



**TN**  
TAMIL NADU

**US**  
URBAN SANITATION

**SP**  
SUPPORT PROGRAMME

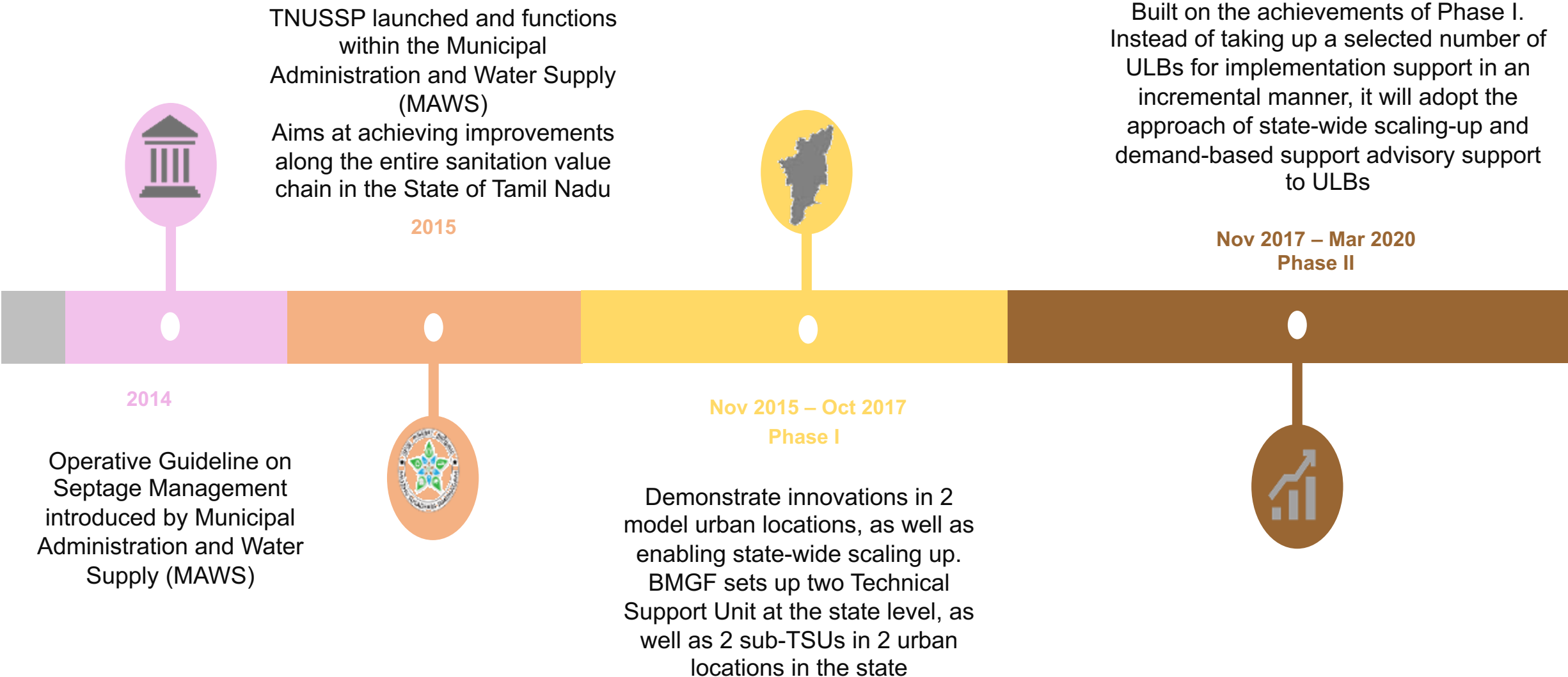
**iihs**<sup>®</sup>

INDIAN INSTITUTE FOR HUMAN SETTLEMENTS

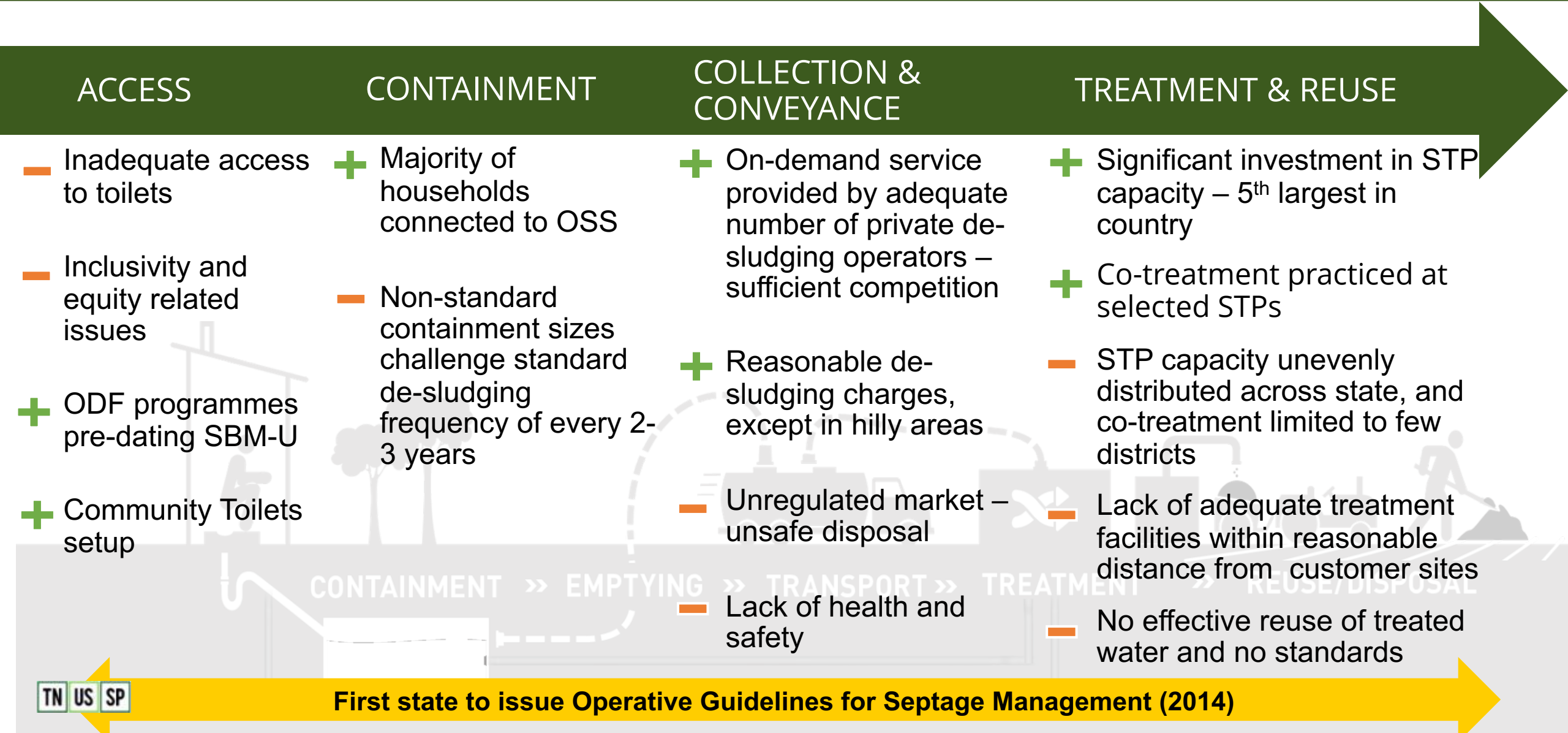
In Association With:



# FSM Timeline for Tamil Nadu



# FSM Context in TN



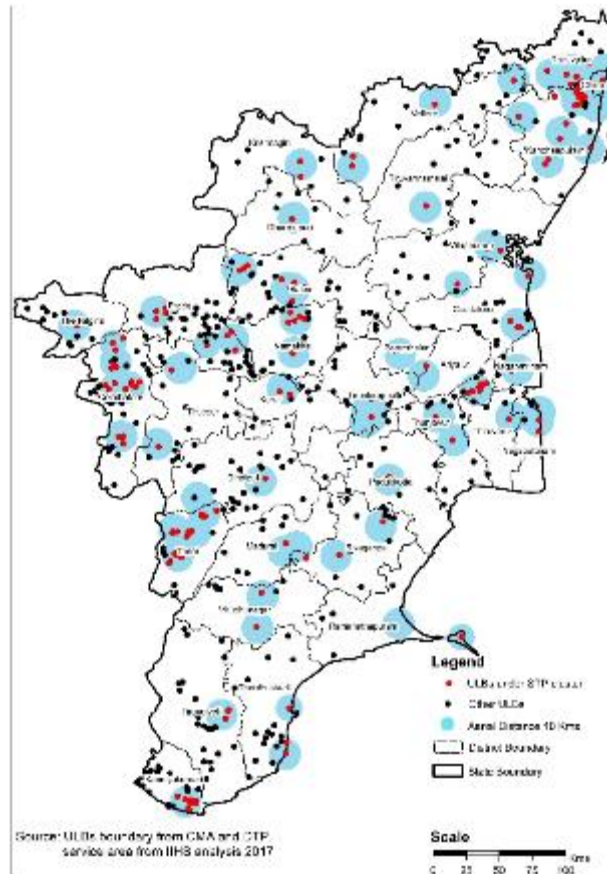


# TN Phase Wise Plan for FSM Coverage in ULBs

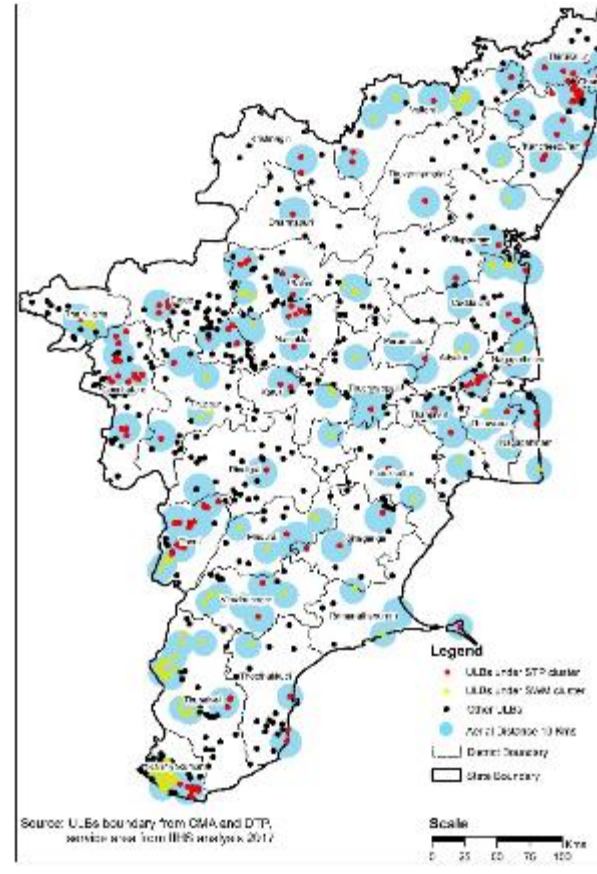
**Principles:** Utilisation of existing facilities, clustering approach

- Phase I and II co-treatment at existing and proposed STPs in all ULBs.
- Phase III : FSTPs at Municipalities with Solid Waste Management (SWM) sites.
- Phase IV: Town Panchayats land secured within Resource Recovery Parks (RRP).
- Phase V ULBs not falling in any of the above clusters.

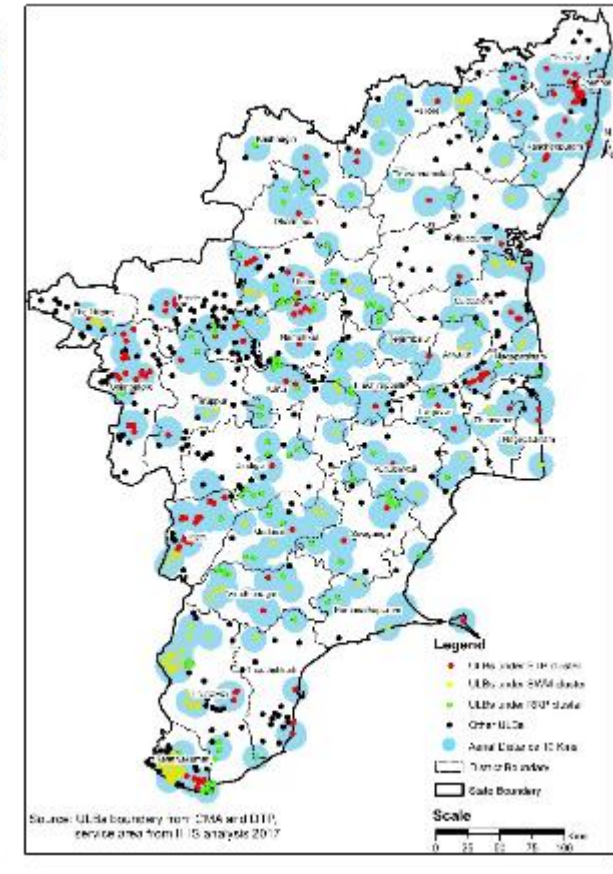
**Phase I & II**



**Phase III**



**Phase III**



- STP Cluster ULBs
- SWM Clusters
- Aerial Distance 10 km
- RRP Clusters
- Other ULBs
- District Boundary
- State Boundary
- Scale: 1:2,310,000

Source: TNUSSP Analysis, 2017

# State Investment Plan

State Investment Plan - Road Map for scaling treatment facilities and coverage of urban population (excluding Chennai)							
No	Details	Phase-1 Co-treatment at existing STPs	Phase -2 Co-treatment at upcoming STPs	Phase -3 New FSTPs	Phase -4 RRP of TPs	Phase -5 Standalone cities	Total
1	No. of STP/FSTP locations	41	34	49	78	157	353
2	Total cities covered	69	86	110	111	287	663
3	Households Coverage	26,80,950	13,39,048	9,48,335	4,53,617	12,25,728	66,47,678
4	Population Coverage	103,48,467	51,15,163	36,90,113	17,50,962	47,47,182	256,50,797
5	Cumulative population coverage	40%	60%	75%	81%	100%	
6	Investment (crores)			217			

# Fecal Sludge Treatment Plants in TN



PNP FSTP



Karunguzhi FSTP



# State FSTPs under construction

No	Progress	Number of FSTPs
1	Operational	2
2	Completed/ Nearing completion	4
3	Advanced stage	5
4	Intermediate stage	12
5	Initial stage	38
		61



**SDB-02: Finishing works are in progress**



**SDB-01: Floor PCC laying work is in progress**



**SDB-02: Plastering work is in progress**



**ISAF: Wall concreting is in progress**

# Approach for FSTP Implementation

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1. Co-locating FSTPs with SWM sites
  - a. Securing land and obtaining approvals – simple and quicker;
  - b. Long term sustainability of operations: example co-composting of dried FS with organic MSW
2. Design decisions:
  - a. Non-mechanized systems – ease and continuity of operations & availability of vendors
  - b. Modular approach for optimal operations;
3. State support to ULBs for quality assured scaling:
  - a. Standardisation across ULBs
    - Type design and DPR: standard design and detailed drawings to assure
    - Site assessment – standardized questionnaire
    - Standard processes for clearances such as Pollution Control Board
    - Operations: Standard SLAs & O&M protocols
  - b. ULB led implementation - procurement of private services
  - c. Rigorous Quality Assurance process



# QA Arrangements for FSTPs

## Helpline:

1. WhatsApp tracking, Email, weekly calls

## ULB Capacity Building

1. Workshops at Critical stages
2. Cross-learning meetings
3. Monthly review, FAQs
4. roving support for critical areas

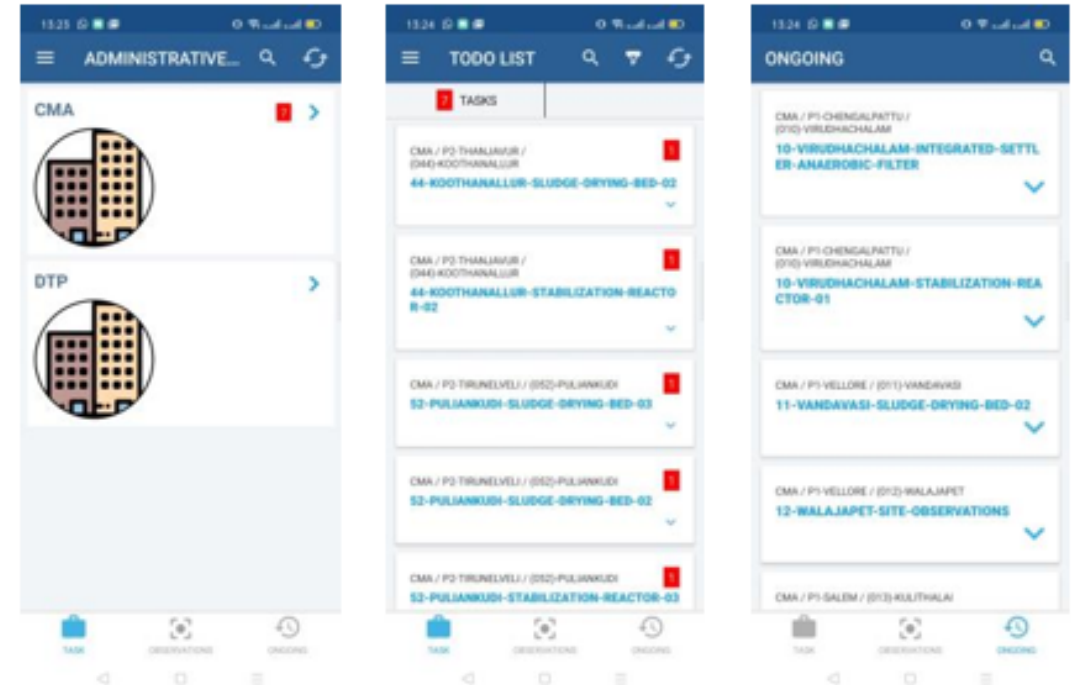
## Team Organisation

1. State team for key decisions and cross learning
2. QA field teams for al sites, visits at important decisions

## App for Monitoring

1. App to enter observations in a pre-loaded detailed checklist

## App Screenshots



## Virtual Reality Tool

1. FSTP is created in a 3D VR environment to help users understand Operation and Maintenance

# Enabling and Improving Co-treatment

State has adopted following approach:

- 1. Build on existing infrastructure:** Improving or creating decanting facility (sewer pumping stations) as decanting facility
- 2. Sustaining safe operations:** O & M improvements and addressing issues specific to co-treatment,
- 3. Improved monitoring and protocols:** Screening for industrial waste, tracking of loads through app; Support systems for data collection and performance monitoring



**Anna Stadium Decanting station, Trichy**



**STP at Coimbatore**

# Approach for Scaling Co-treatment

1. Current situation assessment of STPs through combination of secondary data and rapid primary assessment:

- Access, infrastructure for decanting and pre-treatment
- Current inflow and plant performance
- Improvements required to enhance or enable co-treatment.

Criteria	A1 Co-treatment not practised	A2 Co-treatment practiced	B	C	D
STP working status	All equipments in working condition, and has unutilized capacity		All equipments in working condition, and has unutilized capacity	working at full/ near full capacity	Equipments not functioning/ breakdown
Investment or modification required to adopt co-treatment	Requires Minimal investment (Upto 3 Lakh Rupees)		Requires moderate investment (Between 3 to 20 Lakhs)	Requires high investment (More than 20 Lakhs)	Requires high investment (More than 20 Lakhs)

2. Categorisation based on current practices and improvement needs and action plan for each category

Category	A1	A2	B	C	D
No. of STPs	11	13	1	1	3



# Co-treatment: Progress

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## Implementation Plan

- a. Capacity building: trainings, exposure visits, ready reckoners, type designs and detailed drawings
- b. Roving support by externally sourced teams

## Progress

- a. Template and type design for pre treatment and decanting station prepared.
- b. On-line testing for industrial waste is being developed.
- c. 20 ULBs have initiated co-treatment which could potentially co-treat 2857 KLD.
- d. Co-treatment being initiated in 10 ULBs; has potential to co-treat 1082 KLD.

# De-sludging Model in TN

## OBJECTIVES

1. Provide adequate treatment facilities by removing barriers to safe disposal
- 2. Regulate the market to ensure and enable safe disposal (and prevent open dumping)**
3. Ensure worker health, safety and welfare
4. Minimise disruption to existing market – protect businesses and livelihoods
5. Enable alternate service delivery models to reach:
  - a. Urban poor**
  - b. Public facilities institutions and establishments
  - c. Areas with difficult terrain and monopoly of private providers

## APPROACH

- 1. Provision of adequate treatment facilities within a 12 km radius** – clustering of ULBs around existing and upcoming treatment facilities, based on average travel distance
- 2. Minimal License and Tipping Fees** – promoting use of disposal facilities by reducing financial burden on private operators and limiting rent-seeking opportunities
- 3. Standard License Agreement and GPS-enabled monitoring system** – optimal regulation of the private sector market – without price interventions – to address open dumping and promote worker safety
- 4. Customised Service Models** – scheduled services for Bulk Generators (i.e. CT/PTs, Public Establishments and Institutions) and subsidised rates for urban poor

# Governance and Regulation

## Government Order (G.O(2D)35) issued by GoTN

### 1. Standard Licensing agreement

- Minimal regulation for a market led model –no disincentives, removal of barriers, some welfare provisioning

### 2. MoU for the shared use of the treatment facility by cluster ULBs;

- Establishes Cluster Model
- Ensuring financial sustainability: formula for cost sharing, ring-fenced account

in order to make effective use of the constructed Faecal Septage Treatment Plants, the Indian Institute for Human Settlements (IIHS) has prepared the following Documents:-

- i. Draft License for Issuance of licenses to the private septage operators;
- ii. Draft Memorandum of Understanding to be entered by the Faecal Septage Treatment Plants utilizing Municipalities / Town Panchayats, with the lead Urban Local Bodies i.e, where the Faecal Septage Treatment Plants are constructed and operated; and
- iii. Draft Memorandum of Understanding to be entered between the Urban Local Bodies those intend to use the Sewage Treatment Plant established by the Corporations / Municipalities Town Panchayats for co-treatment facilities.

3. The Commissioner of Municipal Administration has informed that the above documents are reviewed and the Comments and Suggestions have been incorporated in the said documents prepared by the Indian Institute for Human Settlements (IIHS). He has therefore requested the Government for according approval of the documents mentioned in para 2 above which are used for constructed Faecal Septage Treatment Plants.

4. After scrutiny, the Government have decided to accept the documents in respect of Memorandum of Understanding for the co-treatment of Faecal Sludges and Septage along with sewage at the STP at (name of the Urban Local Bodies) and Memorandum of Understanding for the treatment of Faecal Sludge and Septage at the Faecal Sludge Treatment Plant at (name of that ULB) annexed to this order and also to permit the Commissioner of Municipal Administration to use the documents in the constructed Faecal Septage Treatment Plants.

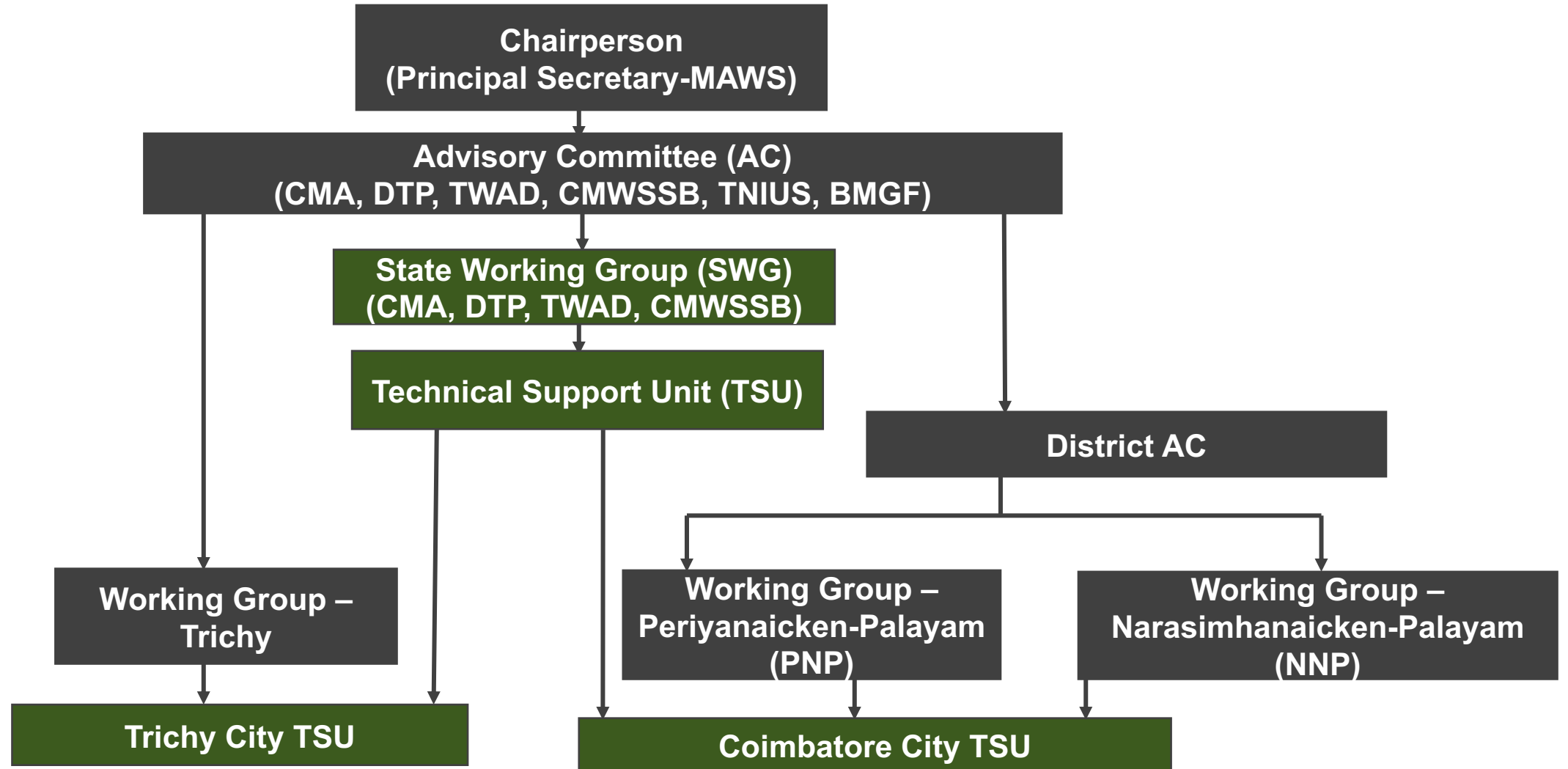
5. This order issues with the concurrence of Finance (MAWS) Department vide its U.O.No.7572/ Fin.(MAWS)/2020, dated 27.2.2020.

**(BY ORDER OF THE GOVERNOR)**

**HARMANDER SINGH  
ADDITIONAL CHIEF SECRETARY TO GOVERNMENT.**



# Governance and Regulation



# Behaviour Change Communication and Education



- 1. ULB
  - Developing communication packs for ULB (media, social media)
  - Mass Communication Materials
  - Folk Art performances
- 2. State Level Campaign (Kakkaman film release, FM)
- 3. Social Media campaign



Treatment Facilities as Resource Centres