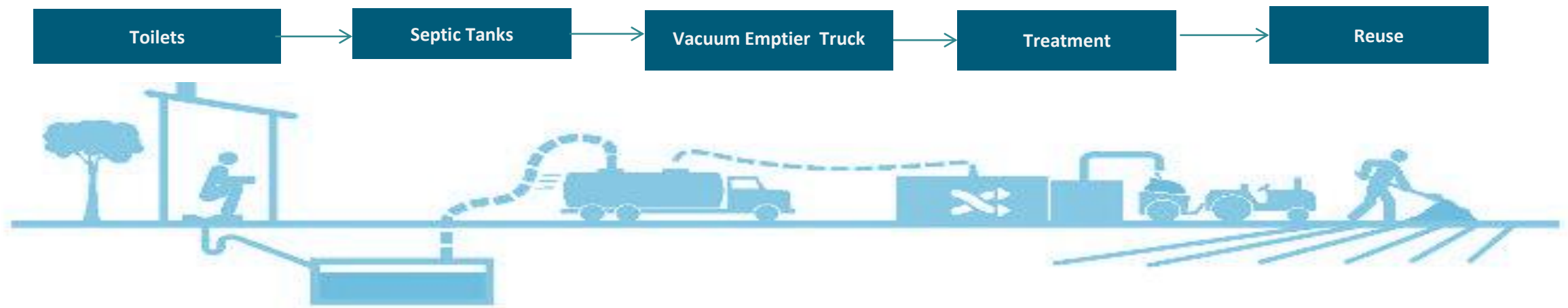


Leveraging Private Investment in Sanitation and Wastewater in India

Meera Mehta

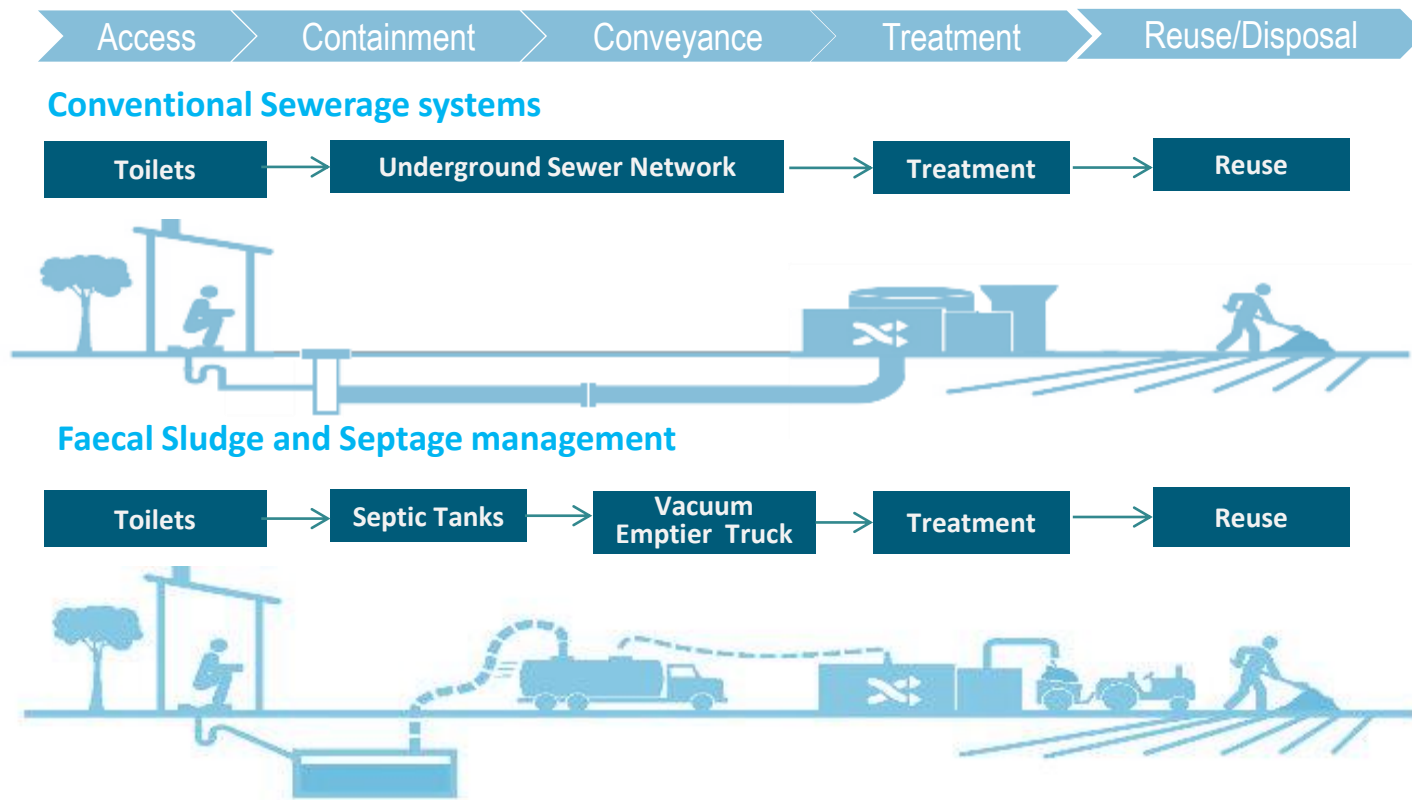
ADB Session at SWWW, August 22, 2023

Center for Water and Sanitation (CWAS)
CRDF – CEPT University



No region is on track to achieve the SDG target of universal access to safely managed sanitation services by 2030.

Safe management across sanitation value chain



Safely managed sanitation requires attention to the entire sanitation service chain

And... emphasis is also needed on Reuse

Though PPP experience in sanitation sector is limited, there are examples of commercial finance mobilized across the service chain in India

		Municipal Bonds for wastewater treatment: Metro cities in India	Reuse with PPP, private sector: Nagpur, Anjar and Gandhidham
Sanitation credit, Jalna	Performance Linked Annuity Model (PLAM), Wai and Sinnar	Hybrid Annuity Model (HAM), Namami Ganga (STPs) and Telangana +AP (FSTPs)	Reuse in textile industries- Surat
Access	Conveyance	Treatment	Reuse

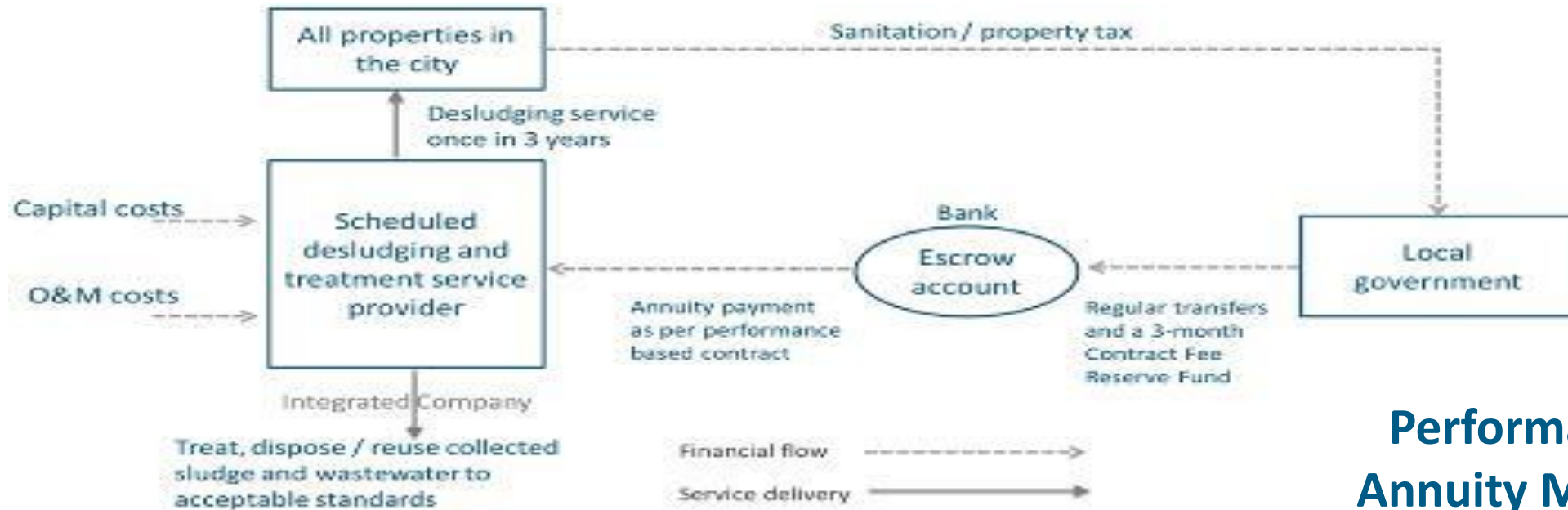
Leveraging sanitation credit for individual household toilets

- Over 300 women of self-help groups (SHGs) in the city of Jalna, India accessed sanitation credit through **banks/micro-finance institutions(MFIs) for construction of individual household toilets**. The approach involved demand generation, mobilizing toilet loans from banks, overseeing toilet construction, and ensuring loan repayment.
- This is now being scaled up by MAVIM with support from water.org. During the last year, **over 3500 loans have been mobilized with loan amount of USD 0.5 million (INR 5cr) disbursed**.



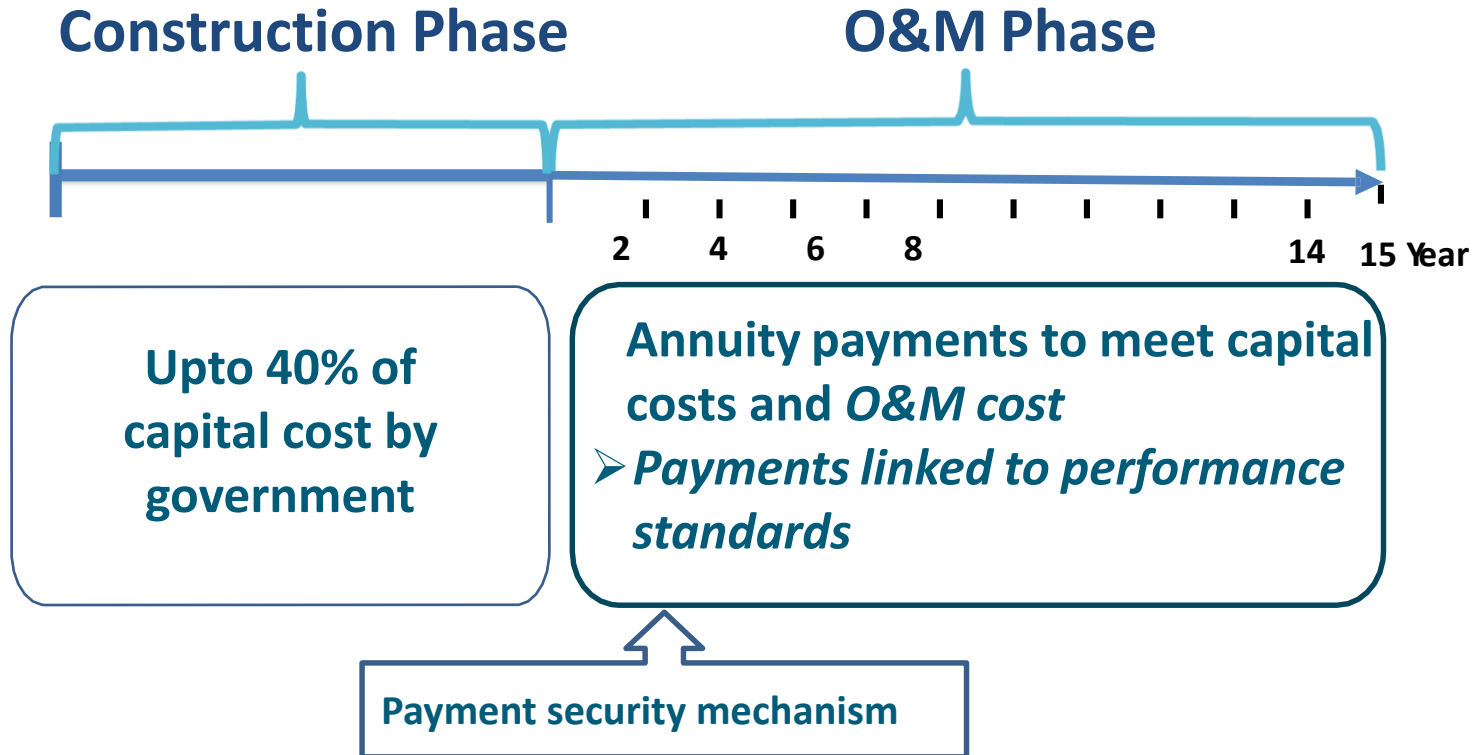
Conveyance using a PPP Model- *Wai and Sinnar, India*

- Wai and Sinnar Municipal Councils in India have used a PPP model – (Performance linked Annuity Model) for Citywide 3-year model for Scheduled Desludging services.
- Wai successfully completed 1st Round of scheduled desludging (4900+ properties) and has a new contract for Round 2. This model is being scaled up across cities in Maharashtra



**Performance Linked
Annuity Model (PLAM)**

Treatment using Hybrid Annuity Model (HAM) - *Namami Gange*

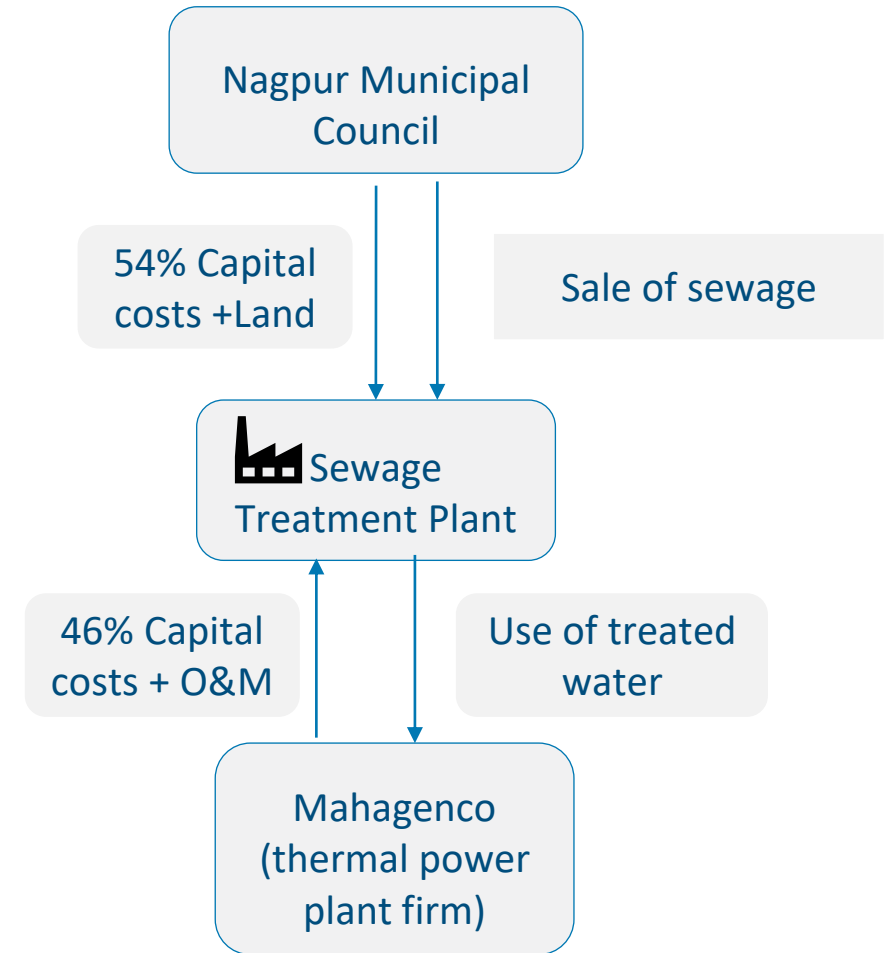


- **Namami Gange India - 32 STPs using HAM, with a Total value of USD \$ 1.4 billion**
- **200 FSTPs - planned using HAM approach in the states of Andhra Pradesh and Telangana**

Globally, for the first time World Bank has sanctioned **USD 19 million guarantee** to backstop GOI's payments for 3 HAM-PPP projects

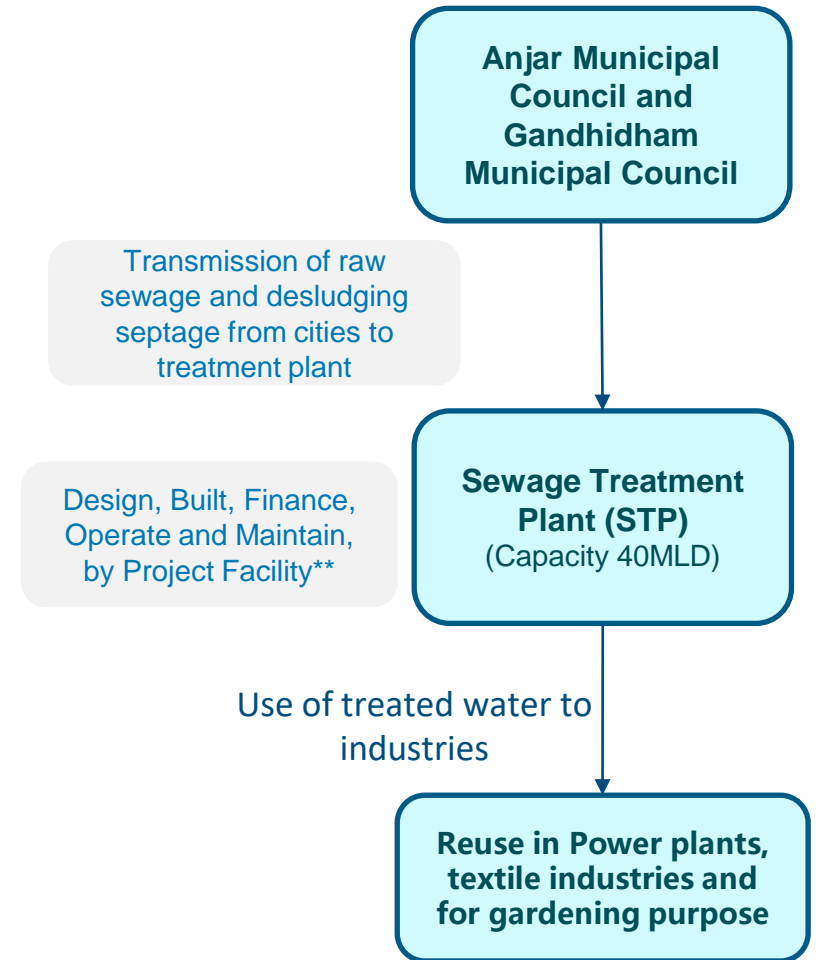
Reuse for thermal plant using a PPP Model – Nagpur, Maharashtra

- Mahagenco – a thermal power plant firm in Nagpur, purchases sewage water from the Nagpur Municipal Council. The STP along with secondary and tertiary treatment are constructed, operated and maintained by private provider.
- Capital cost - US\$28 million: Private provider- 54% of capital cost and O&M cost, Local government gave 46% of capital cost and land for STP. Private provider pays local government a fixed amount US\$ 2.25 million a year for 110 million liters a day of raw wastewater.



Reuse by private industry - Anjar and Gandhidham

- A private industry partner, 'Welspun' reuses treated wastewater from the cities of Anjar and Gandhidham in their power plants, textile industry and gardens. It used a Design, Build, Finance and Operate (DBFO) model for this Sewage Treatment Plant.
- Cities receive a revenue of Rs. 62 lakhs per year at the rate of Rs. 0.4/KL for the raw sewage by Wellspun industries.



*The respective ULBs ensure that Sewer generated by citizens is free from Industrial waste, hazardous material, prohibited and restricted material

****Welspun Infrastructure Ltd** and Technology Providing Partner **Ion Exchange Ltd** (Concessionaire).

*** Sewage Pumping Station other than GNP Facility, network of bulk transmission of sewage from Designated location to STP is operated by Concessionaire.

Commercial finance for water and sanitation projects has also been mobilized through municipal bonds and green bonds

**32 municipal bonds by
13 Urban Local Governments
+
Pooled bonds to implement
WASH projects for 23 ULGs**

FY 1997- 2017



FY 2017-2023



**An estimated USD 500 million
mobilized for WASH projects +
USD 21 million as incentive
subsidy**



**Augmentation of water
supply projects**



**Development of sewerage
treatment systems**



Retail investors



Institutional investors

Source: SEBI (2023), Retrieved from SEBI database, available on <https://www.sebi.gov.in/>

Involving private sector also helps leverage good monitoring systems

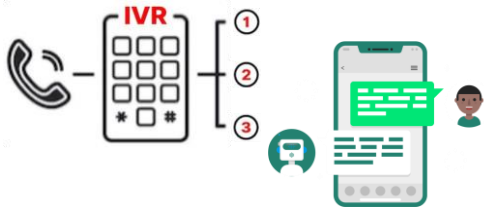
IOT enabled monitoring systems

SaniTab, SaniTrack and SanQ



For real time Monitoring of septic tank desludging services, and quality of treatment at FSTPs

IVR and chatbot supported monitoring



Use of IVR for feedback from community, Chatbot system for monitoring across local governments

Payment tracking platform



To address issues of 'delayed payments' - Monitor bill clearance of private contractors by local authorities

Summary

- There is a need to tap the emerging opportunities for mobilizing private and commercial finance for sanitation sector across the value chain
- These maybe through locally designed PPP projects as well as by supporting Green Municipal Bonds
- For successful partnerships, it is equally important to build strong monitoring capacity and use the emerging new technologies

Thank you

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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.



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