# Release of the Report & Discussion on Key Findings


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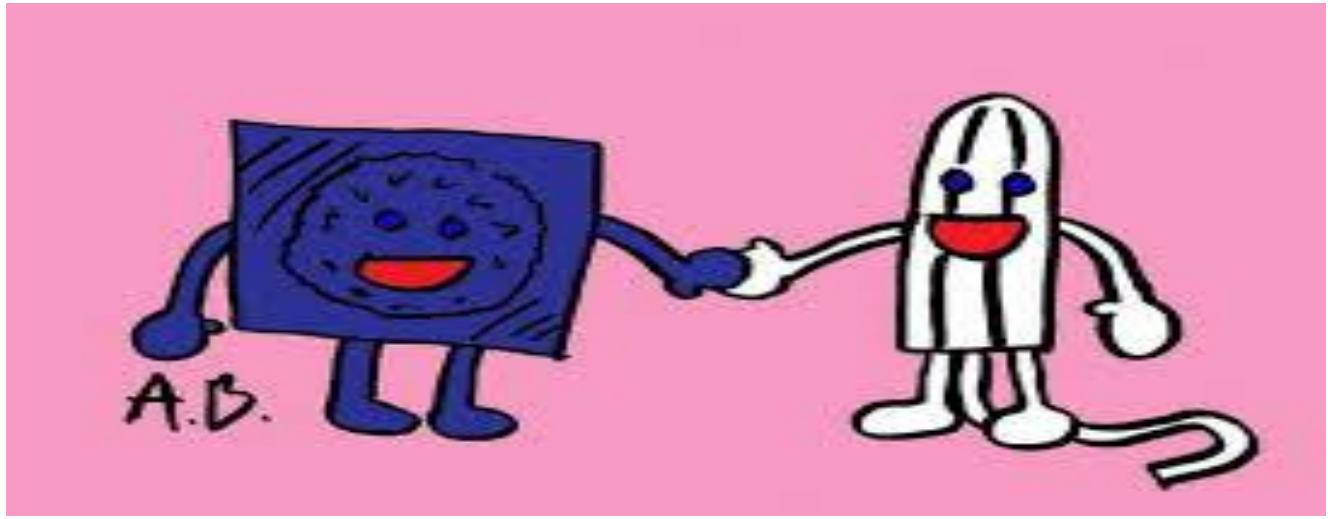
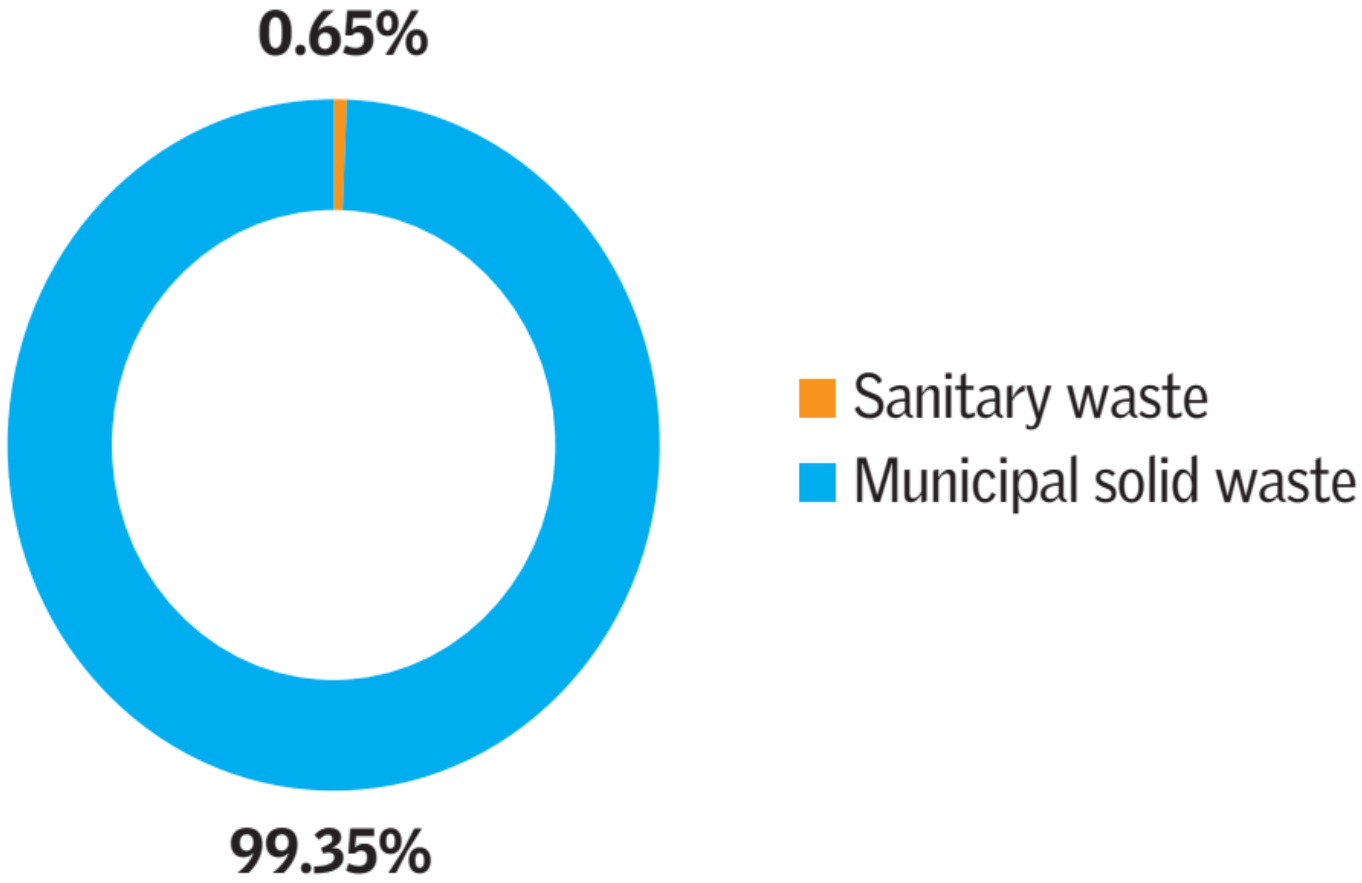
**8800371929**

**According to the provision of 3(41) of Solid Waste Management Rules, 2016, "sanitary waste"** means wastes comprising of used diapers, sanitary towels or napkins, tampons, condoms, incontinence sheets and any other similar waste.



# Estimated generation of sanitary waste in India




Source: CSE 2022.

Note: Only disposable sanitary napkins and baby diapers have been considered.

**925 TPD**

# Cont.


**Considering 3-4 % of sanitary waste is contributing in total solid waste**

Sanitary Waste generation

**4,385 TPD**

Status as on 16.05.2022; Source SBM(U) Dashboard, MoHUA

# Why is it difficult to manage sanitary waste?

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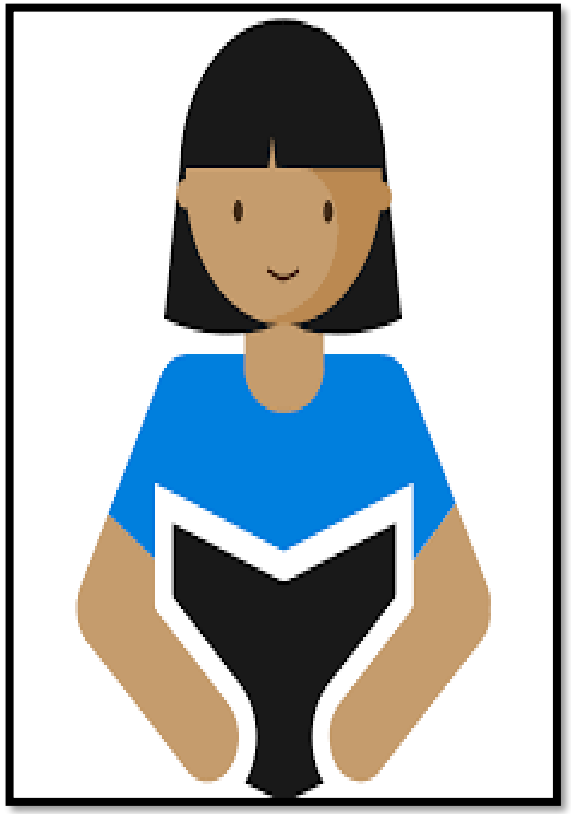
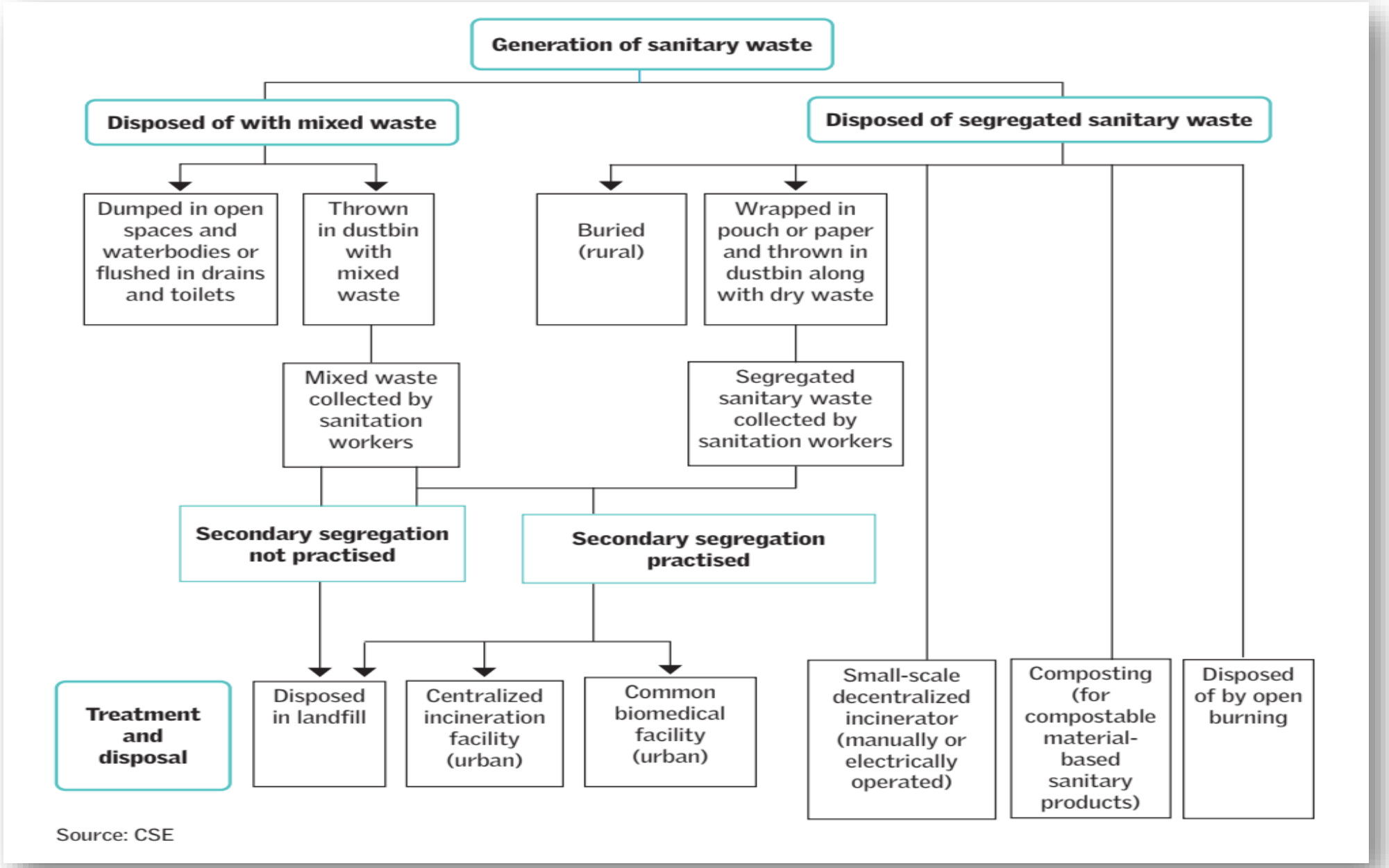



| | | | |
|---|---|---|---|
| **Taboos and Myth** | **Low literacy rate and no awareness** | **Hardly any documentation and statistics** | **Inadequate Infrastructure and services** |

# Sanitary waste management in India





# Consequences of mismanagement of sanitary waste

# Existing Legislative framework to support sanitary waste management

Solid Waste Management Rules, 2016 ( Duties of consumers, local authorities, producers, private agencies and SPCB/PCC )

Central Pollution Control Board Guidelines 2018 (Disposal alternatives, the technical specifications and pollution control standards)

Menstrual Hygiene Management (MHM) Guidelines 2015 (MHM options, MHM infrastructure, role of various relevant stakeholders, the technical details of disposal methods)

# Consequences of inconsistencies between existing legal framework

**45%**
Use routine waste disposal methods or dustbins

**23%**
Throw away in open spaces, drains, rivers, wells, lakes, or roadside

**15%**
Dispose of by burning

**25%**
Dispose of by burying

**9%**
Throw in toilets (flushing or pit latrine)

Source: Menstrual Hygiene Management, WaterAid, 2019. Graphic prepared by CSE.

# LARGE SCALE BIO-MEDICAL WASTE INCINERATOR

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Source: CSE, 2022

# Key Challenges associated with centralised sanitary waste management system

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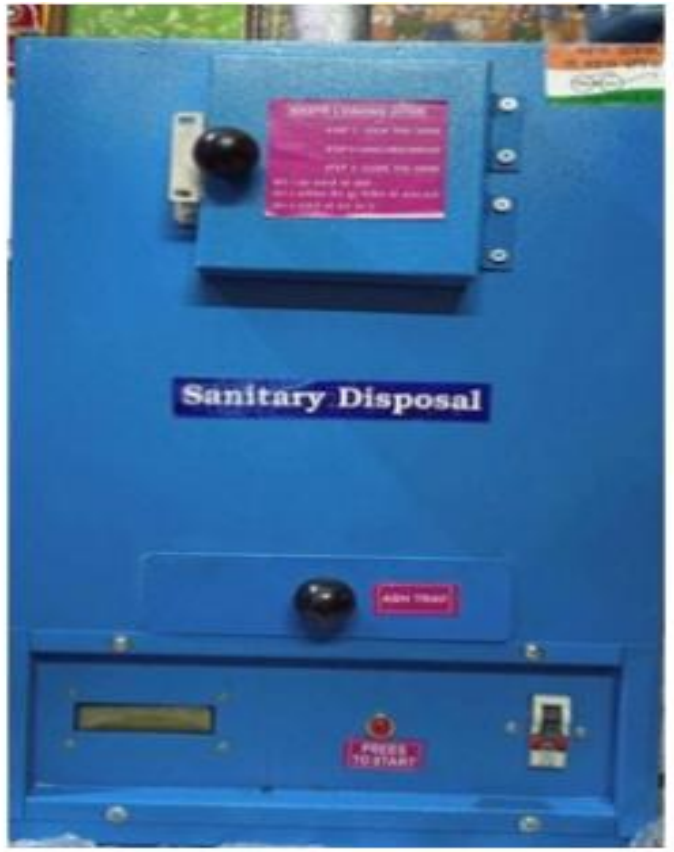
- Lack of source segregation
- Inadequate infrastructure and services
- Handling issues
- Capacity constraint
- Financial constraint

# SMALL-SCALE DECENTRALISED INCINERATOR

**Size:** Small-scale incinerator
**Capacity:** Approx. 100–300 pads a day
**Cost:** Rs 10,000–25,000




**Size:** Medium-scale incinerator
**Capacity:** Approx. 400–900 pads a day
**Cost:** Rs 30,000–70,000

Source: GeM Portal, Government of India

# Key Challenges associated with decentralised sanitary waste management system

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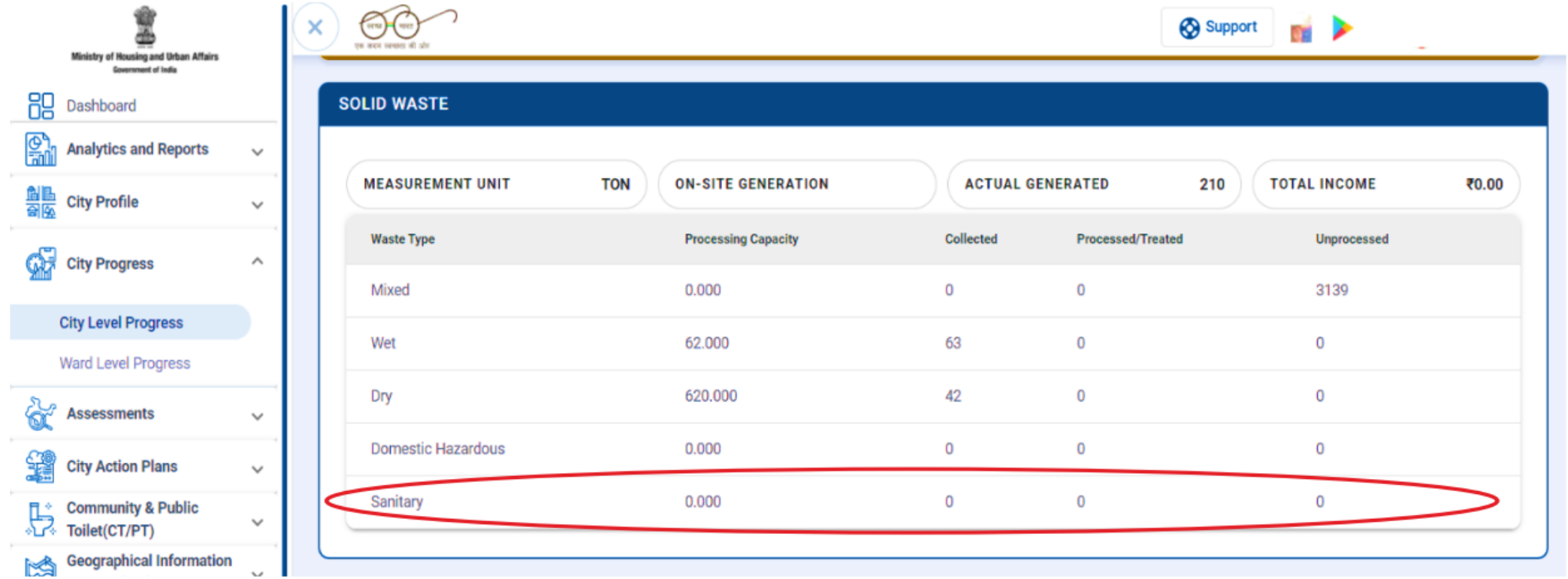
- Standards of decentralised incinerators
- Self certification
- Lack of technical guidance
- Taboo and myths associated with sanitary waste disposal
- Inappropriate placement of incinerators
- Disposal of ash
- Functioning of incinerators

# Way forward to create a robust system for sanitary waste management

- **COMPREHENSIVE ASSESSMENT**

## Snapshot of SBM-MIS portal




Source: Ministry of Housing and Urban Affairs (MoHUA), Government of India.

- **INVENTORY OF SANITARY PRODUCTS**


Source: CPCB

# • ADDRESS INCONSISTENCY IN TERMINOLOGY

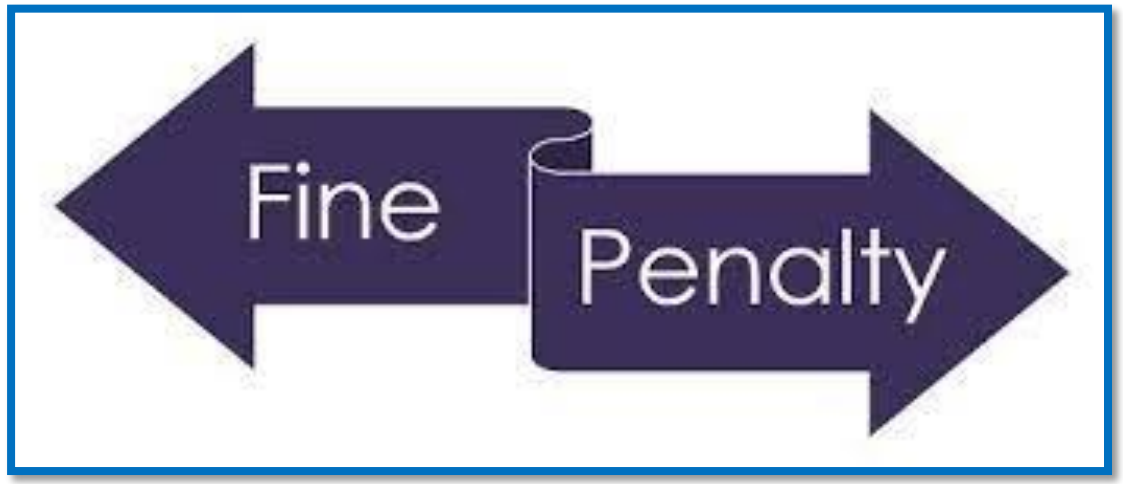
B

Projected Waste generation streams for year 2025:

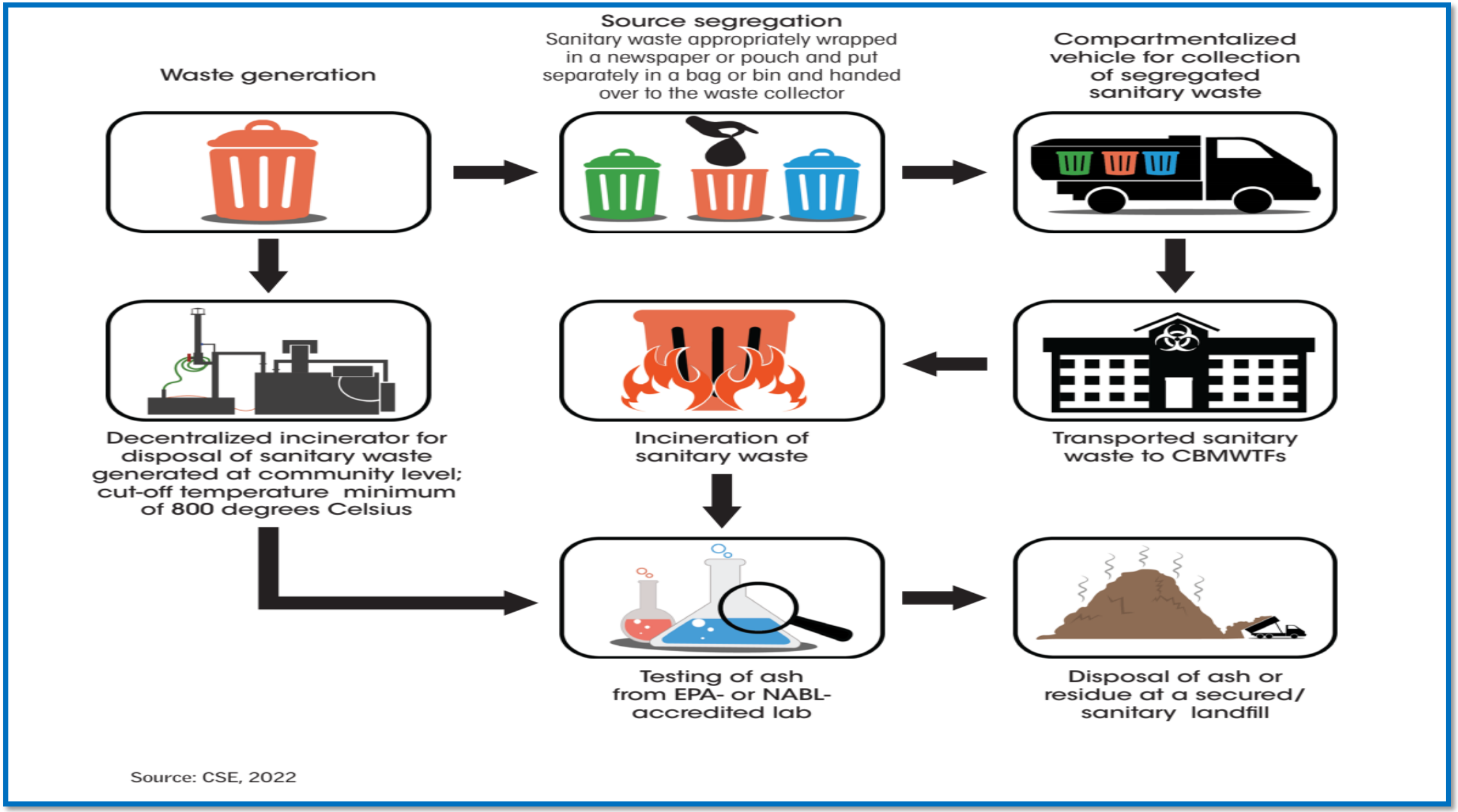
| Waste stream | Fraction in MSW (indicative–can be changed as per actuals in ULB) | Projected waste generation in TPD | % of MSW |
|---|---|---|---|
| Wet Waste | 55% | | |
| Dry Waste | 35% | | |
| Domestic Hazardous waste | Minor | | |
| Other Waste(Drain Silt & Inert ) | 10% | | |
| To SLF (not more than) | 20% | | |

Source: CSWAP ( City Solid Waste Action Plan) template, MoHUA,2022

- **STRENGTHENING EXISTING RULES AND GUIDELINES**

# • RE-DESIGN EXISTING INFRASTRUCTURE AND SERVICES



- **EXTENSIVE IEC, BCC AND CAPACITY BUILDING ACTIVITIES**

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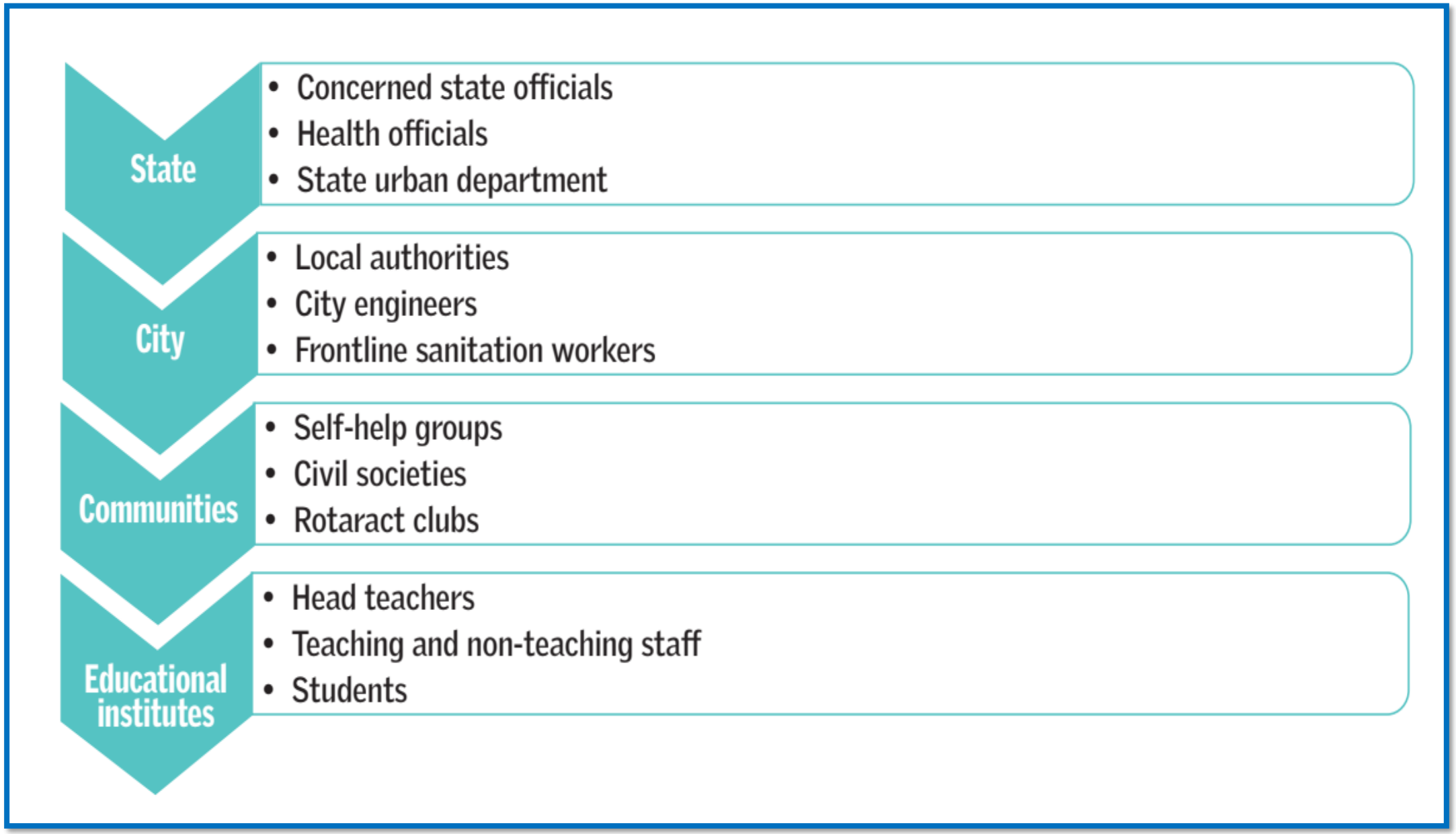
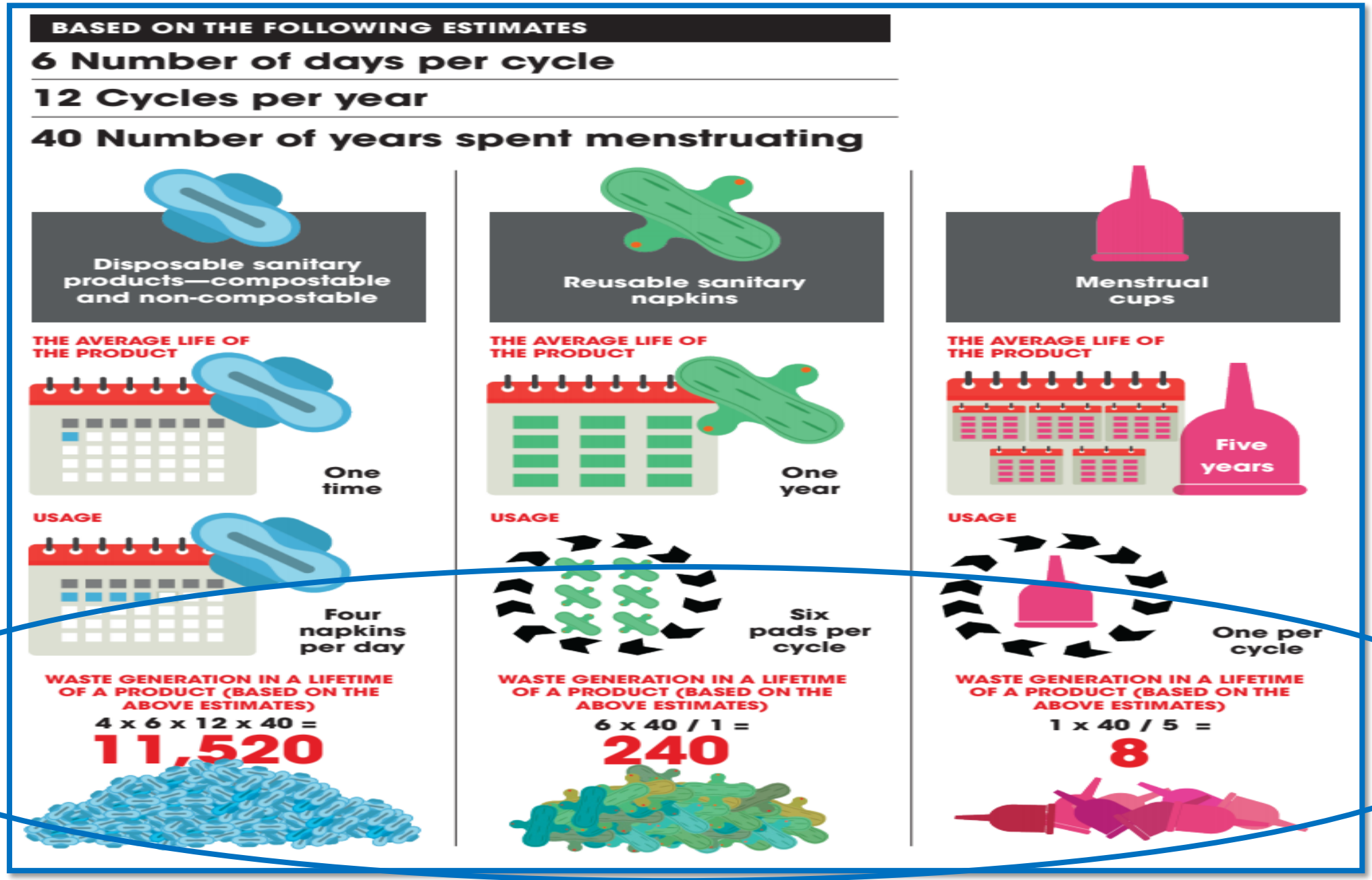


- **COLLABORATE WITH OTHER ORGANIZATION**

*A poster from the Red Dot campaign*


Source: SWaCH Pune

- **PROMOTE ALTERNATIVE & ECO-FRIENDLY SANITARY PRODUCTS**



# • DISCLOSURE OF COMPOSITION AND TESTING OF ECO-LABELLED SANITARY PRODUCTS


Source: Anandi compostable sanitary napkins

## INDIAN STANDARDS

**IS 5405:2019:** Sanitary napkins are absorbent materials used to absorb fluid discharged during menstruation. As compared to cloth and other materials (husks, ashes, etc.) used during menstruation, they provide better hygiene and protection against leakage. This standard was originally published in 1969 and subsequently revised in 1980. The current revision was made in the light of experience gained since its last revision and to incorporate the following major changes:

- Material and sizes
- Types of sanitary napkin
- The procedure and requirement of ability to withstand pressure after absorption
- The optional requirement of disposability
- Hygiene testing requirement
- Good manufacturing practice guidelines for hygiene requirement
- Bio-compatibility evaluation requirement
- Optional requirement of biodegradability and compostability
  Manufacturers that claim that their product is biodegradable or compostable shall perform the above testing for the final product. The product shall be considered biodegradable or compostable when tested as per IS/ISO 17088. The information regarding whether the product is biodegradable, compostable or oxy-degradable shall be marked on every packet of sanitary napkin.
- Sampling and criteria for conformity
- Marking and packing clause

**IS/ISO 17088:2021:** These standards specify procedures and requirements for plastics and products made from plastics that are suitable for recovery through organic recycling. The four following aspects are addressed:

- Disintegration during composting;
- Ultimate aerobic biodegradation;
- No adverse effects of compost on terrestrial organisms; and
- Control of constituents.

These four aspects are suitable to assess the effects on the industrial composting process. This document is intended for use as the basis for systems of labelling and claims for compostable plastics materials and products. This specification is intended to establish the requirement for the labelling of plastic products and material as "compostable" or "compostable in municipal and industrial composting facilities". The labelling, in addition, must conform to all international, regional, national, and local regulations.

# • STANDARDIZE PROCUREMENT PROCEDURE

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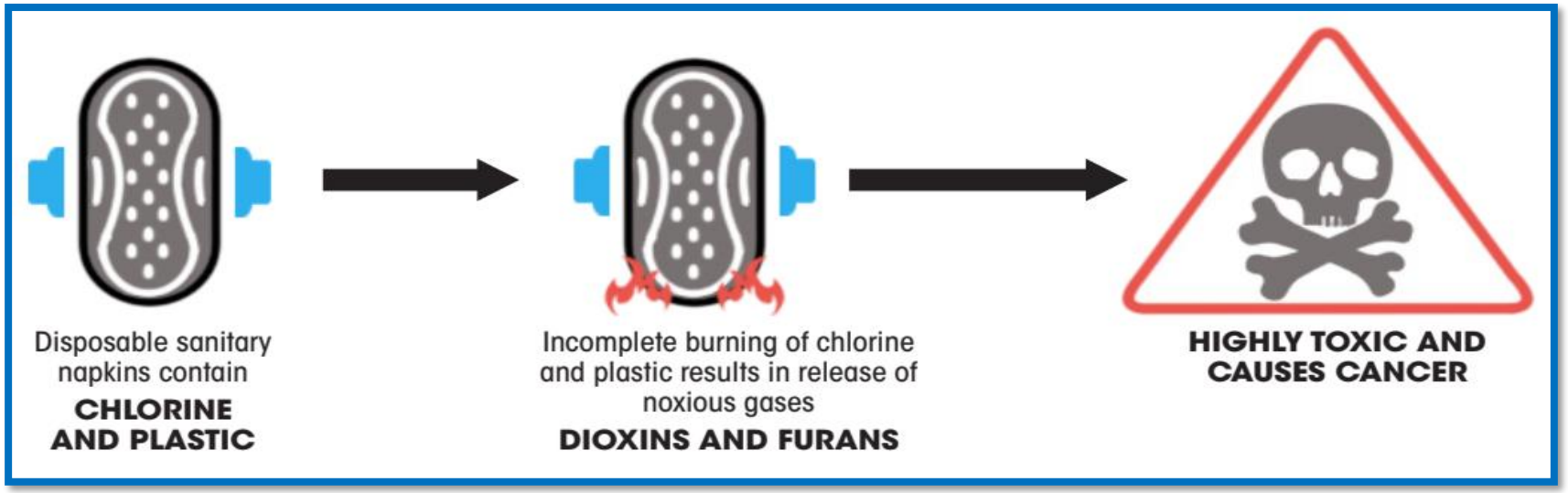
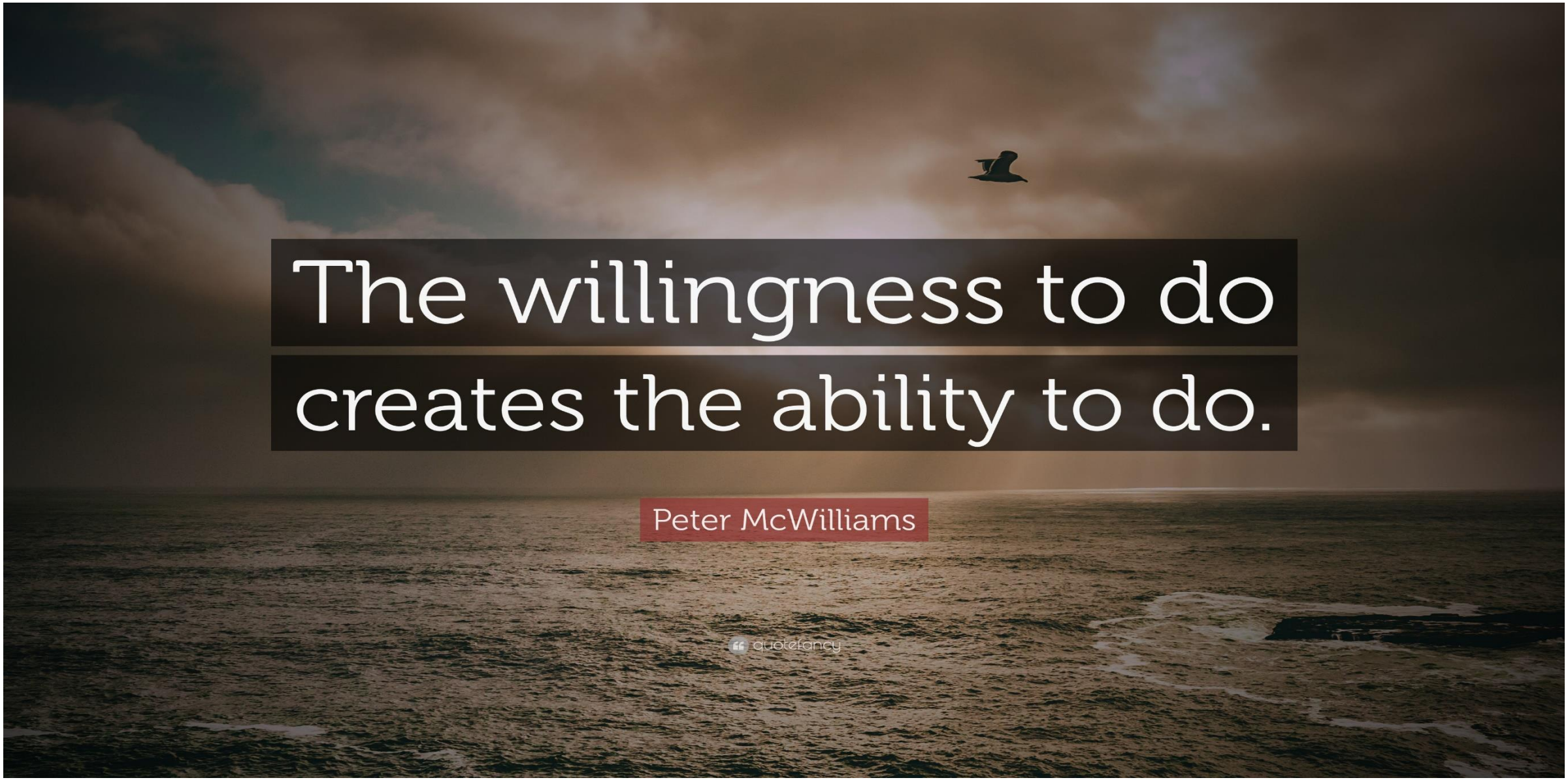
| S.No. | Tender details | Number of Incinerators and Location | Procurement Standards |
|---|---|---|---|
| 1. | Bid Document for Supply, Installation, Commissioning, Operation and Maintenance for 5 (five) years of automatic sanitary napkin vending machines & electric incinerators at various locations in Amritsar City under Amritsar Smart City Project.[84] | 85 incinerators to be installed in Government Girls School, Railway Station and Bus Stand, Public Toilets, Hospitals, Factories or Industrial establishments, Offices, Government Offices in Amritsar City | • Ensure complete burning of napkin<br>• Ensure instant disposal in a scientific and hygienic way with fully automatic way and burn completely<br>• Burns 150 to 200 napkins/day, can be programmed for cycles/day<br>• Self-disposal by user by directly putting into the incinerator<br>• Ash generation should not exceed more than 5% per napkin<br>• Ash should be collected in separate tray and ensure stack on that tray<br>• Auto power & thermal cut-off and automatic temperature maintenance should be there for safety of user<br>• Inside refractory lining should be excellent heat Guidelines on approval of Sanitary Waste retention to avoid thermal loss<br>• The residence time for gaseous products in the combustion chamber will be designed to be at least 2 seconds to ensure complete combustion<br>• The emission from incinerators shall comply with the General Emission Standards mentioned under Standard for incineration section in SWM Rules, 2016.<br>• The Incinerator should stop automatically if the door/ lid is open. |

Source: Menstrual Waste Disposal In India, NFSSM,2020.

# • REGULAR MONITORING


Source: CSE 2022- Public Park in Gurugram



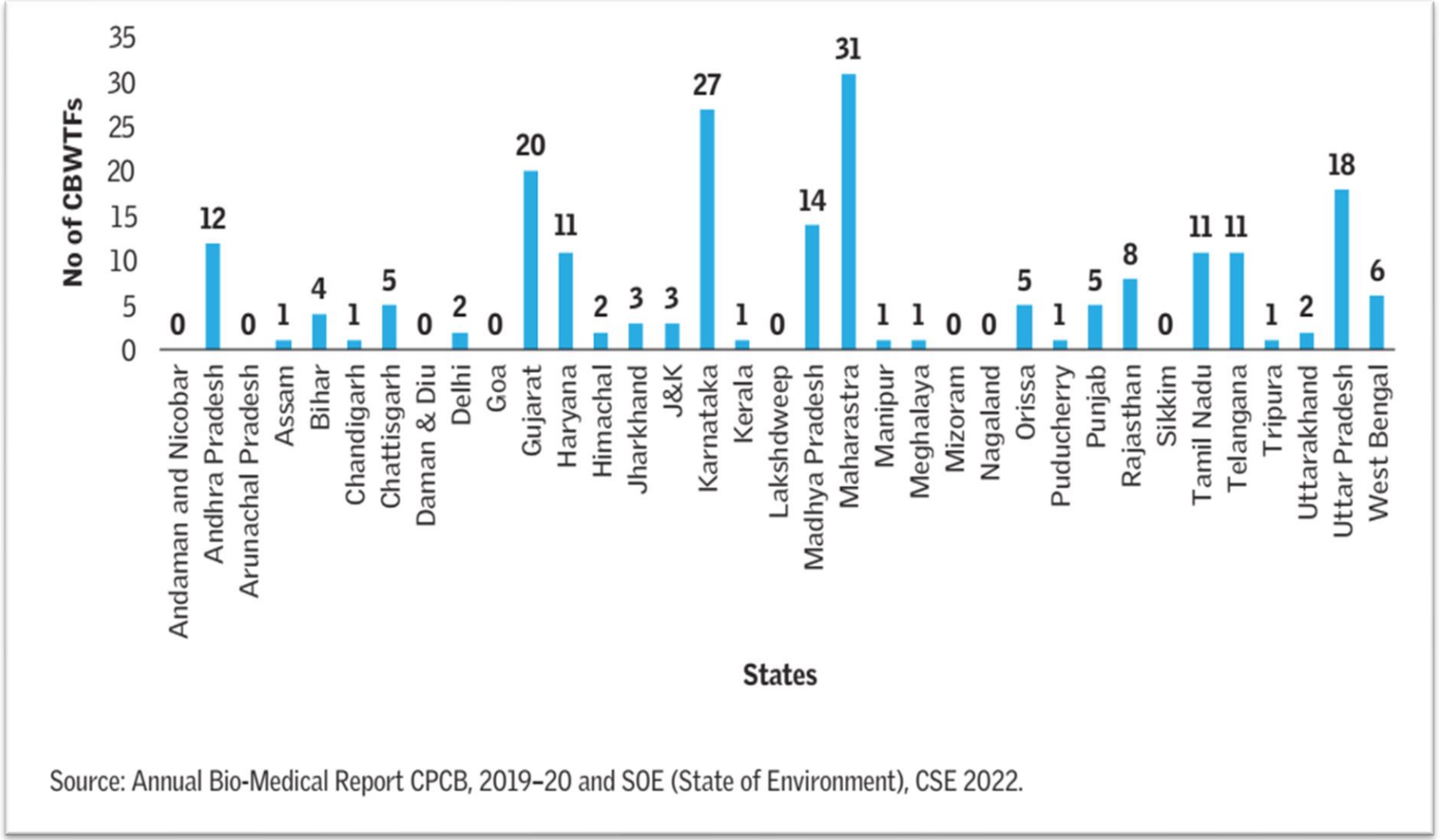

The willingness to do
creates the ability to do.
Peter McWilliams
quotefancy

Thank You

# Current Capacity of Incinerators in India

- There are **207 operational** common biomedical waste treatment facilities (CBWTFs) in India with a total incineration capacity of **621 TPD.**

- As per CSE study, the generation of sanitary napkins and baby diapers is estimated **925 TPD.**




Source: Annual Bio-Medical Report CPCB, 2019–20 and SOE (State of Environment), CSE 2022.