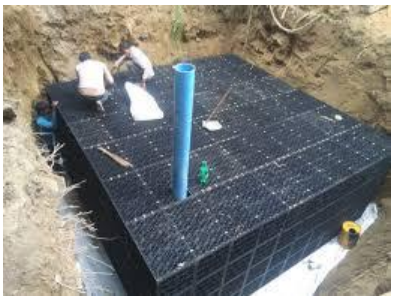
THE RAINWATER PROJECT

- RAIN WATER HARVESTING
- FRESH WATER MANAGEMENT
- SUB-SURFACE DRAINAGE SOLUTIONS
- CONSULTANCY AND AUDIT



ADVA ENVIRO SOLUTIONS PVT LTD

ABOUT US:

- The rain water project *is an enterprise that focusses on fighting the social cause of water crisis in our country by implementing innovative water management /conservation solutions.*

- Our foundation is built on the idea of conserving water, protecting the natural resources from depletion and to keep evolving ourselves unless we reach our goal.

OUR VISION

- To conserve and harvest every possible raindrop. To keep working as a catalyst until water remains a natural resource for everyone.

- To create and lead the path of journey towards creating a self-sustainable environment by means of 3Rs i.e. Reduce Water Waste, Recharge Ground Water, Reuse Rain Water

OUR MISSION

- To provide scientific, innovative and suitable services working round fresh water ecosystem

- To spread awareness on water conservation(from urban area, industrial area to rural area)and become the most trusted partner for the community

What is Rain Water Harvesting?

With the gradual depletion of ground water level, population growth, urbanization and fast paced infrastructure development, the only way to conserve fresh water is by storing rain water and recharging the ground water.

Rain Water Harvesting is an age old technique for collecting, filtering, storing and using rain water for later use.

Why Rain Water Harvesting?

Rain water harvesting (RWH) is one of the most effective methods of water management and water conservation. It involves collection and storage of rain water at surface or in sub-surface aquifer, before it is lost as surface run off.

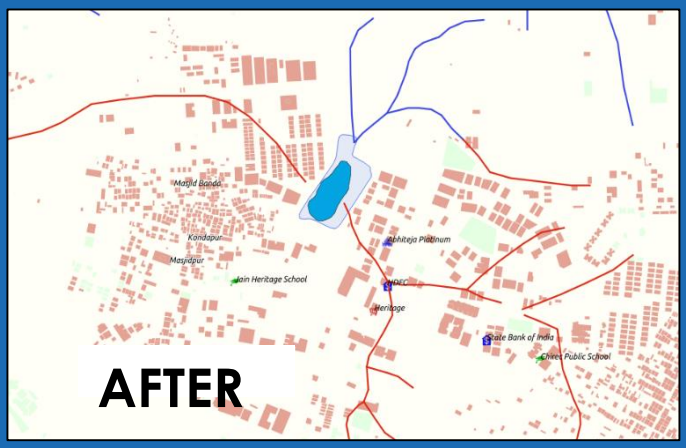
NEED	ADVANTAGES
• Overcome inadequacy of surface water • Protect depletion of ground water levels • Increase infiltration in sub-soil • Reduce ground water contamination • Improve ground water quality by dilution • Increase vegetation cover • Regulatory compliance	• Cost of recharge to sub-surface reservoir is lower • Aquifer serves as a distribution system also – increases productivity • Reduces flood hazards • Effects rise in ground water levels • Reduces soil erosion • Remove bacteriological and suspended impurities during the surface water transition within the sub-soil

As an estimate, merely capturing the rain water and run off on 2% of India's land area could supply 26 gallons of water per person.

WHERE	HOW
• Areas where ground water levels are declining on regular basis • Substantial amount of aquifer has been de-saturated • Availability of ground water is inadequate in lean months • Infiltration of rain water into sub-soil has decreased drastically • Recharging of ground water has diminished	• Recharge pit • Percolation tanks • Recharge well • Recharge trench • Store and reuse tanks • Ponds

The tanks are prepared using the conventional (brickwork, concrete) or the modern technique (modular system).
RETAS™ manufactures and executes rain water harvesting through RAINMAXX™ Tanks which are modular by design.

Hyderabad's… Invisible story…

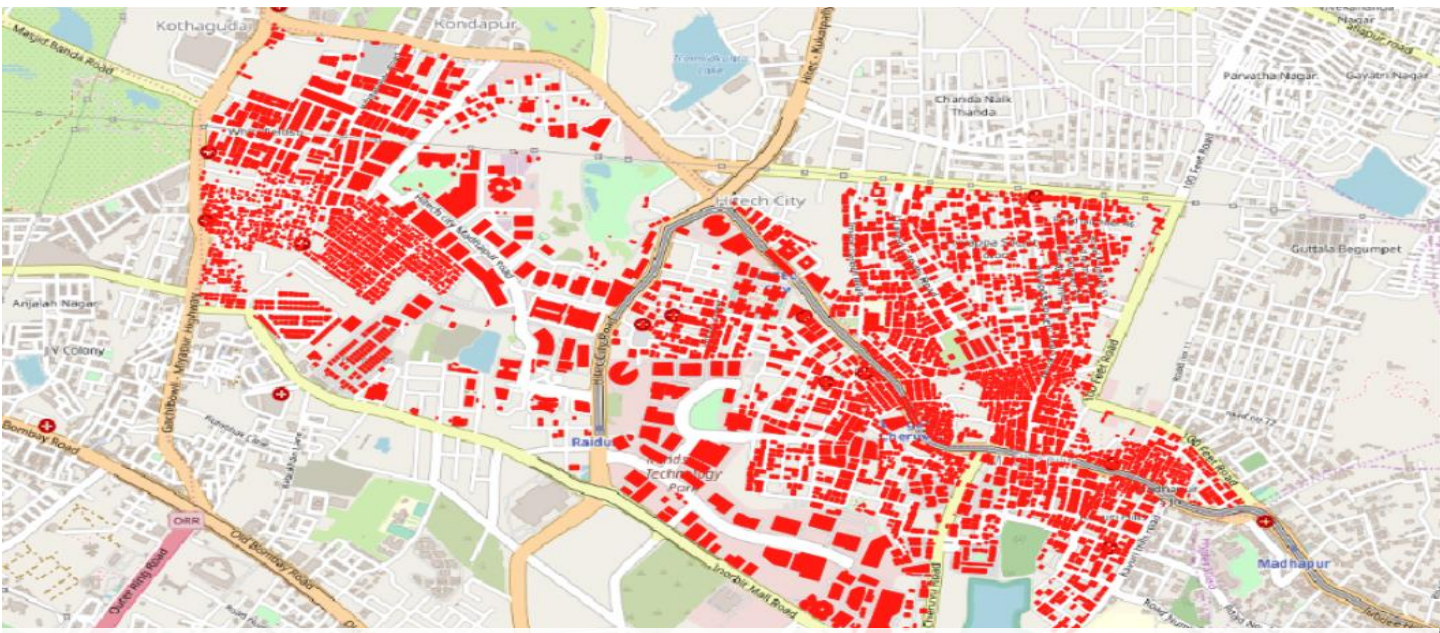


Ground water rapidly deteriorating

Piecemeal approach, **not helping**

- **Vanishing channels..**
- **Massive ground water depletion**
- **Massive groundwater contamination**
- **Tankers driven city**
- **Urban flooding**

Whole city approach missing
Need concerted effort over larger expanses



Rainwater potential on Madhapur **1.45 SQ KM ROOFTOP AREA=102 CRORE LITRES/YEAR**, which can serve the population of Madhapur Basin 16**0 LITRES PER DAY PER PERSON** for a whole year from rainwater alone.

But Rainwater not conserved & 20 crores spent on tankers every year

Our Inspiration


Superblocks to the rescue: Barcelona's plan to give streets back to residents

▲ Nine blocks in Barcelona's Eixample district will make up a 'superblock', the city's new strategy for sustainability. Photograph: Alamy

The Catalan capital's radical new strategy will restrict traffic to a number of big roads, drastically reducing pollution and turning secondary streets into 'citizen spaces' for culture, leisure and the

Super-Block model

An integrated approach

Replicating Barcelona's success

Modelled on lines of the Barcelona Superblock success (for mobility)

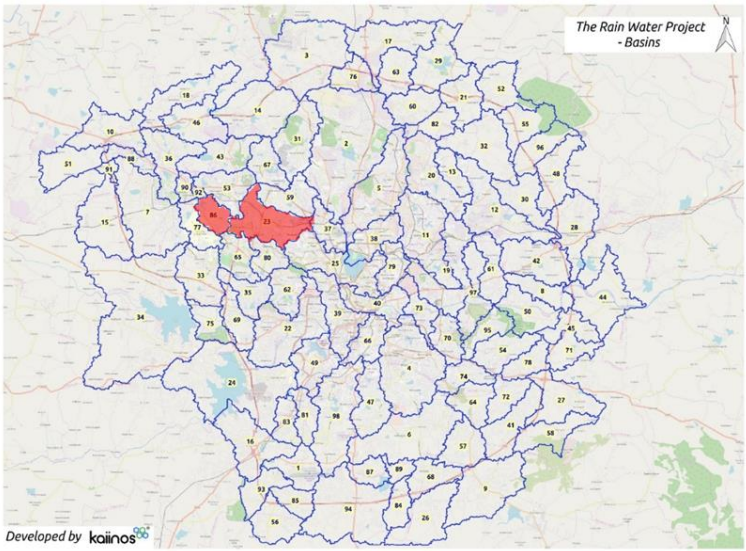
Fix One Basin at a time

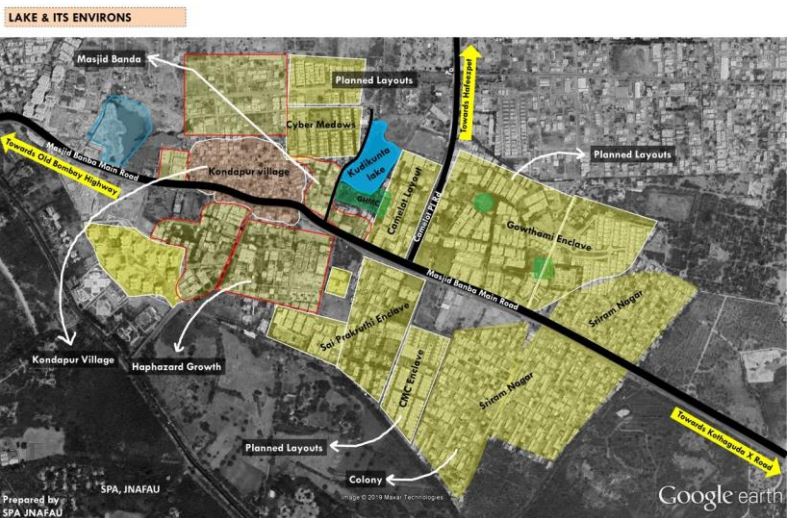
Go beyond the Very few structures today.

Tackle an **extended area to i**mprove ground **water**

Dividing the city of **Hyderabad into 98 basins**

Each Basin as a **Superblock**





A UNIQUE IMPLEMENTATION METHOD OF CREATING A REPLICABLE SUPER BLOCK MODEL TARGETING EVERY SQUARE INCH.

OUR APPROACH

- Implement Superblock model
- Conserve catchment in and around lake
- Collect.Store.Inject
- Target dense clusters, apartment blocks and communities.
- Get extensive conservation in the extended neighborhood.
- Rain collection, harvesting structures, injection bores.
- Innovative modular solutions.

ACTION THROUGH AWARENESS

CAMPAIGNS TO BUILD AWARENESS AROUND RAIN WATER HARVESTING

Restored bores in colleges(IIIT) Restored bores in old factories Restored 3 borewells in school(CHIREC school)

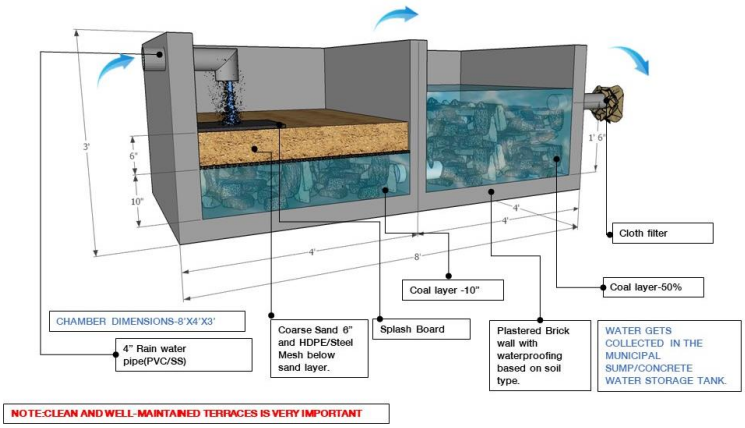
ORGANISING ENGAGING WORKSHOPS,TRAINING ACTIVITIES AND WATER AUDITING

INITIATE ACTION THROUGH LAKE PROTECTION COMMUNITIES

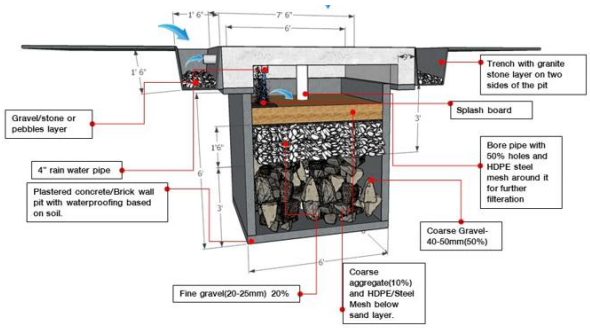
WATERPRENEUR AND TRAINING WORKSHOPS

Our services

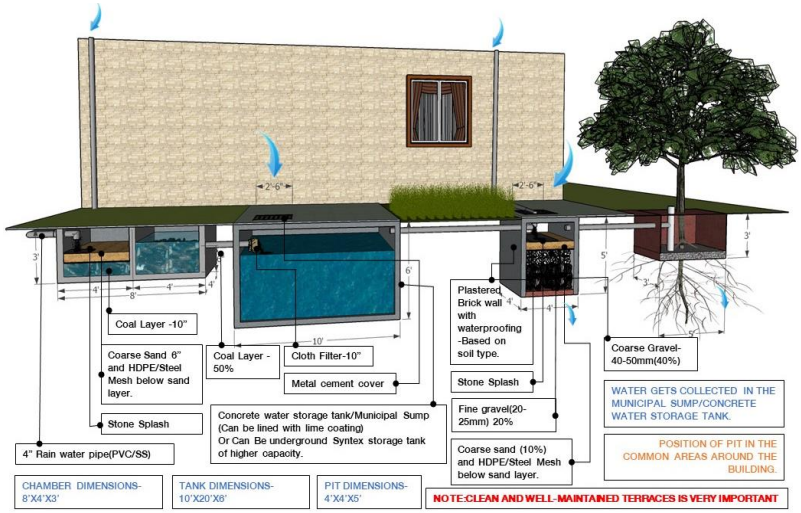
Conventional options



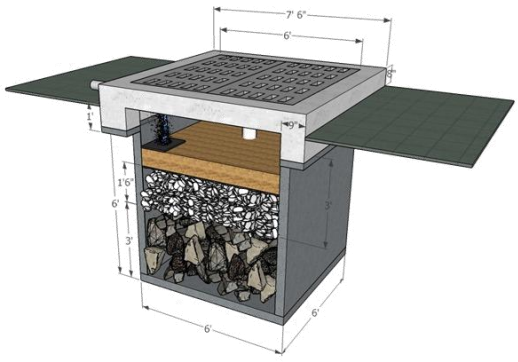
PERCOLATION PITS WITH STONE TRENCH



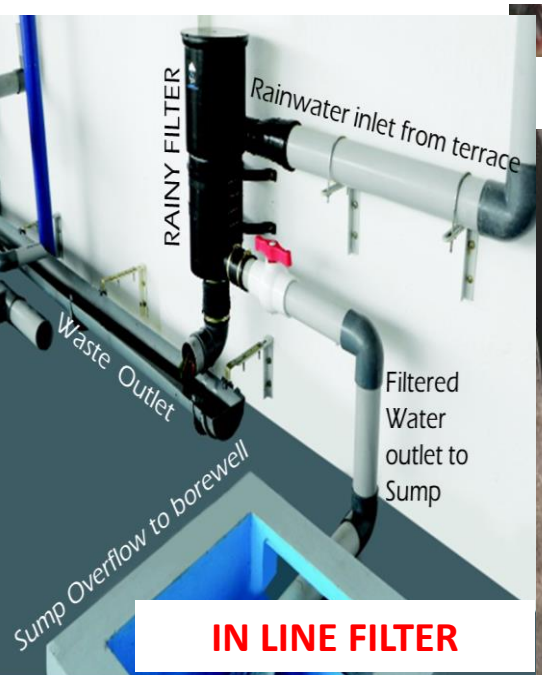
COAL FILTER BED /STORAGE TANK



PERCOLATION PITS



RAIN WATER-FILTERBED/STORAGE/RECHARGE/REUSE



IN LINE FILTER

FERRO CEMENT TANKS

SIMPLE RECHARGE WELLS

Modular options

STORE AND REUSE PIT

RECHARGE PIT

PERCOLATION PIT

ECOLOGICAL CHANNEL

MICRO-FILTER AND DESILT CHAMBER

Rain water harvesting through RAINMAXX™ tanks

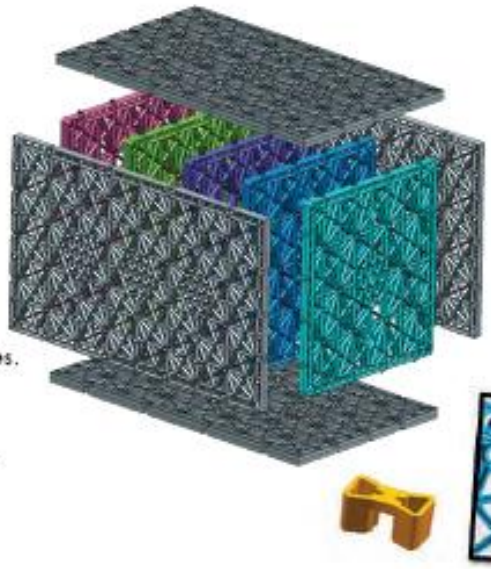
We manufacture RAINMAXX™ modular tanks which are made of 100% recycled PP material. These tanks are used sub-surface for collection, infiltration and storage of rain water.

RAINMAXX™ tanks are innovated and designed after rigorous rounds of discussions with industry experts, town planners, architects and users. We have come up with a product which embodies the theme of MAKE IN INDIA.

Strong Structural Design
- Can be installed under landscaped area, driveways, car parking, Load capacity upto 45 Tones

Make in India - for the world
- Reduced lead time, local inventory

Modular and Honeycomb
- Easy to assemble by using combination of small and large plates. create any size tank.
- Introduction of connectors which provides better stability and strength
- Above 95% void area



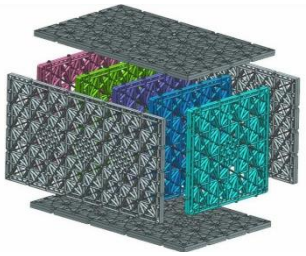
Easy Handling
- Lightweight and trafficable, Reduced logistical cost

Environment friendly
- Made of 100% recycled PP material
- UV stabilized
- Lesser CO_2 emission
- Ensure IGBC credits

Tank specifications

Surface Area	96% void
Material	100% recycled Polypropylene ALSO available in 100% VIRGIN HIPP
Biological & Chemical Resistance	Unaffected by moulds and algae, Soil-Bourne chemicals, bacteria and bitumen.
Service Temperature	-30°C to 120°C (-22°F to 248°F)
Load Capacity	30 tonnes/m2(4 smallplates) ; 45 tonnes/m2 (7 small plates)

Materials used



Rainmaxx Tank

Geotextile

Waterproof Liner (for Storage and reuse only)

Microfilter

Value Chart

Criteria	*Modular RWH*
Initial Cost of tank	*INR 16,16,000*
Cost of filtration	*External filtration unit, desilting chamber and risers:- INR 2,30,000*
Total initial cost	*INR 18,46,000*
Construction Time	*10 days after recharge well*
Maintenance cost	*INR 7,000 per year*
Maintenance Time	*50-55 minutes*
Size of tank	*31.51m * 2.448m * 1.31m*
Top Surface	*Infiltration from top surface*

ADVANTAGES

- RELIABILITY
- LIMITED TIME FOR INSTALLATION (TANK ONLY)
- EFFECTIVE DETENTION VOLUME (STORAGE CAPACITY)
- SPACE UTILIZATION
- HIGH LOAD BEARING CAPACITY
- SAFETY
- ECO FRIENDLY -ENVIRONMENTAL IMPACT
- HIGH CAPACITY
- LONG LIFE AND MATERIAL STANDARDIZATION
- FLEXIBILITY-REDUCE/EXTEND
- AESTHETICALLY CLEAN AND NEAT
- PRONE TO SEASONAL CHALLENGES
- THE SAME TANK BUILT DURING CONSTRUCTION PHASE CAN LATER BE USED AS PERCOLATION PIT/DOMESTIC STORAGE TANK/RWH STORAGE TANK.

INSTALLATION PROCESS CHART

Pre Installation Process

STEP 1

VES Survey

STEP 2

Bore Logging Test

STEP 3

Soil Percolation Test

Installation Process

STEP 1

Recharge Well

STEP 2

Excavation

STEP 3

Base Preparation

STEP 4

Laying & Cutting of Geotextile

STEP 5

Laying of Rainmaxx™ Modules

STEP 6

Assembly of Rainmaxx™ Tank

STEP 7

Wrapping of Geotextile

STEP 8

Backfilling

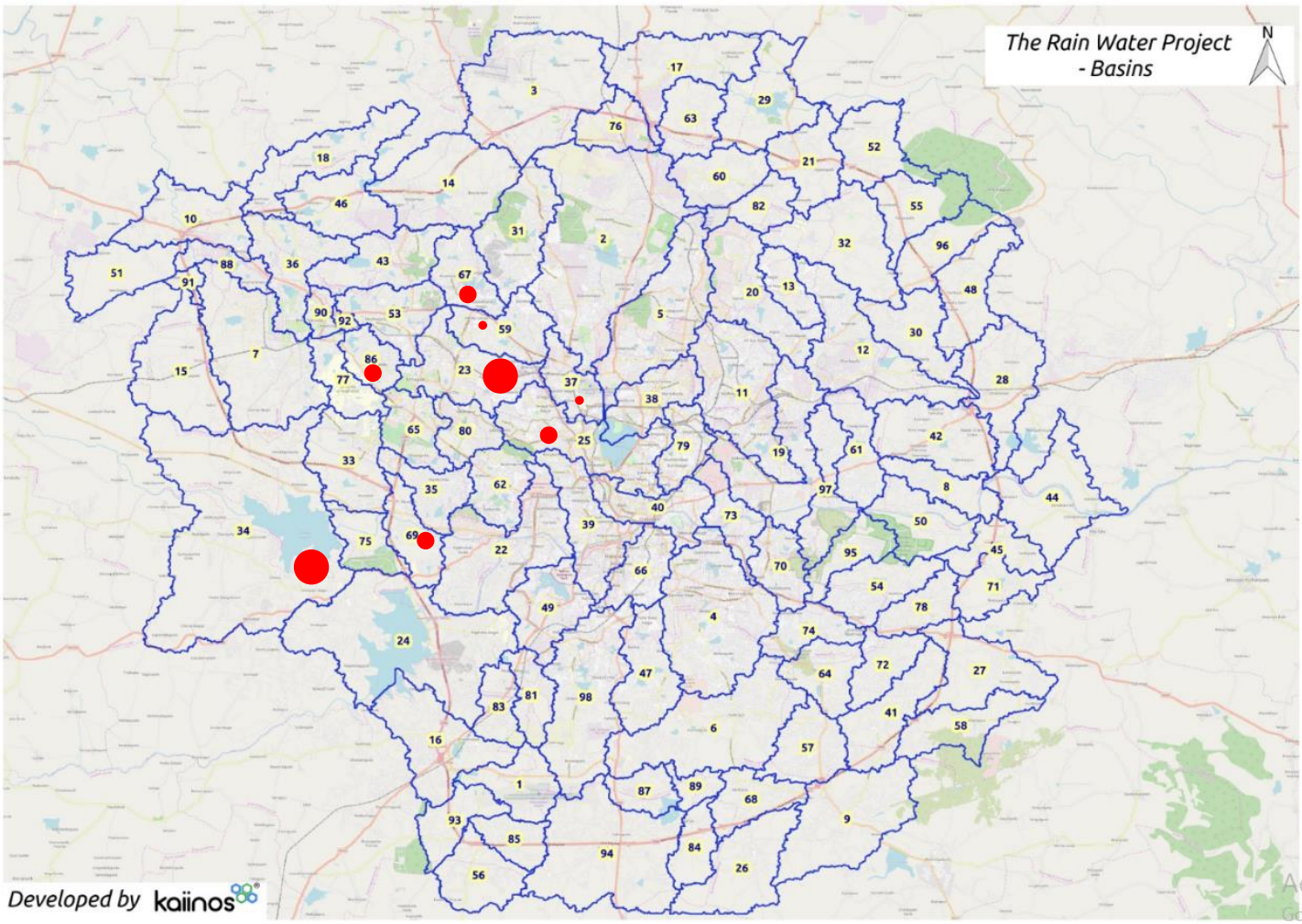
STEP 9

Connection with Microfilter

STEP 10

Cleaning of Recharge Well

Starting at the prime locations of Hyderabad…



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