

Workshop on: JAL SANCHAY JAN BHAGIDARI A Jal Shakti Abhiyan Initiative

Roles and responsibilities of
Engineers/ Builders/ Developers

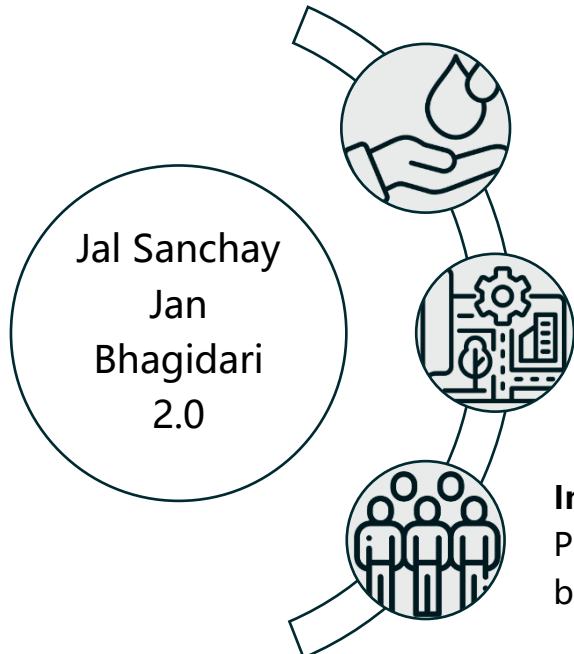
GdMC | AADA | GDA | CWAS-CRDF-CEPT

25th February, 2026



Objective of the Workshop

Gandhidham Municipal Corporation (GdMC) in collaboration with Gandhidham Development Authority (GDA), Anjar Area Development Authority (AADA), Center for Water and Sanitation (CWAS), CRDF, CEPT University, with support from Gandhidham Chamber of Commerce and Industries (GCCII) organised a one-day training program on “**Jal Sanchay Jan Bhagidari 2.0 – Roles and Responsibilities of Engineers, Builders and Developers**”



Enhance groundwater recharge at scale: Promote widespread adoption of rainwater harvesting and recharge structures across urban areas to improve groundwater levels.

Strengthen community and stakeholder participation: Encourage Active involvement of the citizen, engineers, builders, and institutions in water conservation efforts.

Integrate water sustainability into urban development: Ensure water-sensitive Planning and conservation measures are embedded in infrastructure projects, building approvals and city planning processes.

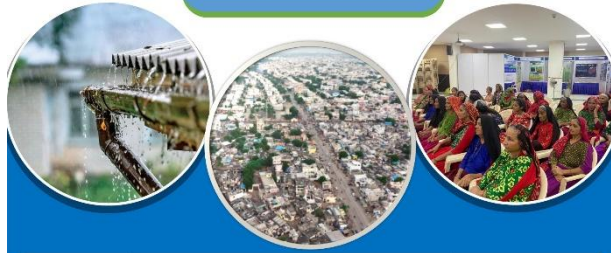
Agenda of the Workshop

JAL SANCHAY
JAN BHAGIDARI 2.0
A Jal Shakti Abhiyan Initiative

Gandhidham Municipal Corporation (GdMC)
in coordination with
Gandhidham Development Authority (GDA), Anjar Area Development
Authority (AADA), and Center for Water and Sanitation (CWAS), CRDF,
CEPT University with support of Gandhidham Chamber of Commerce and
Industries (GCCII)

Organizes One Day Training for Architects,
Engineers, Builders and other invitees

25th February 2026



Time	Session	Speaker
16:00 - 16:05	Introduction	GdMC
16:05 - 16:20	Role of Engineers, Builders and Architects in water sensitive urban planning.	CWAS-CEPT University, Ahmedabad
16:20 - 16:25	Current policy and guidelines for Rainwater Harvesting (RWH) and Ground Water Recharge (GWR) in Gandhidham and Anjar.	GDA/ AADA
16:25 - 16:40	Open discussion Q&A and Wrap up	
17:00- 17:30	Site visit Rainwater harvesting Theme Park, Adisar Garden, Adipur- Gandhidham	



Session On

JAL SANCHAY JAN BHAGIDARI 2.0

A Jal Shakti Abhiyan Initiative

- Key Challenges faced by our cities
- Emerging Approaches of Urban Development
- Geohydrological Study and Scaleup initiatives



Session Speaker

Priyadarshini Choudhary
Lead Research Associate
CWAS-CRDF-CEPT University

Priyadarshini is an infrastructure development professional with 14+ years of expertise in managing multidisciplinary projects, focusing on project management, stakeholder coordination, and technical documentation.

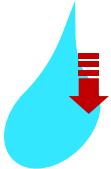
She holds a Master's in Infrastructure Engineering & Management from CEPT University, Ahmedabad, and a Bachelor's in Civil Engineering from Rajasthan University, Jaipur.

Water security an issue of extreme urgency



54%

Of India faces high to extremely high water stress

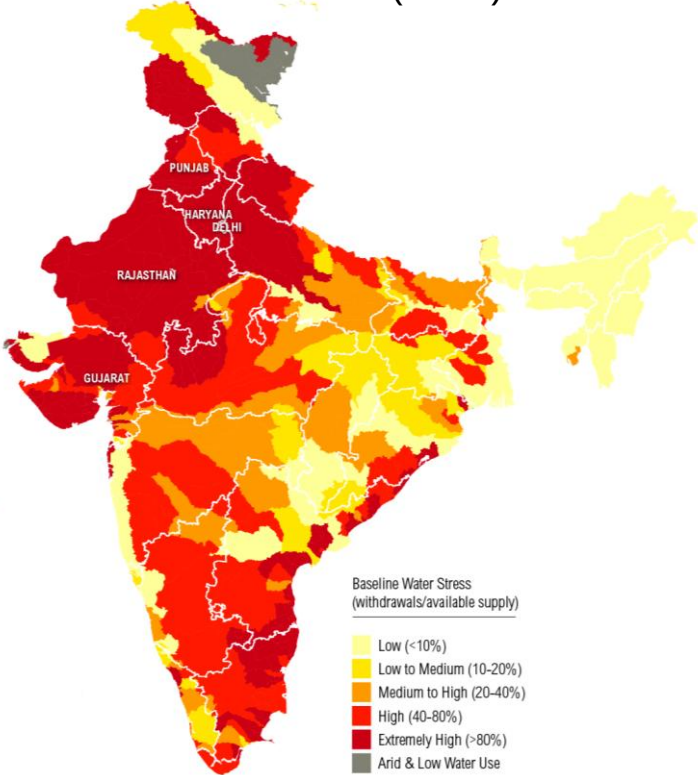


21 cities moving towards zero ground water level



6% predicted loss in gross domestic product (GDP) by 2050

Baseline water stress in India Ratio of total withdrawals and total flow (2010)



Source: Composite water index, 2018, Niti Aayog report

Key challenges faced by our cities, today ...

Ironical situation- floods vs. water scarcity

On the one end there is **acute water scarcity** and on the other, the **streets are often flooded** during the monsoons



Depletion of local water resources

Depletion of groundwater levels



Distant water sources



Deteriorating Quality of Water Sources

Solid waste and untreated sewage dumping



Industrial pollution



Key challenges faced by our cities, today ...

Widening demand and supply gap



India's water demand will grow 24 percent by 2025 and 74 percent by 2050

Urbanization leading to surge in

- Domestic water demand
- Industrial water demand

High Water losses



Water losses and leakages in pipes as high as 40-50% of total water supply

Inequity in water supply



Key challenges faced by our cities, today ...

Lack of rainwater harvesting and groundwater recharge



Vanishing lakes and waterbodies



Lack of demand management

Water wastage



Non-maintenance of traditional harvesting structures



Lack of water saving fixtures

USING WATER EFFICIENTLY
By using fixtures that reduce the flow of water, a lot of it can be saved.

Conventional taps 6-8 litres/min.	VS	Low flow taps (with aerators) 2 litres/min.
Conventional shower 12-15 litres/min.	VS	Low flow showers 6-9 litres/min.
Conventional WC 6-9 litres/flush	VS	Low flow dual flush WC 3 and 6 litres/flush

Anjar and Gandhidham: The region has historically faced water crisis...

Chronically drought prone region with a frequency of once in every 2.5 years

- Over exploitation of ground water, which is further aggravated by salt water intrusion
- Dependent on Narmada Water

Frequent Urban flooding scenario in major parts of the cities



In Kutch, history has a habit of repeating itself

Rutam V Vora | Bhuj, March 28 | Updated On: Mar 28, 2019



The region is witnessing its worst drought in 30 years; 16 of its 20 dams have gone dry; there is drinking water but nothing for cattle; and yet, its people remain resilient

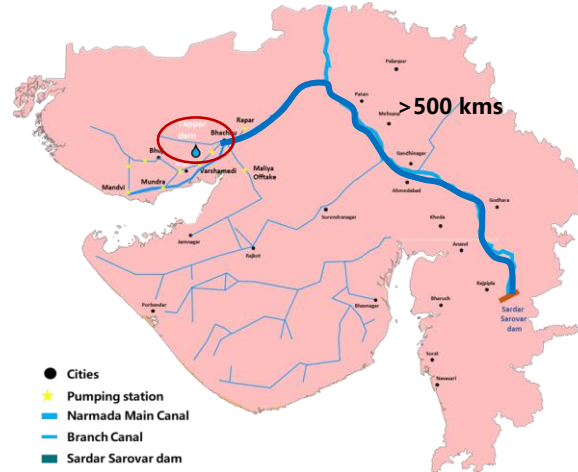


Photo from THE TIMES OF INDIA

Rains pound Gandhidham, Anjar towns in Kutch

TNN | Jul 12, 2020, 04:32 AM IST

Rajkot: Heavy rain lashed Kutch's commercial city Gandhidham and Anjar on Saturday evening causing severe water-logging in many areas. However, the people welcomed the rain that gave them some respite from the humid heat.



Gujarat Braces for a Wet Weekend; Heavy Rain Alerts Issued over Kachchh, Jamnagar, Sabar Kantha, Surendranagar, Mahesana

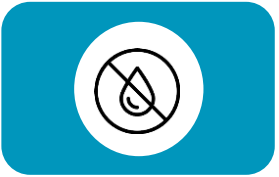
By TWC India Edit Team - 22 July, 2022 - TWC India



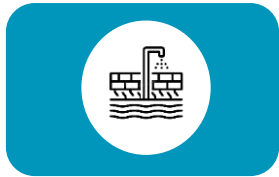
Are the cities prepared for emergency situations...



The **surface water** is available from a **distance** of more than **500 km**



Any **breakdown** in bulk line/ transmission line or **less precipitation** in Narmada catchment may cause no supply or lesser supply

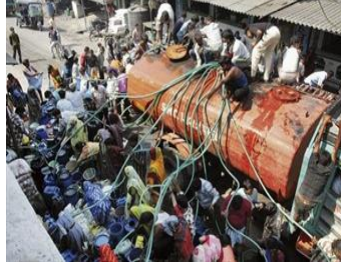


The cities also **depends upon ground water**, which is already showing **depleting trends** (Gandhidham ground water supply is also dependent upon Anjar's aquifer)



Cities needs to move towards water security

Augmenting Own Water Resources



Safe Water Supply and Sanitation - Need of the hour ...

12% of India's population already living the

DAY ZERO

scenario with respect to water. "21 major cities are racing to reach zero groundwater levels, affecting access for 100 million people" --- NITI Aayog

The **AVERAGE** citizen receives **114 LPCD**

but

more than **70% of cities** receive less than **70 LPCD**

POOR SANITATION

6.5% GDP

investment is estimated to come according to a World Bank study.

98% CITIES ODF

but only **30%** estimates upto

81% OF WASTEWATER UNSAFELY DISPOSED

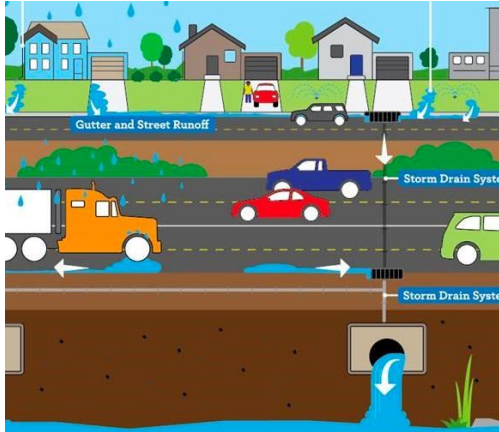
What are the roles and responsibilities of Engineers/
Builders/ Developers???

... especially in context of climate vulnerability and resilience

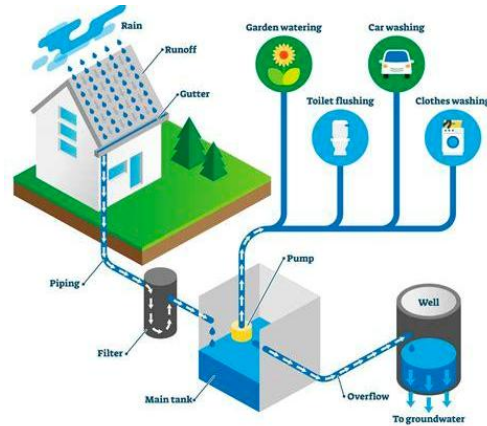
India is **7th most climate vulnerable**

country in the world due to its diverse ecology!

Why Engineers/ Builders/ Developers???



They shape urban infrastructure



First point of integration for water-efficient design



Critical actors in compliance with development regulations

Emerging approaches of urban development

Water sensitive urban design


Rainwater Falls on	Water Sensitive Urban Design Elements
Green Areas (Parks, Forest, etc.)	Retention Ponds, Detention Ponds
Roads / Green Streets	Bio Swales, Vegetated Filters, Gravel Filters along the Roads, Pervious Paving on Footpaths, Underground Storage Tanks (for RW and TWW storage) to use it for roadside Landscaping and Horticulture, Rain Gardens
Open Parking Lots	Bio Swales, Vegetated Filters, Gravel Filters, Pervious Paving
Open Land	Retention Ponds, Detention Ponds, Dry Swales
Water Bodies / Drains	Constructed Wetlands (to rejuvenate water bodies / lakes)

Blue-Green infrastructure

Blue green infrastructure



➤ In 2009, Toronto became the first city to mandate green roofs for all buildings with a plinth area more than 2,000sqm



➤ Paris plans to increase its green cover from 9.5% to 50% by 2030



➤ Berlin's Rummelsburg neighbourhood has done away with stormwater drains by implementing green roofs, rain gardens, bioswales and permeable pavements



➤ In 2020, Singapore launched a programme to plant one million trees by 2030

➤ Amsterdam has augmented its green cover by creating 'pocket parks'

➤ Jinhua in China has replaced a concrete floodwall at the confluence of three rivers with a 26-hectare wetland park without compromising flood protection

Leading examples in residential societies and townships



129 Weekend homes, Rancharda, Ahmedabad : Rainwater harvesting systems developed as part of society landscaping



Parikh House – A resident of Ahmedabad city : Rainwater harvesting systems along ground water recharge structure (recharging existing bore well); water used for drinking purpose



78@Gokuldham, Residential society, Ahmedabad : Rainwater harvesting systems developed in alignment with storm water management system



Torrent Pharmaceuticals campus:

- Rainwater harvesting and ground water recharge for urban flood mitigation
- A system with sunken areas and bio-swales and ponds for RWH and recharge

Some recent news on actions...

AMC adopts 'Sponge City' plan to tackle urban flooding

Will Spend ₹250cr On Ecobloc Stormwater System, Develop Scheme For Flood Warning

Jignesh Parmar
@timesgroup.com

Ahmedabad: In response to frequent waterlogging during monsoons, the civic body in Ahmedabad is adopting the concept of a 'sponge city' to mitigate urban flooding. A fund of Rs 250 crore from the National Disaster Management Authority (NDMA) has been allocated for implementing an urban flood management plan in the city. This plan includes several components such as lake interlinking, the installation of ecobloc stormwater management and infiltration systems in key waterlogging areas, and the development of a real-time flood warning system.

As a pilot project, the Ahmedabad Municipal Corporation (AMC) has selected the Bandhan Trikona area in Sola for the installation of ecoblocs along the road. Ecoblocs are modular polystyrene blocks that can be stacked together to create water reservoirs capable of storing, infiltrating, or reusing rainwater. A senior AMC official said, "Ecoblocs offer several advantages over conventional gravel infiltration ditches, including a significantly higher reservoir volume for rainwater (up to 97% compared to 30-40% for gravel)." The initial cost of implementing the

ecobloc system in Sola is estimated to be Rs 60 crore, he added. Ahmedabad currently has 115 waterlogging hotspots where water accumulates for up to four to five hours during heavy rains. "The majority of these hotspots are located in the South Zone, which includes areas like Maninagar, Behrampura, and Isanpur," adds AMC official.

The ecobloc sponge parks can direct stormwater to nearby gardens or water reservoirs. "The second project that will be undertaken is interlinking of lakes, in the newly developed South West Zone. These include interlinking of seven major lakes like the Punia, Bedar, Mumatpura, Malkani Sarkhej, Sakri, Fatehwardi, Azadnagar and Kanajiyia lakes. A similar plan is being chalked out for seven lakes in the East Zone too," added the AMC official.

The AMC will also implement a real-time flood warning system and the real-time data will be broadcasted to citizens. The NDMA will release Rs 50 crore annually to support Ahmedabad's urban flood mitigation efforts. The proposed plan and the selection of a consultant responsible for its implementation have been presented to the standing committee for approval.

SPOTS THAT REMAIN WATERLOGGED FOR 4-5 HOURS

North West 115
West 25
North 14



CA CIRCLE

AREAS WHERE WATERLOGGING IS COMMON

JOHNPUR: PQC Road (S) Gala Gymkhana Road, Bh Bopal Gam, Premnath Di service roads near Shwra and Shyama! crossroads

WHAT IS

It consists of modular blocks that can be stacked together to form a reservoir to store, infiltrate or reuse rainwater. The ecobloc has many advantages over conventional gravel infiltration ditches

ECOBLOCS ADVANTAGES

GREATER STORAGE: The ecobloc system can provide a reservoir volume in excess compared to 30%-40% of standard gravel infiltrate

LONG SERVICE LIFE: The made of durable plastic can withstand high load corrosion. Its service life to exceed 50 years

CENTRE'S SUGGESTIONS

► Information on total water bodies and status of encroachment

► Water bodies to be included in land records so that action be taken against encroachers

► Report checks on human activities on the catchment areas

► Water bodies to be included as integral part of town planning process

► State govt should ensure concurrent evaluation of the water bodies under repair, renovation, and restoration of water bodies scheme

► State should involve the user communities for keeping the water bodies encroachment free

► State should explore possibility of creation of new water bodies



Photo: Yogesh Chavda & Anvita Jamnani



Sarkhej Roza lake

WATER BODIES UNDER VARIOUS JURISDICTIONS

Cities and towns	Water resources dept	Revenue dept
1,939	4,413	12,182

Panchayat dept	Total
25,604	44,138



URBAN COUNT

Area	Lakes
Vadodara	625
Surat	330
Gandhinagar	61
Ahmedabad	60
Junagadh	18
Bhavnagar	12
Rajkot	9



OUR WATER BODIES

Name of lakes	Area (hectares)
Sursagar	6.74
pura	2.24
Gotri	1.68
irsali	3.54
orwa	3.53
nath	0.48
larni	7.79
nath	5.39
ama	5.61
asna	3.58
jalja	7.64
rasia	1.29
hobi	2.41
abdi	3.79
Rani	3.46



Siddhanath lake

Area (hectares)	Lake Name
0.42	Masiya
4.68	Danteshwar
3.41	Ajwa Road
3.86	Kamlanagar
4.65	Atladara
1.23	Lal Baug
1.07	Manjalpur
0.77	Mohammed



ar lake

Areas where recharge wells can be constructed in existing ponds/ lakes

► Alkapuri, Gotri, Sevasi, Old Padra Road, Akota, Atladara, Manjalpur, Makarpura, Pratapnagar, Subhanpura, Gorwa, Refinery Road, Fategunj, Nizampura, Sama-Savli Road, Chhani Road

National Missions with focus on water security including RWH, GWR, Lake rejuvenation, aquifer mapping...



**Jal Shakti Abhiyan:
Catch the Rain**

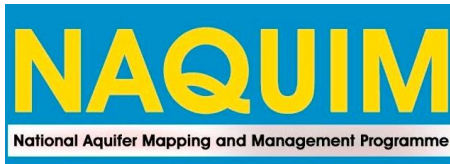
**Jal Sanchay Jan
Bhagidari (2024)**

A specialized component focusing on community-led construction of low-cost, artificial recharge structures and reviving defunct bore wells



**Atal Mission for
Rejuvenation & Urban
Transformation
(AMRUT) 2.0**

Water Security: Rejuvenation of urban water bodies/lakes, promoting the circular economy of water, Aquifer Management plan



**National Aquifer
Mapping and
Management
(NAQUIM)**

Implemented by the Central Ground Water Board (CGWB), this program maps aquifers (water-bearing formations) to understand their capacity and quality

Development Control Regulations mandate inclusion of RWH/ GWR in building plan...

Inclusion of Rainwater Harvesting in Building Permission...

- Anjar Area Development Authority (AADA)
- Inclusion of Rainwater harvesting as part of **Environment Management** (Adapted **GDCR**)

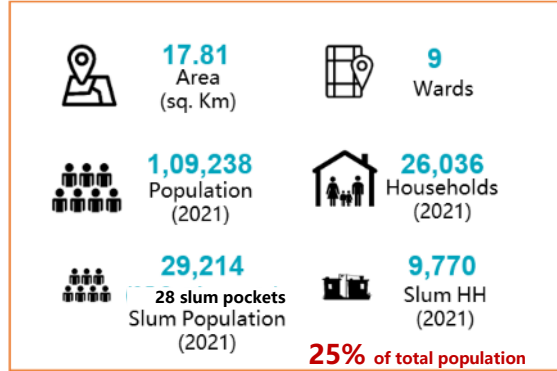
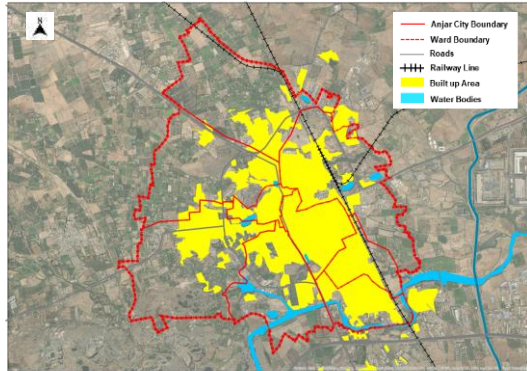


- Gandhidham Development Authority (GDA) (Est.1957)
- Inclusion of Rainwater harvesting as part of **Environment Responsiveness**

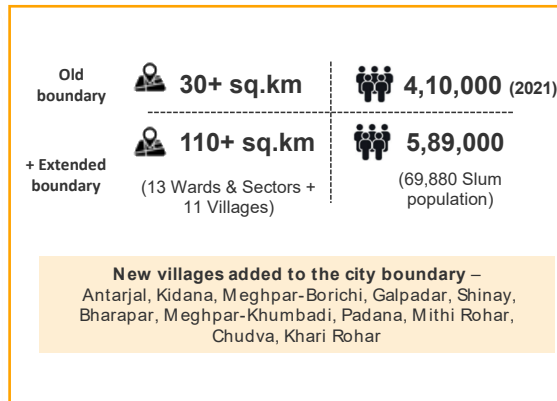
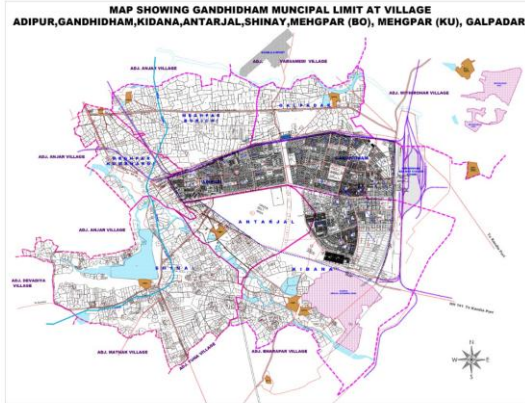
- Rain water harvesting is mandatory for all buildings with ground coverage of 80 sq.mts and above
- Policy initiatives needs to be supported by ground level monitoring system

Building Plot Area (Sq.km)	Harvest Infrastructure Type
Between 80 to 500	Percolation Pit or Bore Recharge
Between 500 to 1500	Percolating Well with Rain Water Harvesting System
Between 1500 to 4000	Percolating Well with Rain Water Harvesting System (up to ground second river)
4000 and above	Percolating Well with Rain Water Harvesting System (up to ground second river) for every 4000 sq.mt area

The twin cities of Kachchh - Anjar and Gandhidham



- Kachchh is a largest district of Gujarat State; spread over **45,674 km²** with a long coast line of about **406 kms**



- Kachchh region falls under **arid-semi arid zone** (classified by **average annual rainfall of 250-500 mm**)
- Growing **economic and industrial hub** in the state. The key industries include **Engineering, Power, Steel Pipes, Cement, Handicrafts. Emerging industry sectors include Construction, Chemicals, Ceramics and Textiles**

CWAS in support with ACT conducted Geohydrological study for understanding aquifer and watershed of the two cities...

Approach and Methodology adopted

Data Collection and Field Investigations



Data Analysis and Aquifer Mapping



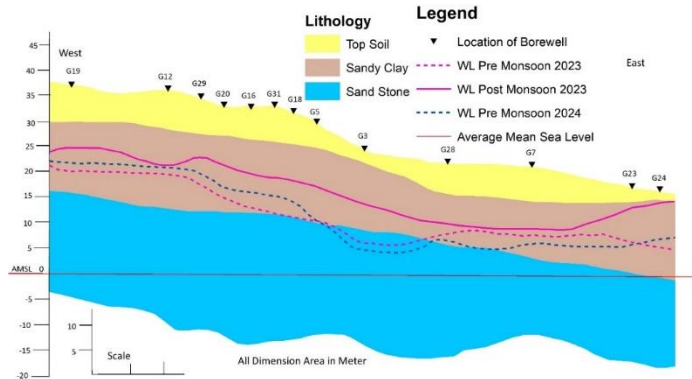
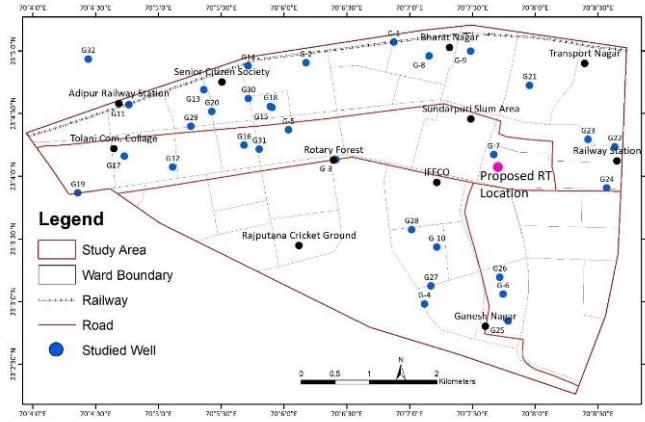
Community Engagement and Demonstration Planning



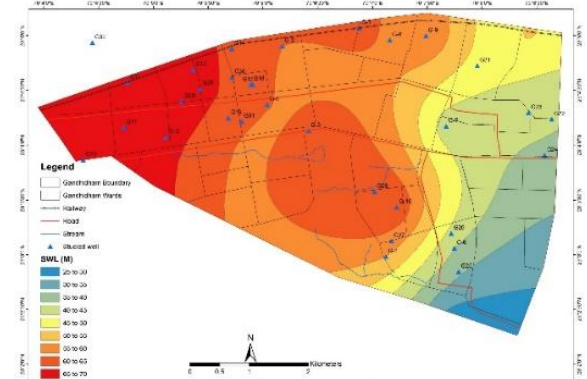
Aquifer Recharge Planning and Strategy Formulation



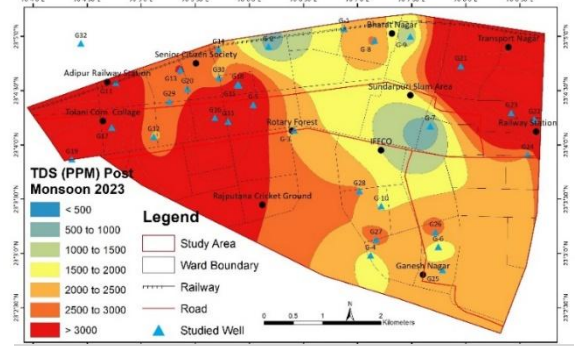
Understanding the ground water behaviour for pre and post monsoon season - Gandhidham



30+ observation wells were studied to understand groundwater behavior.

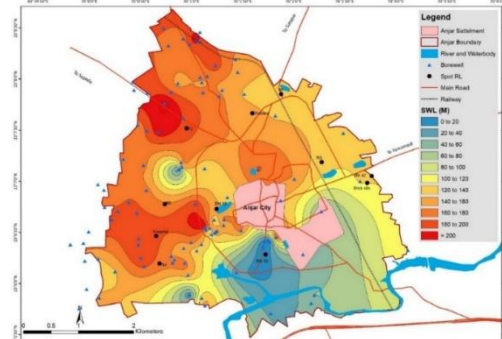
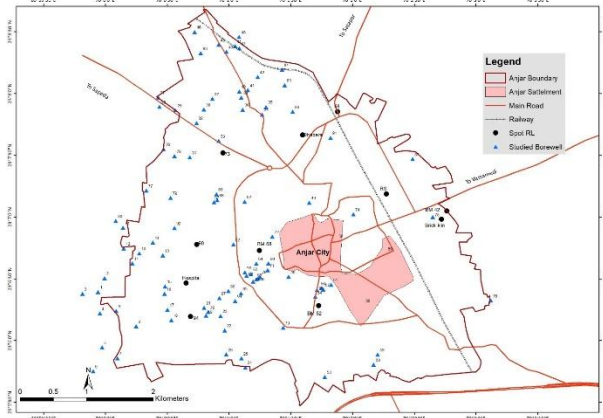


Pre and Post monsoon water levels were observed

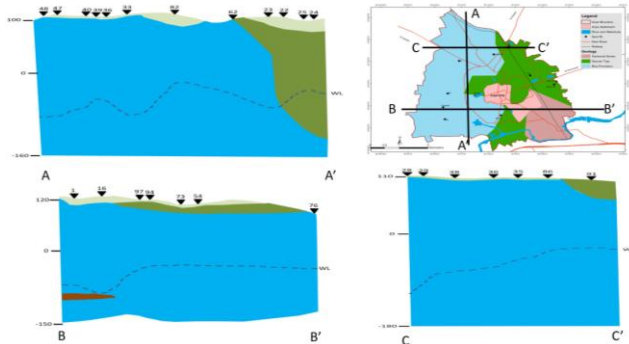


Pre and Post monsoon water quality were monitored

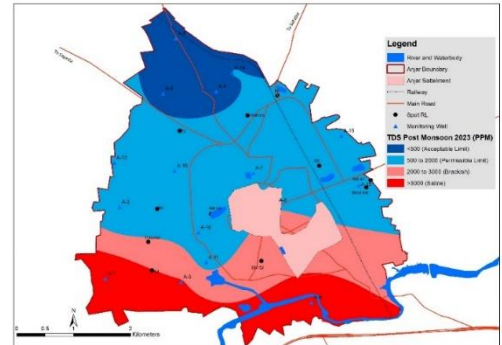
Understanding the ground water behaviour for pre and post monsoon season - Anjar



Pre and Post monsoon water levels were observed

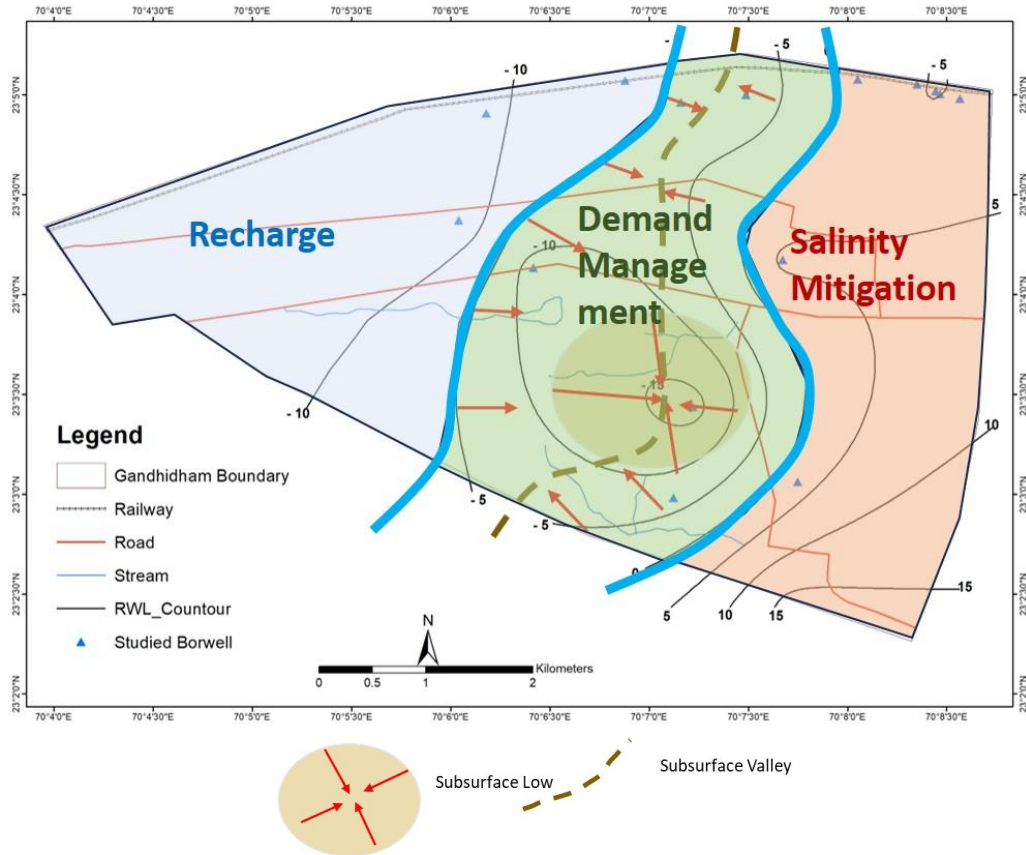


90+ observation wells were studied to understand groundwater behavior.



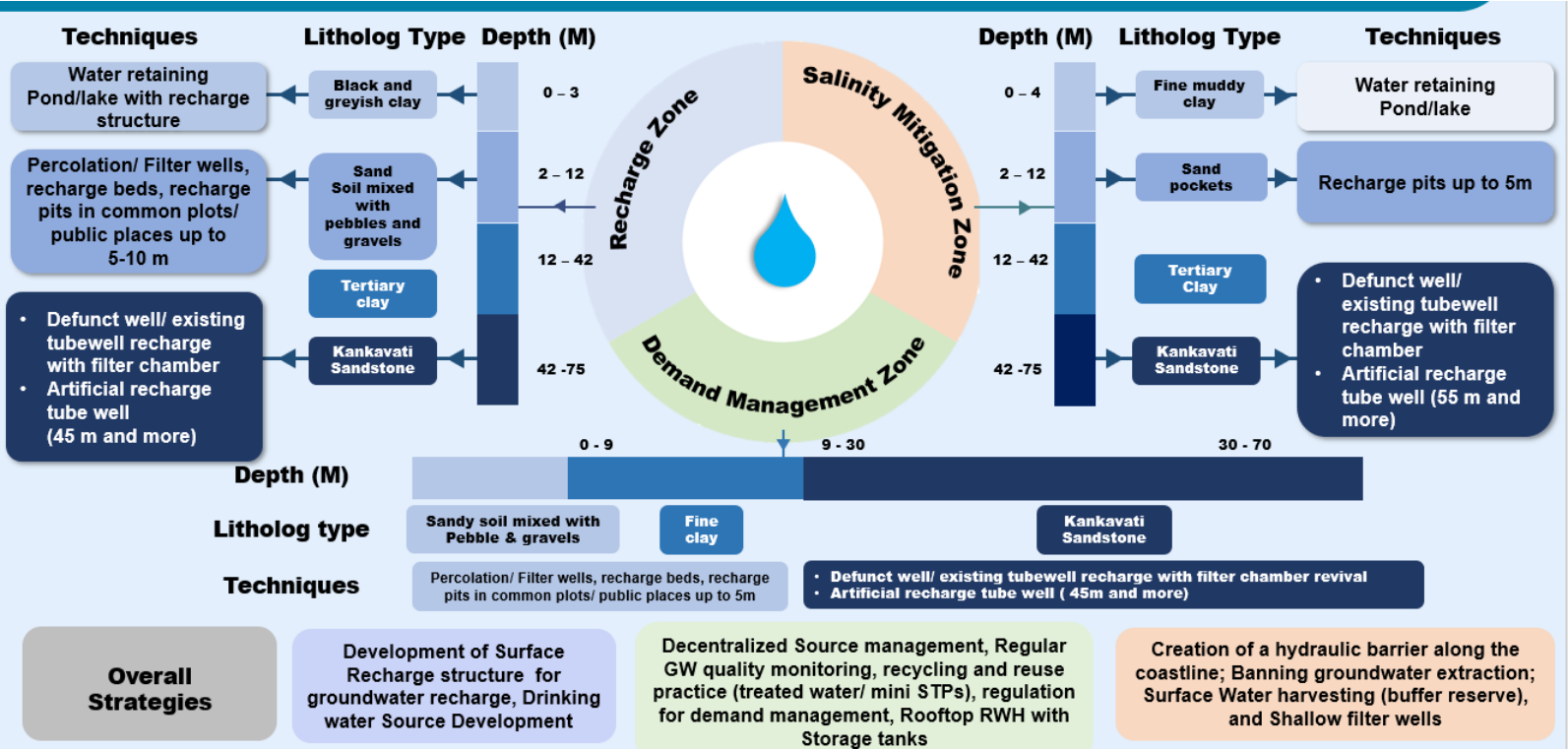
Pre and Post monsoon water quality were monitored

Gandhidham characterized in three different zones based on Geohydrology study...

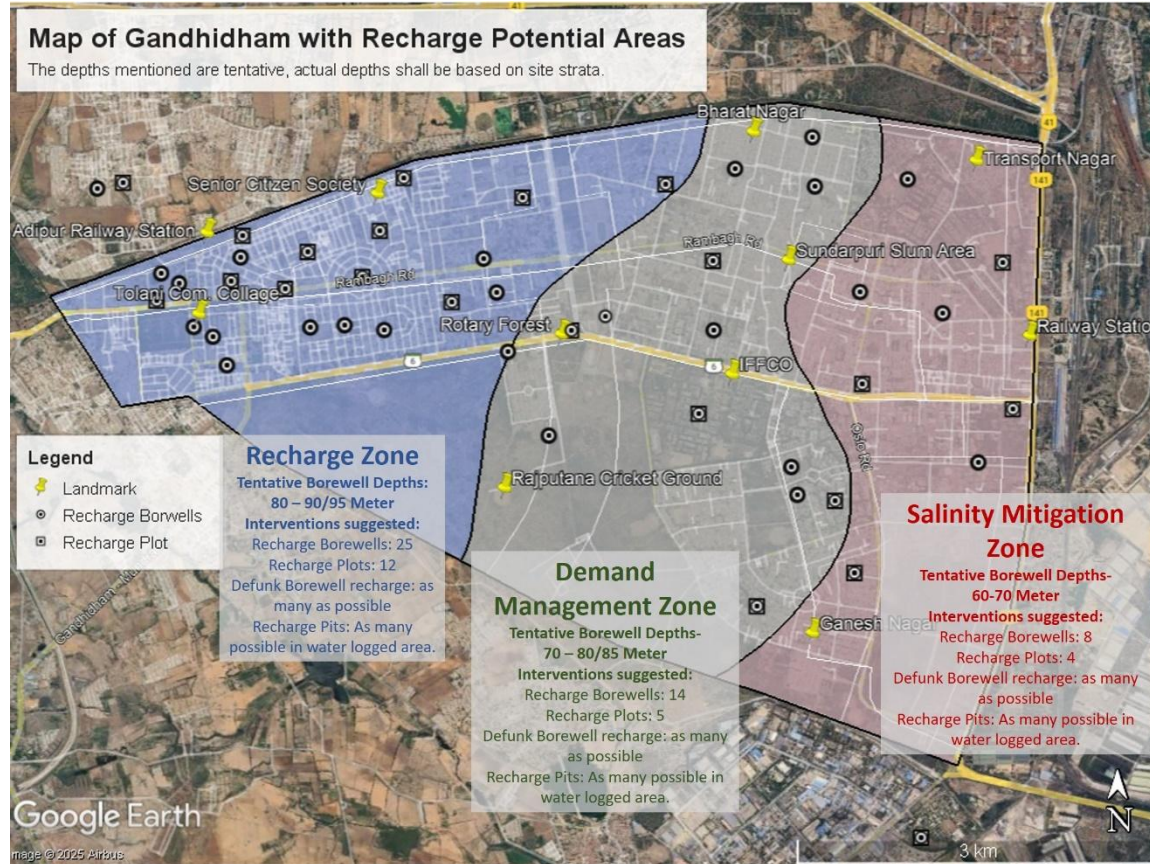


- Based on the geohydrological study, the city was classified into three zones—Recharge Potential, Demand Management, and Salinity Mitigation—to enable the development of targeted recharge and water management strategies for each zone.
- Recharge strategies were then designed for each zone based on the underlying lithology.
- Subsequently, pilot demonstrations were implemented across all three zones to test and showcase the proposed interventions.

Zone-wise Groundwater recharge strategy for city - Gandhidham



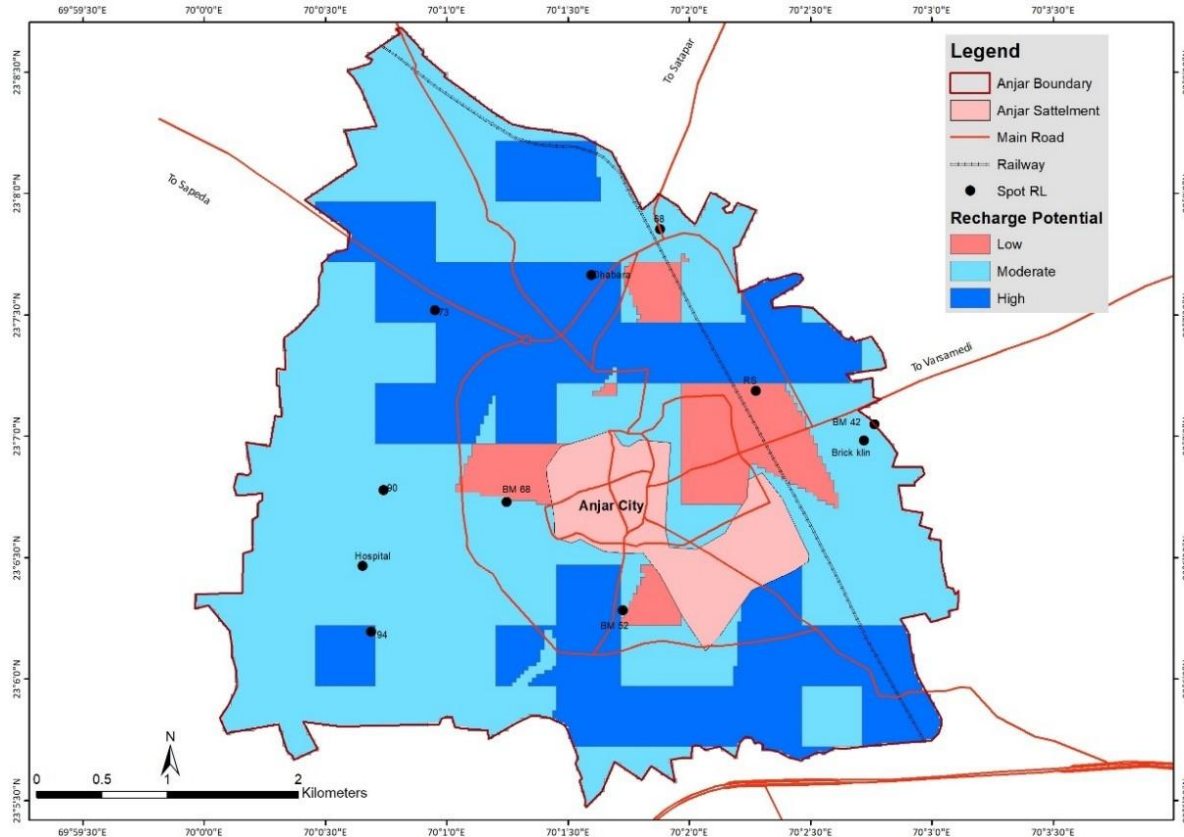
Scaleup initiatives by GdMC under “Catch the Rain”...



- City-Level Groundwater Recharge Plan is developed to address challenges, such as depleting water levels, deteriorating quality and flooding during rainy season.
- Considering the Geohydrological characteristics of each management, specific locations for appropriate recharge techniques have been identified.
- These locations are strategically selected to optimize groundwater replenishment based on the unique needs and conditions of each zone.
- Based on these recommendations GdMC has initiated various GWR structures under “ Catch The Rain”

Please note- these depths are tentative, and should be amended based on the actual strata encountered at the time of construction. For mitigating Floods, strategies like Borewell along with Filter bed, Recharge plot etc. is to be considered based on volume of water available in the area additionally, Recharge Pit, Percolation wells are also required.

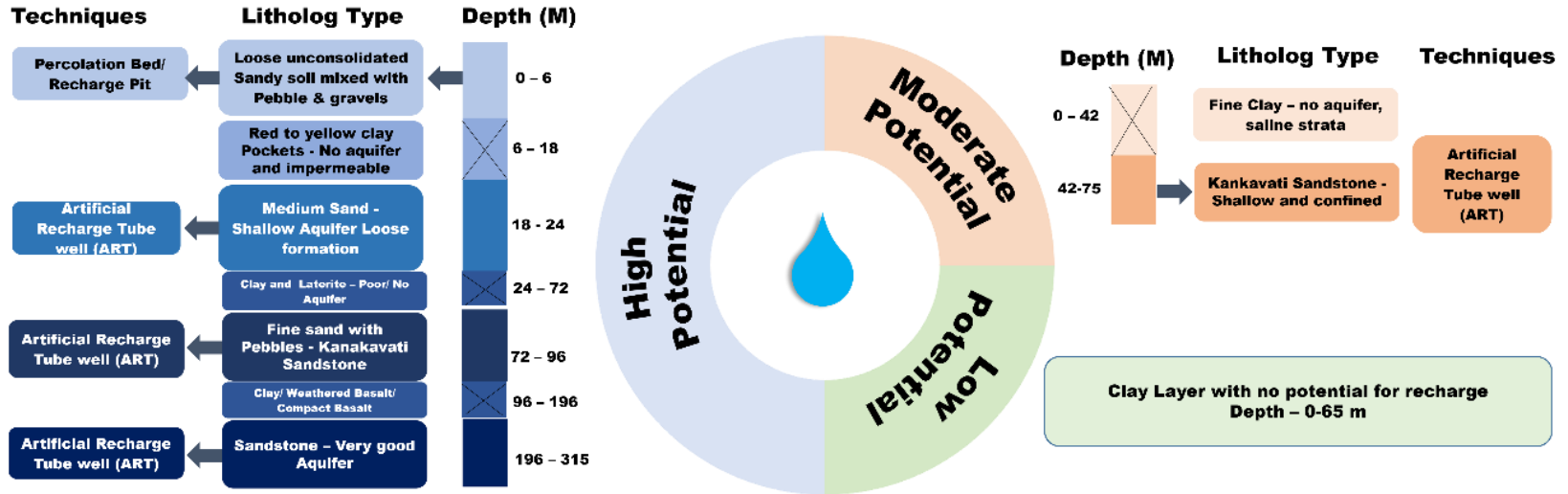
Potential Categorization for Ground water Management in Anjar...



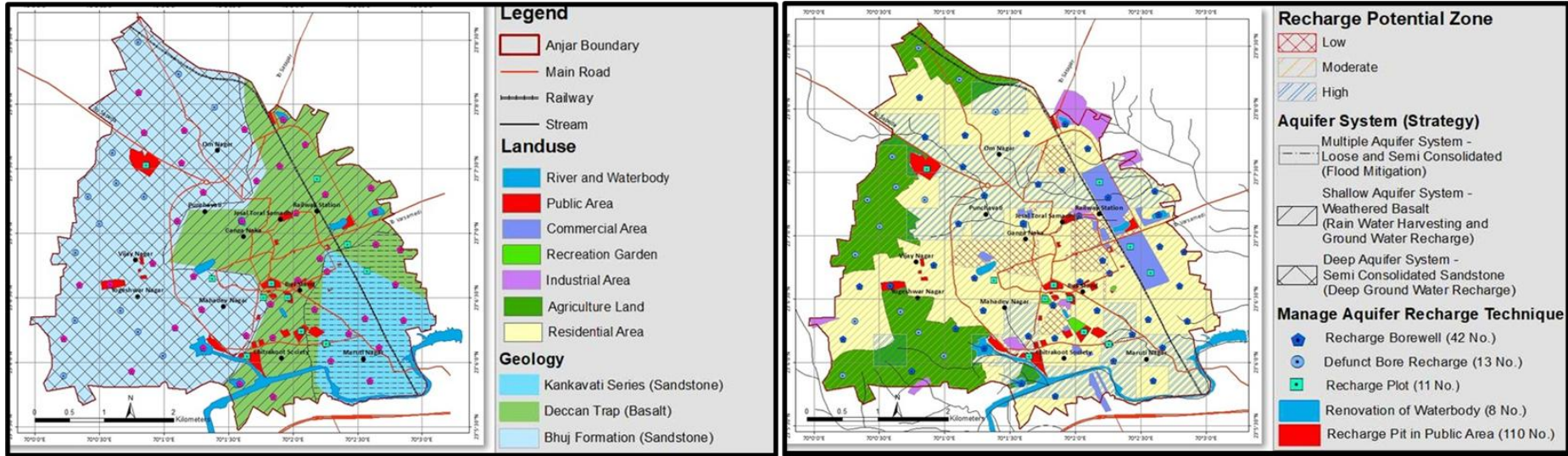
- Based on the Geohydrological study, Geohydrological Potential Categorization for Management Strategies were developed.

Zone-wise Groundwater recharge strategy for city - Anjar

Zone-wise Recharge Techniques - Anjar

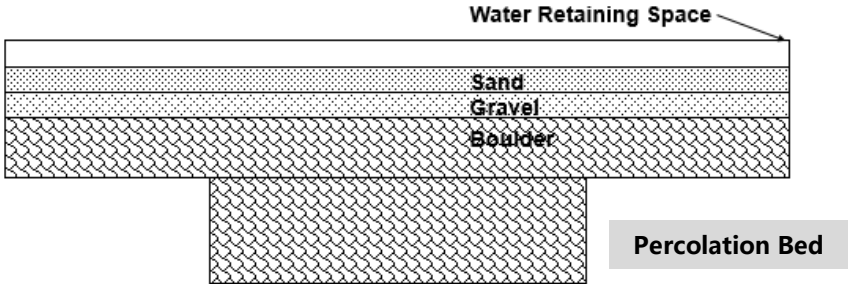
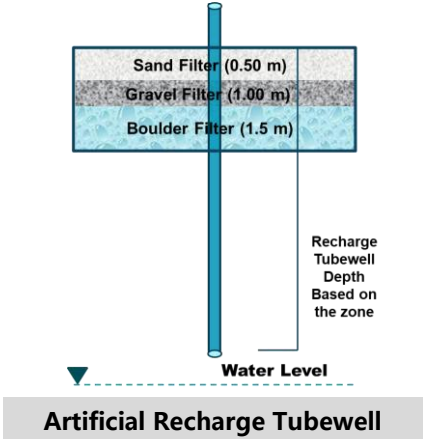
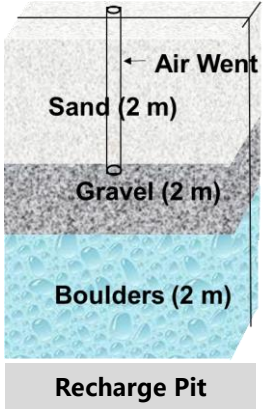
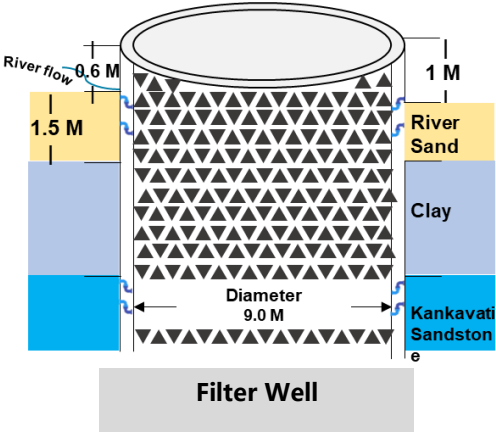


Identified aquifer management techniques for Anjar City...



- City-Level Groundwater Recharge Plan is developed to address challenges, such as depleting water levels, deteriorating quality and flooding during rainy season.
- Considering the Geohydrological characteristics of each management, specific locations for appropriate recharge techniques have been identified.
- These locations are strategically selected to optimize groundwater replenishment based on the unique needs and conditions of each zone.

Various Techniques for Ground water recharging...



Pilot Demonstration in Gandhidham...



Anganwadi no-85, DC-5 Gandhidham

- Rainwater Harvesting- Rooftop Storage for Drinking Purposes at Anganwadi

6000+ Litres fresh water available for **30+ students**, through Rainwater Harvesting in Gandhidham



3 school cluster- Kanya Shala, Kumar shala and Hindi Shala

- Rooftop Rainwater Harvesting for drinking purpose and Ground Water recharge for improving depleting water levels at Group School in Gandhidham

40,000+ Litres fresh water available for **3000+ students**, through Rainwater Harvesting in Gandhidham

Excess water gets recharged in the ground and reduces flooding like situation in school ground



Bio-Swale to increase water holding capacity



Plumbing to capture roof top water

GdMC Building

- Ground water Recharge using rooftop rain water

Improves ground water table

Pilot Demonstration in Anjar...



Anganwadi no-41, GIDC Anjar

- Rainwater Harvesting- Rooftop Storage for Drinking Purposes at Anganwadi

6000+ Litres fresh water available for **30+ students**, through Rainwater Harvesting in Anjar



BEFORE



AFTER

Swami Vivekanand school

- Groundwater Recharge using rooftop rain water and surface water

10+ million litres groundwater recharging annually through GWR



Gokulnagar

Marutinagar

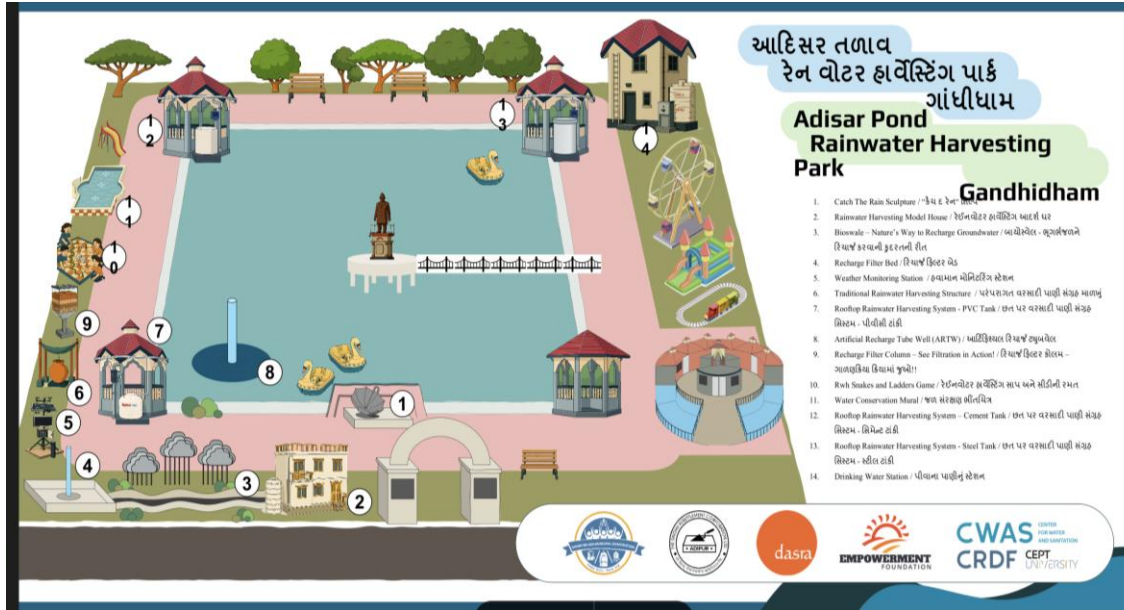


APMC

- Groundwater recharge structures to mitigate urban flooding and improve depleting Ground Water levels

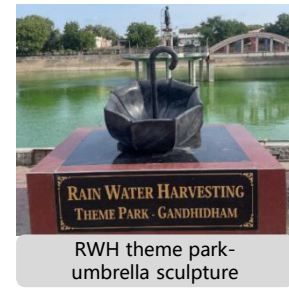
36+ million litres groundwater recharging annually through GWR

Gujarat's first Rainwater Harvesting Theme Park @ Adisar Pond, Gandhidham...



આદિસર તળાવ
રેન વોટર હાર્વેસ્ટિંગ પાર્ક
ગાંધીધામ
**Adisar Pond
Rainwater Harvesting
Park**
Gandhidham

1. Catch The Rain Sculpture / કેચ ટૂ રેન સ્કલ્પ્ચર
2. Rainwater Harvesting Model House / રેન વોટર હાર્વેસ્ટિંગ મોડલ હાઉસ
3. Bio-swale - Nature's Way to Recharge Groundwater / બાયોસ્વોલ - જીવજંતુઓને ટીપ્પણ કરવાની કૃતિ કરવી રીત
4. Recharge Filter Bed / ટીપ્પણ ફિલ્ટર બેડ
5. Weather Monitoring Station / હવામાન મોનિટરીંગ સ્ટેશન
6. Traditional Rainwater Harvesting Structure / અંધારાના વાજાની પાણી મેકાઇ માળખું
7. Rainloop Rainwater Harvesting System - PVC Tank / છેલ પાંચ વારસાની પાણી મેકાઇ કોલેક્ટર - પીવીસી ટાંકી
8. Artificial Recharge Tube Well (ARTW) / આર્ટિફિશિયલ ટીપ્પણ સ્તંભવેલ
9. Recharge Filter Column - See Filtration in Action! / ટીપ્પણ ફિલ્ટર કોલમ - જીવજંતુઓના ફિલ્ટ્રેશન ડેમો
10. Rock Sinks and Ladders Game / રોક સિંક અને લડ્ડીસ ગેમ અને સીડીની રમત
11. Water Conservation Manual / પાણી સંરક્ષણ મુદ્દાવલિ
12. Rainloop Rainwater Harvesting System - Cement Tank / છેલ પાંચ વારસાની પાણી મેકાઇ કોલેક્ટર - સિમેન્ટ ટાંકી
13. Rainloop Rainwater Harvesting System - Steel Tank / છેલ પાંચ વારસાની પાણી મેકાઇ કોલેક્ટર - સ્ટીલ ટાંકી
14. Drinking Water Station / પીવાના પાણીનું સ્ટેશન



RWH theme park- umbrella sculpture



Weather Monitoring station



RWH systems



Household RWH, Bio swales and GWR structure



Traditional method



Rainwater drinking station



Mural depicting water conservation practice & city fabric

- The Rainwater Harvesting (RWH) Theme Park at Adisar Park in Adipur, Kutch, is Gujarat's first-of-its-kind demonstration park dedicated to rainwater harvesting and groundwater recharge.
- It is developed in partnership with Sindhu Resettlement Colony and Gandhidham Municipal Corporation.
- SRC and GdMC to promote this park as educational and awareness platform promoting sustainable water conservation practices. Conduct exposure and learning visit by school students and active citizens.

Various initiatives by individuals...



- Jaydip ji, resident of Chitrakut Society, Anjar; teacher and member of Bharat Vikas Parishad.
- Constructed **two separate tanks: one for municipal supply and one for rooftop rainwater harvesting**
- Simple system: **terrace downtake pipe, valve, and elbow for first-flush diversion.**
- **6000-litre tank; family of 4 uses water for drinking and cooking** (lasts 9–10 months).
- **Tank generally kept covered**; opened only in evenings to avoid sunlight exposure.



- Apabhai Ahir, resident of Golden City Society, Anjar; teacher at Kanyashala, Adipur.
- Constructed **two separate tanks: one for municipal supply and one for rooftop rainwater harvesting.**
- Simple system: **terrace downtake pipe connected to rainwater tank with valve and elbow for flow control** (first flush diverted).
- **7000-litre tank; family of 6 uses water for drinking and cooking** throughout the year.
- **Tank remains sealed**; water pumped as needed.
- Proved highly beneficial during Cyclone Biparjyo.



- Ushaben, Adipur (Gandhidham) resident, athlete and runs a women empowerment NGO..
- Inspired by traditional rainwater harvesting practices from Mumbai, a **simple home-based system was created.**
- **Terrace runoff is diverted** (after first flush) through a pipe to storage drums and an underground tank.
- **Water is filtered using muslin cloth layers** and stored in multiple containers.
- **Uses harvested rainwater for drinking and cooking throughout the year.**

Strategic Value Additions through Sustainable Water Integration...



Enhances **project face value & green branding**



Improves compliance with **building bye-laws & environmental norms**



Reduces long-term **water dependency & tanker costs**



Increases market appeal to **environmentally conscious buyers**



Positions project as **climate-resilient & future-ready**

Jal Sanchay Jan Bhagidari: From Responsibility to Action



Architects /Engineers

- Planning as per Bye laws
- Approach Development authorities for technical details



Builder/ Developers

- Implementation as per approval
- Water Security integrated approach



Development Authority

- Plan Approval
- Monitoring
- Building Use Certificate
- RWH/GWR Information desk

Integrate Water. Elevate Value



Key Reflections of the Workshop...

- **Collaborative approach is critical:** The workshop highlighted that achieving urban water security requires strong coordination between municipal bodies, development authorities, and private stakeholders like engineers and builders.
- **Mainstreaming water-sensitive planning:** Integrating concepts such as Water Sensitive Urban Design and blue-green infrastructure into everyday urban development is essential rather than optional.
- **Science-based interventions improve impact:** Insights from geohydrological studies and lithology-based techniques highlighted the importance of designing context-specific, technically sound recharge solutions.
- **From awareness to implementation:** While awareness is growing, the real challenge lies in translating commitments (like the 10,000 recharge structures target) into on-ground execution through active stakeholder participation.

List of Participants...

Sr. No.	Name	Designation/ Department
1	Manish Gurwani	Commissioner- GdMC
2	Mehul Desai	Deputy Commissioner- GdMC
3	Tejabhai Kangad	GCCI
4	Deepak Parekh	GCCI
5	Mahesh Tirthani	GCCI
6	Nirav Patel	Town Planner- GdMC
7	Raju Chandnani	
8	Pratik Joshi	Secretary- GACEA
9	K.L. Bhavnani	Civil Engineer
10	Lalit Vidhani	President- GACEA
11	Nailesh Shah	GACEA
12	Deepak Shethia	AADA
13	Pragnesh Vaghani	AADA
14	Tushar Pandya	AADA
15	Keval Rathod	AADA
16	Dipti Tanna	CWAS- CRDF, CEPT University
17	Priyadarshini Choudhary	CWAS- CRDF, CEPT University
18	Anil Prajapati	Planning Assistant, GdMC/ AADA
19	Kinjal Katuva	Planning Assistant, GdMC/ AADA
20	Pravin Patel	President- Kutch Kadva Patidar Samaj
21	Hiren Soni	AADA
22	Chetan Acharya	AADA
23	Manoj Tikyani	Supervisor- GDA
24	Gayatri Gupta	Supervisor- GDA
25	Salonee Thakkar	Architect- GDA
26	Naishadh Thakker	GACEA
27	Khushal Sorathiya	Engineer
28	Deep Tank	Engineer
29	Parth Thacker	AADA
30	Prashant Goswami	AADA
31	M. B Sorathia	
32	Tejas Sheth	GCCI
33	Damji Bhanushali	GCCI

Sr. No.	Name	Designation/ Department
34	Ramkaran Tiwari	GCCI
35	Harish Maheshwari	GCCI
36	Laxman Ahir	GCCI
37	Rajubhai Gadhvi	NGO
38	Sanjay Thacker	Engineer
39	Rajiv Chawla	GCCI
40	Muljibhai	
41	Sunil Gupta	Civil Engineer
42	Dharmesh Vora	GACEA
43	Jekinkumar Sanghvi	Architect
44	Mohanlal Jangid	Social Worker
45	Gurudutt Sharma	President- Jangid Samaj
46	Chintan Bhatt	GACEA
47	Bharatbhai	
48	Nitin Parmar	Contractor
49	Bhavesh Dangar	Builder
50	Hemant Sardarangani	Builder
51	Kunal Asnani	Builder
52	Anand Udvani	FSO GDMC
53	Anirudhsinh Jadeja	Builder
54	Shripalsinh Jadeja	Contractor
55	Mehul Gusai	Builder
56	Chetan Katira	Builder
57	Mitesh Prajapati	Civil Engineer
58	Vikas Pujara	Builder
59	Kalubhai Samidesh	GCCI
60	Vasudev Patni	GCCI
61	Hemchandra Yadav	GCCI
62	Dolly Chhaya	Architect (GACEA)
63	Hardik Pandya	Engineer (AADA/GDA)
64	Suryakant Harsora	President- Luhar Samaj
65	Dinesh Shrimali	Yog Center
66	Saransh Joshi	Civil Engineer

CWAS CENTER FOR WATER AND SANITATION

CRDF CEPT RESEARCH AND DEVELOPMENT FOUNDATION

CEPT UNIVERSITY

About us

The Center for Water and Sanitation (CWAS) is a part of CEPT Research and Development Foundation (CRDF) at CEPT University. CWAS undertakes action-research, implementation support, capacity building and advocacy in the field of urban water and sanitation. Acting as a thought catalyst and facilitator, CWAS works closely with all levels of governments - national, state and local to support them in delivering water and sanitation services in an efficient, effective and equitable manner.

Thank you



cwas.org.in
pas.org.in



cwas@cept.ac.in
tiny.cc/pasenews



[CEPT_CWAS](https://twitter.com/CEPT_CWAS)



[cwas.cept](https://www.instagram.com/cwas.cept)



[cwas.cept](https://www.facebook.com/cwas.cept)



[cwas.cept](https://www.linkedin.com/company/cwas.cept)