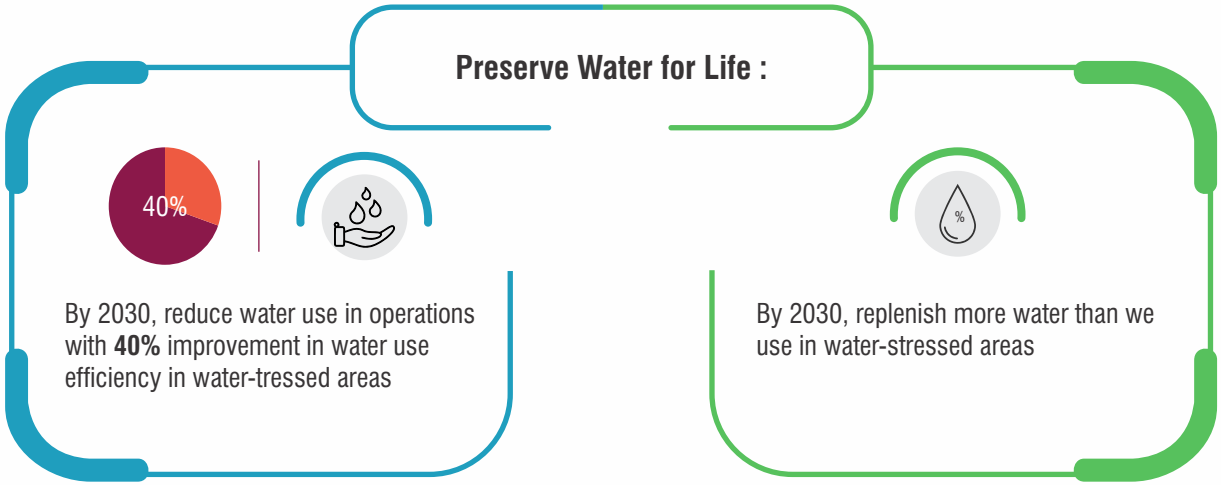
Condensate Recovery System for Water Conservation: Condensate recovery systems installed to recycle steam condensate, reducing fresh water needs for boiler operations and promoting water conservation. Condensate recovery improved from 65% to 85 %

Rainwater harvesting...

Goa receives huge rainfall in monsoon which can be trapped and used for production to reduce the dependency of water bodies. They have covered catchment area of per day rain equivalent to one day production.

Awareness Activities

- Gemba walk was carried out to find out water leakages in the plant
- Awareness road show was basically designed to create public awareness.
- Training given to employees towards water conservation.
- Poster and slogan competitions towards water conservative methods were conducted on environmental day.
- Diageo Sustainability Goal Towards society 2030 were displayed at various location to create awareness and to improve efficiencies in distillation plant to 12 L/L till 2030.
- Kaizens competition being carried out between different Diageo units and best kaizen gets rewarded.
- Recent Evaluation study of water management have shown drastic reduction in water consumption at various locations in the unit, which indicates effectiveness of awareness creation.



ITC ROYAL BENGAL & ITC SONAR

SPECIAL JURY'S AWARD

Mr. Gaurav Soneja
Cluster General Manager

At ITC Royal Bengal, we believe that true luxury is inseparable from sustainability. Our commitment to water stewardship is not just a responsibility but an opportunity to lead by example in conserving one of our most precious resources. Through innovative practices and advanced technologies, we aim to set new benchmarks in water efficiency while maintaining one of a kind guest experiences.

Brief message from CEO and long-term goals:

"At ITC Royal Bengal, our dedication to water sustainability extends beyond operational excellence—it is embedded in our ethos of 'Responsible Luxury.' Our long-term vision integrates cutting-edge technologies such as zero-mile water bottling, smart irrigation systems, and advanced wastewater treatment processes to minimize water consumption and maximize reuse. With our LEED Platinum certification and continued focus on water-efficient innovations, we endeavour to contribute to a sustainable future that harmonizes environmental stewardship with luxury hospitality. Through collaboration and unwavering commitment, we aspire to inspire the industry and communities alike to join hands in safeguarding water resources for the future."

Name of the Initiative: Innovative Water Efficiency and Sustainable Irrigation Systems

Location: Kolkata, West Bengal, India

The Initiative/Innovation: As an exemplar in "Responsible Luxury," ITC Royal Bengal has undertaken several pioneering initiatives that not only deliver opulence but also champion environmental sustainability. A prime focus has been on **innovative water management practices** aimed at significantly reducing the hotel's water footprint.

ITC Royal Bengal operates a cutting-edge **Zero Discharge Wastewater Treatment Plant,** which treats and reuses all wastewater for non-potable purposes such as flushing, cooling towers, and landscaping. This advanced treatment system uses Submerged Aerobic Fixed Film (SAFF) technology and UV disinfection, ensuring high-quality treated water that meets stringent environmental standards.

One of the standout projects is the deployment of a **Smart Irrigation System** that is fully integrated with the hotel's rainwater harvesting infrastructure and treated water from the in-house **Sewage Treatment Plant (STP)**. This system ensures 100% of the hotel's landscaping irrigation needs are met without drawing on potable water. The use of **drip and sprinkler irrigation systems** in gardens and vertical landscapes minimizes water consumption, while a dedicated artificial pond captures rainwater. The smart irrigation system is equipped with sensors that optimize water usage.

The **Scale and Bio-Removal System (SBR) technology** deployed in the cooling towers eliminates the need for the chemical treatments, resulting in significant water savings and reducing the frequency of water-intensive cleaning processes. The innovative system allows real-time adjustments in water usage, leading to enhanced operational efficiency and lower water consumption.

The hotel has also implemented **advanced water-efficient fixtures,** conforming to **LEED standards,** across all guest rooms and public areas. These include low-flow faucets, dual-flush toilets, and sensor-based urinals, reducing water wastage without compromising guest experience.

The high -efficiency laundry machines and the use of **Diversey CLAX Advance chemicals** have cut water usage by 16% and energy usage by 19% significantly reducing the

environmental impact of laundry operations while maintaining top-tier service standards

The **HVAC condensate recovery system** has significantly reduced the consumption of fresh water in cooling operations, leading to both water and energy savings.

Impact:

The water conservation efforts at ITC Royal Bengal have yielded impressive results, making the hotel a model for sustainability within the hospitality sector. Through these innovations, the hotel has made significant strides in reducing its fresh water consumption and promoting efficient water use. The specific consumption for fresh water (Kl/Room Night Sold) of FY 23-24 has reduced by **36%** compared to FY 22-23.

With innovations mentioned above, ITC Royal Bengal has strengthened its position as a leader in sustainability. The hotel's efforts are a blueprint for future projects in the hospitality industry, showcasing that luxury and responsibility can indeed coexist. Recognized with **LEED Platinum Certification,** ITC Royal Bengal continues to inspire through its commitment to environmental stewardship and water sustainability.


COMMUNITY
INITIATIVES
BY INDUSTRY

INDUSIND BANK LTD.
(Livolink Odisha Project)

1st PRIZE

IndusInd Bank

Mr. Srinivas Bonam
Head - Inclusive Banking Group

"The Bank is honoured to receive the FICCI Water Award 2024 for the Springshed Water Conservation project in Odisha. Our CSR philosophy "Sattvam – Our Country , Our Commitment" guides every initiative we undertake. We understand that Water is not just essential to Life but also a cornerstone for sustaining livelihood. Our commitment to Water Stewardship is a reflection of our larger responsibility to the Nation, as we strive to uplift communities through optimal conservation of vital resources of water, contributing to the resilience and prosperity of the community we serve."

Brief message from CEO and long-term goals:

"IndusInd Bank strives to create a sustainable value for all, leaving behind a better world for generations to come. The Bank recognizes the critical importance of natural capital in ensuring sustainable development and long-term economic stability. The Bank is committed to integrating natural capital considerations into its business practices, and its commitment via sustainability and CSR initiatives, aiming to enhance ecosystem services and mitigate environmental impacts. Through our CSR initiatives and sharp focus on water stewardship projects, we tackle water scarcity and environmental degradation, emphasizing accountability and action with activities such as conservation of natural springs, roof rain and river water harvesting, afforestation, restoration and revival of traditional water bodies. By doing so, the Bank supports environmental sustainability and ensures long-term economic resilience and value creation for its stakeholders.

We are deeply honoured that our Springshed Water Conservation Project in Odisha has been awarded the First Prize under the Community Initiatives by Industry category at the 12th Edition of the FICCI Water Awards. This recognition strengthens our commitment to addressing water scarcity and supporting sustainable development in rural communities.

Through this Project, we have delivered reliable water solutions to over 7,000+ families across 82 villages. By creating 1,333 acres of irrigated farmland and developing 541 acres of agroforestry, we've enhanced both agricultural productivity and water security. We have also conserved over 37 lakh cubic metres of water and installed drinking water filters for more than 2,000 households. The use of solar-powered and diversion-based Irrigation systems has ensured water efficiency and climate resilience.

In addition to infrastructure, we focus on building local capacities by training over 100 farmers and community members in water management, and we've established 82 Water User Groups (WUGs) to foster long-term community ownership of water resources. These efforts align with India's

national priorities and the UN Sustainable Development Goals, creating models that can be replicated in other regions for sustained impact. This award reinforces our resolve to continue striving for innovative solutions that help promote water stewardship and build resilient communities. With this feather in our cap, we are more motivated than ever to make every drop count."

Name of the Project – Springshed Water Conservation

Location – 82 villages in Kalahandi and Kandhamal districts of Odisha

The Goal of the initiative

The project aimed to augment water resource management, to improve the wellbeing of families in two of the most underdeveloped blocks of South Odisha by ensuring water accessibility and availability.

The Objectives

The core objective of the programs was conservation of spring systems and coupling them with efficient conveyance and application systems to ensure water security. These two extreme eventualities needed to be managed for enhancing agricultural productivity, augmenting income and preventing degradation of soil and water, which were best addressed by the programs.

The major strategies

The program aimed to equip vulnerable villages to techniques for adaptation to climate change and thereby the security of water for drinking, domestic and irrigation usage. The main focus was on mountain ecosystems of South Odisha region. The solution revolved around the following key elements

- Access to irrigation through Diversion Based Irrigation (DBI) structures and solar lift irrigation systems ·
- Water conservation with the construction of different structures like check dams, intake well, gully plugs, staggered trench etc.
- Catchment area development through afforestation and soil conservation in the DBI sites and the villages within the spring shed
- Integrated Natural Resource management – Proper land use for protecting it from all forms of erosion, enhance productivity while maintaining soil fertility, water harvesting and conservation for effective use (domestic, irrigation, etc.) ·

- Command area development through soil health stabilization, improved agriculture practices, promotion of low water requirement crops in with focus to traditional crops like finger millets, maize
- Water distribution management and sustainability of constructed different structures by formation and strengthening of Water User Groups (WUG)

Geography and coverage

The South Odisha clusters, particularly focused on districts such as Kandhamal and Kalahandi, are known for their rich natural resources and diverse tribal populations. These clusters are characterized by a significant presence of tribal communities, including Particularly Vulnerable Tribal Groups (PVTGs), who rely heavily on agriculture, forest-based livelihoods, and traditional practices for their sustenance. The region is hilly and forested, which poses challenges in terms of infrastructure and connectivity. Tribal communities dominate the population, with a strong cultural connection to land and natural resources. Their livelihoods primarily revolve around subsistence agriculture, shifting cultivation, and forest produce. The challenges farmers were facing in this locality included low agricultural productivity, lack of infrastructures, limited livelihood diversification and social & economic marginalization.

The program was implemented in Th. Rampur block of Kalahandi and Kothagarh block of Kandhamal district. Both the districts are aspirational district with more than 80% of the target households are from ST and SC and living below the poverty line.

With proper interventions of structural majors of DBI, installation of solar, intake wells, water conservation tanks, supported restoration of water for the round-the-year supply; especially for 4-month dry period. There was immense potential for commercial farming and livestock development in these clusters. The natural resources, combined with modern farming practices, were able to transform the economic landscape. The active involvement of tribal communities in construction of different water conservation and irrigation structures also led to sustainable agriculture, further enhancing long-term socio-economic empowerment.

Impact and Learnings from the Spring-Shed Program in Two Blocks of South Odisha Clusters

The Spring-Shed program was initiated in two blocks of the South Odisha clusters with the goal of restoring spring water to provide year-round irrigation for cereal crops, commercial vegetable farming, and domestic water use. The program yielded significant impacts and valuable learnings, as outlined below:

Major Impacts:

1. **Water Conservation and Community Impact:**

- Various water conservation structures have been constructed across **82 villages,** directly benefiting around **2,000 households (HHs)** by sustaining their livelihoods and improving water availability.

- The initiative also provides domestic water for approximately **7,000+ households,** ensuring year-round water supply for daily use, improving living standards.

2. **Irrigation Expansion:**

- The program has brought **1333 acres of land** under irrigation through **Diversion-Based Irrigation (DBI) and solar-powered lift irrigation systems.**
- These infrastructures are helping the community adopt **high-value crops,** and this shift is expected to become a regular practice in the coming years.

3. **Enhanced Cropping Intensity and Seasonal Cultivation:**

- Target households are now engaged in rabi cultivation, with **30% also practicing summer cultivation** after the irrigation infrastructure was established.
- The **cropping intensity** has doubled, increasing from **100% to 200%,** indicating that farmers are utilizing their land more efficiently throughout the year.

4. **Increased Agricultural Productivity:**

- The productivity of key crops like **paddy, ragi,** and **pigeon pea** has seen a significant increase, with yields improving by more than **100%.**

5. **Income Growth:**

- The average annual income of beneficiary households has increased from **₹23,000** in **2019** to **₹74,919 in 2023,** reflecting the tangible economic benefits of the program. This data is based on a third-party assessment conducted in FY 2022-23.
  - **Drip irrigation systems** to enhance water use efficiency in crop cultivation.

6. **Agricultural Entrepreneurship:**

- Three agriculture entrepreneurs have emerged, providing **soilless vegetable seedlings** to the project locations without financial support. This entrepreneurial activity is fostering local economic growth and self-reliance

7. **Introduction of New Technologies:**

- The project has introduced advanced technologies, such as:
  - **Hi-tech Polyhouse nurseries** to provide **soilless seedlings.**
  - **NIYO sprayers** for efficient crop protection.
  - **Portable solar pumps** for water lifting, which ensure sustainable and cost-effective irrigation solutions.

Key Learnings:

- **Water conservation infrastructure** plays a crucial role in transforming agricultural practices, ensuring not only year-round farming but also increasing cropping intensity and household income.
- Adoption of **solar-powered irrigation systems** and **hi-tech agricultural technologies** is key to sustainable growth and resilience against climate challenges, with significant long-term benefits for the community.
- **Entrepreneurial support** within the community is essential for sustaining agricultural initiatives without ongoing financial aid, indicating a shift toward self-sufficiency.

The program highlights the importance of **third-party assessments** to track progress and validate impacts, showcasing tangible improvements in income and productivity.


INNOVATION
IN WATER
TECHNOLOGY

SMARTERHOMES TECHNOLOGIES PVT. LTD.

1st PRIZE

Mr. Jitender Thirwani
COO

Efficient water management is not just about conserving resources; it is about ensuring that every drop counts for future generations. At SmarterHomes, we believe technology is the key to unlocking sustainable water solutions for urban living.

Brief message from CEO and long-term goals:

SmarterHomes Technologies is committed to driving long-term water sustainability through innovative solutions like our WaterOn system. By enabling real-time monitoring and usage-based billing, we have empowered communities to take ownership of their water consumption, resulting in measurable reductions in wastage. Our vision extends beyond smart metering – we aim to create a culture of water responsibility. Our future initiatives focus on integrating advanced analytics and AI-driven insights to optimize water distribution and leakage control, ensuring that our solutions continue to support sustainable living across urban landscapes.

Name of the Property: Pritam Woods

Name of the Initiative: IoT-based smart water management solution for real-time monitoring and efficient leakage detection.

Location: Bangalore

The Initiative/Innovation: Up to 30% reduction in water consumption after installation of water meters.

Impact

The Challenge

Located in Bangalore, is an apartment complex of 40 flats. They relied on manjira, borewell & tankers, but the borewells produced less water over time. Consequently, they had to acquire numerous water tankers and incurred higher water expenses.

The Solution

To address this, they considered installing 81 water meters which would measure the amount of water used by each flat. This helped the society with 3 main benefits, • Each household is billed for the water it actually uses. • Meter readings encourage residents to be more conscious of their water usage. • Volumetric pricing is introduced where, instead of a flat rate, a higher rate is charged forfor higher volumes. This is an added incentive to use less water.

Value Delivered

Accurate Readings	Real Time Measuring	Smartphone App-based viewing of Data	Cost of Meters	Detection of Leaks

9 Billion Litres measured	**40 K** Devices	**5 Million** Leakage alerts

Bangalore | Hyderabad | Chennai | Pune | Mumbai | Kochi | Coimbatore

Together, we can make every drop count and build a more sustainable future

7777-80-4646 | www.smarterhomes.com | info@smarterhomes.com

Name of the Property: Splendid Eternity

Name of the Initiative: IoT-based smart water management solution for real-time monitoring and efficient leakage detection.

Location: Bangalore

The Initiative/Innovation: Up to 40% reduction in water consumption after installation of water meters.

Impact

The Challenge

Located in Hoodi, Bangalore, is an apartment complex of 80 flats. They relied on borewells, but the borewells produced less water over time. Consequently, they had to acquire numerous water tankers and incurred higher water expenses. The property consumed 45,000 Liters per day and paid exorbitant water consumption costs.

The Solution

To address this, they considered installing 163 water meters which would measure the amount of water used by each flat. This helped the society with 3 main benefits,

- Each household is billed for the water it actually uses.
- Meter readings encourage residents to be more conscious of their water usage.
- Volumetric pricing is introduced where, instead of a flat rate, a higher rate is charged for higher volumes. This is an added incentive to use less water.

Value Delivered

Accurate Readings	Real Time Measuring	Smartphone App-based viewing of Data	Cost of Meters	Detection of Leaks

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WATER
INITIATIVES
BY NGO

PEOPLE'S ACTION FOR NATIONAL INTEGRATION (PANI)

1st PRIZE

Mr. Bharat Bhushan
Secretary – Chief Functionary

"Water is the foundation of life, not just for humans but for every living organism on this planet. At PANI, we hold deep respect for this natural resource, understanding that conserving water is not just a responsibility, but an essential act for the survival of all beings. Our aim is not merely to save water but to create a sustainable balance - ensuring that water serves every creature today and tomorrow, as it always has."

Brief message from CEO and long-term goals:

At PANI, our philosophy with regards to water begins with our vision which states: PANI envisions itself as a medium for building an inclusive society that prospers in harmony with its surroundings. Living in harmony with our surrounding does not just entails the social, but also natural surroundings. All our life lessons began with a simple yet profound truth: Jal Hi Jeevan Hai - Water is Life. This timeless wisdom reflects the essence of our relationship with water, one that runs deeper than mere utility. Water is not just a resource, it is the lifeblood of the ecosystems we share with every form of life - plants, animals, microorganisms. For humans, water connects us not only to our needs but to our role as caretakers of nature.

Our vision is anchored in this balance. PANI is committed to nurturing a harmonious relationship between humans and nature, where water is conserved, purified, and respected. This ethos has guided our work since the beginning, with nearly one-third of our projects focused on Natural Resource Management and Climate Change. But we know that the efforts cannot be fleeting. Our long-term sustainability plan emphasizes continuity and scale - ensuring that our work does not stop with one-off initiatives, but grows through partnerships and collaborations.

The actions we take are about empowering communities, particularly at the grassroots level. We have mobilized Community Resource Persons (CRPs) - primarily women and adolescent girls - who play a pivotal role in water conservation, promoting sustainable and efficient water usage in both domestic and agricultural contexts. These efforts are magnified through our partnerships with peer organizations in the SATHI Network (Supporting Association for Thematic and Holistic Initiatives), where we share knowledge and encourage collective action across hundreds of Civil Society Organizations.

Our approach is holistic. We believe water conservation should be integrated into every facet of life. Through programs like the Chachikpur Rural Change - Makers Program, we train future leaders

on the essentials of water-saving practices, connecting the importance of water to everything from food sustainability to ecosystem health. These are not just isolated lessons; they are building blocks for a future where water conservation is woven into the fabric of everyday life.

Ultimately, PANI is not just about water - it's about harmony. Our long-term water sustainability plan is a journey of reconnection, helping society realize that we are not separate from nature but an integral part of it. Water gives life, and our role is to ensure that it continues to sustain all life, now and for generations to come.

SWERA – Sustainable Solutions for Water Efficient, Economically Rewarding Agriculture

Objective:

- To bring positive change in communities and farming practices for conservation of natural resources, mainly water and soil.
- To enhance production and productivity of major crops in the area.
- To improve livelihood conditions of farmer households through adoption of progressive agricultural practices and facilitate government services/ programs/schemes by awareness and knowledge building.

Supported by: Hindustan Unilever Foundation (HUF);

- **Location:** 300 Gram Panchayats of 6 Developmental Blocks of Balrampur district, Uttar Pradesh, India. With over 70,000 small and marginal farmers.
- ***The Initiative/Innovation***
- ***Impact (in Numbers)***

1. Brought over 1.23 lakh acres of land with over 70,000 women farmers under improved package of practices such as:
    - Systematic Rice Intensification (SRI)
    - Intensification of Arhar / Toor
    - Seed drill and zero tillage
    - SWI for wheat
    - Raised bed farming of onion
    - Mulching

- Sustainable Sugarcane Initiative
- Machan – Trellis farming for vegetables

2. Water saving of 323.99 billion litres
3. Increase in the yield of major crops – 5.84 lakh tons
4. 19.94 lakh person days of employment generated
5. Aggregate income increase – INR 298 Crore
6. Average income of household increased from INR 25,000 per acre to INR 49,149 per acre.
7. Individual income increased in a range of 35% to over 100%

These are all assured by third party.

- ***Impact (qualitative)***

1. *Enhanced socio-economic status of women and girls*
2. *Better health, education and nutrition of the families*
3. *Increased village level GDP*
4. *Enduring and Self-sustaining village level institutions*
    - *Mahila Kisan Sangathan (MKS)*
    - *Farmer Resource Centre (FRC)*
    - *Community Resource Persons (CRPs)*
    - *Agriculture-Entrepreneurs*

EARTH BRIGADE FOUNDATION

2nd PRIZE

Dr. P V. Subramaniam
Co-Founder & Managing Director

Water is life (जलमेव जीवनम्), and by providing drinking water to wildlife using solar-powered pumps, we are harmonizing the balance between the Sun, Earth and Water to protect our delicate ecosystems and to revitalize our forests.

Brief message from CEO and long-term goals:

"At Earth Brigade Foundation, our approach to long-term water sustainability goes beyond immediate relief; it is about creating lasting solutions for wildlife conservation. Through Project Aquarius, we aim to establish permanent water sources in India's forests using solar-powered technology, reducing dependence on short-term fixes like diesel-operated tankers. By focusing on replenishing natural and artificial waterholes, we not only support wildlife but also reduce human-wildlife conflict, contributing to a more harmonious coexistence. Our long-term goal is to expand these efforts, ensuring that wildlife can thrive even in the most challenging seasons, while promoting ecosystem resilience".

Name of the Initiative - Project Aquarius – 100th Installation at Dhikala

Location - Dhikala, Corbett Tiger Reserve, Uttarakhand, India

The Initiative/Innovation

Project Aquarius, an initiative by Earth Brigade Foundation, directly addresses the acute water scarcity faced by wildlife in India's forests, particularly during the summer. This initiative deploys solar-powered pumps to provide a renewable and sustainable water supply, mitigating the environmental damage caused by diesel-operated water tankers, which are traditionally used for this purpose by the forest department.

For it's 100th installation, EBF selected the Dhikala campus in the Corbett Tiger Reserve. This decision may seem surprising, as the campus is near the Ramganga River and a large reservoir. However, territorial wildlife often avoids water sources located in open areas, where they are vulnerable to lurking predators.

While Dhikala has electricity, the power supply is often unreliable due to the remote location, making conventional electric pumps ineffective in maintaining consistent water levels in the campus and additionally in the five water bodies created around the campus.

- To solve these challenges, EBF innovatively installed a solar-powered pump beneath the electric pump in an existing 10-inch borewell, avoiding the need to drill additional borewells. By laying over 8.5 kilometers of underground pipelines, the solar pump is able to supply water to the four water bodies, including one that is 3.5 kilometers away. This solution not only avoids the environmental impact of additional borewells but also ensures a consistent water supply even during power outages.
- The solar setup, safely installed above staff quarters to protect it from wildlife damage, has proven to be a low-maintenance, cost-effective solution. Additionally, EBF has refurbished defunct equipment from previous installations, further reducing waste and the project's overall carbon footprint.

Impact

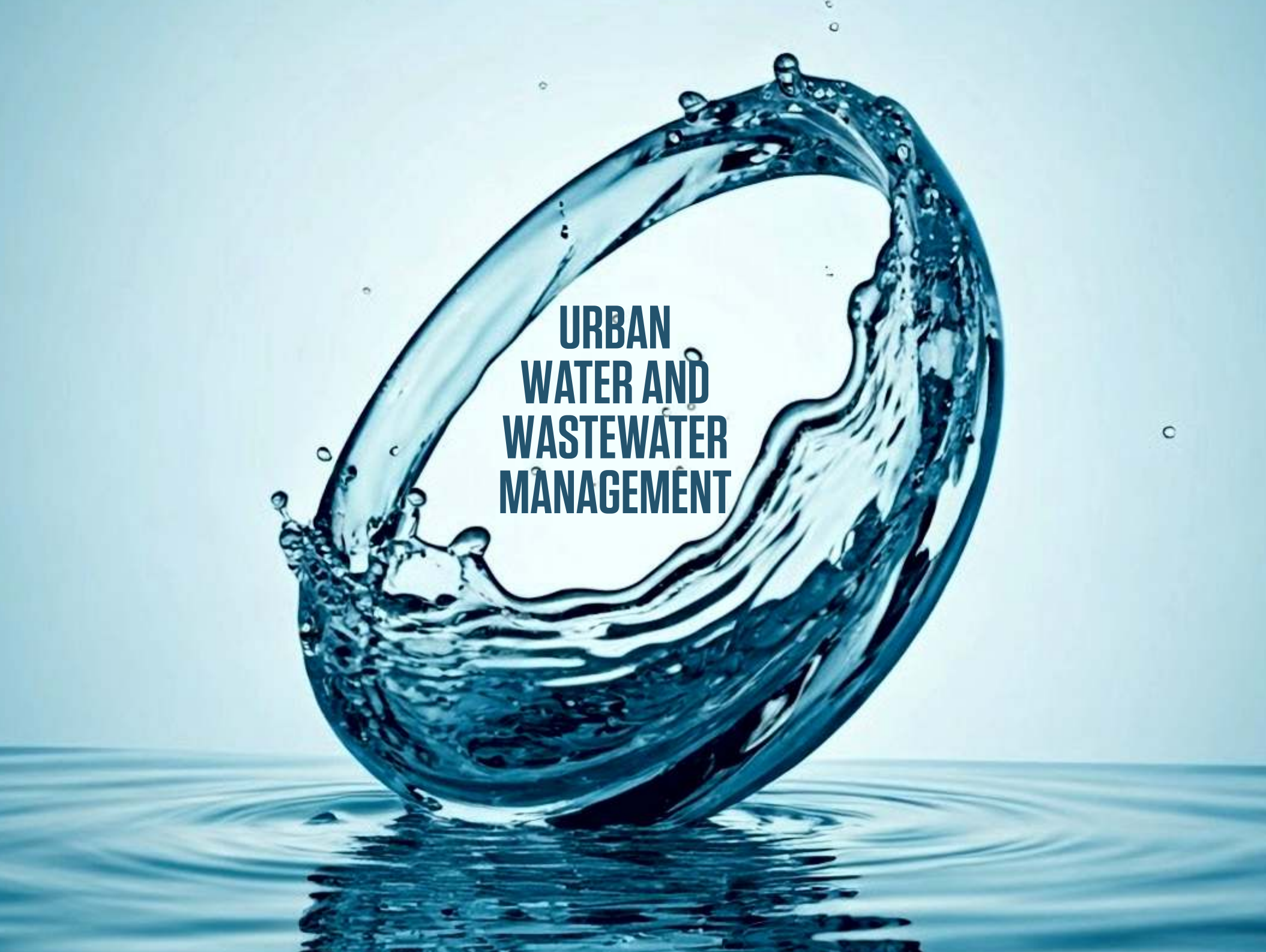
The Dikhala installation is a prime example of how EBF is leading the way in innovative, sustainable water management for wildlife conservation. Key impacts include:

- **Wildlife Water Access:** By maintaining consistent water levels at four water bodies, the installation ensures that wildlife in and around the Dhikala campus have access to water, without needing to expose themselves to predators near open water sources like rivers. While tigers and leopards visit these water bodies,, several smaller creatures too prefer to use these, as they are in safe, secluded areas.
- **Sustainability and Environmental Benefits:** The solar pumps have significantly reduced the forest department's dependence on diesel-operated tankers, avoiding noise pollution and cutting carbon emissions. By utilizing existing infrastructure, such as the borewell and refurbished equipment, EBF has minimized the project's carbon footprint and waste generation.
- **Cost Efficiency:** The innovative use of the existing borewell and underground pipelines saved the cost of drilling new borewells and operating diesel tankers. The installation's solar-powered system ensures long-term sustainability, reducing operational costs associated with water management during power outages.

- **Resilience and Longevity:** The underground pipelines were buried deep to protect them from elephants, while the solar installation was securely placed to prevent damage from wildlife. Additionally, EBF provides a supplemental water supply to the campus tank, ensuring that both wildlife and humans benefit from a consistent water supply even during extended power failures.

- **Community and Environmental Impact:** By ensuring that water is available at multiple points within the forest, Project Aquarius has reduced biotic pressure on a single waterbody, thereby supporting a healthier ecosystem. This initiative also supports the forest staff by reducing their dependence on sourcing water from long distances and exposing themselves to animal attacks, while allowing them to focus on more critical conservation efforts such as anti-poaching activities.

- The 100th installation at Dhikala is a symbol of Earth Brigade Foundation's forward-thinking approach to wildlife conservation, where innovative technology meets sustainable practices to safeguard India's most precious ecosystems. The Dhikala solar installation is a testament to Earth Brigade Foundation's commitment to innovative, sustainable water management solutions that benefit both wildlife and the environment, while also reducing the operational burden on the forest staff.


URBAN
WATER AND
WASTEWATER
MANAGEMENT

VISHVARAJ ENVIRONMENT PVT. LTD.

1st PRIZE

Honouring the spirit of 'Sujalam Sufalam'—ensuring every drop nurtures life, preserves our natural heritage, and sustains prosperity for generations to come.

Brief message from CEO and long-term goals:

The sewage treatment and water reuse project in Chandrapur, Maharashtra, undertaken by **Vishvaraj Environment Pvt. Ltd.,** is a significant step towards addressing the region's water scarcity and promoting sustainability. The project targets the recycling and reuse of 50 MLD of treated sewage water, primarily benefiting the Chandrapur Super Thermal Power Station (CSTPS). Here are key aspects of the project:

Context and Need

- Water Stress: Chandrapur, with a population of over 370,000, is located in a water-stressed region. The Erai River, the city's primary water source, serves both the local populace and industries, including CSTPS.
- CSTPS's Water Needs: The power station, a major consumer of Erai River water, faced severe operational disruptions during summers due to water shortages, with some units shutting down.
- Challenge: The dual need to support the power plant's water demand and conserve the limited river water, while ensuring a sustainable approach for citizens and the environment.

Project Scope and Execution

- Existing STPs: Chandrapur has two sewage treatment plants (STPs) with capacities of 45 MLD and 25 MLD. These plants treat the city's sewage before it enters the Erai River, but the treated water needed to be upgraded to meet reuse standards.
- Vishvaraj's Role: Vishvaraj Environment Pvt. Ltd. took on the challenge to upgrade and augment the existing STPs, ensuring that the treated water could be reused by CSTPS. The

project involves design, engineering, construction, testing, commissioning, and maintenance of systems that recycle and reuse the tertiary treated sewage water.

Benefits

- **Water Reuse:** This initiative demonstrates an innovative approach to water management by converting treated sewage into usable water for industrial purposes, particularly in a water-scarce region.
- **Sustainability:** By recycling sewage water, the project reduces dependency on fresh water from the Erai River, preserving it for other critical uses.
- **Community Impact:** The project not only supports the power plant but also ensures water availability for the citizens of Chandrapur by preventing water shortages that could affect both industry and daily life.

Technological and Operational Excellence

- **Cutting-Edge Technology:** The use of advanced technology in upgrading the STPs and treating the sewage to tertiary standards is a testament to Vishvaraj's innovative approach.
- **Long-Term Vision:** The focus on sustainable practices and the commitment to operational maintenance of the system ensures the long-term success of the project.

Conclusion

Vishvaraj Environment Pvt. Ltd.'s Chandrapur Water Reuse Project is an exemplary case of how technology, sustainability, and resource management can converge to solve real-world problems. The project not only addresses immediate water shortages for CSTPS but also contributes to the overall water security of the region.


BEST
STARTUP - WATER
INNOVATION

LIQUICLEAR TECHNOLOGIES PVT. LTD.

SPECIAL JURY'S AWARD

Mr. Chirag Bhalla
Co Founder & CEO

Mr. Bharat Bhalla
Chairman & Managing Director

Mr. Harendra Pratap Singh
Co Founder & CTO

"Our goal is simple: clean water for today with sustainable solutions for tomorrow"

Brief message from CEO and long-term goals:

"As the CEO of Liquiclear, I recognize that the future of water sustainability is not just a goal but a responsibility we must actively pursue. Our mission is to continually innovate and provide 'Made-in-India, Made-for-the-World' sustainable water solutions that will stand the test of time. By leveraging advanced technologies like our innovative LDI technology, we aim to provide naturally pure mineral water while significantly reducing water wastage, energy consumption and environmental impact. However, addressing the global water crisis requires more than just technology—it requires creating conscious communities and implementing forward-thinking strategies that ensure long-term water security.

Looking ahead, we plan to deepen our investments in research and development, particularly in areas like water reuse and recycling. This will enable us to create systems that minimize the extraction of scarce groundwater and promote efficient resource management. Additionally, we are committed to eliminate information asymmetry amongst citizens regarding purification technologies and foster strategic partnerships with governments, industries, NGOs and communities to implement large-scale water-saving initiatives. We envision a future where every drop of water is valued and preserved, contributing to a more sustainable world.

Our goal is to ethically lead the water purification industry in sustainable practices, ensuring that future generations inherit a planet where access to safe water is abundant and responsibly managed. Through collaboration, education, and technological advancement, we will continue to contribute to the global effort of achieving long-term water sustainability. Together, we can secure a water-positive future for all."

Case Study: The Water Crisis: A Story of Hope, Change and Greener Planet

Initiative: Installation of LDI Water Purifiers at Public Places

Location: India Gate and Udyog Bhawan, New Delhi, India

The Water Crisis: Vulnerable children in Rural India

In the heart of India, we face a looming water crisis impacting millions. With 600 million people under high water stress and 70% of water sources contaminated, the struggle for clean drinking water is a daily reality, especially in rural areas. The NITI Aayog warns that India's water demand may outstrip supply by 2030, threatening vulnerable populations. Unsafe water contributes to 80% of diseases in developing countries, resulting in nearly 1,600 deaths daily in India alone. Alarmingly, 20% of children under five suffer from stunting due to inadequate nutrition linked to untreated water.

Vision and Mission

Liquiclear Technologies was founded with a clear mission: to provide sustainable, efficient and cost-effective water purification systems for all. Their vision: to create an indigenous innovative solution for India's growing water crisis. They believe that access to clean water is a basic human right. Through their futuristic technology and active collaboration with governments, corporates, NGOs and socially conscious communities, they aim to provide socially marginalised communities and children with a reliable, eco-friendly source of safe drinking water. Their founding team, driven by their expertise in water treatment and deep understanding of water issues such as high TDS and contamination, set out to develop innovative, scalable solutions to these challenges.

Their journey began by tackling the hazards associated with traditional purification systems, which not only waste large amounts of scarce water, but use chemicals and salt while removing essential minerals. They aimed to offer a sustainable alternative that maintained natural water quality without depleting essential minerals. After extensive research and development, they introduced our LDI (Liqui-deionization) technology, which is a breakthrough in water purification. This solution is designed to purify water while maintaining its natural mineral balance, with a minimal ecological footprint and low energy consumption.

The Innovation: LDI Water Purifiers

Their LDI water purification system is a next generation technology that offers an efficient, eco-friendly solution to remove dissolved salts, harmful metals and pathogens while retaining necessary minerals in the water without wasting much water. Unlike conventional RO systems, which can waste up to 60% - 70% of water while using high pressure membranes and pumps, LDI uses 'electrosrption' process that eliminates contaminants while preserving minerals and pH, provides over 80% of water recovery, ensuring greater resource efficiency without use of membranes and employing low pressure systems. LDI systems are, hence, designed to operate sustainably, consuming less energy and requiring minimal maintenance making them ideal for offering a long-term solution to the water purification needs of rural communities across the country and in developing economies.

Motive: Public Welfare and Sustainability

Liquiclear's motive extends far beyond developing advanced technologies for water purification; they are committed to empower the rural and marginalised communities with safe drinking water for better health. Their outreach and conscious efforts of the Government of Karnataka have fructified into installation of LDI purifiers in ***25 Residential Schools under the aegis of Tribals/Minorities Department and Water ATMs in 13 rural districts, thereby, impacting over 2500+ households and 20000+ individuals.*** LDI Purifier has also been installed in a residential school in Telangana.

This initiative also aligns with their broader goal of raising awareness about sustainable water management and encouraging communities to embrace eco-friendly technologies. By demonstrating the efficiency and effectiveness of our LDI systems in rural settings, they hope to inspire future collaborations with governments, civic organizations and local communities to expand naturally pure mineral water access across India. Multiple corporates and NGOs have since then committed their support to promote this initiative through their CSR funds.

The Impact: A Model for Public-Private Partnerships

The installation of LDI Water Purifiers in rural areas has had a profound impact on both the public and the environment. Each day, thousands of villagers and tribal communities have access to safe, purified water, significantly improving public health in water stressed areas. By making naturally pure water easily available, Liquiclear is also contributing to the reduction in ground water usage to promote National Water Mission of increasing water use efficiency by over 20%.

The impact has been significant: an estimated **20% decrease** in diarrhea-related illnesses and a 15% increase in school attendance among children at LDI equipped schools. They also conducted awareness campaigns that educated over **2,000 individuals in academic institutes, infrastructure companies, DRDO, hospitality and heathcare industry, NGOs, sports academies, residential welfare associations, Green Certification agencies and corporates** in metropolitan cities on sustainable water management practices using LDI technology, demonstrating that clean water is not just a necessity but a catalyst for health, education, and economic productivity.

In addition, these installations have shown the potential of public-private partnerships in solving critical infrastructure challenges. The success of this initiative demonstrates that collaboration between innovative technology providers like Liquiclear and government institutions can lead to lasting, impactful solutions. It also positions our LDI technology as the most viable alternative to traditional water purification methods, especially in densely populated or resource-constrained environments, to preserve scarce ground water.

Conclusion: Looking forward

Liquiclear Technologies' initiative to install LDI Water Purifiers in rural communities is just the beginning of our larger mission to ensure universal access to clean, safe water. As a company, they are driven by the belief that ***"Water is life, while clean water is health,"*** and they are committed to expanding this initiative across more public spaces, tourist destinations, healthcare and hospitality sectors as well as large gated communities where clean water access is even more critical towards achievement of Net Zero emissions and Net Zero Water targets set forth by the Government of India to meet Sustainability Development Goals of the United Nations.

Through continuous innovation and a focus on sustainability, ***they aim to make a difference*** in providing a greener planet to our future generations.

FICCI WATER MISSION

FICCI constituted a 'Water Mission' in 2011, to promote and provide thought leadership in the area of water efficiency and sustainable water management. It aims to facilitate the sharing and dissemination of best practices across industry sectors in order to encourage corporate and industry players to imbibe a culture of water conservation within their organizations. The Mission focuses on industrial water use efficiency, PPP in urban wastewater and corporate water stewardship.

The Mission is working to create awareness on the existing situation pertaining to water scarcity, quality and generate a discourse on sustainable use of water amongst various users. With growing and extensive depletion and pollution of our water resources, our current work is being restructured to bring this issue back in focus to provide a sense of urgency to the debate of water management.

The objectives of the Mission are:

- To advocate policy direction towards sustainable water management
- To document and disseminate best practices on water conservation, management, reuse and recycling across various sectors and create a forum to facilitate exchange of information and experiences in the country
- To promote through leadership and policy advocacy on sustainable water management including market for wastewater

FICCI Water Awards & India Industry Water Conclave

The FICCI Water Mission has instituted the India Industry Water Conclave and Awards on annual basis to recognize excellence in water conservation and sustainable water management practices. The Conclave and Awards brings together diverse stakeholders from the corporate sector, government, academia, non-governmental organizations, civil society, and financial institutions to showcase best practices, deliberate on policy issues, and propose solutions to surmount challenges in sustainable water management.

FICCI Water Mission Secretariat

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