

## Faecal Sludge Management (FSM)

*A factsheet about stakeholders, implementation, FSM planning, policy reforms and financial models.*

### Stakeholders in FSM

The following stakeholders play an important role in FSM:<sup>1</sup>

- Households & the community
- Decentralized government services (health department, agricultural department, Environmental department, Urban planning and infrastructure, Housing department)
- Community-based organisations/non-governmental organisations
- Public authorities (e. g. local, city, national)
- Public utilities (Pit emptying services, Operation of public toilets, Operation of FSTPs)
- Private sector (Pit emptying services (small-scale enterprises or individual manual desludgers), Operation of faecal sludge treatment plants, Operation of public toilets)
- Farmers, farmers' associations and cooperatives
- Donors

### How is FSM implemented?

The municipality, existing desludging service providers and other stake holders are brought together to craft regulations, create sustainable operating models and participate in training, thus enabling the service providers to work under a legal frame work. A treatment plant is then implemented as a designated disposal point for the desludging operators where faecal sludge is treated and disposed of safely.

### FSM planning

1. Set objectives for your FSM Plan – have a vision, Objectives for your FSM Plan: specific, measurable, attainable, relevant, time based)
2. Set the boundary conditions
  - Financial – within the budget available
  - Geography – within the city boundary
  - Timeline – within a fixed period of time
3. Team formation:
  - Political Body (To ensure that any governance or institutional related recommendation/FSM solution is passed in the municipality and effectively carried out on ground)
  - Consultants (They are the experts in the sector who would be supporting/advising the ULB throughout the process of FSM implementation)

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<sup>1</sup> Eawag/Sandec (2008): Sandec Training Tool 1.0 – Module 5. Faecal Sludge Management (FSM), p.25-26

- Executive Body (This group would consist of engineers and surveyors who would be active on ground: Carry out the baseline surveys to assess the existing sanitation scenario & Carry out the implementation related activities – building of FSTP)
4. Identification of stakeholders (classification:
    - High influence-Low interest group
    - High influence-High interest group
    - Low influence-Low interest group
    - Low influence-High interest group
  5. Stakeholder Involvement Approach
  6. Landscape Study (Survey/Interview/Consultations: To understand the present/existing practices adopted across the sanitation value chain: User Interface – Individual, Public and Community Toilets, Real Estate Builders, Containment (Faecal Sludge Generation) – Septic Tanks, Single and Twin Pits, Masons, Retailers, Collection and Conveyance – Manual Scavengers, Desludging Operators, Vehicle Manufacturers, Treatment – Decentralised STPs, Operators, Reuse – Farmers, Agri-input Retailers
  7. Consultation workshop with ULBs and Executive Body, Various qualitative and quantitative tools to represent the existing sanitation scenario – SFD, Identification of gaps within existing practices – with respect to OBJECTIVES (Vision)
  8. Technical objectives:
    - Socially acceptable technology
    - Easy to integrate with existing infrastructure
    - User Interface: building of toilets
    - Containment: installation of septic tanks and pits
    - Collection and conveyance: procurement of desludging vehicles/operations and maintenance
    - Treatment: construction of treatment units/operations and maintenance
    - Reuse/Disposal: setting up reuse infrastructure (biogas stoves, co-composting plant)

## Policy reforms on FSM in India

There are no specific legal provisions relating to sanitation or Septage management, but there are provisions relating to sanitation services and environmental regulations.

Provisions relating to sanitation services and environmental regulations, majorly stems from:

- The Environment (Protection) Act, 1986
- The Water (Prevention and Control of Pollution) Acts
- Legislations for prohibition of employment as Manual Scavengers and their Rehabilitation
- Municipal Acts and Regulations

National policy level interventions on sanitation includes;

- National Urban Sanitation Policy 2008
- Draft National Water Policy 2012

Levels	Entity	Responsibilities
Government of India	Neeti Ayogh (Planning Commission)	Planning and allocation of central Government funds through Five Year Plans
	Ministry of Urban Development	Development of guidelines, schemes, national level policies, funding support, technical assistance
Government of Karnataka	Directorate of Municipal Administration (DMA)	Oversees the administration and monitor ULBs Oversees service delivery of obligatory functions SWM, water services
	Parastatal Agencies such as KUWSDB, KUIDFC	Responsible for project formulation, funding support, development and implementation of State action plan, training & capacity building
	KSPCB	Regulate and monitor the environment in Karnataka for preventing and controlling pollution (air and water)
District Administration	Urban Development Department (UDD)	Responsible for providing technical support, funding support for sanitation facilities Monitor implementation of schemes
Local Governments	Urban Local Bodies such as TMC, CMC, BBMP (Corporation and municipalities)	Planning, design, implementation, operation and maintenance of water supply and sanitation services in cities and towns
	Development Authorities such as BDA	Responsible for the planning, implementation, O&M of sanitation services
	Para-statal Agencies such as BWSSB	Responsible for service delivery, O&M of sanitation facilities

Fig. 1: Institutional framework for Sanitation and Septage management

Levels	Entity	Responsibilities
Government of India	Neeti Ayogh	Planning & allocation of central Government funds
	Ministry of Urban Development	Development of guidelines, schemes, national level policies, funding support, technical assistance
State Government	Directorate of Municipal Administration (DMA)	Oversees the administration and monitor ULBs Oversees service delivery of obligatory functions SWM, water services
	Parastatal Agencies such as water and sanitation Boards	Responsible for project formulation, funding support, development and implementation of State action plan, training & capacity building
	State Pollution Control Boards	Regulate and monitor the environment for preventing and controlling pollution (air and water)
District Administration	Urban Development Department (UDD)	Responsible for providing technical support, funding support for sanitation facilities Monitor implementation of schemes
Local Governments	Urban Local Bodies such as municipalities and corporations etc.	Planning, design, implementation, operation and maintenance of water supply and sanitation services in cities and towns
	Development Authorities	Responsible for the planning, implementation, O&M of

Fig. 2: Institutional Framework in Karnataka

### Financial Model for FSM

While talking about financials concerning FSM, there are different fields that need to be taken into account:

- Costs of Building and Operating FSM Systems (User fees for desludging and transport, Trucks, Customer Service, Treatment of FS, property/water tax etc.)

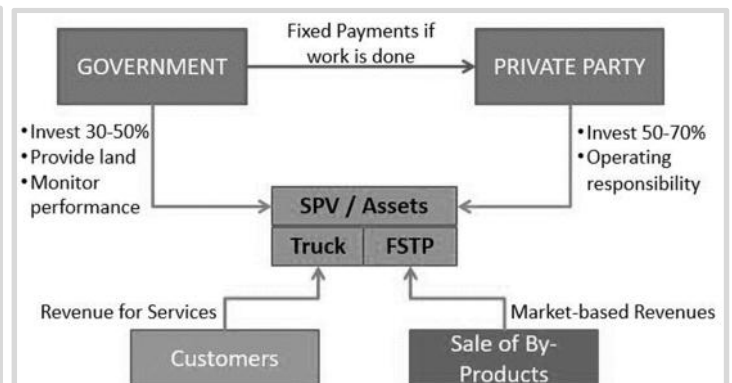
- Contract Structures for FSM

Focusing on the contract structures there are three different ways of financing proper FSM:

- Government invests and maintain FSM / FSTP all investments, risks and obligations shall be administered by the government (Construct & Manage)
- Government invests & private contractor maintains FSM/FSTP (Service Contracts)
- Government and private party invest & Private partner remain = Public-Private-Partnership (PPP) (Private party can bring expertise and share investment burden) PPP: A **long-term contract** between a private party and a government entity for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance

	Construct & Manage	Service Contracts	PPP
<b>Process</b>	Govt Builds Govt Operates	Govt builds. Private Operates	Govt and Private Build and Operate
<b>CapEx by Govt</b>	100%	100%	30-50% + land
<b>CapEx by Pvt.</b>	--	--	50-70%
<b>OpEx by Govt.</b>	100%	70-100%	50-80%
<b>Contract Period</b>	--	3-5 yrs	12-20 yrs

**Fig. 3** Options for Government



**Fig. 4** Public-Private-Partnership