

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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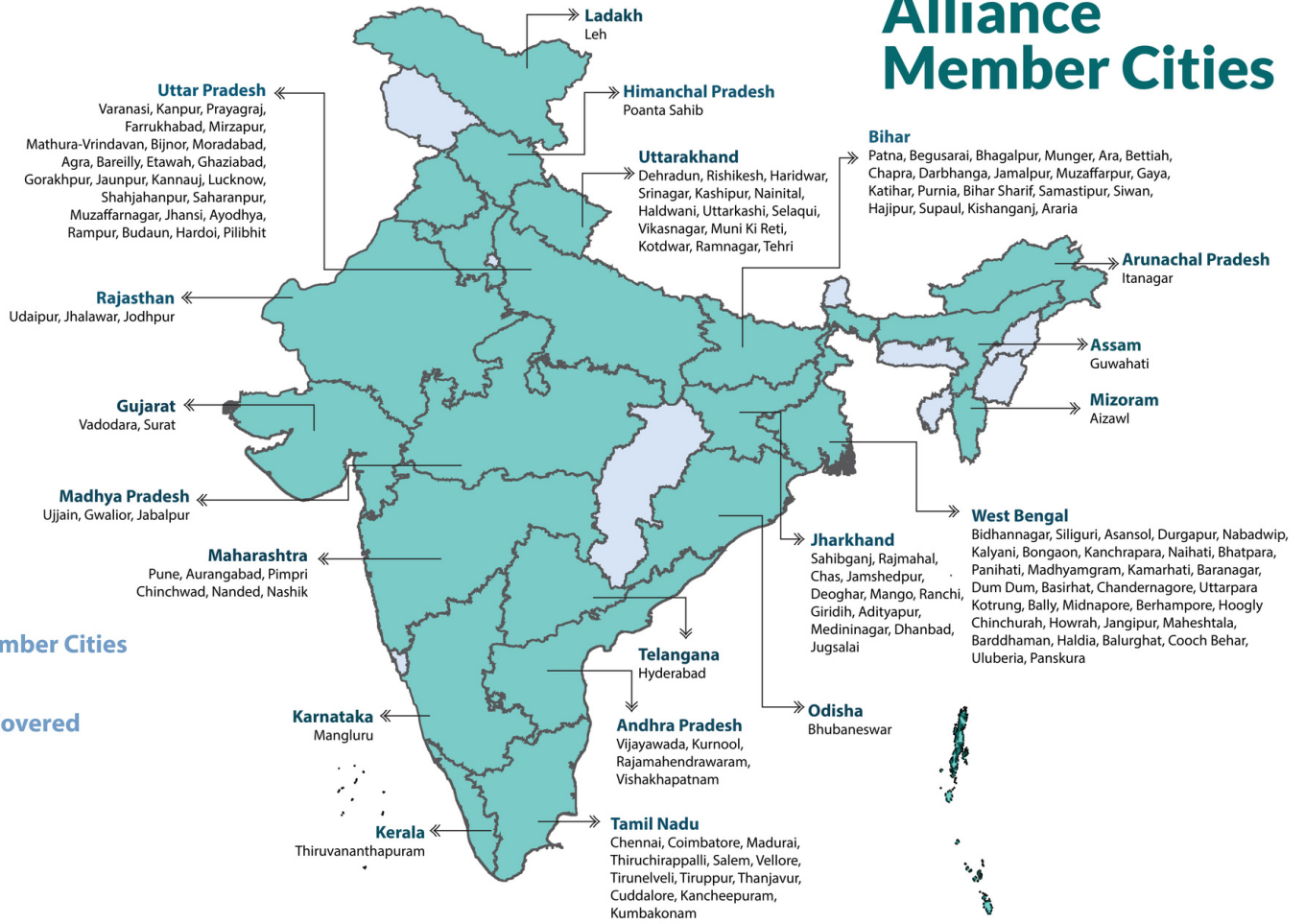
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RCA CITIES SNAPSHOT



Alliance Member Cities



RCA Member Cities
142
States Covered
20

States
20

SMART Cities
31 Smart City

AMRUT Cities
96 AMRUT 2.0
1st Mission for Rejuvenation and Urban Transformation

Ganga Basin Cities
86

River Basins
28

Rivers
78

URBAN RIVER PARTNER'S MEET AND LAUNCH OF STUDENT THESIS COMPETITION SEASON 4

On the occasion of the World River's Day (celebrated worldwide on the last Sunday of September) NIUA and NMCG hosted an Urban Rivers Partners Meeting on 22 September. The event aimed at celebrating the rivers by bringing together like-minded partners working in the domain of managing rivers to reflect on the challenges and possible solutions for cities managing their river stretches.

The meeting served as a platform to announce several groundbreaking initiatives and collaborations mentioned below that promises to reshape the future of our urban rivers. Preparation of Urban River Management Plans - In a significant move towards sustainable urban river management, plans for the preparation of 60 Urban River Management Plans were unveiled. The project will be carried out with World Bank assistance, underscoring the importance and global significance of the project.

Launch of the Academic Arm of the RCA - The meeting marked the official launch of the Academic Arm of the River Cities Alliance. This alliance, comprising universities, research institutions, and experts, is dedicated to advancing river-related knowledge and solutions.

Launch of Season 4 of Student Thesis Competition on "Re-imagining Urban Rivers" - One of the most exciting announcements at the Urban Rivers Partners Meeting was the kick-off of Season 4 of the Student Thesis Competition on "Re-imagining Urban Rivers." This competition encourages young minds to explore innovative ideas and solutions for the sustainable development and restoration of urban rivers. The new season promises even greater opportunities for research, collaboration, and impact.



URMP TRAINING PROGRAM IN AYODHYA, UTTAR PRADESH

A two-day training program on preparing URMP for the alliance member cities of Uttar Pradesh was conducted on 5-6 July 2023 at Ayodhya, Uttar Pradesh. The workshop focused on introducing the Urban River Management Plan Framework, which serves as a comprehensive guideline for cities to enhance the management of their rivers.

The training program aimed at fostering awareness on urban river management in 18 member cities of Uttar Pradesh, official onboarding of new member cities Pilibhit and Badaun in the RCA, exposure visit for participants to good practices by Ayodhya Nagar Nigam etc.



Glimpse of the 3-day training program on URMP

URMP TRAINING PROGRAM IN BIHAR

A two-day training program on preparing URMP for the alliance member cities of Bihar was conducted on 27-28 July 2023 at Patna, Uttar Pradesh. The workshop focused on introducing the Urban River Management Plan Framework, which serves as a comprehensive guideline for cities to enhance the management of their rivers. The training was attended by around 60 officials from 20 alliance member cities of Bihar.

During the training, six more cities, Araria, Samastipur, Siwan, Supaul, Kishanganj and Hajipur, were officially onboarded into the River Cities Alliance



Group picture of officials from State

WEBINAR “WATER HYACINTH- FROM BLUE DEVIL TO A FASHIONABLE SOLUTION

A webinar dedicated to exploring ways to harness the potential of Water Hyacinths (Jal Kumbhi) was organised on 4th August, 2023 in online mode. The webinar featured Mr. Gaurav Anand, the founder of the Swachhatapukare Foundation, as a guest speaker. The webinar highlighted as to how Water Hyacinths, when managed effectively, can be transformed into eco-friendly and useful products. Examples included diaries and beautiful sarees, showcasing a unique approach to sustainable resource utilization. By repurposing water hyacinths, an invasive species can be transformed into valuable items thereby reducing their negative impact and further contributing to a cleaner and more sustainable environment.

Collection of Water hyacinth from the water bodies



THESIS COMPETITION ON “RE-IMAGINING URBAN RIVERS”

Grand Finale of STC 3.0 at CEPT University, Ahmedabad - The third season of the thesis competition (2022-23) marked its culmination on 10-11th August in CEPT University, Ahmedabad. The competition aimed to tap into the intellect and creativity of students from various backgrounds, ranging from Engineering to Planning, to arrive at innovative solutions for re-imagining the outlook and management of rivers that flow through cities. The season 3.0 saw 20 innovative projects from students from over 16 Universities all over India.

Grand Finale of Season 3 witnessed a remarkable plethora of engagements with the academicians, not only involving the finalists of the competition but also their respective supervisors. In addition to this, faculties and students from several institutes of Gujarat were also invited to be a part of this academic event. Around 100 students from various educational institutions across Gujarat participated in the event. These students were sensitized on the systems approach for managing urban river stretches. The engagement with students was in the form of interactive exercises, games, and team competitions. The jury constituted for evaluating the projects as presented by the thesis competition students were evaluated by Mr. S Vishwanath (Biome Environmental Solutions), Ms. Manvita Baradi (UMC), Dr. Nikita Bhakuni (Associate Professor, CEPT) and Dr. Mona Iyer, Dean, Faculty of Planning, CEPT University.

In addition to the above, a roundtable with around 30-40 faculty members from various educational institutes was conducted with an objective to foster collective discussions on how to mainstream river thinking and considerations into academic curricula. The roundtable emphasized the pivotal role of academia in advancing urban river management and explored avenues for enhancing educational approaches to align with the sustainability of urban rivers.





A significant highlight of the STC Season 3.0 Finale was the 'Faculty Roundtable' which took place on 10-11th August at CEPT University, Ahmedabad. Over 40 faculty members from various fields attended the roundtable. The event was organised with an aim to 'Mainstream River-Centric Thinking into Academia's Fabric'. The event was characterized by a masterclass-like atmosphere where a range of distinctive ideas, avenues, and possibilities emerged for potential engagement, co-learning, and co-working between academia and NIUA-NMCG.

On-boarding of the 'Academic Wing' to RCA: The 'Academic Wing' is being welcomed into the 'River City Alliance' (RCA), an ever-growing network encompassing 148 river cities. This expansion will serve to broaden the reach and engagement of RCA.



CITY CORNER

APLI KHAM: AN (ECO)LOGICAL APPROACH TO RIVER RESTORATION, AURANGABAD



The journey of Kham River Restoration Mission in Aurangabad is straight out of the existing discourses, happening at all levels of urban fraternity. It makes a case for any city that intends to bring change, a change that is bolstered by a shared vision, meaningful partnerships, ingenious use of existing municipal resources and active participation from residents and local organizations. The Mission has been tied together by strong leadership and a delicate balance of thought and action. It has also been instrumental in laying the foundation for “a collective stewardship” that steers away from the business-as-usual approach and thrives on a sense of ownership towards the river. That’s the story of ‘Apli Kham’...and this is just the beginning.

Every morning, the seventy-five-member Whatsapp group of stakeholders involved in the Kham River Restoration Mission wake up to a message from Mr. Asadullah Khan, Assistant Commissioner, Aurangabad Municipal Corporation. It consists of an image of his team on ground and plans for the day on the work around the river. Khan Saab (as he is fondly referred to by the people of Aurangabad) assisted by Mr Prakash Bakal, Project Coordinator, EcoSattva Environmental Solutions Pvt. Ltd. and Mr. Tauqir Ahmed, Junior Engineer, Garden Department, Aurangabad Municipal Corporation have been driving action along the Kham Riverfront consistently for the last three years now.

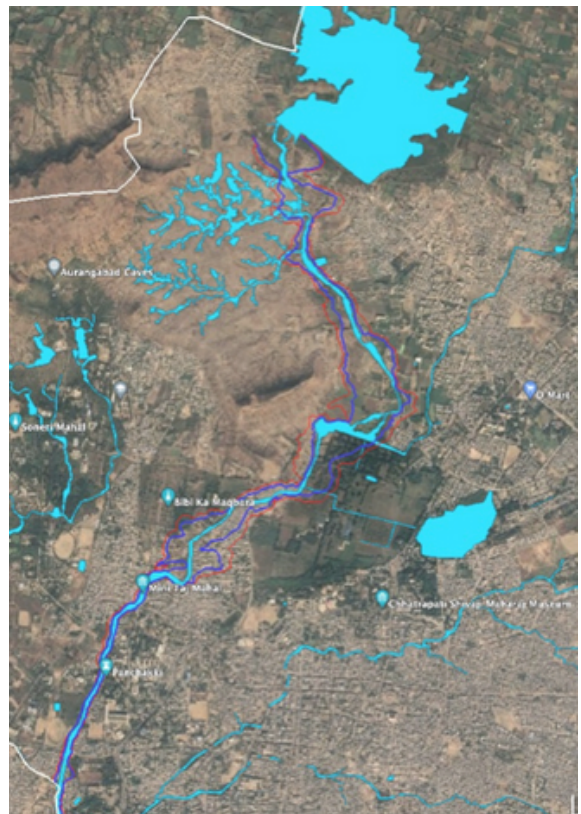
As the day progresses updates come in from other teams- the Gardens team reporting on the status of bridges that are being barricaded to prevent dumping of waste into the river and its contributing nalas, the Solid Waste Management team reporting on collection and segregation in the colonies and areas along nalas and the river, the sewerage department reporting on the diversion of raw sewage into the underground network and management of leakages.

The updates range from heart-warming images of a peaceful pools of water or a flock of migratory birds spotted by the JCB operators, or water flowing through the old nehers, or a group of laughing children taking a dip, to concerning images of big piles of garbage or construction and demolition(C&D) waste in or along the river, dead animals abandoned in nalas or new sources of raw sewage entering the river. All put together, they capture the intricate journey that is the Kham River Restoration Mission.

Understanding the Kham River

The Kham is a seasonal river which originates from the Jatwada hills and flows through the city of Aurangabad, located in Maharashtra, India. Before its confluence with the Godavari river (Nath Sagar), Kham River stretches over 60 km of urban, industrial and rural landscapes. The river finds mention in the historical accounts as the lifeblood of the thriving ancient city established by Malik Amber.

Now, like most rain-fed rivers in India, the river reveals its bare bones in the summer heat, and comes alive in the monsoon, gushing through the town center of this historic city. Of the 14 km stretch passing through the city, approximately 7.73 km mirrors a typical degraded urban river. The challenges that it faces include the existence of unregulated sand mining in the river bed, encroachments of the river bed and floodplains and solid and liquid waste pollution, among others. Moreover, a majority of citizens relate to the river as a naala (drain carrying black water), obscurely flowing in their backyards. Nevertheless, the river continues to support economic activities like dhobi-ghats, agriculture etc; and harbours rich architectural and cultural heritage along its banks in addition to the natural functions it performs.



The Kham River Restoration Mission

The prelude to the Kham River Restoration Mission was in 2016, when Varroc-an MNC having its roots in Aurangabad, Confederation of Indian Industries (CII) and the Aurangabad Cantonment Board joined hands to restore a 1.5 km stretch downstream of the River. Through plantation and in-situ treatment using green bridges, results in the form of odour control and beautification were achieved. However, with the constant in-flow of sewage and solid waste dumping in the upstream areas, the need for a broader strategy became evident. In 2019, Varroc onboarded EcoSattva, an Aurangabad-based social enterprise working to mitigate environmental challenges to conduct a study and design a three-year plan for the Kham River.

Some Fun and Not so Fun Facts!

Floristic assessment identified 86 species of flora (aquatic/ semi-aquatic and terrestrial) thriving along various segments of the river. But the absence of some invasive species commonly found around polluted water bodies like water hyacinth, water cabbage, typha etc. was surprising!

Water quality analysis revealed exacerbation of pollution as the river flows through the densely populated parts of the city with very high COD, BOD, TDS, TSS, very low DO and presence of E. coli and Fecal coliform bacteria

40% of individuals surveyed were unaware of the existence of the Kham river in Aurangabad city but encouragingly, 84.2% said they would be interested in participating in a river Restoration mission

The river and nalas under study flows directly through 30 municipal wards and a total of 32,225 m² of the river was found to be covered with MSW. A higher concentration of MSW was found near bridges and other points of access.

In the last three years, based on a series of surveys, interviews and an orthophoto drone survey three areas of interventions have been devised -

1. **Eco-friendly Riverfront development** which uses minimal concrete and focuses on restoring the riparian vegetation endemic to the region, that remain a public asset and reinstates the city's lost connection to the river. As a result, more than 1 lac sq Meters area has been reclaimed after cleaning of legacy waste and invasive species. The city now has 10 new ecological river-front spaces with its green cover being 50,000+ trees richer. And all pathways have been created by upcycling construction & demolition debris from different parts of the city.
2. **Upstream interventions** that ranges from intercepting and diverting sewage to door-to-door awareness on solid waste management. This has led to integration of thousands of households into the municipal collection system and reduction/complete elimination of more than 150 Garbage Vulnerable Points (GVPs) in the city- Thus directly preventing solid waste pollution from entering the water streams.
3. Creation of a **public campaign and citizen's movement** that brings the river back into the conscience of residents in a meaningful way. Multiple offline, online, social media, print media and radio campaigns have now been run in the city to engage citizens and truly make the river the heart of the city.

Over the course of two years, the Kham River Restoration project has seen significant progress. It has received recognition and a growing network of partners have come forward to scale and amplify the impact.

The city now is a member of the River Cities Alliance, an alliance of more than 50 river cities in India, established by the National Institute of Urban Affairs and the National Mission for Clean Ganga. Under this, it is currently developing its Urban River Management Plan, expanding the scope from one river stretch to the holistic management of its two river ecosystems and water bodies. The city's approach remains solution-oriented: from overcoming the pressing questions through collective brainstorming to translating strategies into on ground interventions and embracing the learnings on the way.

With its Kham River Restoration Mission, Aurangabad has paved the way for a number of other cities that aspire to bring change.

"Owing to the partnerships, the project has been able to witness solutions to the complex decisions and discussions confronting Indian river cities. The more complex issues take more time, and the demonstration of intent and impact from the lower hanging fruit sets a context for the complex issues too, like has been proven by the Kham River Restoration Mission"

Victor Shinde, Lead, Water and Environment at National Institute of Urban Affairs.



Restoring the groundwater fed natural springs/water bodies riparian buffer and wells in the flood plains to enhance the baseflow



RIVER CITIES ALLIANCE
A city led movement



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