







Scaling up CWIS from city to state and national levels in India

ADITI DWIVEDI 22ND FEBRUARY 2023, ABIDJAN, CÔTE D'IVOIRE CENTER FOR WATER AND SANITATION, CRDF, CEPT UNIVERSITY







# **CWAS SUPPORT TO TWO SMALL TOWNS WITH SANITATION IMPROVEMENTS**

### Wai

- Known for its Ghats on the banks of River
   Krishna and around 250 temples.
- Holy river
- Also known as site for Bollywood shoots

### Sinnar

- Flourishing industrial districts
- Fast growing town

Wai – one of the 8 global cities showcasing the implementation of **CWIS principles** 





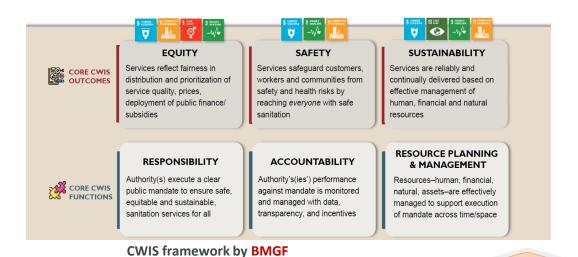
Ideas demonstrated in these cities have become models for FSSM





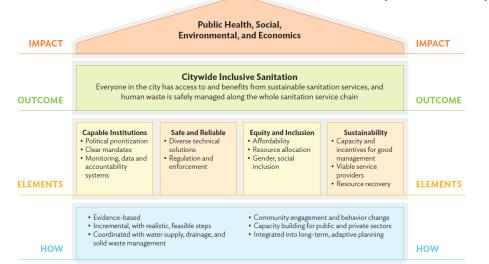


# CWIS FRAMEWORKS ADOPTED BY LEADING ORGANIZATIONS





4 pillar of CWIS support by World Bank



- ✓ Public services approach
- ✓ Safe and sustainable sanitation
- ✓ Equity and inclusive mandate
- ✓ Accountability and responsibility







# HOW HAVE THESE CITIES DEMONSTRATED CWIS?







# **RESPONSIBILITY - GOVERNMENT OWNERSHIP OF IMPROVEMENTS**

# GOVERNMENT RESOLUTION FOR IMPLEMENTATION

### वाई नगरपरिषद सर्वसाधारण सभा ठराव क्रमांक ४ दिनांक १८-०४-२०१५ ठराव क्रमांक ४ विषय - मेला व्यवस्थापन आराखढा तपार करून त्याची अमलबजावणी करणे आणि हडको कार्यालयाकडे निर्धा मंजरीमाओ प्रस्ताव साहर फरणे बाबत निर्णय पेणे. <mark>ठराव -</mark> २०११च्या जनगणनेनुसार इ.000 बुटुंबांपैकी ५,१४५ बुटुंबांकते. पैपस्थित शौचाराये असून त्यातील ४,४२९ बुटुंबांक शोचावयं हो मेप्टिक टॅक्समा जोडकोशी आहेत. भाई नगरपाणिकने वेलेल्या विद्याचाररस्थान असे सक्षात आने की. पुटुंब स्टरावरील बहुसंख्य सेप्टिक टॅक्स हे आधारस नियमाकती आणि सीपीएचईईखें माहितीपुण्डिकस सोगी सुचित केलेल्या आराखडा नियमांनुसार नाहीत. बहुसंख्य सेप्टिक टेंबस हे बोठ्या आबाराचे होते ज्यामुळे ते एकतर ८-१» वर्ष वालावधीपेक्षा अधिव बाठ्या तरी स्वच्छ येले जात आहेत विंवा ते क्वीच स्वच्छ केलेले नाहीत, वास्छे सेपिय टॅक्सक्छ्ये चन पटार्च जमा होतात आणि सेपिय क्सची प्रक्रिया कार्यक्रमता / क्षमता कमी होते. जवा सेप्टिक टॅक्समधून येचा-या सांडपाण्यात बीओडीचे प्रमाण अधिक असते ज्यामुळे बाच्या संपर्कात वेणा-या ज्यातिच्या करोप्यावर त्याचा परिणाम होऊ सवती, तसेच, असा प्रक्रिया न केसेव्य मैनापाच्याची रस्त्याच्या कडेच्या नटारांमार्पेत कृत्या नदीत पाटांद्वारे. येट विन्तेवाटही लावली आहे. संधानिवातित, नगरपालिका ही कुटुंबांना सेप्टिक टॅक्स स्वभद्ध करण्याची सेवा र. १००० प्रती खेप इतकार साव मागणीनगार परविते अणि त्यातीन मैल्याची प्रक्रिया न करताच पनकवरा अमा करण्याच्या ठिवाणी (वृत्तिम मादेश्वर) त्याची विभ्रेषाट सामनी आहे. पर्याषरण समेच मनप्प / प्राणी पांच्या आरोग्यावर याचे परिचाम ब्रोतील, लेप्टिव टॅक्सची अधिव नियमित वनकाता कारणात्र सहाय्य करणात्राठी आणि प्रक्रिया न केलेशा मेशा तथाथ टाकणे टाकण्यात्राठी नियमित सेप्पिक टे स्थम्म करण्याच्या सेवेची तसेच वैजाडकिया प्रकल्याची योजना आधणे आवरयक आहे. तायरी विकास संवात्रपाच्या तसीत सेवा पाहिनेत, त्या मैसावर प्रक्रिया नेती गेली पाहिने व यन त्याचा पुनर्वापर नेता गेला पाहिने. हे करण्याचे पागरे स्हमने - अधिक बातावधीनंतर गेप्टिक टॅक्स स्वच्छ करण्याच्या चक्रामुखे गेप्टिक टॅक्सची प्रक्रिया कार्यधमता/ क्षमता खातावत जागार ताही योजनावळ रितीने सेप्टिक टॅक्स स्वच्छ केने जातील, सेप्टिक टॅक्स स्वच्छ बरण्यासून निध्येत सहसूताचा ओध सुक होईल आणि प्रक्रिया केलेल्या मैलाची विक्री करता वेईल. स्वणून नगरपासिकेने वाईशाडी सर्वांगीण मैला व्यवस्थापत योजना कार्यान्वित करा या कराबानुसार असा निर्णय ग्रेणेत येत आहे की, सेन्टिक टॅक्स योजनावद्ध रितीने नियमितपर्य स्थल्द करण्याची सेवा पुरिष्णाचा अणि सम्में नंबर २३८ (बुगा) / २५१ (नवीन) वेशील घनकचरा टाकच्याच्या डिकाणी (वर्णिश साईटकर) मैलाडिज्या मुस्तिमा/ प्रकल्प उत्तरण्याचा निर्णय नगरपालिकेन फेडला आहे. वेपिटक टेक्स स्वच्छ करण्याची लेवा पुरविणे पेणे व जालविणे) व मैलाप्रक्रिया प्रकल्प जालविणे हे खाजनी संस्थे/ संस्थामार्फत केले जाईल. मैला व्यवस्थापानामध्ये खाजपे संस्थाचा हा सहसाय बायम/ टिकवन देवण्यासाठी, सालमना/ मिळकर्तीवर कर लायमंत याया. तसेच सर्व मासमना घारकांची नपरपातिनेने इरचून विनेत्या नेळापणनाप्रमाणे त्यांचे सेप्टिक टॅक्स तीन वर्षांतून एकदा स्वच्छ करून घेणे वंधनवारक राहील सेप्टिक टॅक्स निवमित्तपर्ण स्थन्ध करून चेन्यासाठी त्यांना झाकण उचवता येणाऱ्या तथासकुंक्यांची (marholes) तरतुर करूर पेण्याची व बाहगोडाठी योग्य असा गोहोच रस्ता देवण्याची जवाबदारी बालबत्ता धारवाची राहील. "Onsite Sanitation व्यवस्था राववित्यासाठी नवीन नियमायशी व bye-laws वनवित्यात यावेत. या ठरावानुसार असा निर्णय ग्रेणेत येत आहे की, श्वाजनी शंध्यांच्या शहभाषातुत शंबींगीय ग्रेसा व्यवस्थायनात्र बार्यवाही करण्यासाही व त्याच्या यहान्वी अमसवजावणीसाही बोग्य असे कर, निवधावर्ती व जनादेश साद करण्यास प्रेजरी वेण्यात येत आहे. तसेच शवर मैलाप्रक्रिया प्रकल्याचा 'समिततर प्रकल्य आराखश' करपूर्व निधी प्रातीसाठी HUDCO या संस्थेकडे साहर करण्याचेत्री या तरबाद्वारे रेंगेल येत आहे. सुचक - मा.सी न्यूरेजा विकासार्थ जावन सही xxx अनुमोदक - माली लक्षेता विकीय उद्धि पूर्व सही XXX ठ.स.मंज्र

Wai and Sinnar resolved to implement FSSM plan in the city through a council resolution
The resolution covers aspects like:

- ☐ Citywide FSSM
- ☐ Involving Private sector
- □ Scheduled cleaning
- Land for treatment facility
- ☐ Taxes to be levied

1<sup>st</sup> Cities in INDIA to have passed such a resolution

### FINANCIAL COMMITMENTS

- **✓** Engaging private desludger through contracts
- ✓ Imposing sanitation tax and using property tax funds
- ✓ Using own funds to develop FSTPs







# SAFE SANITATION ACROSS THE CHAIN

# When work started

### **Access** Collection

Septic tanks

Open defecation

Pour flush toilets

- High dependency on community toilets
- Majority of toilets are connected to septic tank
- Septic tanks 2-3 chambered
- Septic tanks were **oversized**

### **Conveyance**

Suction emptier truck

- Only 2-4 % of septic tanks
   cleaned annually
- ULB provide the emptying services on demand basis
- Levy user charges from 1000

### Treatment

No treatment facility

 No facility for faecal sludge treatment  Septage disposed off on dumping site without

**Disposal / Reuse** 

Disposed off on

dumping site

treatment







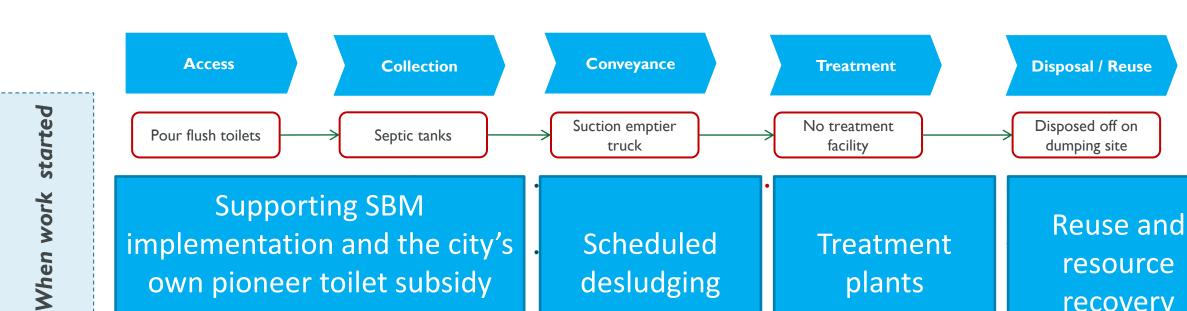








# SAFE SANITATION ACROSS THE CHAIN



own pioneer toilet subsidy programs

desludging

plants

resource recovery



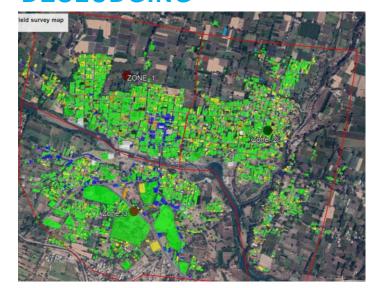








# WAI SUCCESSFULLY COMPLETED ITS FIRST 3-YEAR CYCLE OF SCHEDULED DESLUDGING



3600+ Septic tanks served 6800+
Properties covered

95% 19 million

Acceptance rate of Liters of septage treated services

# FSTPS SET UP TO TREAT THE SEPTAGE





# REUSE OF TREATED WATER AND SEPTAGE







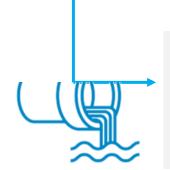




# IMPROVED PERFORMANCE OF SEPTIC TANKS AFTER DESLUDGING RESULTING IN IMPROVED DRAIN WATER QUALITY FLOWING INTO RIVER



- 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







# **SAFETY OF SANITATION WORKER**

- Registers for PPE usage and replacement
- SaniTab / SaniTrack dashboard monitors the PPE usage of desludgers on daily basis.
- PPE flyer has been prepared for various sanitation activities and shared with stakeholders
- Training workshop along with a health camp was organized for all Sanitation workers.
   Also PPEs were distributed during this event.
- Council has introduced clauses related to provision, usage and monitoring of PPEs in all their upcoming contracts for Sanitation based on experience of this scheduled desludging contract





Helmet	Safety goggle	Nose Mask	Hand Gloves	Jacket	Safety Shoes	Gum- boots	Remark	Sign
Date	Date	Date	Date	Date	Date	Date	PPE set given	Sign
			Date				Hand gloves are torn.	Sign
Samole	of form	nats pr	enared	for can	urina r	enlaceme	nt and distribution of PPE i	n the PE









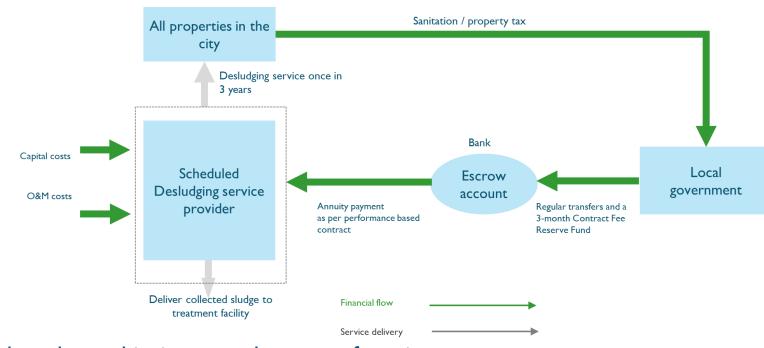


# **ACCOUNTABILITY IN SERVICES**

# PERFORMANCE LINKED MONITORING MECHANISM







- ✓ Payments based on achieving agreed targets of septic tanks emptied
- ✓ Clauses to ensure safety standards use of PPE and vigilance against manual scavenging
- ✓ Fines on non-achievement of targets
- Escrow mechanism to reduce payment risk







# **MUNICIPAL STRENGTHENING**

# BILLING- PAYMENTS TRACKING



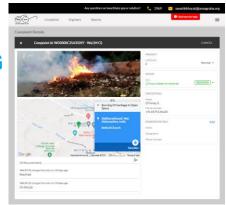
HUMAN RESOURCE ADEQUACY

# TRANSPARENCY IN ADMINISTRATION – ADHAVA DASHBOARD

	Monthly report of key activities of sax June - 2021		
	Street, the of courts boths of all properties	U-si	besit
	Total sense better actually desired	54	16
	first leading splected	60	March .
÷	Otsewarion of Municipino Auring contain	14	Scott make
÷	Strainshalfer practice month and its come	14	March worth left is in partitation deat. (accompanion damp part)
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4	No of rampleins washed / redresset	50	Scongisire
5	tous/connect	MA.	No locus
3	Treatment of septings	Unit	Details
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2	Total septage tracked	60	Senera
3	Total septage record	Ag and it	And copylings — 20000 kg Souther — 41, 35 kg 1 recent common — 200000 ft All the stocker area mount with and copylings controllers away by formers. All the service was recogniting from search for their genetics.
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4	Testimani	MT	No data producte
,	Elizabetiket for province month and its crafts	M.	Mineralement
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	tous/connect	64	No-comments/source observed

			No data avallable	
	Others		Details	
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b	Revindra Kalakhe	ND	Visited all 12 Cfs. At 4.5 Cfs cleaning was not done properly and at bub was not working so informed the Supervisor.	
	Unesh Kantile	MD.	Violated all GCTs and 1 PT. Ar 2-3 CTs cleaning was not done properly informed the Superviso.	
	Name of the Mukedom	Dens of Volt	Otsen stion/tomments	
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	Oconing and maintenance of Community and Public todat	tva	Cetals	
÷	and the same of th			
2	isses/connect	10.	and countries cons	
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	Fire extinguised  Total number of rath for Time trust	tin.		
7		Delt	Details	
4	Issues/comment	NA.	No consisers/source observed	
3	No. of complaints received / redressed	No.	© complaints received all recoived	
		NA.	May month payment done	
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6	Streetlightrepsir	tiva	Ovtolk	
4	lssses/comment	NA.	No-conversi/soues observed	
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2	Total length of drains cleaned (in kms)	kms	No dete avallable	
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	or an usuang		Uneach Kentille, Noverhilandi, Generaud, Madhil eli, Genorii eli,	

### STREAMLINING COMPLAINT REDRESSAL



# STRENGTHENING MUNICIPAL BUDGETING

- ✓ Budget analysis
- ✓ Suggestions on use of Women and child development funds
- ✓ Increasing collection efficiency of property tax, WSS user charges
- ✓ Budget briefs





# **INCLUSIVE AND EQUITABLE SERVICES**



Includes those not connected to sewer networks



Mandatory desludging service but not linked to "user charges" – service to ALL



Special care to service vulnerable areas – long pipes for narrow lanes



Equitable - no charges at time of desludging - benefiting low income areas - sustainably financed through equitable "sanitation tax"













# **EMPOWERING WOMEN FOR INCLUSIVE FSSM SERVICE DELIVERY**

- Building capacities of Elected Women Representatives (EWRs) for effective functioning and participation in local governance focusing on FSSM.
- Sensitizing women at household level regarding the process of desludging
- SHG involvement for maintenance of garden and urban forest - Community empowerment and livelihood development















# NOT JUST ONE-OFF PILOTS!

SCALING UP TO OTHER CITIES....







# **ZOOMING OUT TO MAHARASHTRA – CWIS COMMITMENT**

CWAS - Partner to the state government for implementing the SWACHH MAHARASHTRA MISSON URBAN – 400 cities

Cities with FSTPs operational/construction/ planning phase

Government of Maharashtra has taken up FSSM in a big way!

Thinking "beyond toilets" right from beginning





Increased focus on moving cities towards ODF+/++ (FSSM) after declaring Urban Maharashtra ODF









Infrastructural efforts for treatment

Independent FSTP

311 cities

Functional/proposed STPs

35 cities

Co-treat at nearby STPs **35 cities** 

**Scheduled desludging** 

mandated by state govt for all cities

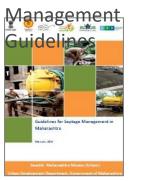
Commitment
on citywide
inclusive
sanitation from
leadership on
launch of
Swachh
Maharashtra
Mission 2.0



# SHARING LESSONS FROM WAI AND SINNAR WITH OTHER CITIES IN STATE

### **POLICY GUIDELINES AND TOOLS**

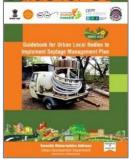
### Septage



O&M of treatment plants



### Step by Step Guide for ODE+



SOP for scheduled









### CHAMPIONING, EXPOSURE VISITS AND CAPACITY **BUILDING**















# LEVERAGING GOVERNMENT PRIORITIES FOR CWIS

Universal Access of individual household toilet (IHHT)

Scheduled desludging for septic tanks

Safe Treatment and Reuse











**Gender Inclusivity** 



NULM -SBM Convergence **Funds for Women** and Child Welfare

Sanitation Worker Safety





**Municipal Strengthening** 









# **SCALE UP IMPLEMENTATION**

# SAFE SANITATION ACROSS THE CHAIN

- ✓ Treatment 212 FSTPs functional across the state, 70 cities practicing co-treatment
- ✓ Desludging State government directives to all cities to implement scheduled desludging
- ✓ Universal access to individual household toilets – mobilizing under SBM 2.0

# CAPACITY BUILDING PARTNERSHIPS FOR STRENGTHENING STAKEHOLDERS

Technical training to cities





Sanitation workers



SHGs and women decision makers



### STATE LEVEL TOOLS









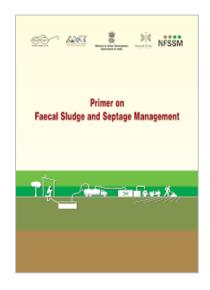


# **BEYOND MAHARASHTRA**

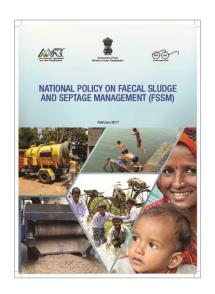
CWAS exchanging knowledge with other states as a partner in



Wai Sinnar experiences in



NFSSM instrumental in



Scheduled desludging mandated as a condition of ODF++ under new SBM 2.0



Support for using tools to other states -



# Thank you

# CVAS CENTER FOR WATER AND SANITATION



CEPT UNIYERSITY

