

RIVER CITIES ALLIANCE

Updates about the Alliance activities

"Rivers have always occupied a central place in India's heritage and ethos, and have traditionally been sources of spiritual inspiration, cleansing and penance... We are striving to introduce a new thinking on river cities. The establishment of 'River Cities Alliance' (RCA) connecting river cities across the country is one such step in this direction" - Shri Narendra Modi, Hon'ble Prime Minister of India

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CITY CORNER; Chennai, Tamil Nadu

TECHNOLOGY CORNER; Environmental Awareness and Action App

WEBINAR

DECODING THE LIQUID WASTE MANAGEMENT RULES

Wastewater treatment and recovery are critical to address water scarcity and environmental pollution. Despite India's rapid economic growth, only around 30% of urban sewage is treated, with the remaining 70% being discharged untreated into rivers, lakes, and groundwater. In response, the Union Ministry of Environment, Forest, and Climate Change has introduced new Liquid Waste Management (LWM) draft rules in October 2024, marking a significant step toward addressing these challenges.

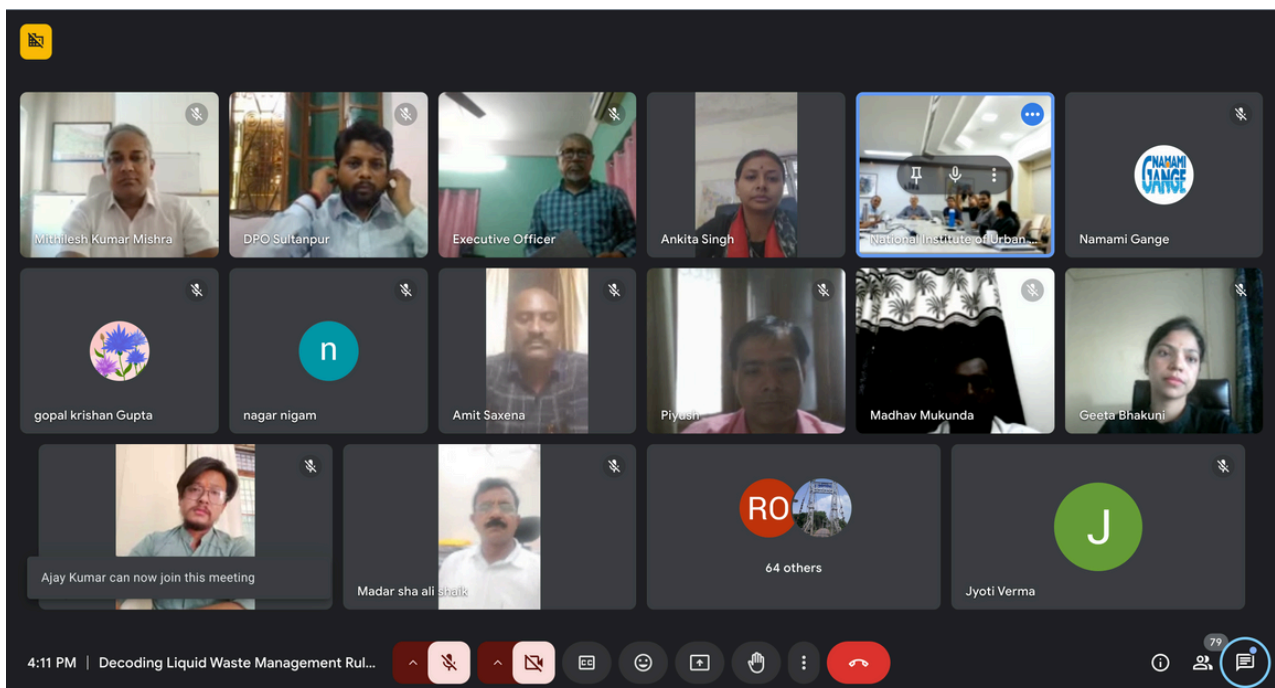
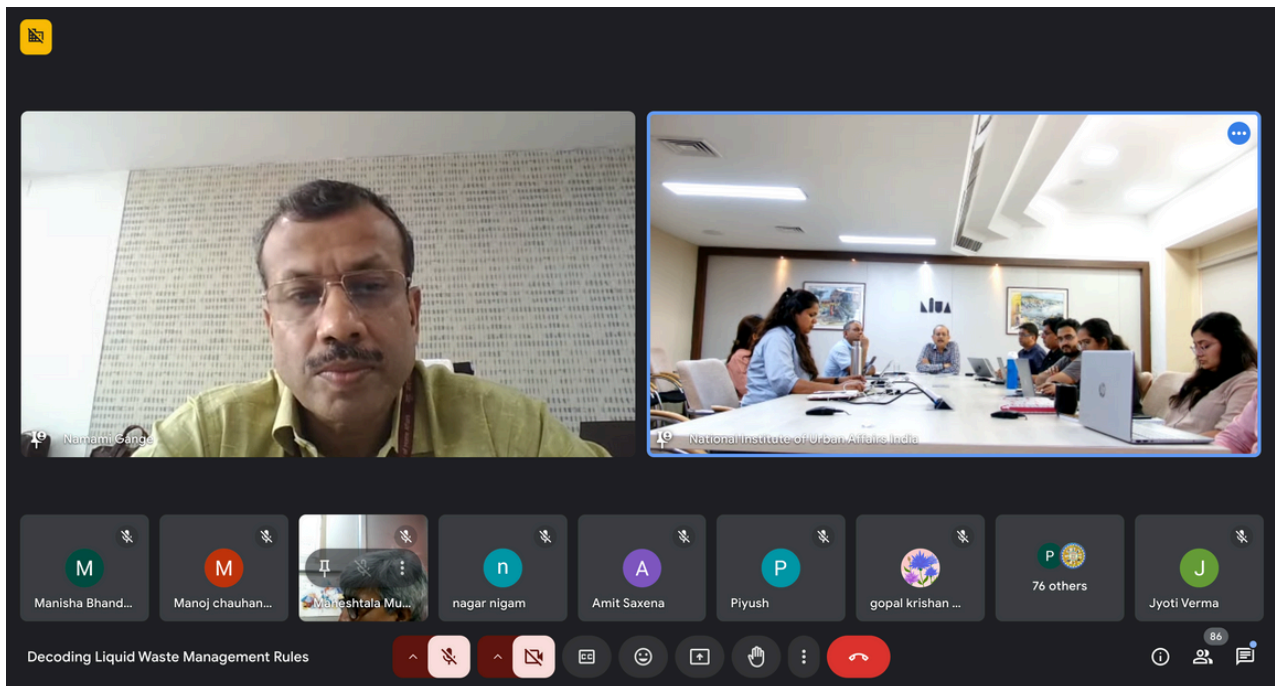
A webinar was organised for the RCA member cities to decode the new LWM draft rules for its effective implementation on the ground. The session opened with a keynote address by Sh. Nalin Srivastava, DDG, NMCG, highlighted the critical importance of managing liquid waste. Dr. Uday Bhonde from NIUA provided an overview of the newly launched LWM rules. Following this, Sh. Rajiv Ranjan Mishra, Advisor at NIUA, led a discussion with various cities on the draft rules. The webinar saw participation from representatives from over 100 cities across states, including Uttar Pradesh, Bihar, West Bengal, Jharkhand, Uttarakhand, Andhra Pradesh, and Maharashtra.

Key takeaways from the webinar include

- **Implementation Timeline:** The Liquid Waste Management Rules will come into effect from 1st October 2025
- **Mapping and Registration:** Urban Local Bodies (ULBs) shall map existing treatment facilities and register bulk users within the city
- **Action Plan Preparation:** ULBs are required to draft an Action Plan for comprehensive wastewater management, covering collection, treatment, reuse, and disposal—either directly or via authorized agencies
- **Monitoring Water Quality:** The rules emphasize monitoring the quality of water bodies where treated water is discharged, with mandatory monthly reporting on a centralized online portal
- **Extended User Responsibility (EUR):** Bulk users are responsible for ensuring the treatment and reuse of wastewater they generate based on water consumption under the EUR obligation
- **Annual Reporting:** ULBs shall submit annual reports to their respective SPCBs by 30th June each year. These reports should include data on wastewater generated, projections for the next five years, drainage network coverage, and the amount of wastewater reused or sold amongst others

- **Registration of Treatment Facilities:** Wastewater treatment facilities shall register on the centralized online portal to generate EUR certificates for treated municipal wastewater and faecal sludge treatment
- **Funding Mechanism:** Participant cities and institutions recommended including clear guidelines on securing funding for infrastructure development and building capacity to comply with the regulations outlined in the draft rules

Glimpse of the webinar



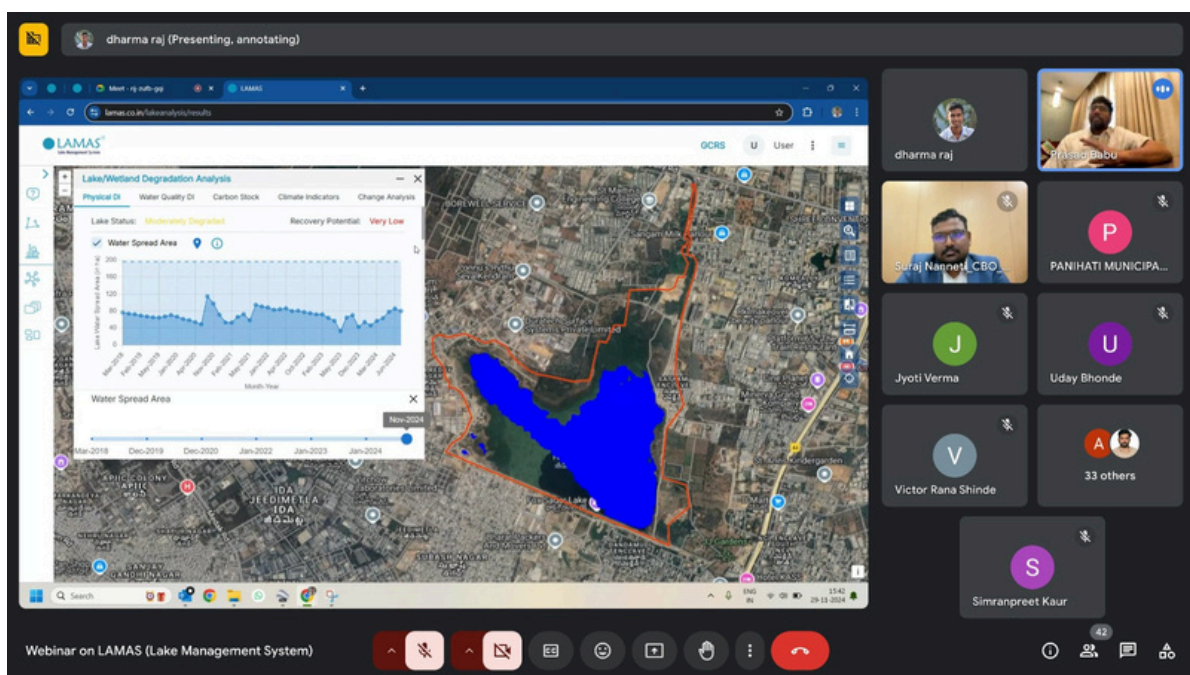
WEBINAR

LAKE MANAGEMENT SERVICES (LAMAS)

Urban water bodies are critical for maintaining the ecological balance in cities. They support essential services like water supply, stormwater management, groundwater recharge, flood mitigation, and recreational opportunities. Additionally, they regulate local temperatures and foster urban biodiversity. However, these water bodies face growing threats from pollution, encroachment, and habitat degradation due to rapid urbanisation. This has led to a decline in their health, emphasising the need for their conservation and restoration as part of sustainable urban development.

A promising innovation addressing these challenges is LAMAS, a WebGIS-based tool for lake health diagnostics and continuous monitoring. LAMAS enables scientific assessment and proactive management of urban water bodies, helping to map, conserve, and track their health. A webinar was organised for the RCA member cities to introduce the technology on 29th November 2024. The webinar started with a small brush-up session on the introduction to RCA, the vision and the activities it undertakes with 145 member cities driving this crucial movement. One of the crucial activities includes capacity building and networking amongst river cities.

Further, LAMAS was introduced as a WebGIS-based innovation for lake diagnostics and monitoring. The session featured Sh. Prasad babu and Sh. Suraj Nanneti from Geo Climate Risk Solutions Pvt. Ltd. The experts discussed the tool in detail, its scientific analysis framework and how deep dived into the conversation on how technology can help in rejuvenating urban water ecosystems. They also shared the monitoring toolbox developed for measuring landscape health of these lakes and wetlands. With successful implementation in cities like Ayodhya, Hyderabad, and Jammu & Kashmir, it's seen as a game-changer for conserving urban lakes.



TECHNICAL SESSION ON CITIZEN-LED URBAN RIVER MANAGEMENT CELEBRATING GANGA UTSAV 2024, HARIDWAR

In a vibrant celebration of the Ganga River's designation as India's national river, the National Institute of Urban Affairs (NIUA) partnered with Namami Gange to host the Ganga Utsav 2024 on November 4th in Haridwar. This occasion not only underscored the importance of the Ganga but also celebrated the achievements of river conservation efforts across India. A group of 75 representatives from 44 member cities of the River Cities Alliance (RCA) gathered on the bank of the Ganga to reflect on their shared goals of river restoration and sustainable urban development.

Dr. Victor Shinde from the National Institute of Urban Affairs (NIUA) opened the technical session by emphasizing the importance of a comprehensive approach to managing rivers and their ecosystems. He encouraged cities within the RCA to share their initiatives for river restoration.

Mr. Anup Samanta, Chief Engineer of Dhanbad Municipal Corporation, described measures taken in Dhanbad to reduce river pollution. Similarly, Mr. Jaishankar, Executive Engineer of Chennai Municipal Corporation, shared Chennai's work on revitalizing its water bodies by reusing treated wastewater. These examples showcased practical actions and community engagement efforts to revive urban rivers and reconnect citizens with their natural resources.

Mr. Rahul Sachdeva from NIUA presented the Urban River Management Plan (URMP) framework, highlighting the value of a holistic plan that combines environment, economic and social aspects to improve river health.

A core feature of the event was the technical session on Citizen-led Urban River Management, moderated by Mr. Rajiv Ranjan Mishra, former Director-General of the National Mission for Clean Ganga (NMCG). This session featured influential voices on sustainable river management, who presented critical insights, including:

- **Locally Rooted River Interventions:** Mr. Joep Steinbusch from the Embassy of the Netherlands in India stressed the need for context-specific river interventions that draw upon local knowledge, resources, and community involvement.
- **Scaling Urban River Management through Participation:** Ms. Upneet Singh from The World Bank emphasized a participatory approach to scaling urban river management, which empowers communities and enhances the ownership and longevity of initiatives.

- **Integrating Basin and City-Level Management:** Ms. Chhavi Sharda from GIZ highlighted the importance of a seamless connection between basin-wide strategies and local urban river management plans, ensuring that actions at all levels complement one another for maximum impact
- **Decentralized Solutions for River Health:** Mr. Depinder Kapur of the Centre for Science and Environment (CSE) advocated for decentralized approaches that can be tailored to specific areas and ensure sustainable, long-term river health
- **Celebrating Natural and Cultural Heritage:** Mr. Manu Bhatnagar from INTACH pointed out that safeguarding and celebrating the river's natural and cultural heritage is essential, as it fosters a sense of pride and historical continuity among communities

Glimpse of the technical session

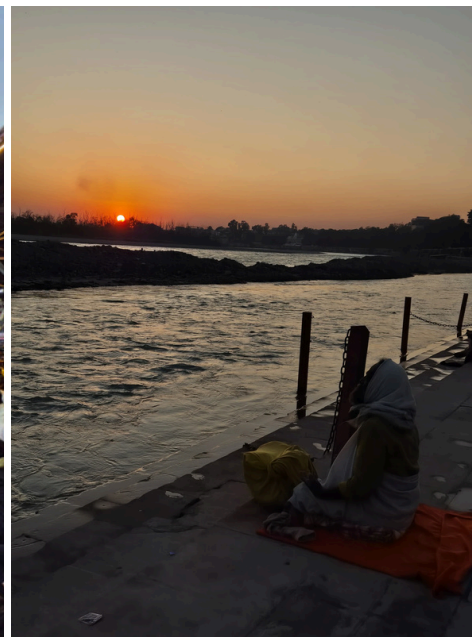


THEMATIC REPORT ON "LEVERAGING THE ECONOMIC POTENTIAL OF RIVERS IN CITIES"

The National Institute of Urban Affairs (NIUA) and the National Mission for Clean Ganga (NMCG) are collaborating to develop a comprehensive document that highlights the diverse ecosystem services provided by urban river ecosystems to cities. As part of this initiative, the team visited Rishikesh in December 2024 to engage with various local stakeholders, including the Municipal Corporation, Development Authority (MDDA), Town and Country Planning Organization, Irrigation and Flood Control Department, Tourism Department, Forest Department, Ghat Samitis, local hotel associations, and community representatives.

Rishikesh, nestled along the banks of the River Ganga, holds profound socio-cultural and ecological significance. The river-riparian forests adjacent to the city serve as critical elephant corridors, and conservation efforts are underway to preserve these natural habitats. Additionally, the city's identity as the "Yoga Capital of the World" and a premier white-water rafting destination plays a significant role in its economic framework, generating approximately INR 53 crores annually from rafting activities alone. Moreover, the city accommodates nearly 13 lakh Kavad Yatris annually, necessitating robust riverfront management strategies to handle large congregations efficiently.

Through this thematic report, NIUA and NMCG aim to strengthen the link between urban development and river health, ensuring a balanced approach to ecological preservation and economic growth.



TRAINING PROGRAMME ON 'RE-IMAGINING DRAINS AS PLACES FOR PEOPLE'

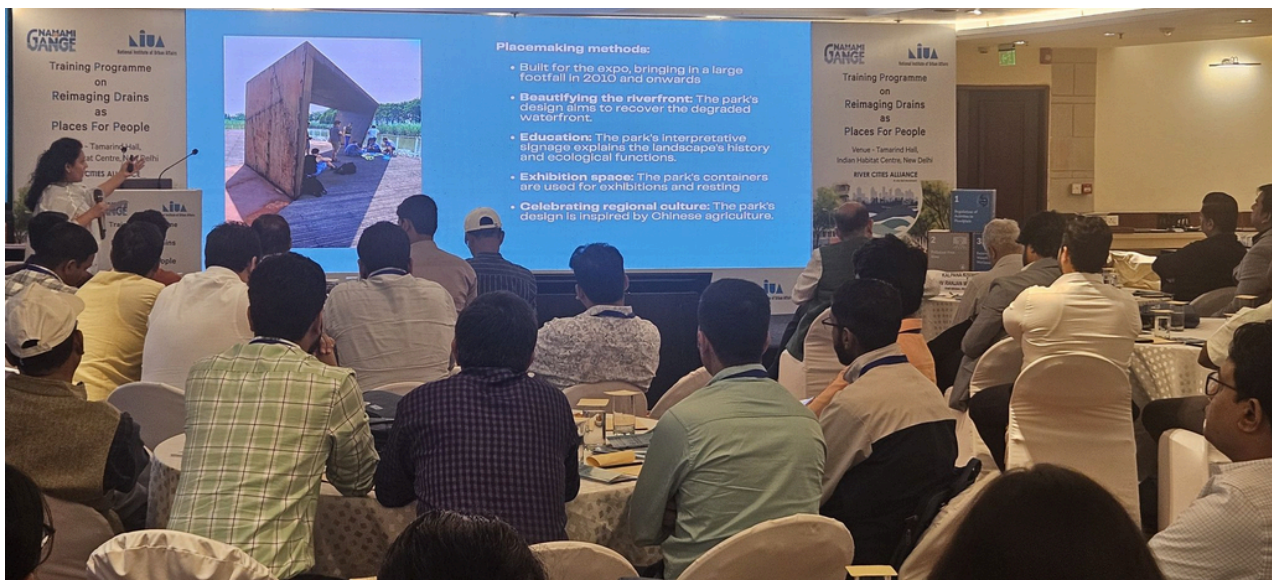
Some of these drains were once first—and second-order streams flowing into the major river spine. Now, they have been reduced to polluted water outfalls. The volume and quality of water in these drains directly affect the health of the communities along the drain and the region's natural ecosystem.

Recognising the immediate need for rejuvenating our drains, NIUA and National Mission For Clean Ganga conducted a two-day training programme on 'Re-imagining Drains as Places for People' where 36 city officials represented 20 cities and 8 states in India. Through interactive sessions, group exercises and a site visit, the participants were provided with hands-on training on placemaking tools, varied solutions for natural water treatment, and methods of citizen engagement to ensure long-term sustainability.

Some of the key learnings were:

- Converting drains from an eye sore to a cynosure
- Introducing a paradigm shift in thinking – from covering a drain as an out-of-sight solution to rejuvenating the drain and tackling its issues head-on
- Moving towards holistic planning by cleaning the water and edge and integrating contextual placemaking elements
- Understanding the value of community participation, inclusion and accountability for planned and sustainable operation and maintenance





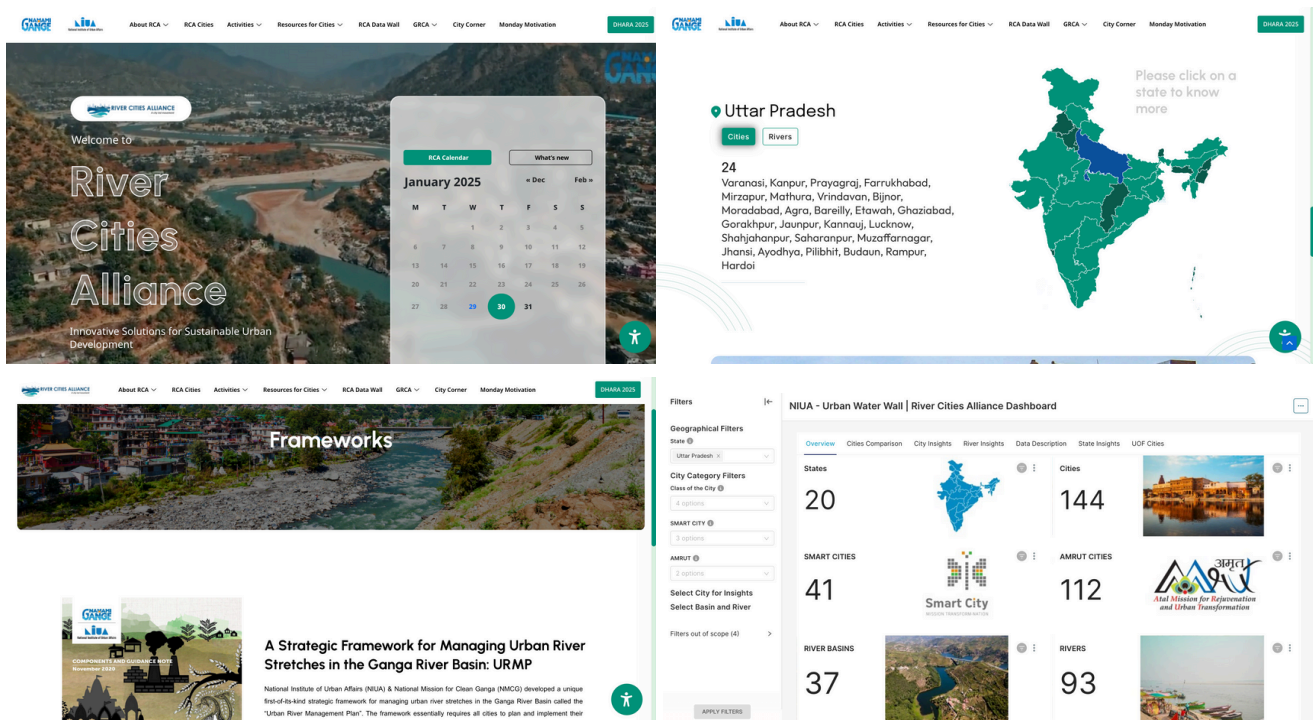
Glimpses of the workshop

LAUNCH OF RIVER CITIES ALLIANCE (RCA) WEBSITE

The River Cities Alliance (RCA) website (indiarca.org) was unveiled by the Hon'ble Minister of Jal Shakti at the Ganga Utsav 2024. Jointly established by Namami Gange, under the Ministry of Jal Shakti, Department of Water Resources, RD & GR, Govt. of India and National Institute of Urban Affairs. RCA is a platform for 145+ river cities across the country to exchange knowledge and good practices for managing urban rivers. The RCA Secretariat, managed by NIUA provides capacity building and technical support to member cities to address critical river-related challenges.

Key Features of the RCA Website:

- **Knowledge Hub:** A repository of technical resources, case studies, and best practices for sustainable river management
- **Training and Capacity Building:** Information on workshops, webinars, and programs to enhance skills and knowledge
- **Project Showcase:** Successful urban river management initiatives for cities to learn and adapt
- **Urban Water Wall:** Comprehensive dashboards featuring member city profiles, challenges, and strategies
- **Collaborative Space:** A forum for cities to share experiences and collaborate on innovative projects
- **Public Engagement:** A space for citizens to volunteer, share feedback and engage in river rejuvenation efforts



LAUNCH OF STANDARD OPERATING PROCEDURE (SOP) FOR RIVER-SENSITIVE GATHERINGS

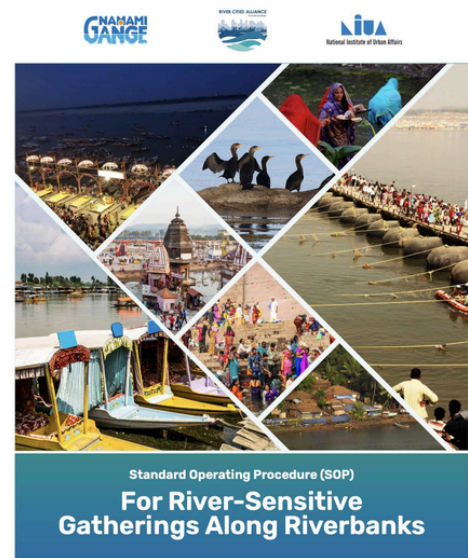
Rivers have held a special place in Indian culture since time immemorial, often celebrated and revered through large gatherings and festivals along their banks. While these events bring communities together while celebrating our rivers, they also sometimes leave long-lasting adverse impacts on river health, its biodiversity, and the associated ecosystems. Challenges such as sanitation, solid waste, and floodplain conservation frequently go unaddressed, contributing to significant environmental degradation.

We are thrilled to announce the launch of the “Standard Operating Procedure (SOP) for River-sensitive gatherings along Riverbanks” by Hon’ble Minister of Jal Shakti Shri C.R. Patil, during the recently held Ganga Utsav at Haridwar on 04 November 2024, which marks the declaration of the Ganga as a National River. The SOP has been developed by the National Institute of Urban Affairs (NIUA) in partnership with the National Mission For Clean Ganga (NMCG). It is a step forward in ensuring the Aviral (continuous) and Nirmal Dhara (unpolluted flow) of rivers, aligning with NMCG’s mission to safeguard river health.

Unlike other available SOPs which primarily focus on the crowd as well as law and order control, this SOP attempts to lay down comprehensive guidelines to promote sustainable practices of river-sensitive gatherings, providing directions for:

- Floodplain Protection
- Riverine Biodiversity Protection
- Sanitation and Solid Waste Management

This SOP is anticipated to serve as a valuable resource for decision makers and city functionaries to manage large gatherings responsibly, protecting the wholesomeness of rivers that are central to these events.



SEASON 5 STUDENT THESIS COMPETITION ON REIMAGINING URBAN RIVERS

The Student Thesis Competition (STC) Season 5 on "Re-imagining Urban Rivers" has been launched. This year's competition saw an overwhelming response with submissions from over 35 institutions across 16 states in India. The projects cover 18 river stretches, addressing critical environmental, ecological, and socio-economic issues related to urban rivers in India.

The Top 10 finalists across 15 academic programs from undergraduate (UG) and postgraduate (PG) courses address a broad spectrum of challenges related to river ecosystems, including:

- Ecological restoration of ponds through starch-based systems
- Ecological values of urban marshlands
- Hydrology, habitat, and humanity for rivers
- Resilient waterfront urbanism
- Flood vulnerability and informal settlements
- Impact of river diversion, case of oxbow lakes
- Landscape metrics influencing river water quality in hilly areas
- Eco-spirituality- the incarnation of cremation ghats
- Sustainable wastewater reuse master plans
- Knowledge-guided machine learning for waterbody management
- Eco-mobility of inland waterways





CITY CORNER

Chennai, TAMIL NADU



Chennai faces the dual challenges of high water stress and heavy rainfall, which have led to both severe droughts and devastating floods. The catastrophic 2015 floods, resulting from a 100-year rainfall event, caused significant loss of life and property damage estimated at \$20 billion. This disaster underscored the critical need for a comprehensive approach to water management in the city.

In response, the Greater Chennai Corporation (GCC), in collaboration with Chennai Smart City Limited, initiated the Chennai Water Restoration and Resilience Framework. This framework aims to unify and scale the efforts of governmental bodies, private entities, and citizens in restoring water bodies to prevent future flooding and recharge aquifers.

The initial phase of the project focused on restoring 210 publicly controlled water bodies within the Greater Chennai Corporation area. Many of these sites had been degraded due to encroachment, pollution, and neglect. Restoration efforts included desilting, constructing groundwater recharge structures, and rebuilding supply channels through nearby stormwater drains. These measures not only enhance the city's climate resilience but also improve water quality and availability.

The project is funded publicly as well as privately by corporations and non-governmental organisations (NGOs) through the “Adopt a Water Body” idea, in which willing contributors are allocated specific tasks to complete.

Know Your Water Body

There are various types of water bodies in Chennai. CSCL has taken an initiative to restore them for the betterment of Chennaites and ecology. Below is a listing of these water bodies.

Enter Pond Name

Enter Pond Location

Enter Pond Size

APPLY





Kamarajapuram Pond

Kosapur Pond (Chelliamman Kulam)

Kathakuzhi Burial Ground Pond





Snapshot of the Dashboard developed by the city to map and monitor the waterbodies in the city

Building on the success of the initial phase, the GCC plans to restore an additional 460 water bodies in the next phase, with subsequent plans to rehabilitate over 1,200 more upstream from the city. This ambitious scaling up reflects the city's commitment to comprehensive water management and resilience building. These restoration projects are part of a broader strategy to address Chennai's water challenges holistically. By integrating efforts across various sectors and involving multiple stakeholders, the city aims to create a sustainable and resilient water system capable of withstanding future climatic and environmental stresses.



PURA KULAM WATER BODY

Impact of the rejuvenation work on the water body

Water availability in the pond

- Before – 122 days in a year
- After – 268 days in a year

Groundwater recharge:

- Before – 1412.33 cum.
- After – 20803 cum.



TECHNOLOGY CORNER

ENVIRONMENTAL AWARENESS AND ACTION APP

The Earth5R App is an all-things-sustainability platform designed to empower citizens to take climate action. With Earth5R app, citizens and organizations can connect with a community of passionate individuals, participate in community-driven initiatives, and track their progress as they work towards achieving their environmental goals. It empowers users to leverage the power of their mobile phones for social good. Through this app, people can take charge of their surroundings, participate in local initiatives, share their knowledge on sustainable practices, and learn from others. Users can participate in a variety of environmental challenges with the Earth5R app and connect with other eco-friendly people to encourage sustainable living. It offers modules for citizens to make a difference while volunteering or interning. Organisations and civic groups can form their groups to mobilise citizens and plan environmental events. Every user receives a sustainability portfolio and is given incentives for action.

Implemented Projects

Since its launch, the Earth5R App has seen widespread adoption in major urban centres in Pan India. Its success has paved the way for expansion to other cities and countries, adapting to local environmental challenges while leveraging global community support.

The Earth5R App has significantly contributed to the improvement of urban river conditions in the pilot cities. Notable achievements include:

- A measurable decrease in pollution levels within the first year of implementation.
- Total **764 clean-up drives organized**, directly involving local communities.
- Enhanced awareness and adoption of waste segregation and recycling practices among **12,50,000 citizens with a base of 48,000 App User- Citizen Trainers**.
- The establishment of a scalable model for urban river management that can be adapted to other contexts.

7.5M+

Global Volunteering
Hours

30K+

Environmentalists
mobilised via
Earth5R App

50K+

Impact Stories
documented in
Earth5R App

6M+

Climate conscious
Audience reached



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RIVER CITIES ALLIANCE
A city led movement



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