

CWIS framework and adoption at city and State level in Maharashtra

February, 2026

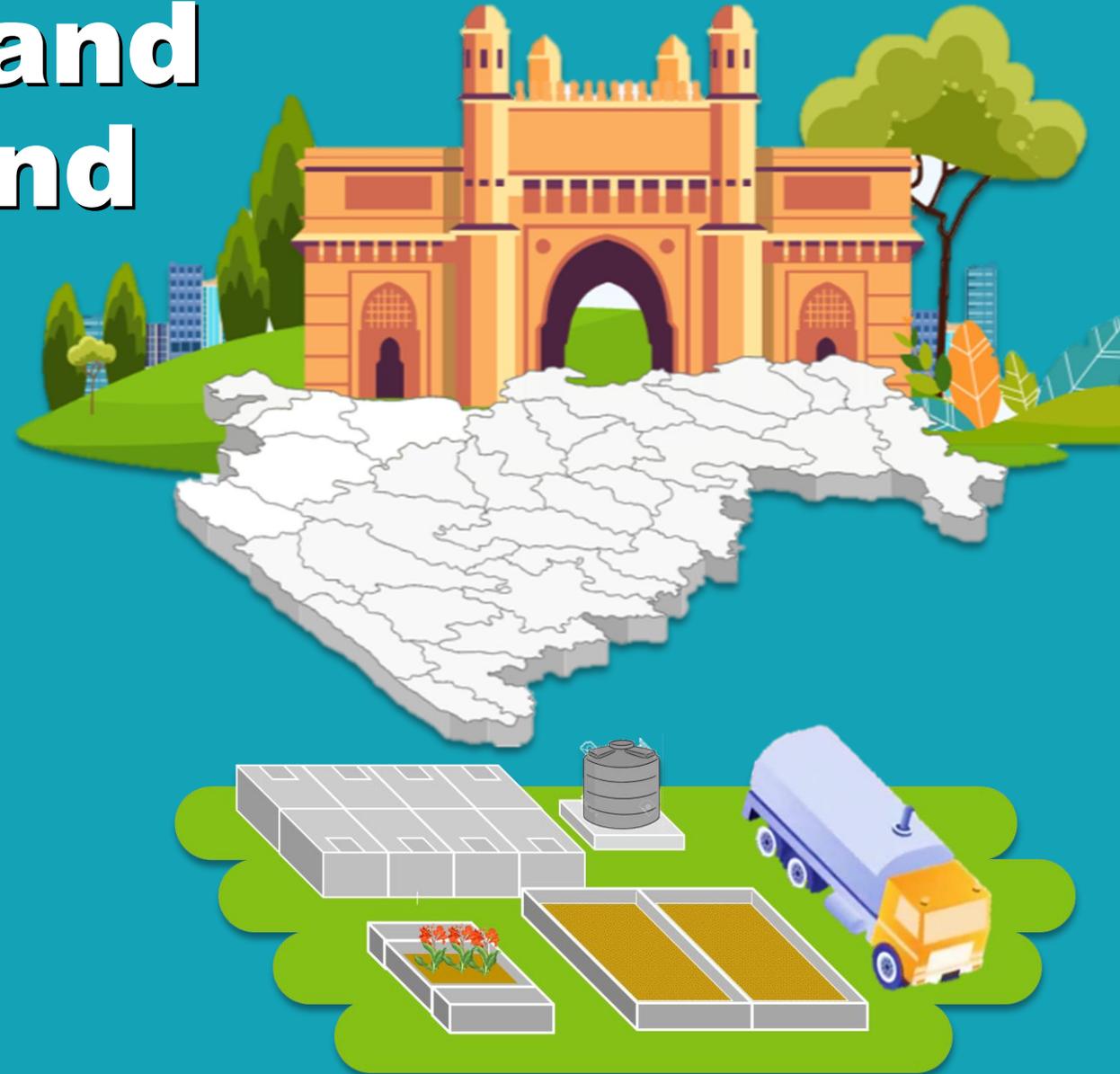
Center for Water and Sanitation (CWAS)

CRDF, CEPT University

CWAS CENTER FOR WATER AND SANITATION

CRDF CEPT RESEARCH AND DEVELOPMENT FOUNDATION

CEPT UNIVERSITY

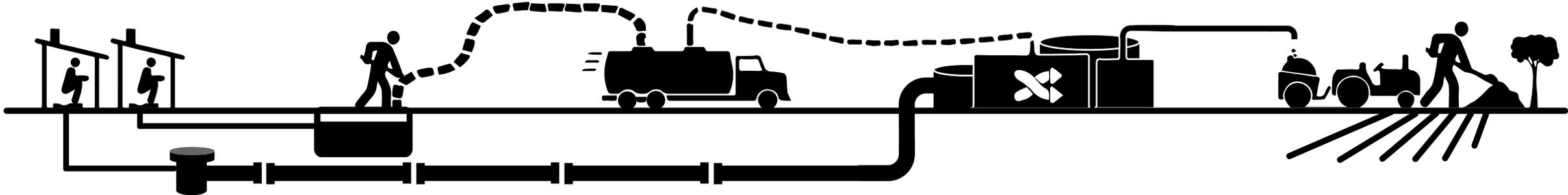


Citywide Inclusive Sanitation (CWIS) definition and framework

‘A public service approach to planning and implementing urban sanitation systems to achieve outcomes summarized by SDG 6: safe, adequate, equitable, and sustainable sanitation for everyone in an urban area, paying special attention to the needs of the poor, the marginalized, and of women and girls’

CWIS SERVICE FRAMEWORK			
CORE CWIS OUTCOMES	EQUITY 	SAFETY 	SUSTAINABILITY 
	<p>Services reflect fairness in distribution and prioritization of service quality, prices, and deployment of public finance/ subsidies.</p>	<p>Services safeguard customers, workers, and communities from safety and health risks—reaching <i>everyone</i> with safe sanitation.</p>	<p>Services are reliably and continually delivered based on effective management of human, financial and natural resources.</p>
CORE CWIS FUNCTIONS	RESPONSIBILITY	ACCOUNTABILITY	RESOURCE PLANNING AND MANAGEMENT
	<p>An authority(ies) executes a clear public mandate to ensure safe, equitable, and sustainable sanitation for all.</p>	<p>Authorities’ performance against their mandate is monitored and managed with data, transparency and incentives.</p>	<p>Resources—human, financial, natural, assets—are effectively managed to support execution of mandate across time/space.</p>

CWIS across the sanitation value chain



Access to toilets

Universal coverage of individual household toilets for all

Collection systems

Septic tanks constructed as per standards

Conveyance

Scheduled desludging is implemented in cities dependent on onsite systems

Treatment

FSTPs and STP are fully operational and monitored

Disposal / Reuse

Used water and byproducts are completely reused

Women are formally engaged in municipal service delivery and take leadership

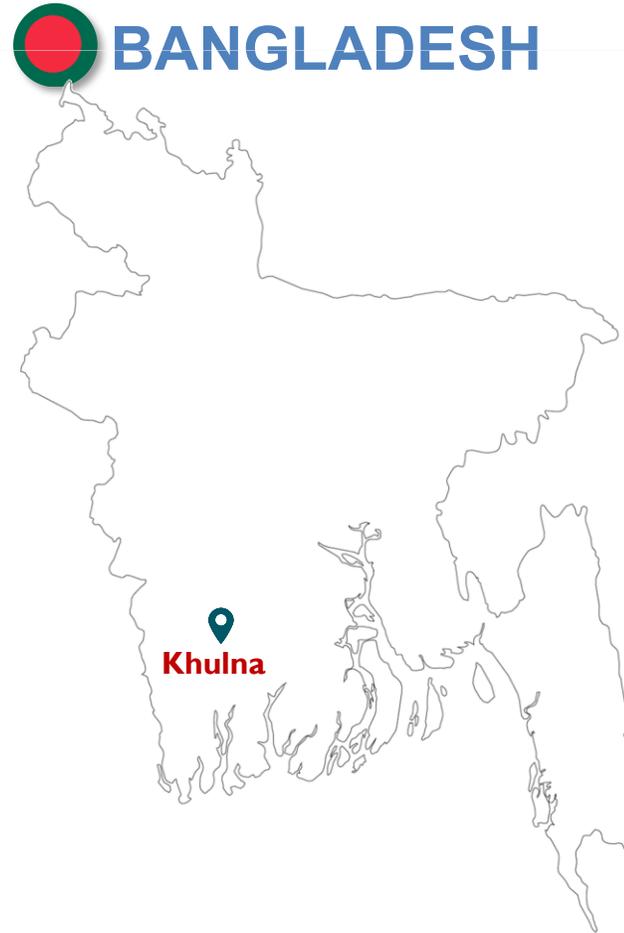
Sanitation infrastructure and service is designed and maintained from a **gender lens**

Safety of sanitation workers is ensured

Wai was one of the 8 global cities under CWIS programme of BMGF

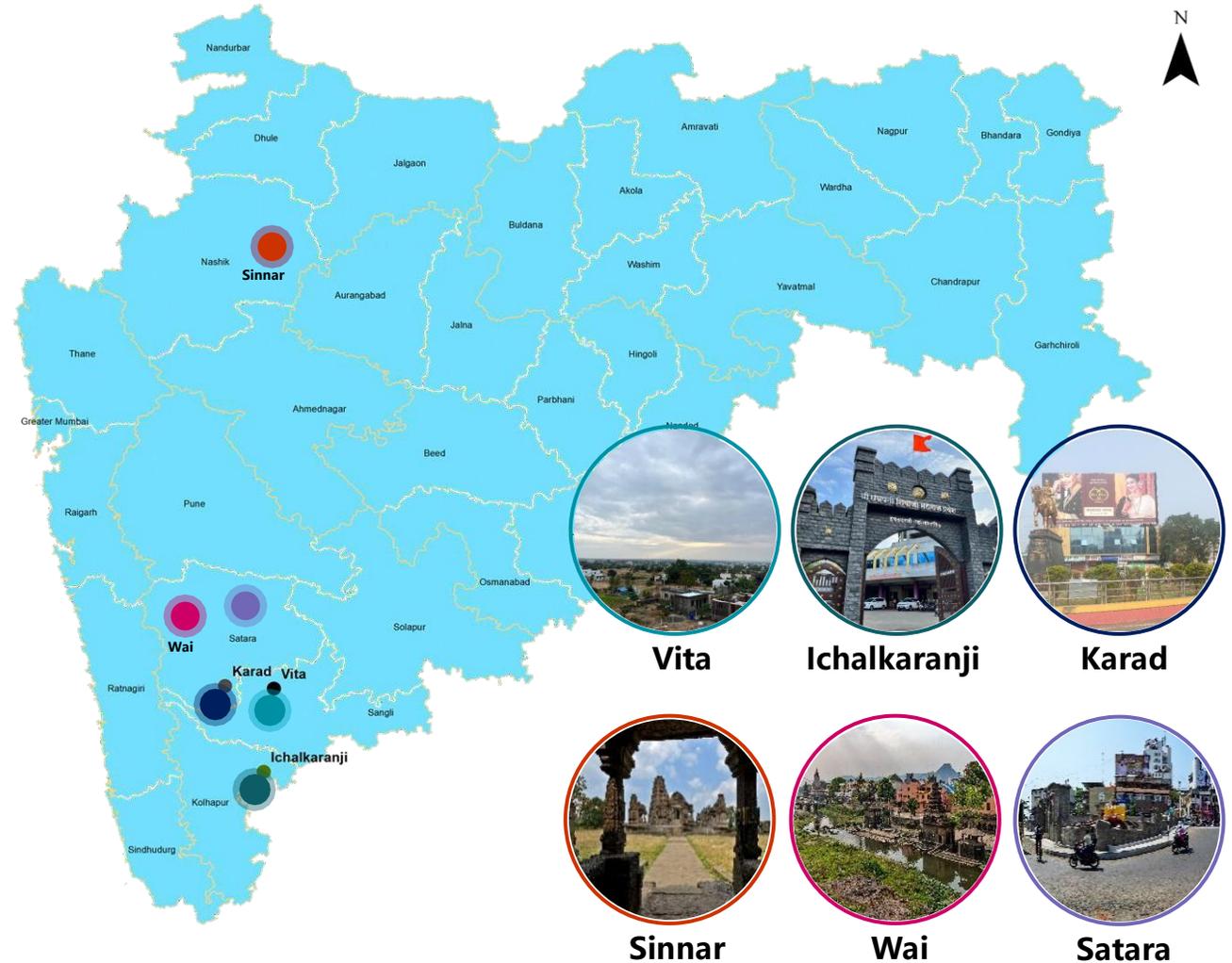
ASIA

AFRICA



CWAS supported 6 small and medium towns of Maharashtra for implementation of CWIS principles

- 6 Small and Medium towns **ranging from 40,000 to 4 lakh population** setting up examples of citywide inclusive sanitation services.
- All towns have **different WASH services context in terms of services provision** both onsite and offsite water and sanitation services.
- These 6 towns act as **'Urban Laboratories'** for scaling the activities in rest of the State.



CWAS's support to the ULBs to move towards universal coverage of own toilets

- CWAS has been supporting city of **Wai and Sinnar since 2015** to improve access to toilets.
- **Awareness programs and ODF drives** were conducted to prevent OD and increase the coverage of own toilets.
- **Women SHGs support access to credit** for construction of own toilets
- **All the cities have around 90-95 % of IHHT coverage** with remaining HHs dependent of shared sanitation facilities.
- All the toilets in **Wai, Sinnar, Vita and Satara are connected to septic tanks**. Partial sewerage network exists in Ichalkaranji and Karad.

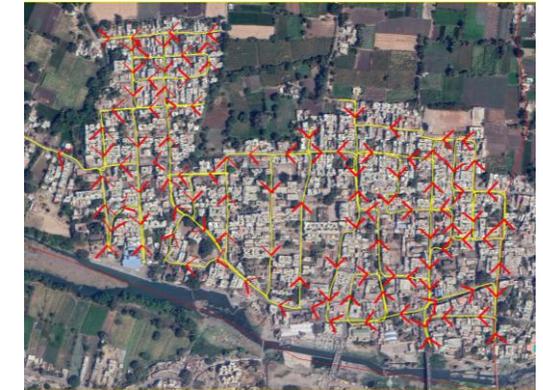
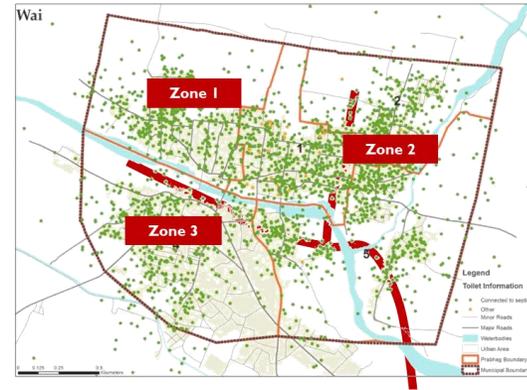


शौचालय बांधण्यासाठी कर्ज घेण्याचे पर्याय				
आपल्याला कर्ज घेण्यासाठी कोणते पर्याय आहे...				
व्याजदर (%)	संपूर्ण व्याज किंवा परतवून घ्यावे लागते का?	संपूर्ण व्याज किंवा परतवून घ्यावे लागते का? (सर्वात कमी व्याज)	संपूर्ण व्याज किंवा परतवून घ्यावे लागते का? (सर्वात कमी व्याज)	संपूर्ण व्याज किंवा परतवून घ्यावे लागते का? (सर्वात कमी व्याज)
आयकर करवून घ्यावे	• 10% - 15% व्याजदर • 10% व्याजदर • 10% व्याजदर	• 10% - 15% व्याजदर • 10% व्याजदर • 10% व्याजदर	• 10% - 15% व्याजदर • 10% व्याजदर • 10% व्याजदर	• 10% - 15% व्याजदर • 10% व्याजदर • 10% व्याजदर
व्याज कर्ज मूल्य	₹ 1,00,000	₹ 1,00,000	₹ 1,00,000	₹ 1,00,000
व्याज मर्यादा	₹ 1,00,000	₹ 1,00,000	₹ 1,00,000	₹ 1,00,000
परतवून घ्यावे लागते का?	• 10% व्याजदर • 10% व्याजदर	• 10% व्याजदर • 10% व्याजदर	• 10% व्याजदर • 10% व्याजदर	• 10% व्याजदर • 10% व्याजदर
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Scheduled desludging implemented by the ULBs to maintain their septic tanks

- CWAS supported the ULBs to implement scheduled desludging, as per which, all the septic tanks are to be desludged in an **interval of 3 to 5 years**.
- **Key features of SD service:**
 - ✓ Citywide desludging of septic tanks in scheduled manner
 - ✓ Involving Private sector through performance-based contracts
 - ✓ Treatment of collected sludge at dedicated FSTP
 - ✓ Service financed through sanitation tax
 - ✓ Online monitoring of the SD service
 - ✓ Service institutionalized through council level resolution



SaniTab

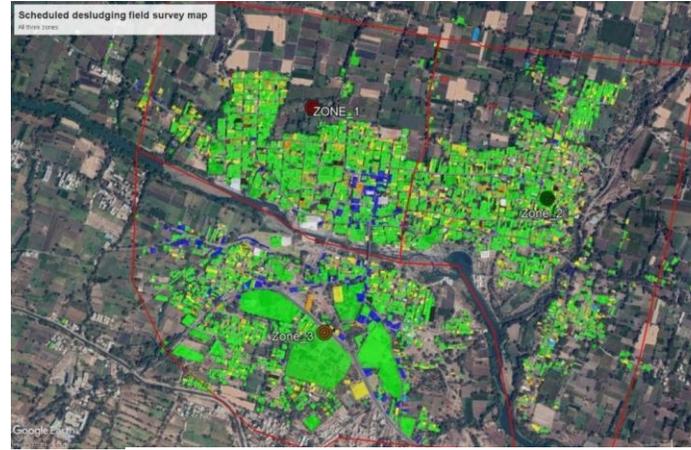


SaniTrack



Scheduled desludging leading to multidimensional impact

- A total of 12,000+ septic tanks have been desludged in these cities. With Wai completing 1st cycle of scheduled desludging.
- SD is ongoing in Sinnar and Satara and work orders given to private operators in Vita and Ichalkaranji.
- Leading to reducing 60 % organic load in drains and improving river water quality.
- Safely collected faecal sludge transported and treated at the treatment facility.



- Reduction in Nitrogen, Total Suspended solids and Organic loads in septic tanks effluent after desludging them



- Reduced concentration from septic tank effluent helped in reducing the discharge of nitrogen and TSS into the open drains
- 50-60% decrease in the value of TSS in desludged areas
- 50-60% decrease in BOD load in drains in desludged areas



- Regular desludging services will eventually improve the quality of river water and ground water as the quality of drain water and supernatants will improve



Urban forest developed at FSTP where treated wastewater is reused

- The treated wastewater is used to irrigate urban forests developed adjacent to treatment facilities.
- Urban forests involve planting saplings, primarily of local indigenous varieties, on clean land generally situated close to the FSTP/STP.
- Almost **19,764 Sq.mt.** barren area developed to urban forest in all the six cities with total **10,306 trees** planted, and large amount of fresh water has been saved.



Solar powered FSTPs making the FSTPs energy neutral

- Solar panels have been installed at the FSTP locations.
- Panels are placed either on the sludge drying bed or on the resource center.
- The solar power generated is **sufficient to cover the entire electrical consumption** for the maintenance and operations of these plants, with **any surplus energy being sent back to the grid.**



Wai



Before

Existing FSTP site with 20 KLD FSTP surrounded by solid waste



After

Satara

Expanded FSTP of 30 KLD with green house solar dryer. Beautifying area around FSTP site



Vita



Sinnar

Women SHGs engaged for provision of various WASH services

- CWAS has been providing technical support to **Wai, Sinnar, Karad and Vita** since 2018 for improving their **WASH services and building climate resilience**.
- CWAS supported ULBs for engaging SHGs in services like: **O&M of MHM infrastructure in CTs/PTs, maintenance of urban forest, GWTP, cleaning of ULB offices, surveys and awareness activities etc.**

Key features of engagement:

- Formal engagement through SHG only tenders
- SHG friendly contract clauses
- Trainings and hand holding support
- Timely payment
- Regular monitoring by ULBs



Capacity strengthening and gender inclusivity trainings for ULBs

- Capacity strengthening of the **women officials and elected representatives on aspects of FSSM**
- Engagement of women for provision of FSSM services as **FSTP site in charge and monitoring of desludging services.**
- **Gender sensitization workshop conducted** Vita, Karad, Ichalkaranji : Concepts on gender, prevention of Sexual Harassment at workplace (POSH 2013) and Gender and social inclusivity in WASH



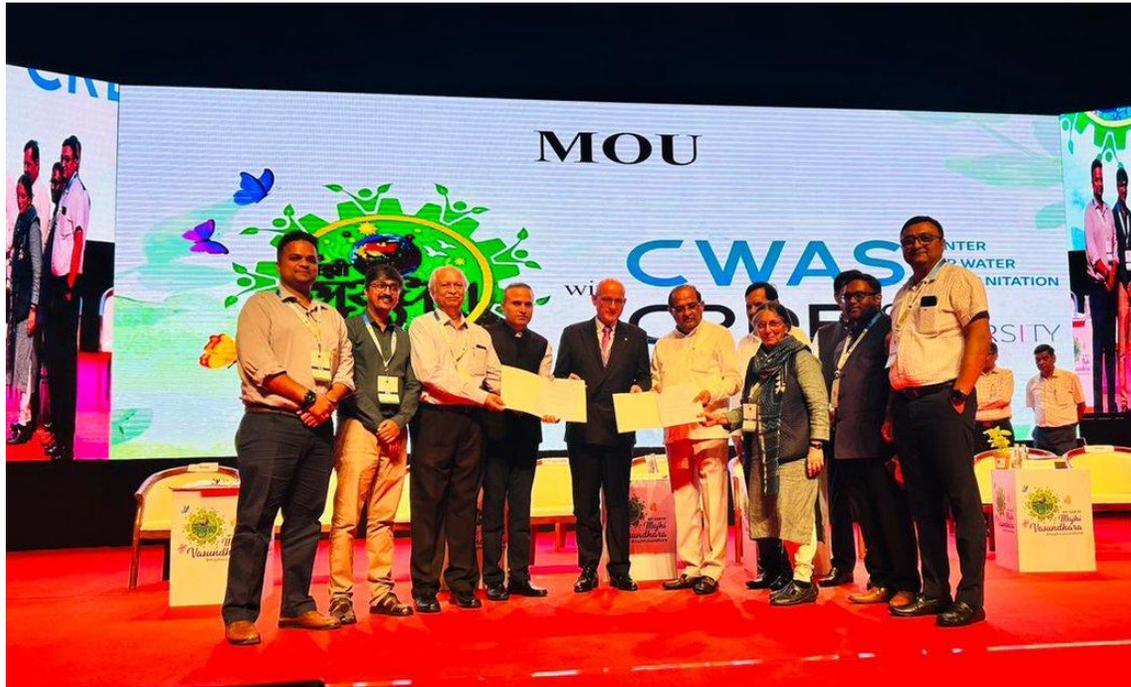
Ensuring safety of sanitation workers while providing inclusive services

- **Surveys of the san-workers** conducted to understand the work-related challenges.
- **Model contract clauses** developed for procurement and replacement of activity and gender specific PPEs.
- **Training, orientation workshop, health camps and counselling** for all sanitation workers organized to sensitized workers towards the occupational hazards and create awareness for the usage of PPEs
- **Use of IEC materials** for educating and encouraging sanitation workers on PPE usage and maintenance



Scaling up CWIS across Maharashtra

CWAS has been supporting GoM for improving sanitation in urban areas

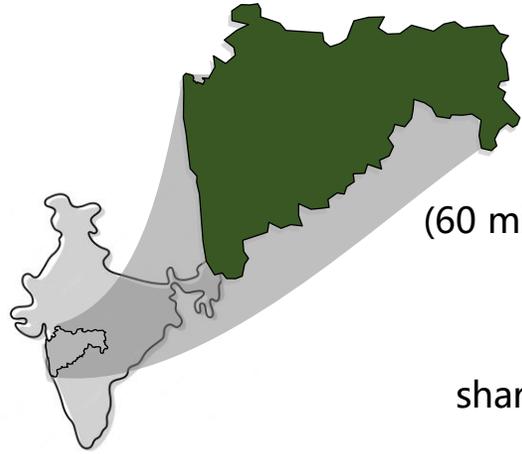


MoU with GoM to support climate responsive water and sanitation in urban Maharashtra under **Majhi Vasundhara**



MoU with GoM to support for City Wide Inclusive Sanitation (CWIS) under **SBM 2.0**

Maharashtra - high urban population, strong local governments and moving towards empowering women



56%
of Maharashtra
is urban
(60 million population)

12%
share of India's urban
population



428
Urban local
bodies

71+ Million
Population
24% in slums

**FINANCIAL
CENTRE**
of India



14%
of India's GDP

21 cities

Million+ population –
Highest in all states

158

Nagar Panchayat (10k-
25k population)

27

M. Corps. (300k+
population)

236

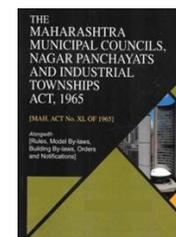
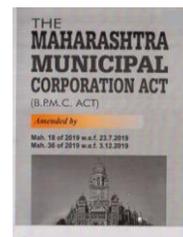
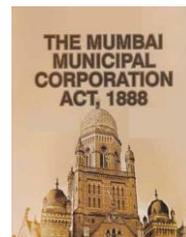
M.Councils (25k-300k
population)



STRONG LOCAL GOVERNMENTS

through effective devolution

Average per-capita own revenue in
Municipalities – 3X of India average



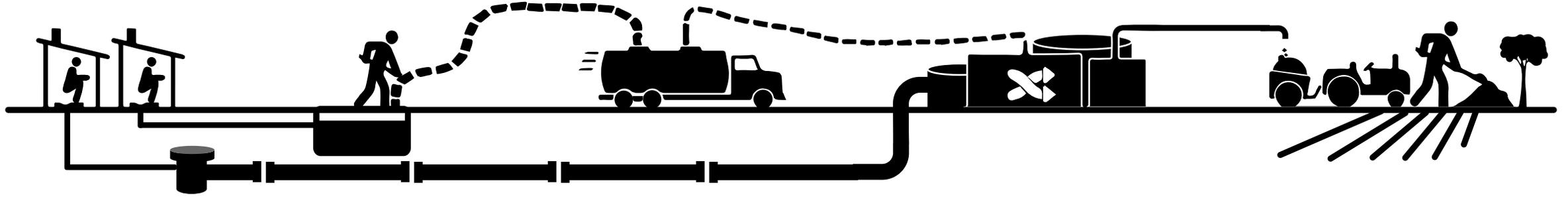
EMPOWERING WOMEN

50% reservation in local government
elected positions

30% reservation in local government
executive wing



Citywide Inclusive safely managed sanitation for all through various state policies, charters and GRs



Access to toilets

City Wide Inclusive Sanitation charter

संकल्प स्वच्छतेचा

1. घरगुती/कुटुंब स्तरावर कचऱ्याचे विक्रीकरण
2. 100% घरोघरी धनकचरा संकलन
3. 100% कचऱ्याचे शालग्रुह पद्धतीने व्यवस्थापन व हॅजिलिगी
4. जुन्या साठलेल्या कचऱ्यावर प्रक्रिया आणि त्या ठिकाणाचे हरित क्षेत्रामध्ये रूपांतर
5. निषिद्धित वेळापत्रकांनुसार मैला व्यवस्थापन तसेच वापरलेल्या पाण्याची विल्हेवाट लावण्याकरीता 100% सुरक्षित संकलन, वहन, आणि प्रक्रिया करणे
6. वैयक्तिक घरगुती सौचालय
7. आकांक्षित सार्वजनिक सौचालये
8. अदृश्यांमार्फत अभिसरण उपक्रमद्वारे गरजपायी सर्वसमावेशक स्वच्छता आणि सहाई मित्र सुरक्षित पाहणे वचने

Collection systems

GR for making cities ODF and proper construction of IHHTs / CTs/PTs

महाराष्ट्र शासन
नगर विकास विभाग

संकेत: २०१५/प्र.अ.१२४/मि-३४
दिनांक: २० नोव्हेंबर, २०१५

Conveyance

Circular on scheduled desludging and FSTP O&M

महाराष्ट्र शासन
नगर विकास विभाग

संकेत: २०१५/प्र.अ.१२४/मि-३४
दिनांक: २० नोव्हेंबर, २०१५

Treatment

GR for constructing city level FSTPs
Cotreatment at STPs
Cabinet approval for setting up STPs

महाराष्ट्र शासन
नगर विकास विभाग

संकेत: २०१५/प्र.अ.१२४/मि-३४
दिनांक: २० नोव्हेंबर, २०१५

Disposal / Reuse

Reuse policy of Government of Maharashtra

महाराष्ट्र शासन
नगर विकास विभाग

संकेत: २०१५/प्र.अ.१२४/मि-३४
दिनांक: २० नोव्हेंबर, २०१५

Safely managed sanitation across cities of Maharashtra

Access to toilets



- Maharashtra has achieved 100% toilet coverage with over 71 lakh Individual toilets constructed since 2014

Cities with complete dependence on onsite sanitation

Desludging and treatment at FSTP



- 234 cities have **individual FSTPs** of 2222 KLD capacity.
- **Demand based desludging services in most cities** - trucks available in almost all cities.
- 211 desludging trucks under SBM 2.0
- Circular for **scheduled desludging** in all cities - Wai, Sinnar, Satara, Ichalkaranji, Vita already implementing

Cotreatment with nearby STPs



- GR for **co-treatment of septage at nearby STPs** for 56 cities. These cities fall in the **20-50 km radius** of the 35 STP cities
- Hingana, Wadi, Wanadongri, Butibori, Kuhi Kanhan Pimpri and Kamptee sending septage to Nagpur Corporation's STPs

Cities partially sewered

Co-treatment of septage with own STP



- GoM has passed a resolution to **co-treat septage at own STPs** for 35+ Cities like Nagpur, Thane, Pune, etc.

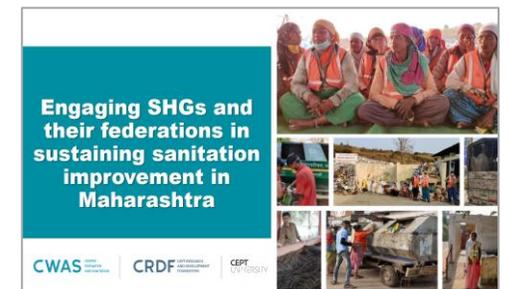
Reuse of treated water and sludge

- **State Reuse Policy** – Reuse at FSTPs – Landscaping works and fertilizer usage
- **HARIT Maha city compost** brand authorization to 119 cities

Equity: Focus on Gender, SBM-NULM convergence activities

- Strong network of SHGs with opportunity and **demand to get engaged for sanitation activities**
- **Letter issued from DMA** office to all the ULBs urging to engage SHGs in sanitation and SWM
- **Technical training workshops** of the SHGs for sanitation and SWM services and water governance
- **Model tender/ Model SoPs** for engagement of SHGs for various municipal services
- **Training Modules and engagement** with technical sector partners
- **Good practices and business models documented** and shared at different State and National

GoM in the process of passing a GR on engaging SHGs in sanitation and other municipal services



Equity: Provision of WASH services in slums

Making WASH access easier – delinking from land tenure

2022 – SBM 2.0 - IHHT benefits are de-linked with the land tenure and sewer connections securities across notified or non-notified slums

2015 – SBM 1.0 - Construction of individual toilets for HHs dependent on Community toilet or defecating open

2010 - Urban Dalit Vasti Water Supply and Sanitation Scheme- To provide individual water connections and individual toilet facilities to urban Scheduled Caste and Neo Buddhist communities in the state

1997 – DMA GR - To provide group connection in slums, EWS communities and chawls

1971 - Slums Defined as per Maharashtra Slum Areas (Improvement, Clearance and Redevelopment) Act, 1971

- Total No. of Slums Settlements – 7537
- 73% of these are in 27 Muni. Corps.
- 107 cities report no slums (mainly Class C and NPs)

Benefiting

ULBs committing additional subsidies from own funds for toilet construction



G.R for using 50% of 14th FC funds by all ULBs towards providing additional incentive toilet subsidy

Case of Wai and Sinnar where incentive subsidy was offered under “own toilet scheme” before SBM and continued as additional subsidy before GR



Access to credit

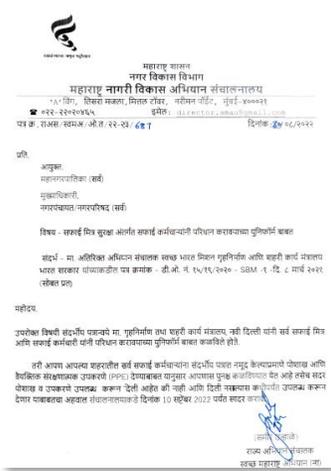


- Exploring sanitation credit options for meeting the gap of funds for construction of toilets
- State Institutions like MAVIM – working with women self help groups on micro-credit
- Blended finance – SHGs mobilized for toilet loans in Jalna with MAVIM
- Toilet and lender fair in Wai, Sinnar

Safety: San-workers safety and protection for workers is high priority of the state government

- **NAMASTE scheme (2023-24)** provision of desludging trucks for mechanized cleaning
- **GR (2023)** regarding provision of job as a sanitary worker to children of deceased sanitary workers.
- **GR (2020)** from UDD for use of 14 th FC funds for PPE purchase
- GR (2020) by Finance Department, GoM, **100% salary given to the Class D staff including sanitary workers during Covid**
- **Directives (2019)** sent from DMA to all newly formed ULBs to maintain previously working gram panchayats' **safai kamgar**
- **Directives from UDD (2015)** to all Nagar Panchayats, Councils and Corporations to provide residences to sanitation workers who have exceeded 25 years
- Letter to ULBs to adopt standard uniform for Sanitation workers
- **Circular on Mechanization of Sanitation related activities** to minimize any kind of contact with sewage/Faecal sludge

Letter to ULBs to adopt standard uniform for Sanitation workers



“Safai Karamcharis are the real Brand Ambassadors of Swachha Bharat Mission as every morning they get up, pick up a broom and start cleaning the city. To stop Safai Karamcharis deaths due to suffocation while cleaning sewers and septic tanks we need focus on mechanization of Sewer and Septic Tank cleaning (Time to move from Manhole to Machine Hole)” - Shri. Eknath Shinde, Deputy Chief Minister, Maharashtra

Accountability: Tools for accountability

Downward Accountability ULB to Citizens

Complaint redressal: (417 cities)
Swachhta App, Call center

Internal Accountability ULB department to CO/ MC

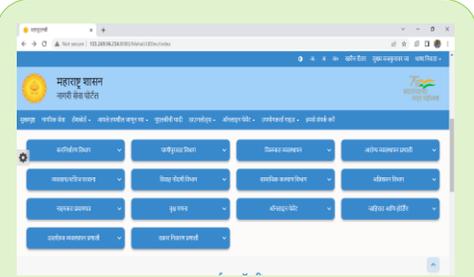
Adhava Dashboard (Wai)
Payment dashboard
(Wai , Sinnar, Satara)



- Adhava report includes performance indicators for:
- Solid waste management,
 - Scheduled septic tank emptying service,
 - Septage treatment,
 - Drain cleaning,
 - Cleaning of community and public toilets etc.

Upward Accountability ULB to higher level of Govt.

Annual Inspection Reports



Annual Budget Briefs (Wai , Sinnar, Satara)

E-Governance: Integrated Web based Portal (413+ cities)

City Budget Portal – using regular accounting codes: (9 cities : Wai, Sinnar, Vita, Karad, Khopoli, Badlapur, Satara, Igatpuri, Pandharpur)



PAS – SLB (417 cities)

City government websites
(400+ cities)

FSSM monitoring and operations review: SaniTab / Sanitrack (desludging) (Wai, Sinnar, Igatpuri, Narkhed, Vita, Saswad, Ichalkaranji), FSTP dashboard (392+ cities), FSTP Whatsapp chatbot (under development)



Maharashtra's CWIS story across 2X3 matrix



CORE CWIS OUTCOMES

EQUITY

Swachh Maharashtra Mission
Access to IHHT – Addressing privacy, safety, health of women
Gender sensitive CT/PT

Ashtapadi Charter with CWIS

NULM – SBM Convergence Strategy
Livelihood opportunities under NULM – SBM
Access to Credit

Act provision: 50% women
representatives in ULBs

Dalit Basti Yojana for slums

SAFETY

Swachh Maharashtra Mission

Safai Mitra and PEMSR ACT
Women SanWorkers- PPE access and benefits

GR for Scheduled desludging, FSTP,
Cotreatment, STP

MPCB and NGT compliances

SUSTAINABILITY

Act provision for financing sanitation

GR / DO for O&M , financing treatment
and desludging operations

Reuse policy

Established Municipal cadre and women
representation

RESPONSIBILITY

State level – Sector led by UDD & DMA

Division level – Monitoring of projects

ULB level – Service delivery driven by
Municipal Acts

Regulators – MPCB, MWRRRA

Act provision: 50% women
representatives in ULBs

ACCOUNTABILITY

Citizen Charter

Grievance redressal tools

Internal–Adhava, Budget, Payment tools

DMA Annual Inspection reports / SLBs

ICT tools – DMA E governance, SaniTab,
SaniTrack, FSSM dashboard, Whatsapp
chatbot

RESOURCE PLANNING AND MANAGEMENT

Established Municipal cadre and women
representation
Institutionalized leadership of women in decision making

Act provision: 50% women
representatives in ULBs

Act provision for financing sanitation

Earmarking of funds for women and
lower income groups
Institutionalization of Gender Budget



CORE CWIS FUNCTIONS

Thank you

C-WAS | CENTER
FOR WATER AND
SANITATION

CRDF | CEPT RESEARCH
AND DEVELOPMENT
FOUNDATION

CEPT
UNIVERSITY

<https://cwas.org.in>

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About us

The Center for Water and Sanitation (C-WAS) at CEPT University carries out various activities – action research, training, advocacy to enable state and local governments to improve delivery of services.



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Sign up: tiny.cc/pasenews