

NbS for Tackling Water Scarcity at Source

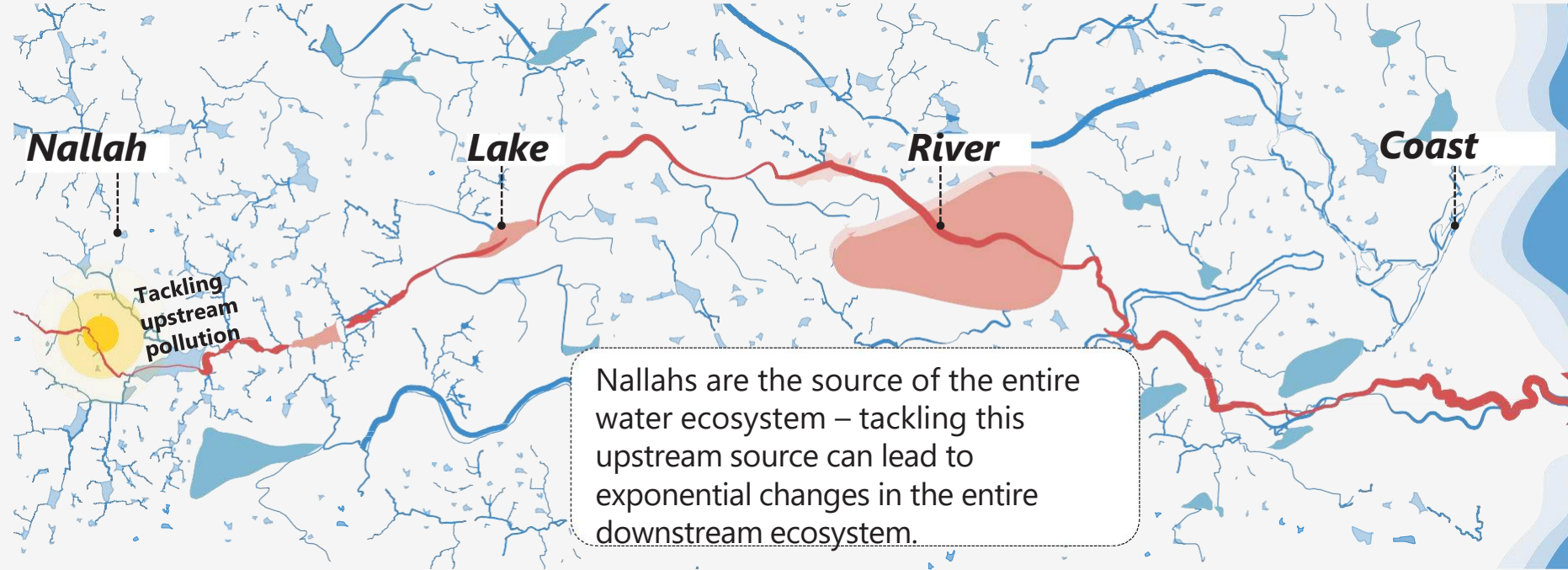
Problem: Water scarcity and pollution

India is at a critical point of urbanization, with 75% of its projected infrastructure for 2050 yet to be built amidst extreme climate change. This rapid urbanization significantly impacts cities' blue-green infrastructure. Even in the current scenario, 72% of the sewage generated in urban centres remains untreated and is discharged into our freshwater system through nallahs and drains.

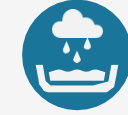
By 2050, 550 million people in Indian cities are projected to face extreme water stress, making India the most water-stressed region globally.

To solve these problems, we need to target the source through a **decentralised, nature-based** approach. Upstream nallahs carry pollutants to water bodies; **treating them at the source is crucial for reducing water stress.**

Solution: Tackling upstream pollution through cleaning and rejuvenation of nallahs



The capacity of a nallah to address challenges



Channelizing and storing stormwater run-off



Increasing ground-water recharge

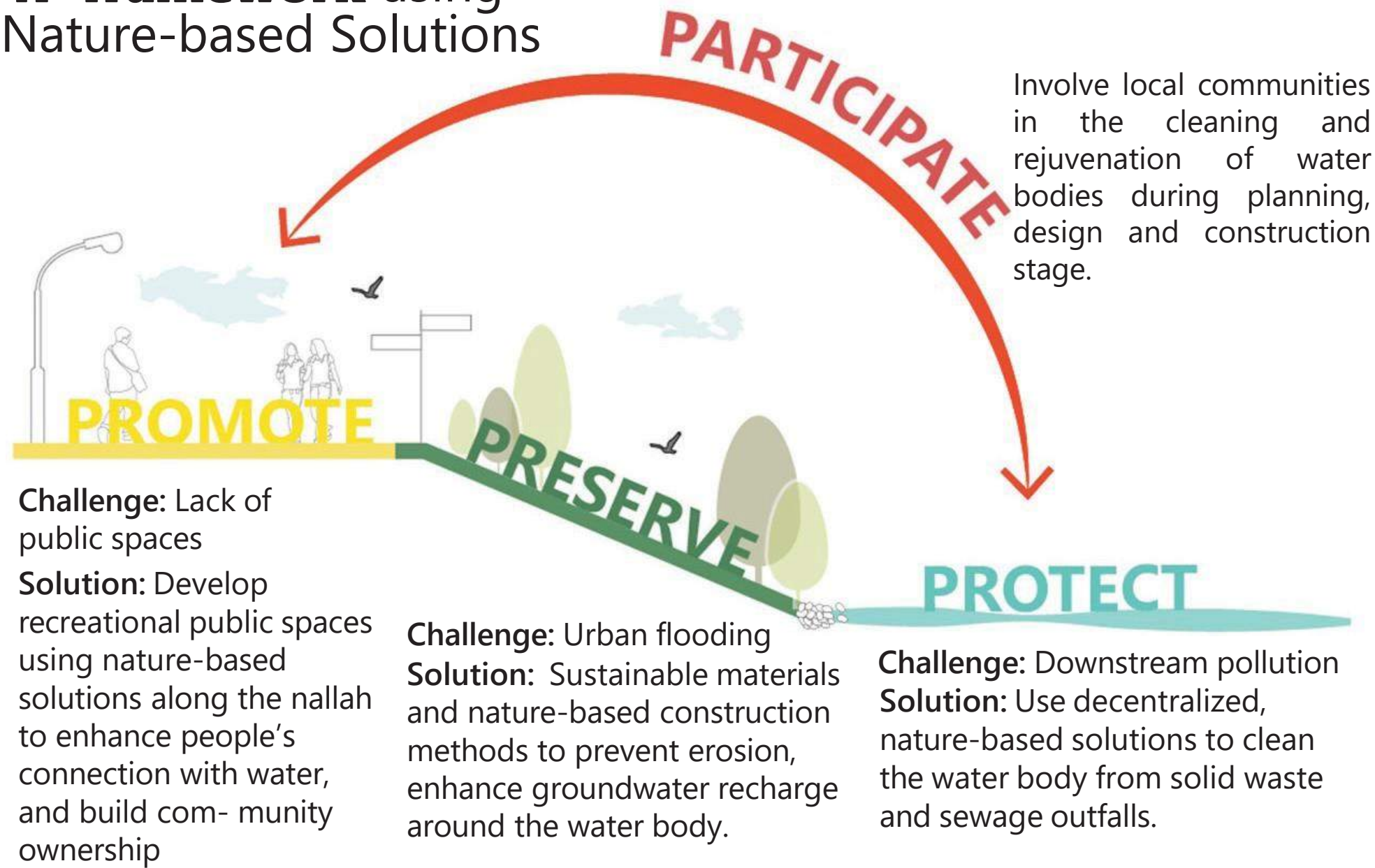


Creating everyday public spaces along the nallahs

Integrating Nature-based Solutions

In large urban centres, it is imperative to **complement** centralised treatment plants with nature based decentralised solutions like wastewater treatment plants, phytoremediation, and bioremediation, etc.

4P framework using Nature-based Solutions



Methodology: Steps to scale up



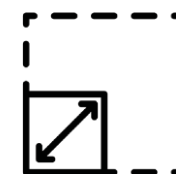
Engage with users/ key stakeholders to understand issues in current ecosystem.



Develop guidelines for nallahs – Water SURE.



Establish proof of concept by working on pilot projects.



Develop a working model to scale to other cities and states.

SCAN FOR MORE INFO



Impact indicators



Environmental

- \ Increase in green/open spaces with permeable surfaces/bio-retention systems
- \ Reduction in stormwater evacuation time
- \ Million litres of rainwater harvested
- \ Increase in ground water table



Economic

- \ Increase in rentable vending spaces
- \ Increase in neighbourhood level recreational/ socio-cultural spaces



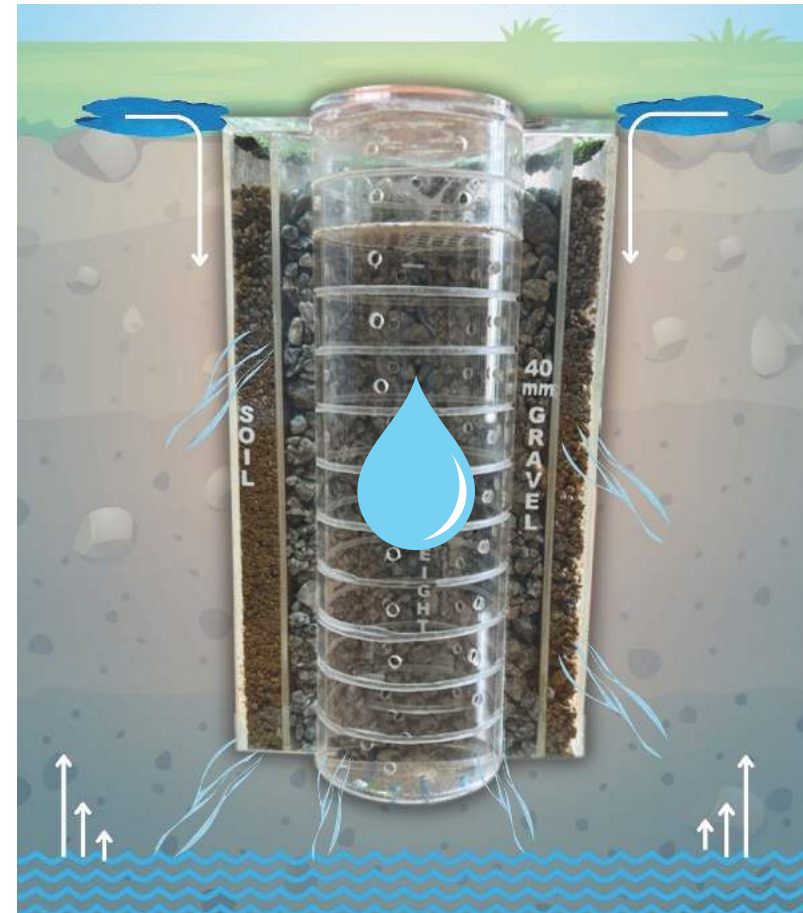
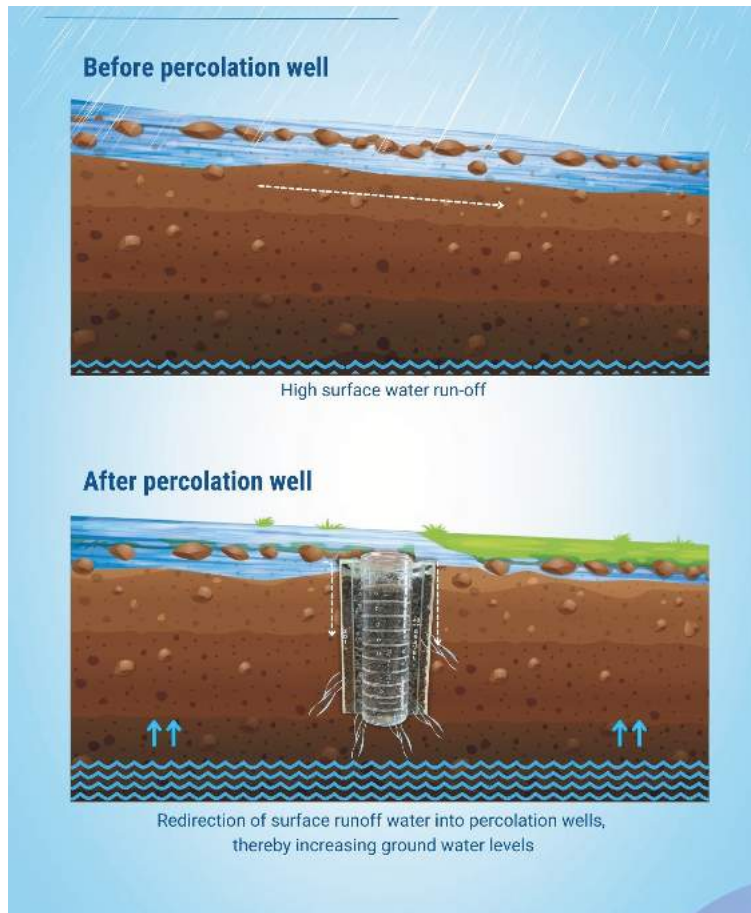
Social

- \ Increase in barrier-free infrastructure
- \ Development of green mobility corridor NMT loops
- \ Increase in neighbourhood level play areas



Bengaluru, once renowned as the garden city, faces a critical groundwater crisis. Rainwater is often wasted as it runs off into the sewage system, causing floods in low-lying areas. Our campaign addresses the urgent need to capture and utilize this precious resource to combat the alarming decline in groundwater levels.

To address the issue described above, United Way Bengaluru is driving a campaign called One Billion Drops. The One Billion Drops program aims to build 10,000 percolation wells and thereby conserve 1 billion litres of rainwater every year.



The project aligns with the Jal Jeevan Mission of "**Catch the Rain, Where it falls, When it falls**" under the **National Water Mission**.

Outcome

- Total percolation wells targeted: 10,000
- Percolation wells constructed to date: 4,470
- Storage capacity of one percolation well: 4,270 liters (one-time filling)
- Annual rainfall harvesting potential per well: 128,100 liters

Benefits:

- Environmental Benefits: Increased groundwater levels and enhanced green cover.
- Rainwater Harvesting: Each well can harvest up to 128,100 liters of rainwater annually.
- Reduced Flooding: Decreased rainwater wastage and lower risk of floods in low-lying areas.
- SDGs Contribution: Supports SDG 3, SDG 13, and SDG 17.
- Awareness and Education: Organizes educational visits and volunteering activities.
- Institutional Engagement: Aligns stakeholders for sustainable water conservation.
- Traditional Knowledge: Utilizes traditional well-diggers' skills.
- Art and Aesthetics: Warli art on wells raises water conservation awareness.
- Economic Benefits: Creates livelihood opportunities for traditional well-diggers and marginalized women.

Technical Details

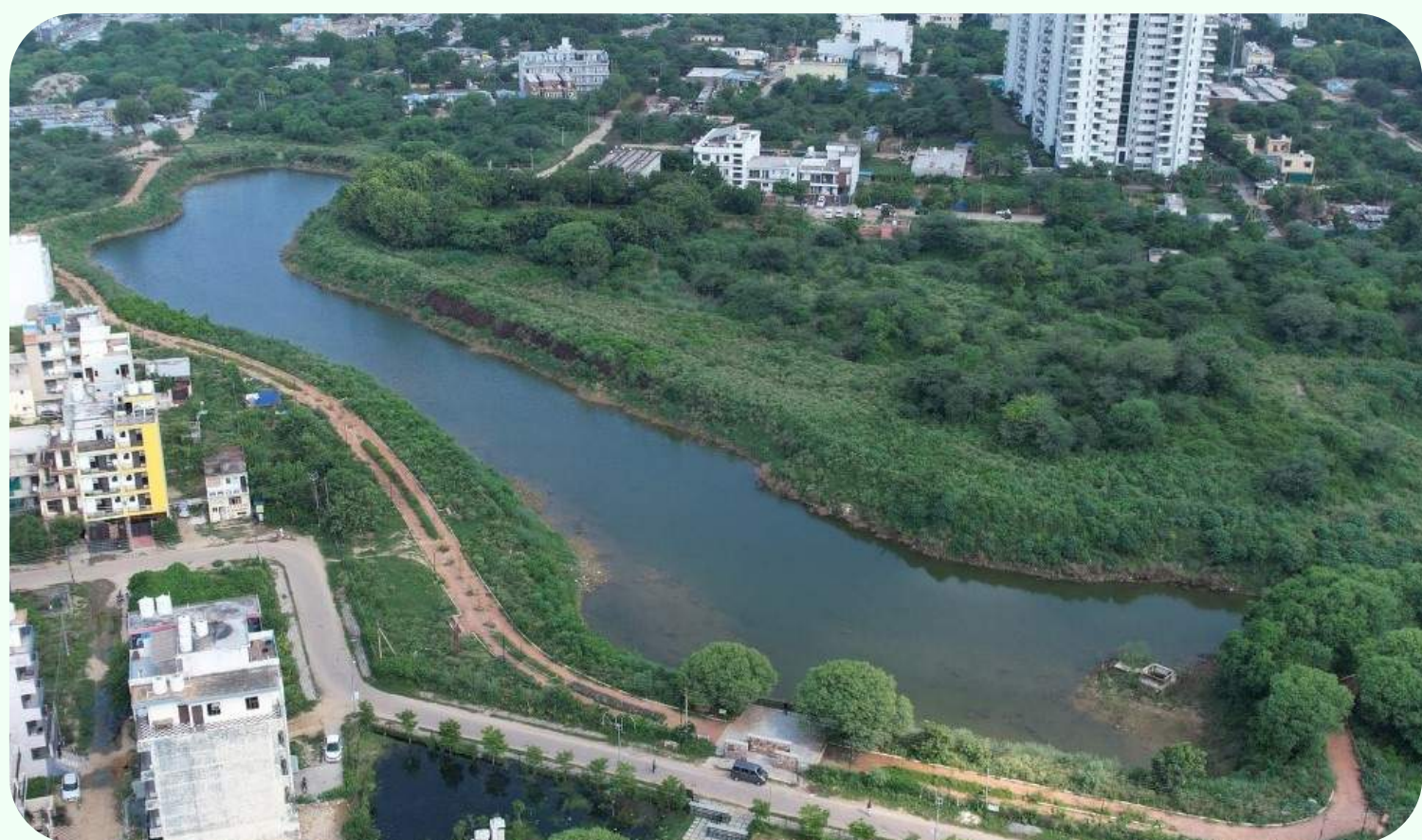
Diameter	4 feet
Height	12 feet
Volume	150.79 cubic feet
1 cubic feet is equal to	28.3168 liters
Volume of a Percolation well	4,270 liters
Total number of Percolation Wells aimed	10,000
Total volume of a well can hold in a year - 30 times fill in a year	1,28,100 liters
Total volume that 10,000 wells can hold in a year	1.28 billion liters



As global temperatures continue to rise and have a cascading impact on lives and living systems, urban areas that have concentrations of population and drive economic activity will be the worst affected. In urban areas there is a growing challenge of precious water bodies turning into wastelands – a place where the community around it use it to dump household waste, construction debris, or using them to build illegal structures.

Saving our cities

The SEEDS Urban Resilience, Governance and Enablement (SURGE) Initiative is being carried out in the Delhi National Capital Region and Bengaluru. Protecting and rejuvenating lakes are solutions to build sustainable environments and resilient societies. Waterbodies and wetlands are sponges that can check urban flooding. They are also precious carbon sinks that support communities around them. Water bodies and wetlands thrive when biodiversity, water quality, and ecosystem services are maintained. Essential for the environment and when healthy, these water bodies are beneficial for local communities too!



Drone capture of the Wazirabad Lake post restoration and intervention.



Jharsa Lake, Gurugram; After restoration

Once an ailing lake in in the Saraswati Kunj. Haryana, the **Wazirabad Lake** in Gurugram has now become an active catchment for run-offs from the Aravalli range.

The **Jharsa Pond** also in Gurugram has become a site for recreation. From a encroached piece of land, today it is filled with activity.

Engineering Measures and Implementation Strategies for Restoration

- *Levelling, Filling, and Dressing the Ground*
- *Phytoremediation*
- *Erosion Control*
- *Stormwater Management*
- *Setting up a Track for Cycling and Jogging*
- *Public Awareness and Education*

Engineering Measures and Implementation Strategies for Restoration

- *Water Body Rejuvenation*
- *Sediment Removal*
- *Hydraulic Excavation*
- *Bank Stabilisation*
- *Greenway Development and Chain-link Fencing*
- *Bioremediation*
- *Vegetative Buffers*

Quantification of impacts

- *Biodiversity Enhancement*
- *Habitat Quality*
- *Enhanced Recreational Activities*
- *Improved Physical and Mental Well-being*
- *Economic Impact*



Quantification of impacts

- *Improved Water Quality*
- *Increased Biodiversity*
- *Flood Mitigation*
- *Community Well-being*
- *Urban Heat Reduction*



About SEEDS

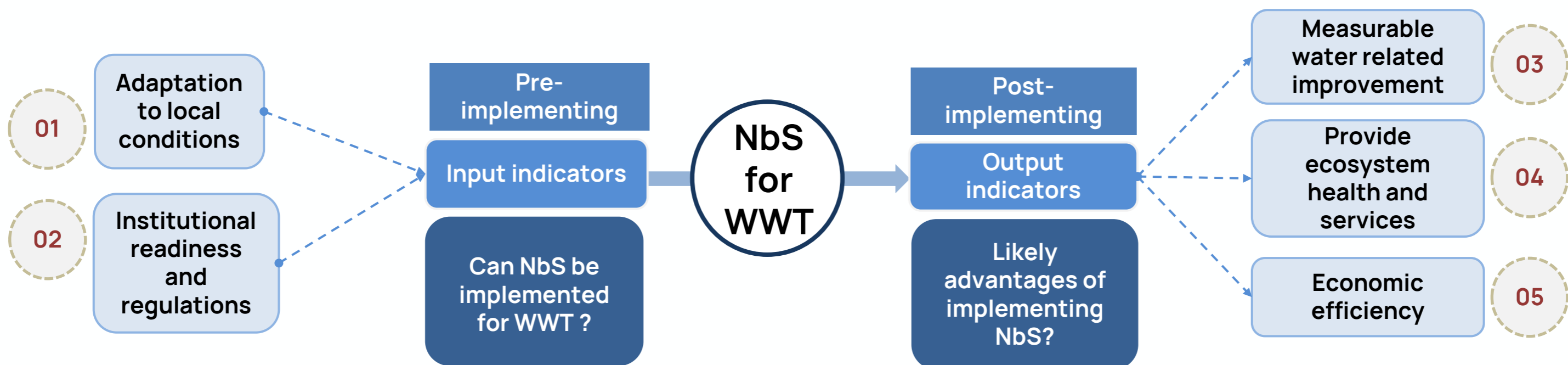
Born in 1994, **SEEDS** (Sustainable Environment and Ecological Development Society) has dedicated all actions towards protecting the lives and livelihoods of people in the 225 vulnerable districts of India by partnering with them in building resilience to disasters and climate change impacts.

To know more, Visit, www.seedsindia.org

01 Problem Statement

India's rapid urbanization has intensified the need for alternatives to energy-intensive and costly conventional wastewater treatment (WWT) facilities. This research explores Nature-based Solutions (NbS) for eco-centric treatment methods and seeks to develop a **comprehensive framework to inform decisions on adopting NbS in WWT.**

02 Comprehensive Framework: NbS for Wastewater Treatment

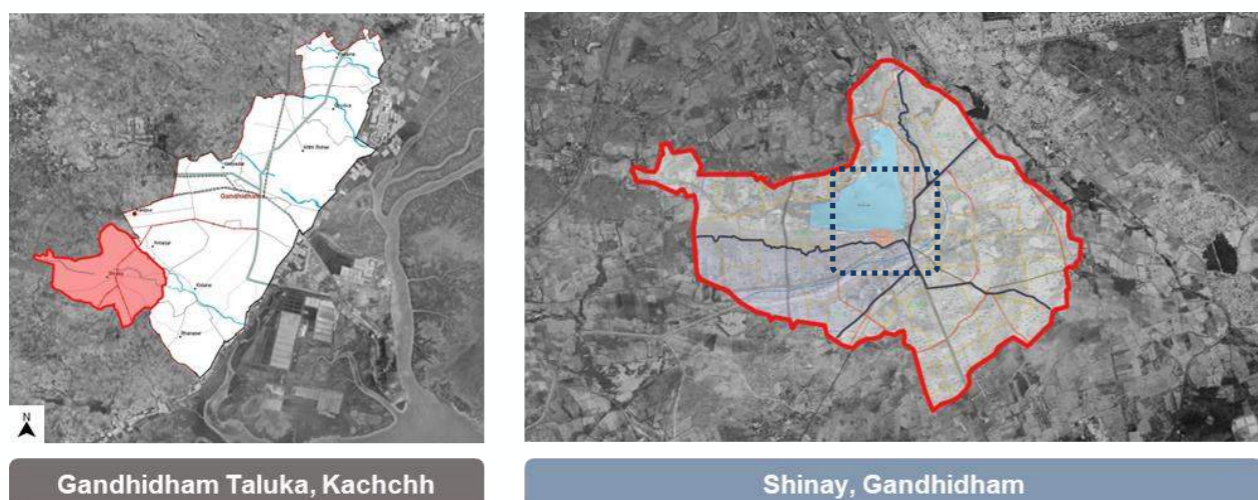


Source: Author

Two-part Framework

- **Input (pre-implementation) indicators** help determine if NbS for WWT can be adopted or not.
- **Output (post-implementation) indicators** suggest possible advantages.
- Each indicator has sub-indicators. A set of questions, based on the sub-indicators has been developed, **for local authorities.** This questionnaire is adaptable.

03 Testing at Shinay



40 questions for all indicators

10 questions shortlisted aligning with input indicators

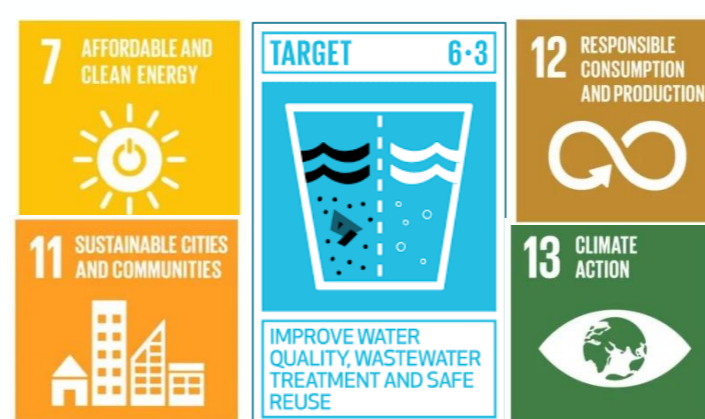
Source: Field visit, FGDs, Interviews

Why Shinay? This case site, in water-stressed Kachchh district, was chosen because the **community is endeavoring to establish a WWT facility.**

Based on our questionnaire, input indicators suggest that **NbS for WWT facility can be adopted in Shinay.**

04 Impact

Outcomes lay the groundwork for **informed decision-making and effective implementation of NbS in wastewater treatment** across diverse Indian contexts.



SDG linkages of NbS for WWT



SCAN FOR MORE

Social

- Community participation
- Foster a sense of ownership and empowerment.

Economic

Potential cost savings of up to 50% in capital and operational costs

Environmental

Promising path towards more environment friendly wastewater management.



The research has been carried out as an academic project with CEPT University, Ahmedabad and funded by Global Sanitation Graduate School (GSGS)



Urban Forests for a Greener Tomorrow

Leveraging Nature's Solutions for Urban Challenges

Declining green spaces have made cities more vulnerable to the impacts of climate change, including rising sea levels, severe weather events, droughts, floods, forest fires, and declining biodiversity. This has catastrophic effects on human lives and livelihoods, impacting fresh water availability, agricultural productivity, infrastructure, and disease spread. **It is crucial for local authorities, companies, and citizens to prioritize afforestation and environmental stewardship in city planning.** Trees provide multiple benefits - they sequester carbon, moderate local climate, foster biodiversity, improve air quality, provide storm protection and positively impact the socio-economic condition of the people.

CERE's Urban Afforestation Project aims to **increase the green cover in Indian cities** and also help organizations and individuals **reduce their carbon footprint**. The project provides a **common platform for two distinct groups**, (i) urban landowners across India who have space to grow trees, and (ii) organizations and individuals who have the financial resources and wish to plant trees, but have no access to open spaces.

FEATURES



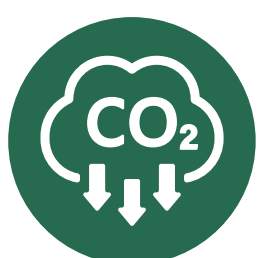
CERE's plantations are diverse and adapted to local conditions. We only plant **native species**.



We ensure **high survival rates** of more than 80% since we focus on maintenance and water supply.



We **geotag** a statistically significant portion of the plantation to ensure accountability and transparency.



We undertake studies with species-specific coefficients & issue a **carbon sequestration certificate**.



The plantations support **biodiversity** and promote awareness through **stakeholder engagement** activities.

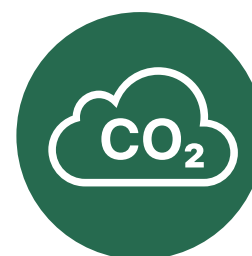
IMPACT



2,99,550
TREES PLANTED IN URBAN LOCATIONS



128
LOCATIONS ACROSS INDIA



50,516
TONNES OF CO₂ SEQUESTERED



Our **Carbon Sequestration Assessment Methodology** has been verified by a third party in accordance with the **ISAE 3410 standard**. Please visit uap.cere-india.org for more information.

SOME OF OUR CLIENTS





Constructed Wetland Technique

Constructed wetlands are improvised human-made systems designed to mimic natural wetlands that help in purifying wastewater. They are used widely as a cost-effective and energy-efficient solution to treat greywater from tertiary treatment sources. They provide a platform for research towards recycling earth's natural resources.



Prototype development



Wetland system



Treated water



Height and leaf number show encouraging growth (70-100%), followed by root-length (57-65%) and finally, plant numbers (33%).



Average removal efficiencies:
75.99% for biochemical oxygen demand (BOD)
76.16% for chemical oxygen demand (COD)
57.34% for total dissolved solids, 62.08% for nitrates,
58.03% for phosphate, 57.83% for potassium.
It helps in treatment of *E.coli* bacteria.



Typha sp. contained wetland cell showed greater efficiency in removal of parameters such as COD and BOD than *Phragmites sp.*



57% cost saving and energy saving over conventional design.



A good removal for all components by 8 days of Hydraulic retention time, around 80% for inorganic components and close to 90% for organic components



It helps to achieve resource recovery, Net Zero and Circular Economy in Wastewater treatment



Dissemination of Research



For Policy makers



For Policy makers



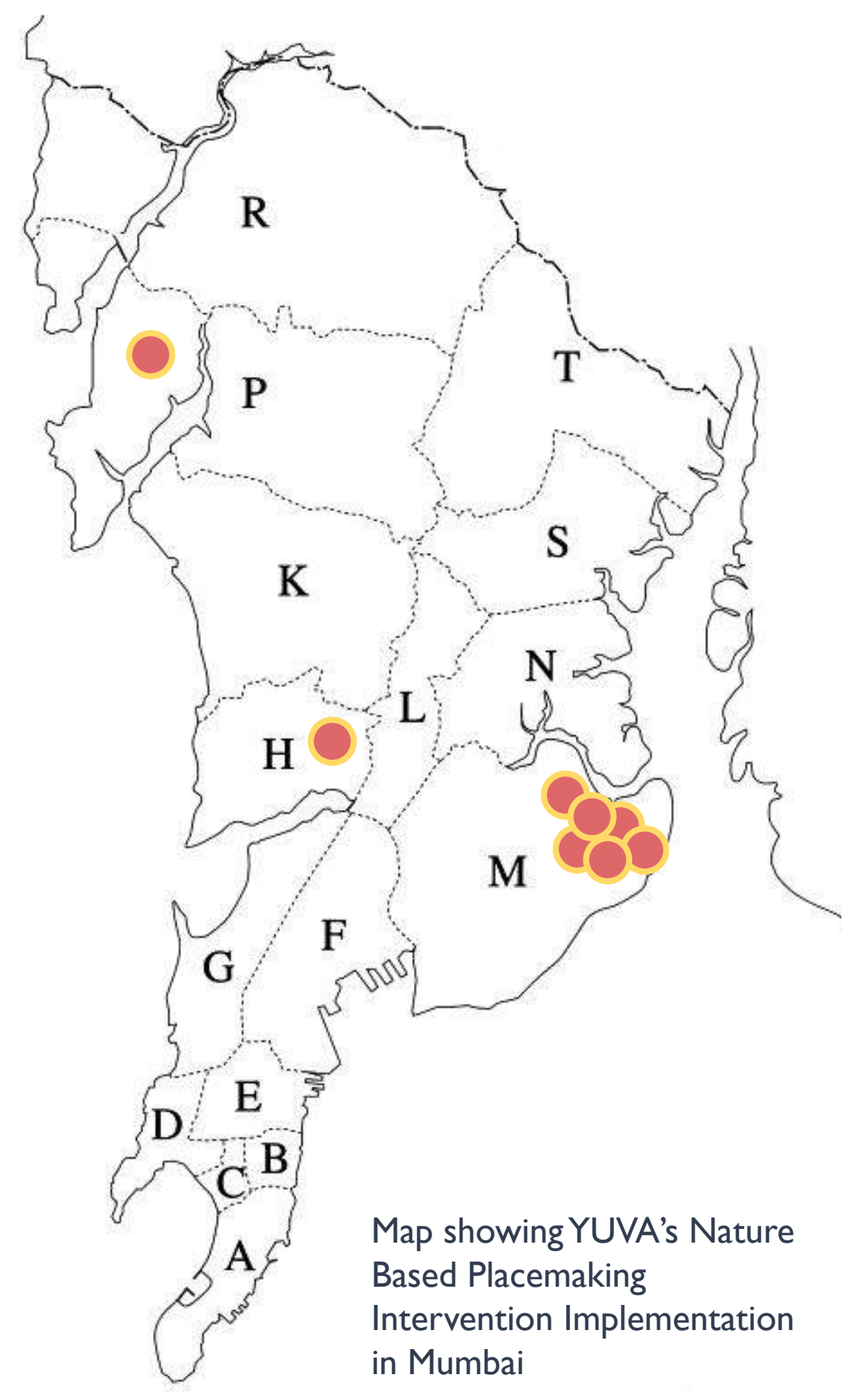
For Students



Chalo Basti Badlein

Nature-based Placemaking in an Urban Poor Resettlement Colony

The transformed public space in Lallubhai Compound, a Rehabilitation and Resettlement colony in Mumbai, illustrates the potential for scalable models of climate adaptation that enable urban poor communities to advocate for systemic change, offering a pathway toward climate just cities.



In addition to being the most socially vulnerable ward, M-East ward also stands out as the most climate vulnerable ward with 40.08 per cent of its population affected by urban heat risks (YUVA, 2023; MCAP, 2022).

Contributing to a framework for sustainable urban adaptations

Climate adaptation examples in urban settings are rare, especially those focused on climate-just adaptation for the urban poor.

The case of Lallubhai Compound, where YUVA interfaced directly with resident communities and agencies like WRI, MMRDA, and BMC, demonstrates the power of community-led initiatives. Using qualitative methods and participatory co-design workshops, YUVA enabled active participation and deliberative dialogues, leading to inclusive decision-making and lasting ownership among participants.

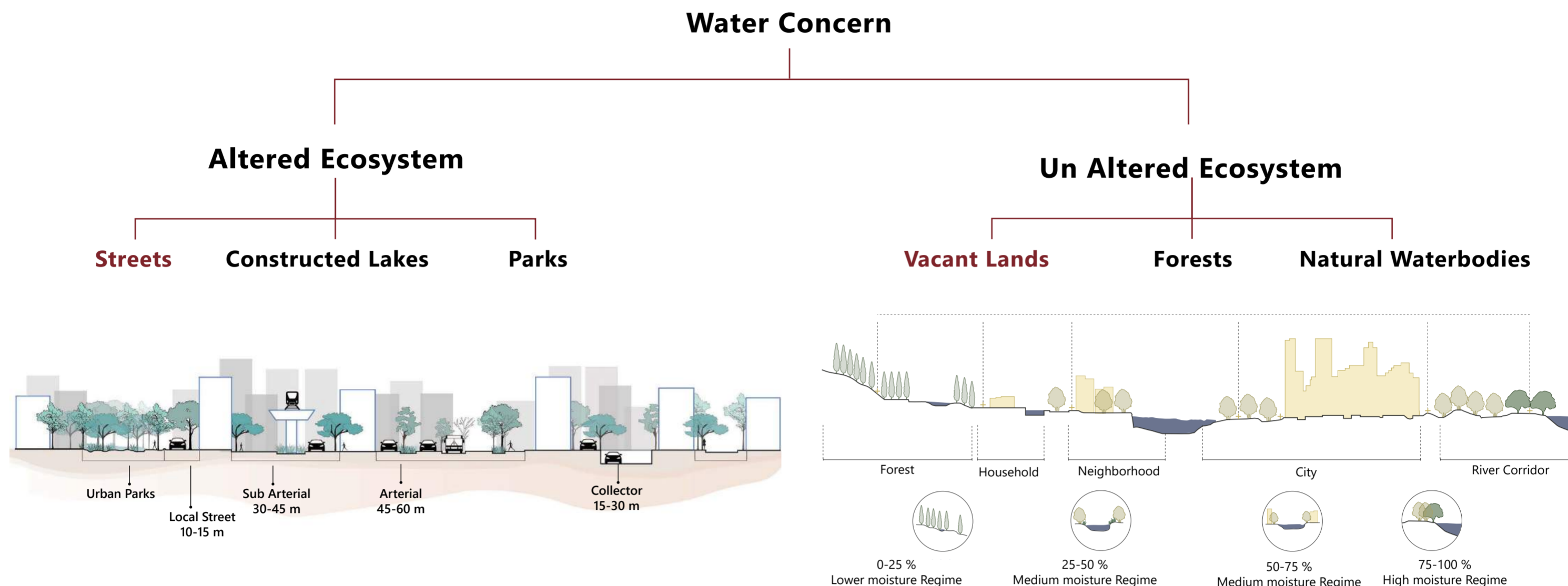
Nature-based Solutions: Addressing Urban Water Stress through Altered and Un-Altered Ecosystems



Scan for full paper

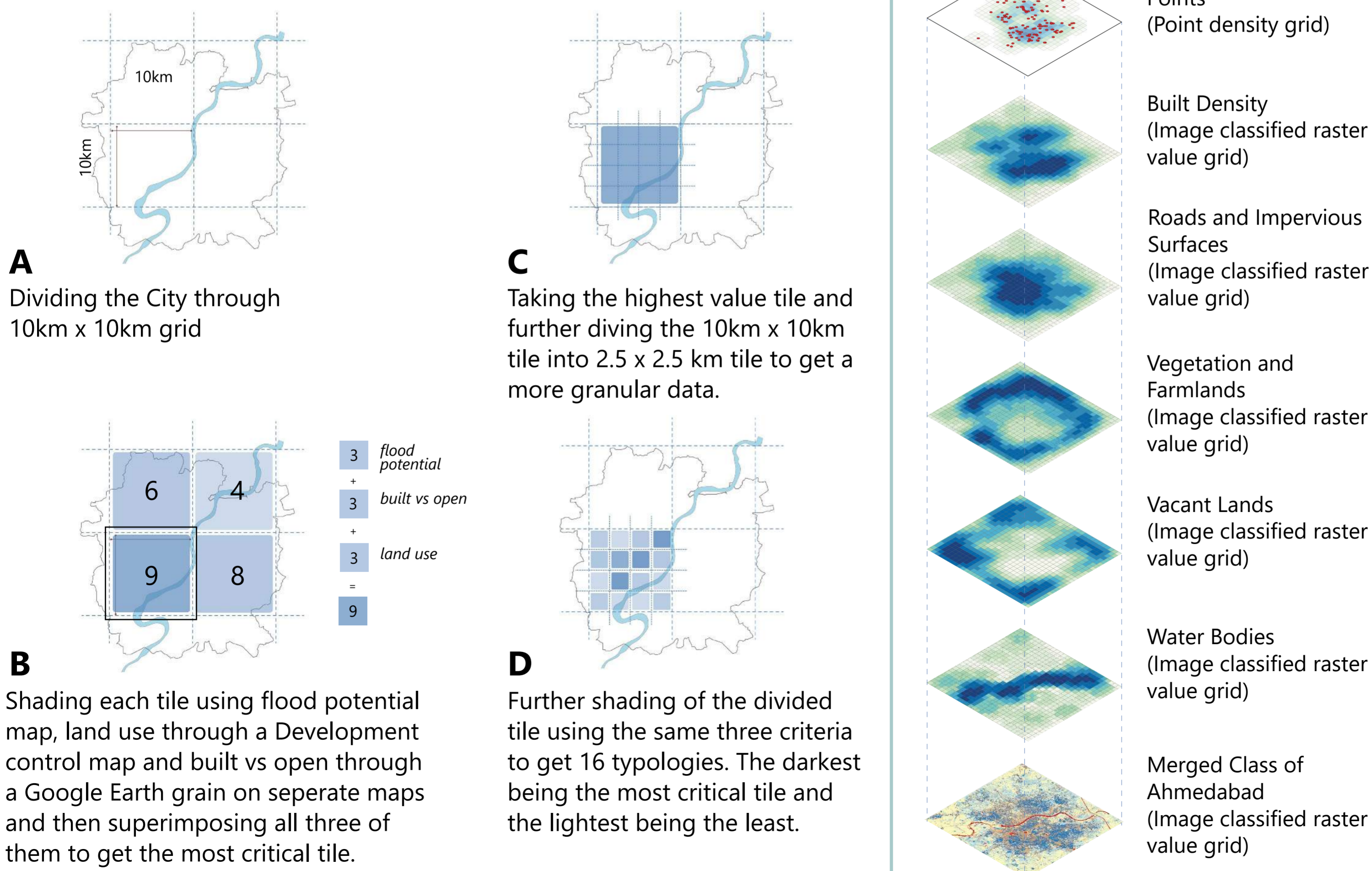
1. Identify

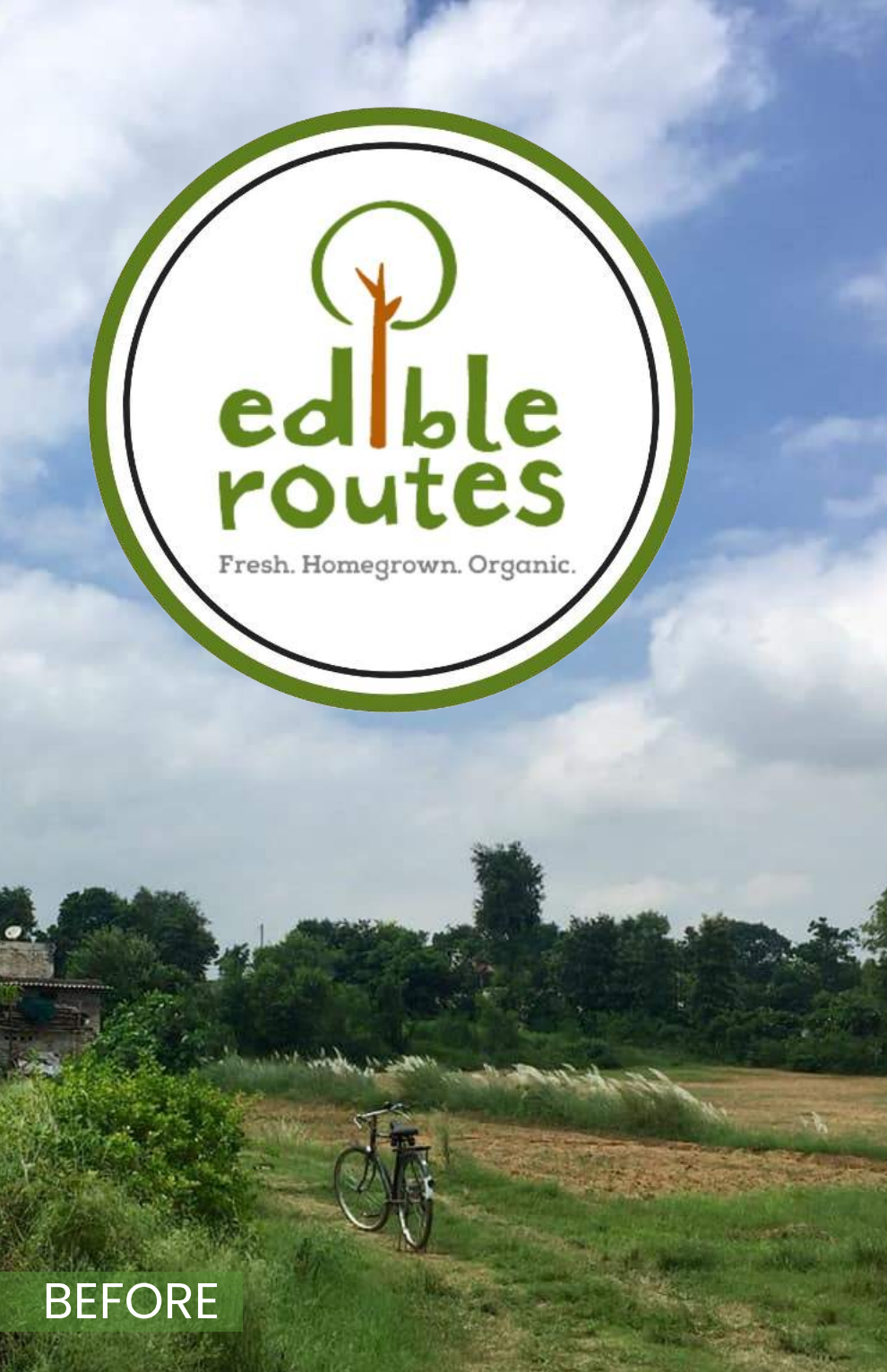
Investigating the primary concerns leading to water stress and urban flooding in a semi-arid land. After identifying the concern, the intensity of the problem in the context is assessed based on the criticality of addressing an ecosystem-based approach typologically classified as actionable outcomes to protect, restore, and create.



2. Analyze & Adapt

The analytical process begins with providing a systemic weightage through a complex overlay studied under various context, society, and ecology lenses. Depending on its criticality, simulations of various outcomes were developed. The value matrix allows multi-dimensional inferences for integrating the NbS in a given site. Since the NbS must respond to several scenarios with varying combinations of parameters, the outcome is highly flexible and resilient.





BEFORE



AFTER



Image Source: Edible Routes Pvt. Ltd.

Location: Amarkanam Farm, DLF Chattarpur Farms, New Delhi

OUR EXPERTISE. YOUR MINI FARM. YOUR ORGANIC FOOD

PROBLEM:

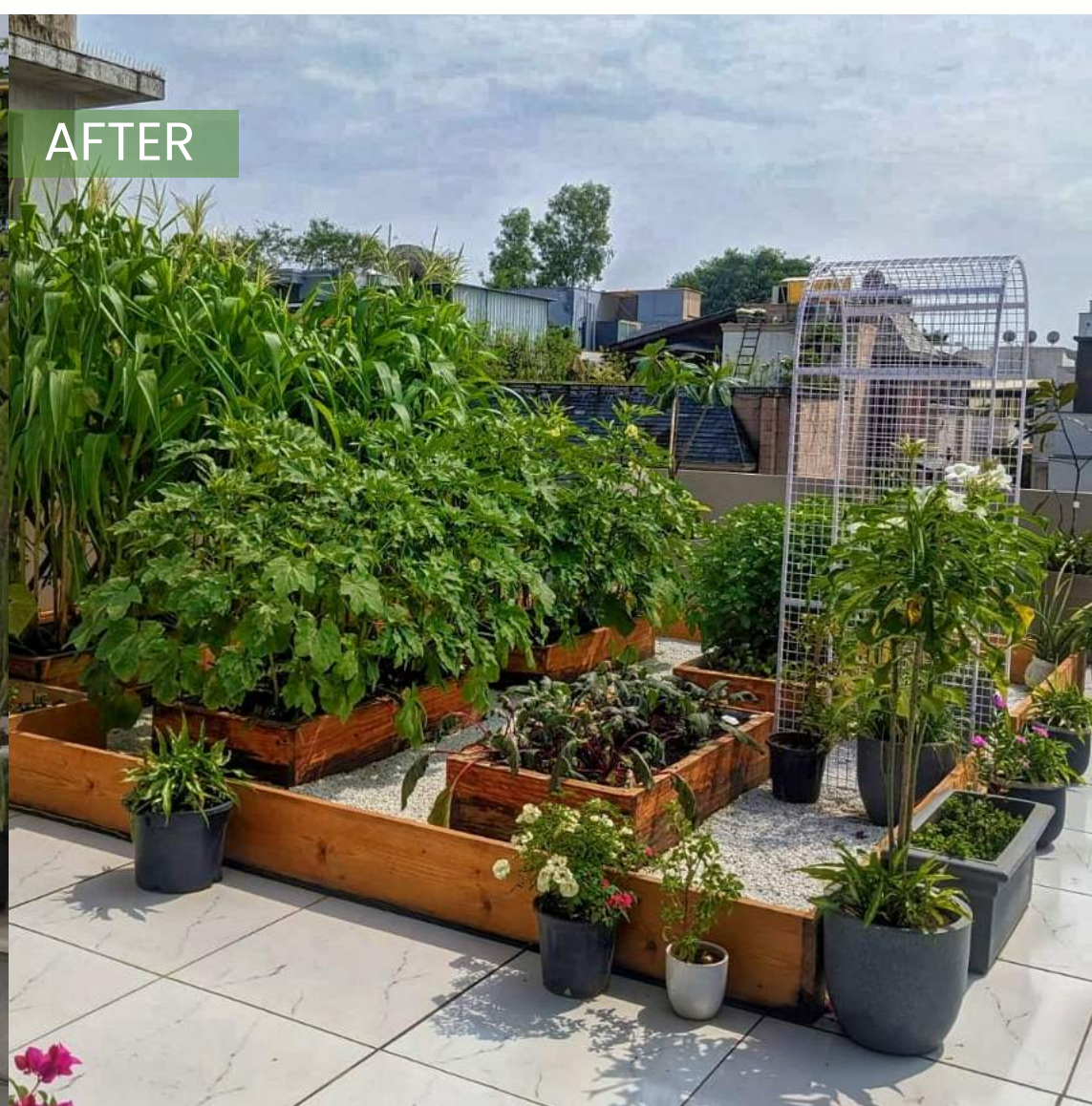
- Lack of green spaces diminishes urban sustainability and quality of life.
- Many people are unaware of the origins of their food.
- Food is often laden with chemicals.
- Long-distance food transport results in high food miles and loss of freshness.

FARMLETS

- Farmlets are small-scale farms that offer fresh, locally-grown produce.
- Farmlets provide easy access to fresh food, foster community interaction and engagement.
- Over 500 families have been engaged through our subscription service



BEFORE



AFTER

Image Source: Edible Routes Pvt. Ltd.
Location: Panchsheel, New Delhi



PROBLEM:

- Deforestation and lack of native vegetation.
- Maintenance of urban and land-based food systems can be challenging without expertise.

KITCHEN GARDENS & LAND PROJECTS

- Convert areas from 100 sq.ft. to 100 acres into regenerative food spaces through permaculture.
- Transformed 2000+ urban spaces into edible landscapes. In 150+ land projects, converting 784 acres into sustainable ecosystems.



www.edibleroutes.com



info@edibleroutes.com

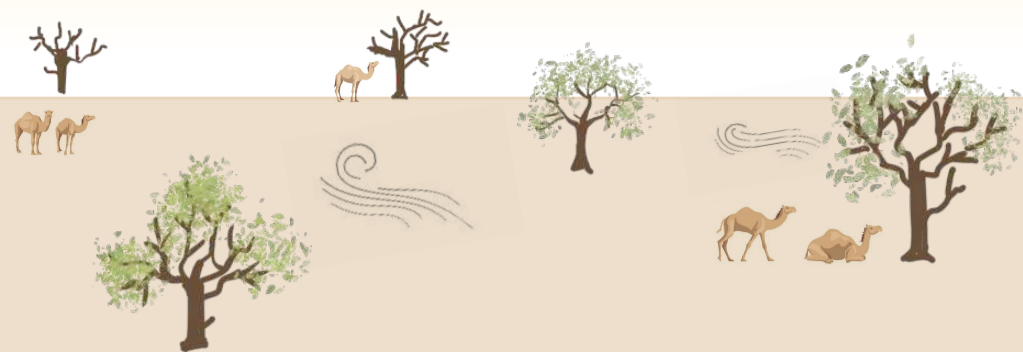


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STORY OF DHUN Water Conservation and Land Regeneration



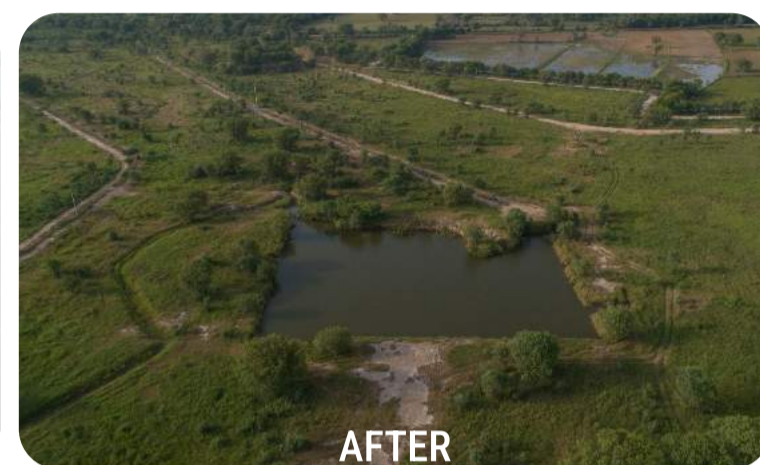
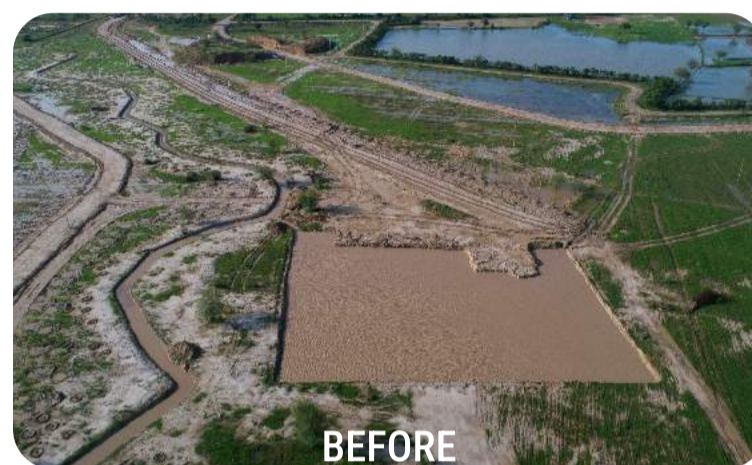
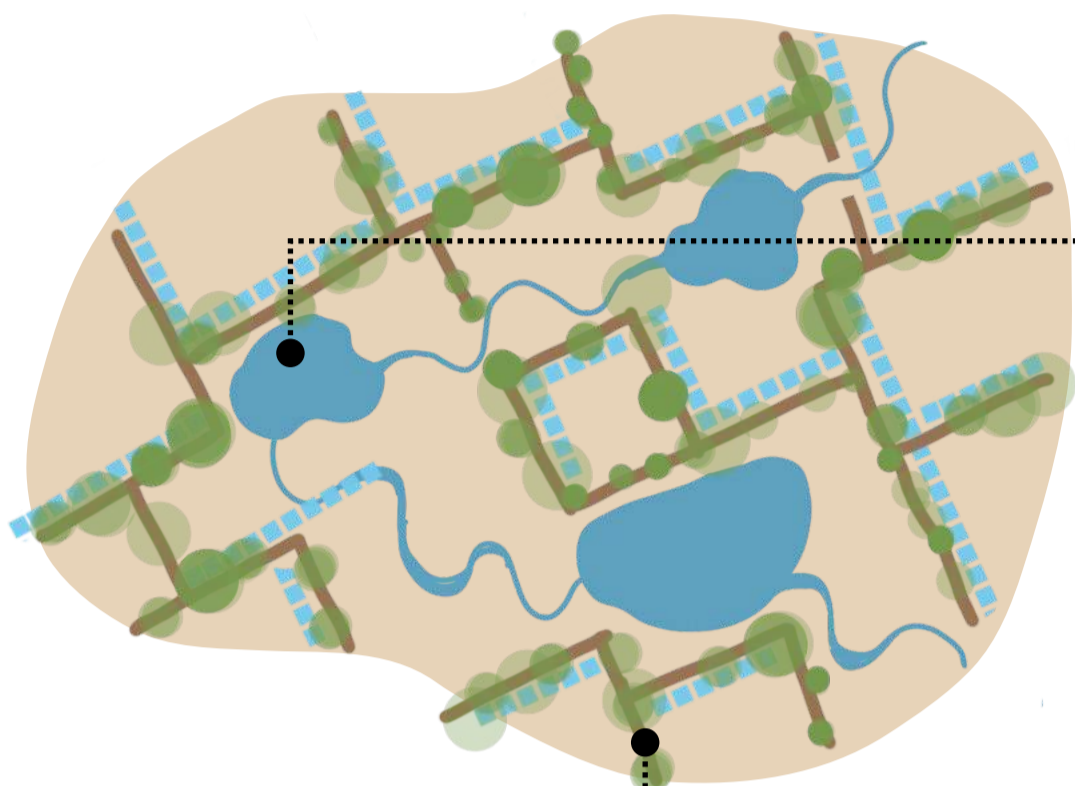
WHERE WE STARTED

- Barren land
- Soil erosion due to water runoff and heavy winds
- Absence of biodiversity



INITIATIVES UNDERTAKEN

- **HYDROGEOLOGICAL STUDY** - conduct a detailed study to understand the role of groundwater in the water security and management plan.
- **CONSERVING** and **HARVESTING** water by developing multiple lakes connected with a network of bio-swales



An indigenous practice known as the '**CHAUKA SYSTEM**' was implemented to create a **sponge-like environment** across the site, ensuring water is retained in multiple locations and flows slowly.



Unmanaged water runoff

Water captured in chaukas

Green cover

IMPACT GENERATED

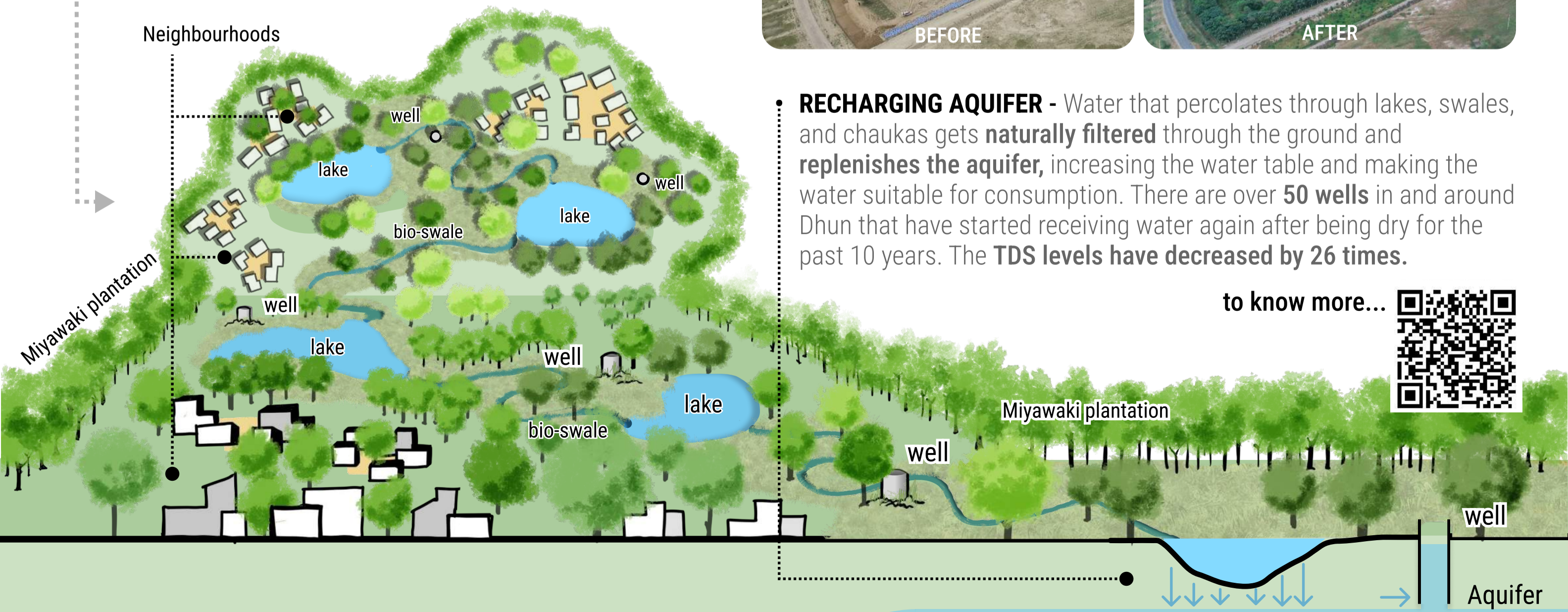
- The ground & surface water at Dhun has 26x lesser TDS, compared to neighbouring settlements.
- From 2013 to 2024, Dhun's forests, farms, and grasslands sequestered over 30,000 metric tonnes of carbon.
- Dhun has over 170 species of birds including 4 vulnerable and 6 near-threatened species.
- Dhun's ambient temperature is 7° lesser and humidity is 2x more compared to Jaipur city.

- **AFFORESTATION** - Dhun has over **2,70,000 trees** on site with over 30 species of native trees with food gardens, orchards and more. **Miyawaki technique** was used to plant multiple trees at 4-6 vertical layers in a width of around 5 meters all along the periphery. All the species chosen for plantation are **native**.



- **RECHARGING AQUIFER** - Water that percolates through lakes, swales, and chaukas gets **naturally filtered** through the ground and **replenishes the aquifer**, increasing the water table and making the water suitable for consumption. There are over **50 wells** in and around Dhun that have started receiving water again after being dry for the past 10 years. The **TDS levels have decreased by 26 times**.

to know more...





Revitalizing Blue-Green Infrastructure in Gurugram

Gurugram a 'sponge city': Restoring natural drainage creeks through NbS

Number of creeks: 2

Area & length: 70 acres, 5 km

Sectors: 42, 43, 55, 56 & 57

Status: Nearly complete

Implemented by
I am Gurgaon



Ecological Design by **Sehreeti Developmental Practices Foundation**



Gurugram Municipal Development Authority

*Sponsored by **Aramco, Mercer, SML, Kotak Mahendra***



BEFORE



BEFORE



AFTER



AFTER

Stream daylighting | Urban flooding and storm water management | Groundwater recharge | Waste management | Continuous maintenance and monitoring | Restoration and revitalization of urban biodiversity | Blue-Green pedestrian mobility corridors | Waste | Heat island mitigation | Placemaking



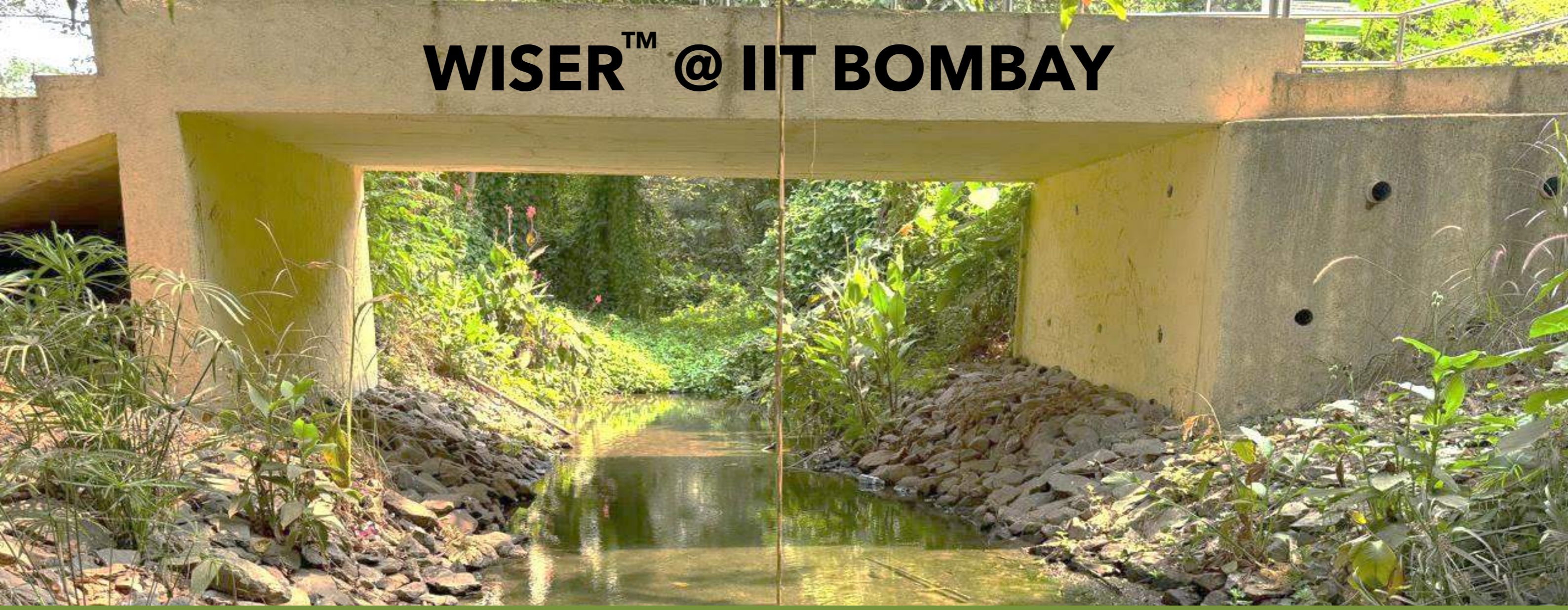
BEFORE



Under construction



- **Green Jobs**
- **Promotes a circular economy**
- **Reuse of Construction and Demolition (C&D)**
- **Support for Informal Workers**
- **Enhanced Community Engagement and Well-Being**
- **Citizen Engagement**
- **Property value increase**



WATERBODY IN-SITU ECOLOGICAL REJUVENATION



PROBLEMS ADDRESSED

- Water Quality:** Removal of nutrients from wastewater
- Biodiversity Enhancement:** Provide habitat for native flora and fauna
- Reduced freshwater consumption :** Storage of stream water for planation
- Groundwater Recharge:** Replenishing the recharge zones
- Carbon Sequestration:** Through increased flora and phytoremediation
- Community Engagement:** Awareness amongst stakeholders
- Aesthetic Improvement:** Create visually appealing environments



SOCIAL BENEFITS

- Community empowerment:** Builds local ownership and responsibility
- Public health:** Reduces waterborne diseases.
- Enhanced life quality:** Recreational spaces promote mental and physical health.
- Capacity building:** Awareness on conservation and ecosystems
- Reduced Littering:** Due to aesthetics
- Social Cohesion:** community interactions



ECONOMIC BENEFITS

- Cost-effective solution:** Low CAPEX and OPEX and use of local material
- Reduced infrastructure costs:** Efficient decentralized treatment systems
- Employment:** Direct and indirect opportunities
- Increased property values:** Enhanced aesthetics attract investment
- Healthcare savings:** Reduced water-borne diseases
- Carbon credits:** Monetizing environmental benefits

BEFORE



AFTER



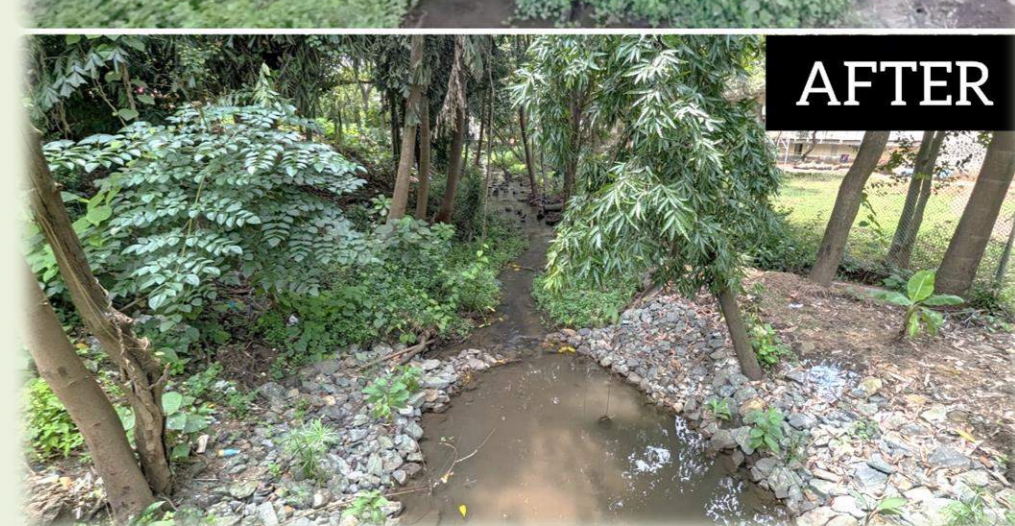
ENVIRONMENTAL BENEFITS

- Restore ecological functions
- Biodiversity improvement
- Effective treated water reuse
- Minimal energy use
- No chemicals needed
- Improved water quality
- Groundwater recharge
- Locally sourced material
- Reduced freshwater demand

BEFORE



AFTER



CLEAN-WATER: REJUVENATING WATER BODIES



Why

We are rejuvenating waterbodies for the prosperity of everyone including citizens, lakeside communities, fishermen, governments, ecology & biodiversity ; by addressing problems such as water pollution, deadly diseases, economic losses.

How

By improving water quality, we fix most of the problems like death of aquatic life, loss of biodiversity, foul odour, water borne diseases and deaths, reduction in GHG emissions, preventing groundwater from getting polluted, etc.

What

Our products: floating islands, aerators and microbial cultures based on the principles of phytoremediation and bioaugmentation help to remove pollutants, curb eutrophication and increase the dissolved oxygen levels in water for better water quality and healthier aquatic ecosystems.



Floating Islands



Aerators



Beneficial Microbial Cultures

Nalanda Sarovar, Indore



Pipliyahana Lake, Indore



Benefits

- Increase in happiness index, decrease in water related diseases & deaths.
- Prevent groundwater pollution, algal blooms, mosquito breeding water borne diseases, odour issues, etc.
- Increased balance in biodiversity and health of ecosystems.
- Improvement in groundwater quality.
- Restored ecosystems enhancing climate resilience.
- Beautification & Restoration of water bodies.
- Enhancing quality of life of people dependent on water bodies.



Impact

- 18 types of floating islands created
- 90+ floating islands installed over 17 water bodies across 12+ cities covered
- >600 Million Liters of Water treated
- 30+ wastewater treatment projects done

Recognition

- Water Hero & Jal Prahari Award from Govt. of India
- Speaker at TEDx, INK@WASH, All India Radio, National CSR Awards, IIM Indore, Institution of Engineers

Grants Received

- Ministry of Housing & Urban Affairs - AMRUT 2.0 Mission
- IIT Kanpur
- IIT Madras
- IIT Ropar

WATER BALANCE PILOT



BEFORE



AFTER

The Little Flower Convent School for the Blind and Deaf, a 90 year-old institution, generates about **27,000 L of wastewater that is treated daily using NbS systems** and safely infiltrated through an underground pipe network, while **irrigating 3000 plants**. Five dual-aquifer recharge wells benefit both the school and the entire vicinity, and **reduce the impact of floods**.

1 | UNDERSTANDING THE PROBLEM

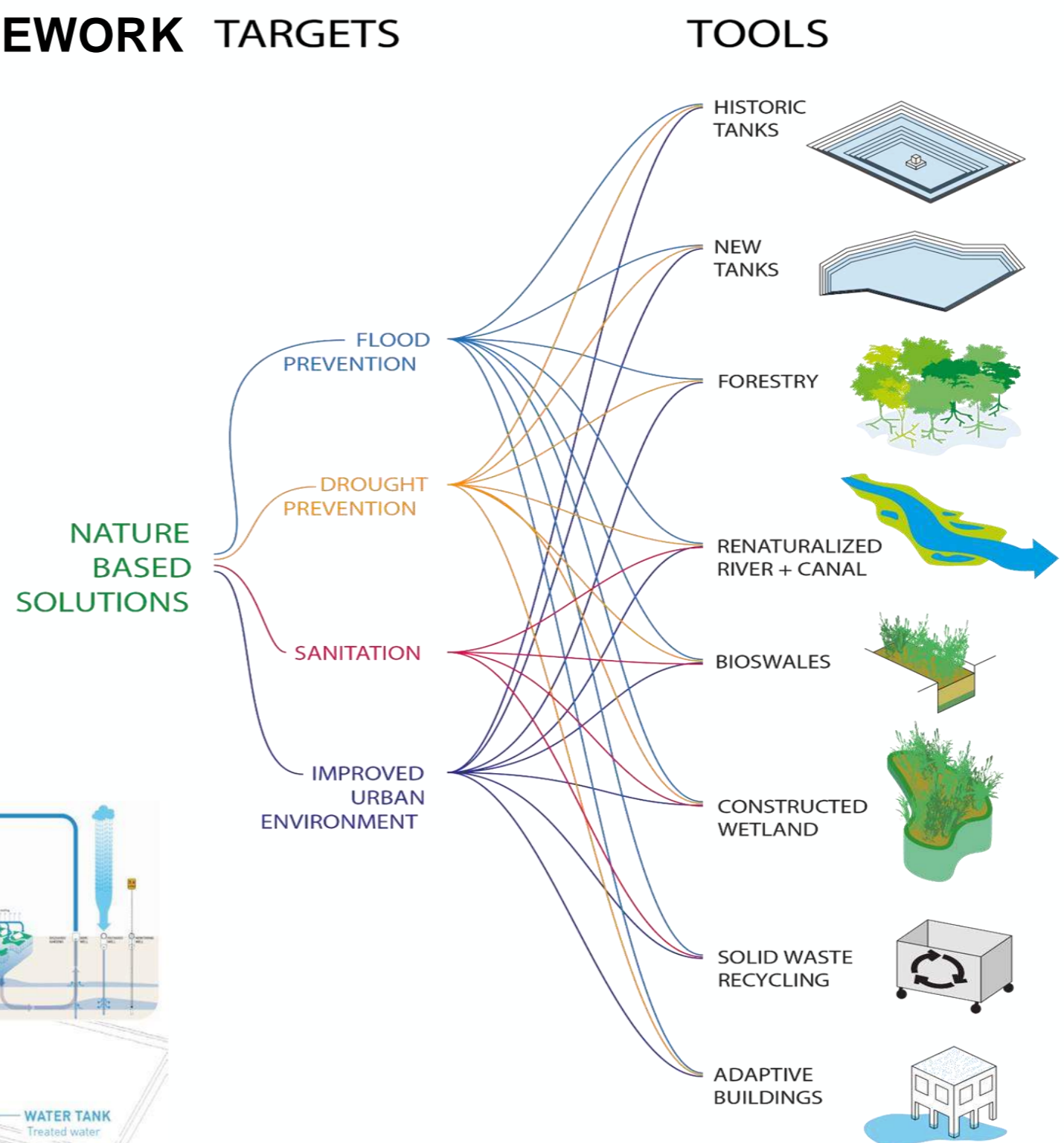


Flooding at LFC
07 Nov 2021

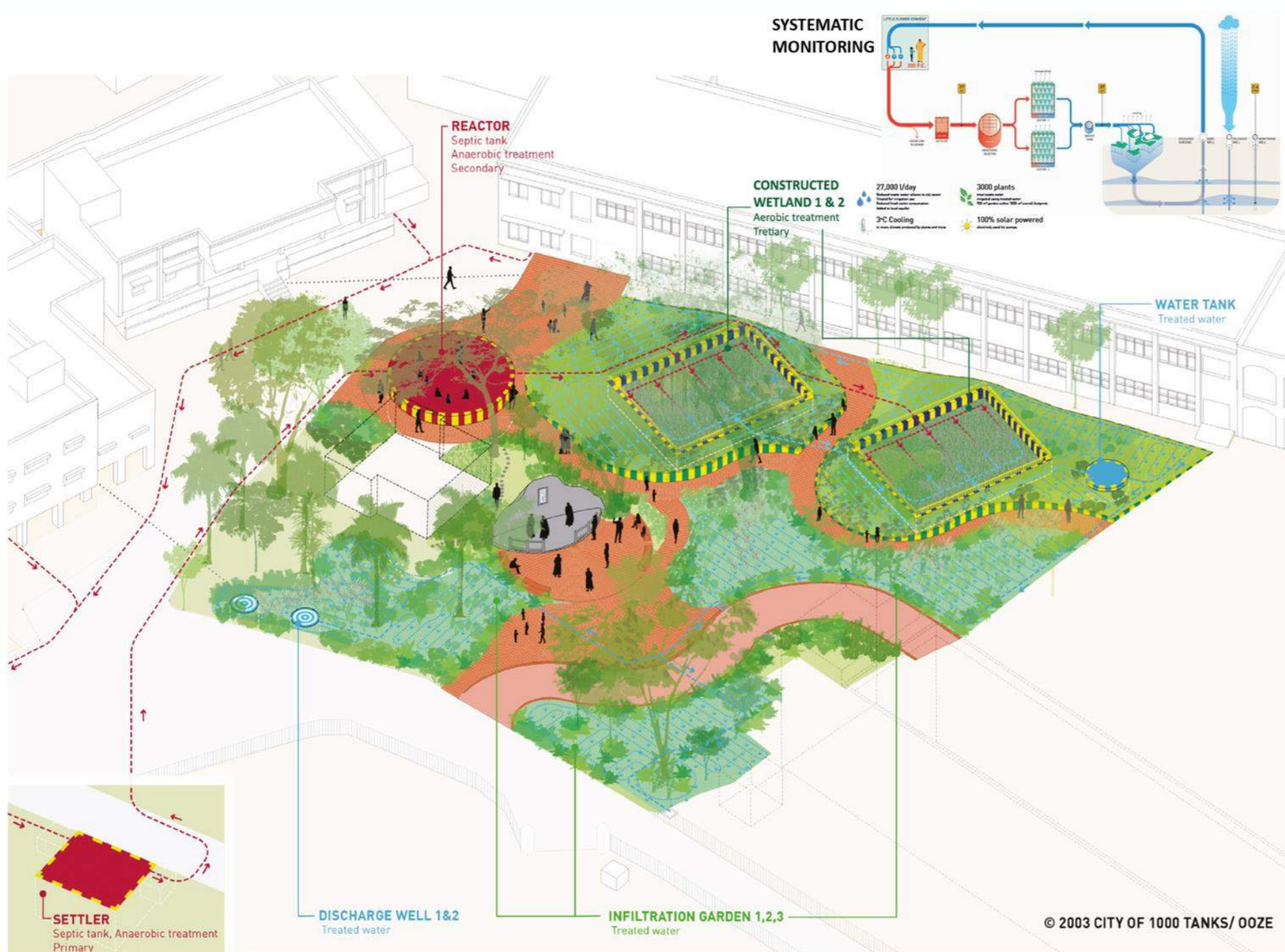
Backflow of
Sewage

The **1,000 tanks approach** to achieve a water abundant Chennai, seeks to help the city cope with floods & drought, and improve sanitation & urban environments using the identified tools.

2 | FRAMEWORK TARGETS



3 | SOLUTION



THE MYLAPORE FLAGSHIP PROJECT

This Pilot at LFC is in the process of being upscaled to the Mylapore Flagship project at the request of **The Green Climate Fund (GCF)**, with the approval of the Govt. of Tamil Nadu.

4 | KEY BENEFITS

- Enhanced urban biodiversity
- 5 °C cooler campus
- Rs. 7.5 lakhs saved yearly
- Water security ensured
- Building awareness for the next generation

Quality of water at every stage of the treatment Process.



Monitoring Phase

mg/l	Standard*	Oct/22
pH	7	7,8
BOD	30	5
COD	250	32
TSS	100	12
TN	100	24
NH3	50	17
NO3	10	BDL(DL 1.0)
TKN	50	21
TP	5	5,4
TDS		730



A Consortium of Indo-Dutch experts



Website



Monitoring (Live)





CulTool/Sanchay

Culture for Climate Action in Jodhpur

GRRID Corps implemented the project – **CulTool/Sanchay** – Culture for Climate Action in Jodhpur, within the framework of the Net Zero programme of ICCROM, supported by the Swedish Postcode Foundation.

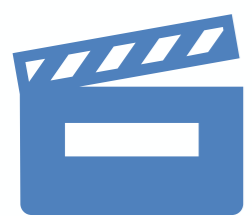
Sanchay comprised of multi-dimensional approaches to **build consensus** and **mainstream traditional knowledge (TK)** and **indigenous practices towards disaster risk reduction and climate action** in Jodhpur.



A city-level heat action plan (HAP) using culture as a tool – India's first! Increased acceptance by residents.



Technical study on vernacular architecture for the Municipal Corporation to ensure climate-smart and energy efficient construction practices in the city's Master Plan.



First documentary illustrating a city's riskscape through residents' narratives – local perception of climate change and documentation of TK.



Immersive and experiential capacity building of school children, teachers and parents on Jodhpur's rich water culture and its importance in climate action.



Focussed capacity building workshops for women and children in the old city.



Hyperlocal climate decisions by women, call for use of place-based wisdom by children etc.



Mutual learning sessions - intergenerational dialogue, documentation of wisdom

Young minds in action

Schools getting ready for the future

Nature-based Solutions: A Sustainable Model for Urban Resilience – A Case Study from Tamil Nadu

The implementation of Nature-based Solutions addressed certain challenges like heat mitigation, flood control, water sustainability, and biodiversity support at the Chennai Zoo. Following two drought years in 2018 and 2019 causing an acute water crisis, efforts were made to establish a network of percolation ponds and to restore Otteri Lake. Spanning 18 acres within Arignar Anna Zoological Park, Otteri Lake was crucial for local biodiversity. Its restoration involved desilting, planting native vegetation, and sustainable water management in the catchment area to create a resilient ecosystem.

With such similar models adopted across the state, NbS was proposed in the "Tamil Nadu Heat Mitigation Strategy" as a means of passive cooling and a framework to adopt NBS in various sectors is being developed for Tier 2 cities, focusing on sustainable urban planning and resilience.



Otteri Lake Model of restoration through NbS

Restoration methods adopted combined physical, chemical, and biological eco-restoration techniques. Key interventions included sediment dredging, desilting, and deepening the lake to improve water quality and storage capacity. Invasive species were managed, native vegetation was planted, and water flow was optimized to maintain stable water levels. Initiatives were taken to improve wildlife habitat and created recreational spaces for the community. Scientific plan in creation of a network of percolation ponds at pivotal points contributed to ground water recharge. Monitoring and evaluation ensured adaptive management and long-term sustainability.



Environmental benefits

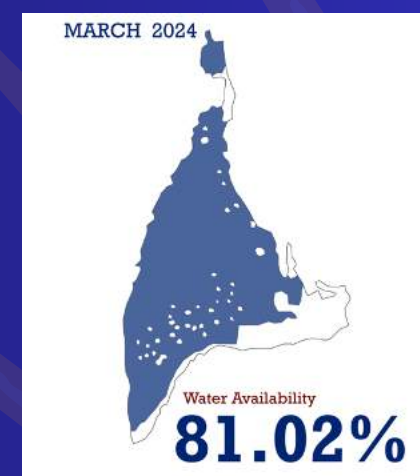
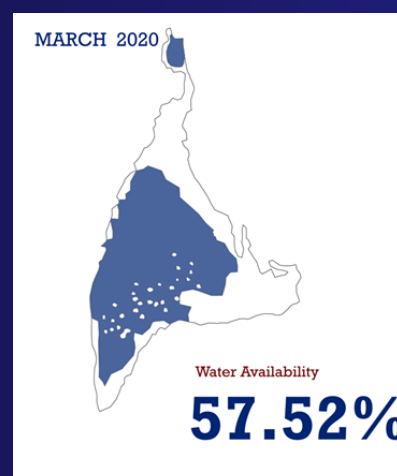
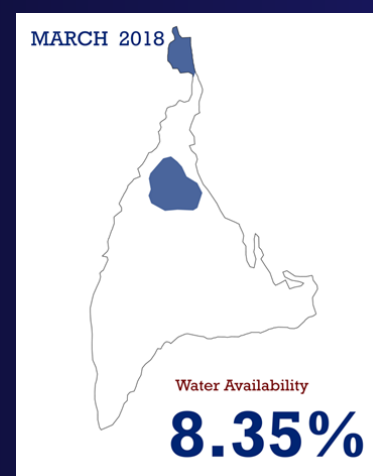
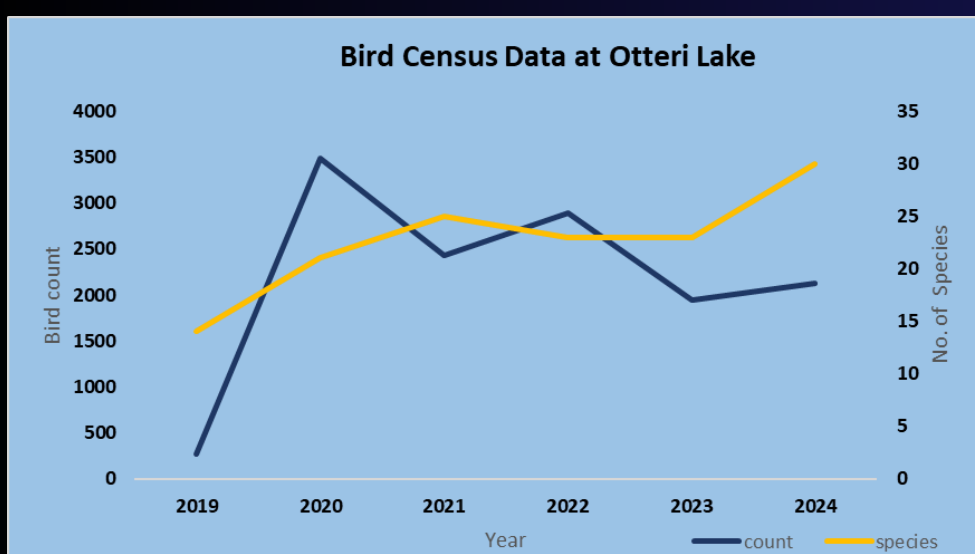
- Biodiversity Recovery
- Sustained Water Availability and Ecological Balance
- Green Cover

Social Benefits

- Conservation Education to children and youth
- Community Engagement and awareness
- Recreational Opportunities

Economic Benefits

- Tourism and Local Business Activity
- Cost Reduction on water procurement and Ecosystem Services
- Supported financial sustainability



Implementation

Various NbS based solutions were implemented at different scales in Tamil Nadu

Strategy

NbS as potential solution for passive cooling in Tamil Nadu Heat Mitigation Strategy

Framework

NbS framework for Tier 2 cities in Tamil Nadu is under development