

City Wide Septage Management Planning Tool

“Introduction & Session Details”

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Septage Management: recognised, and its role **growing**...

Eg. 38% urban households use septic tanks (2011)...

India Policy & Acts – National Urban Sanitation Policy...



Innovations in desludging / emptying equipment



~~Problems still persist in disposal & environmental safety~~



Key Issues in Septage Management

Health & Environment

- (1) Illegal dumping
- (2) Treatment suspect
- (3) Indiscriminate disposal

Construction

- (1) Poor quality & not as per standards
- (2) Lack of secondary treatment effluent
- (3) Customization to local conditions
- (4) Grey & black water mixing
- (5) Lack of land for treatment, disposal

Common weaknesses and threats

O & M

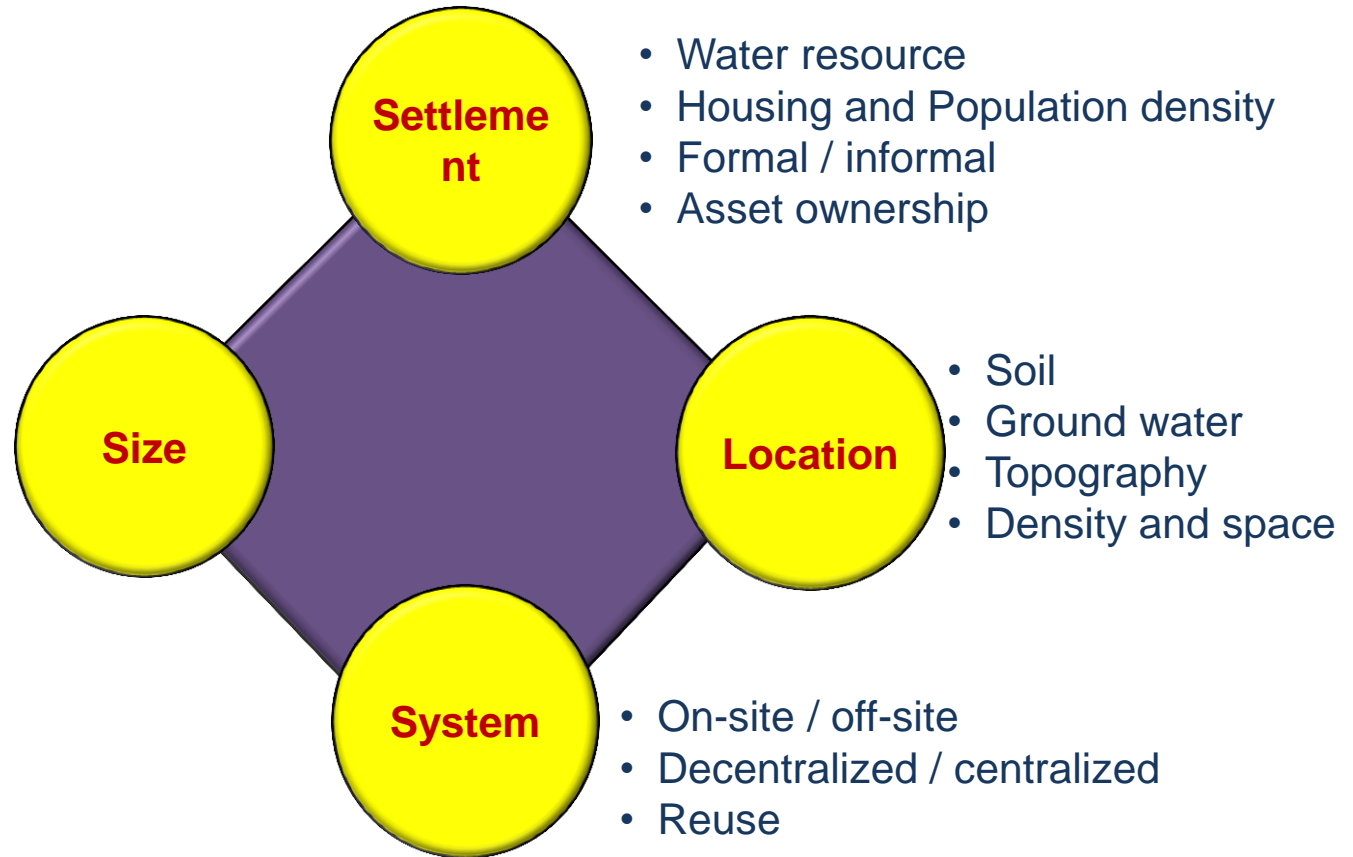
- (1) Low knowledge on spatial distribution
- (2) Baselines non-existent
- (3) Weak house level maintenance
- (4) Manual desludging
- (5) No monitoring and control

Regulation

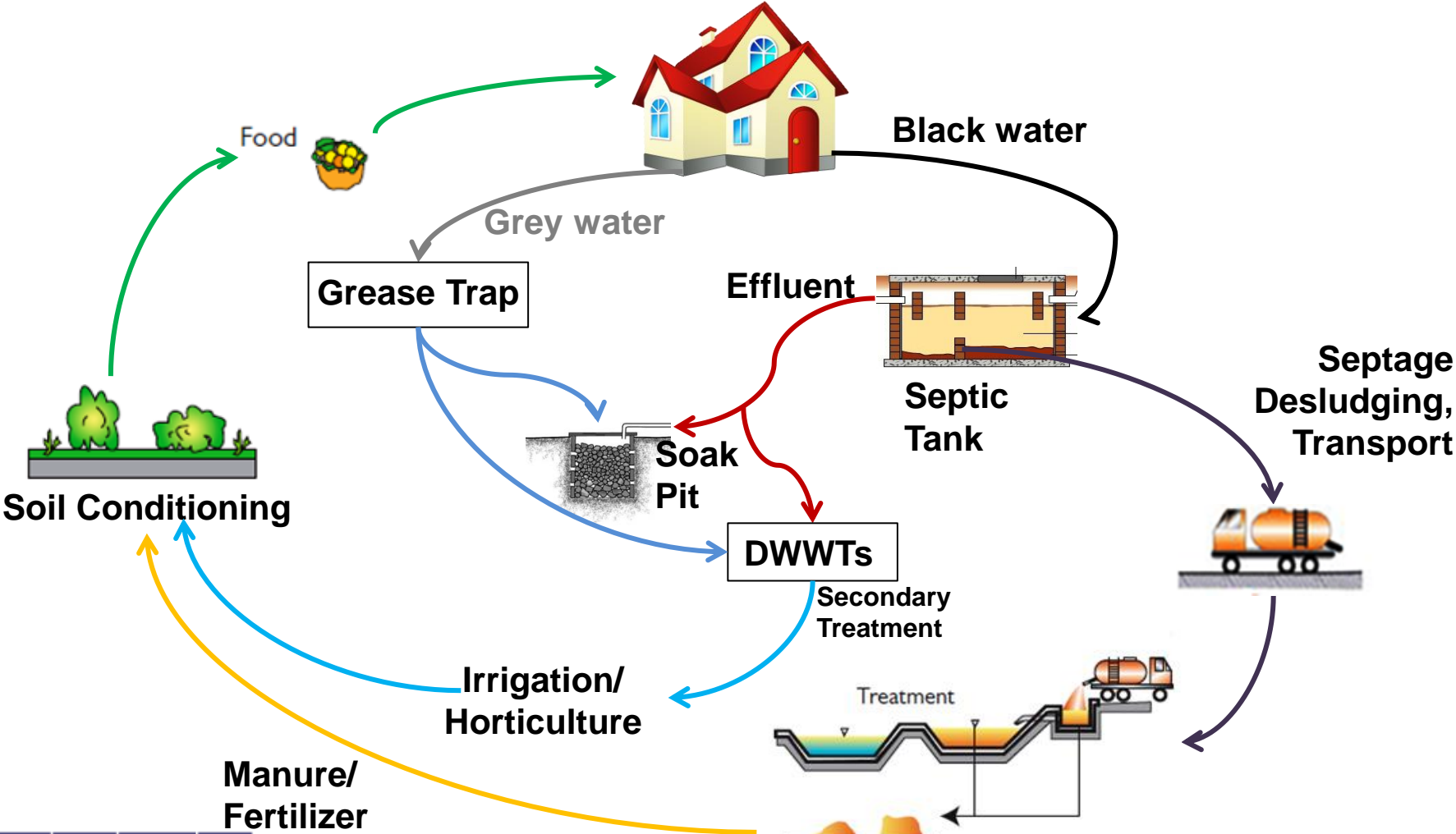
- (1) Overlapping functions, roles
- (2) Weak enforcement of regulations
- (3) Unclear discharge standards

Key factors influencing planning sanitation requirements...**city wide perspective**

- 1-10 lakh population
- Million plus
- Mega cities



Sanitation Value Chain, closing the loop (liquid & solids)



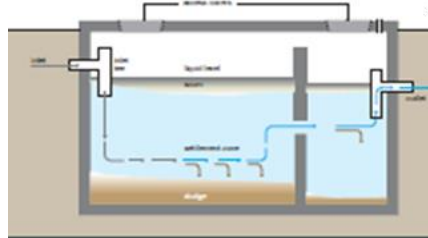
Institutional Conundrum for SM

Individual System Pit Latrines



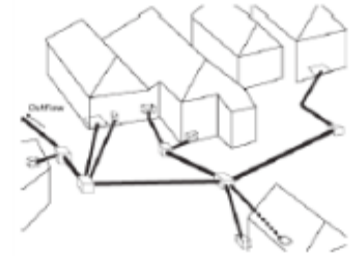
Upgrade

Septage Management System Septic Tank



Upgrade

Sewerage system



Human Skills

Managed by Households

- Mason

Managed by Households

- Mason
- Plumber

Managed by Households

- Plumbers for Household connectivity

Institutions

Managed by City / ULB

- Vacuum truck operators
- Treatment plant operators

Managed by City / ULB

Requires dedicated institution (WS, sanitation + various depts. viz

- Management
- Engineering & Technical
- Accounts & Finance
- Administration
- Data management
- Customer service etc...

Typical Statutory Obligations and Regulations for SM - For Ex. in India

National

- Water (Prevention and Control of Pollution) Act, 1974
- The Environment (Protection) Act, 1986
- The Prohibition of Employment as Manual Scavengers & their Rehabilitation Act, 2013
- Building Codes

State / Province

- Municipal Acts
- State Water Supply and Sewerage Acts
- Municipal Drainage and Sanitation Bye-laws
- Municipality Building Rules

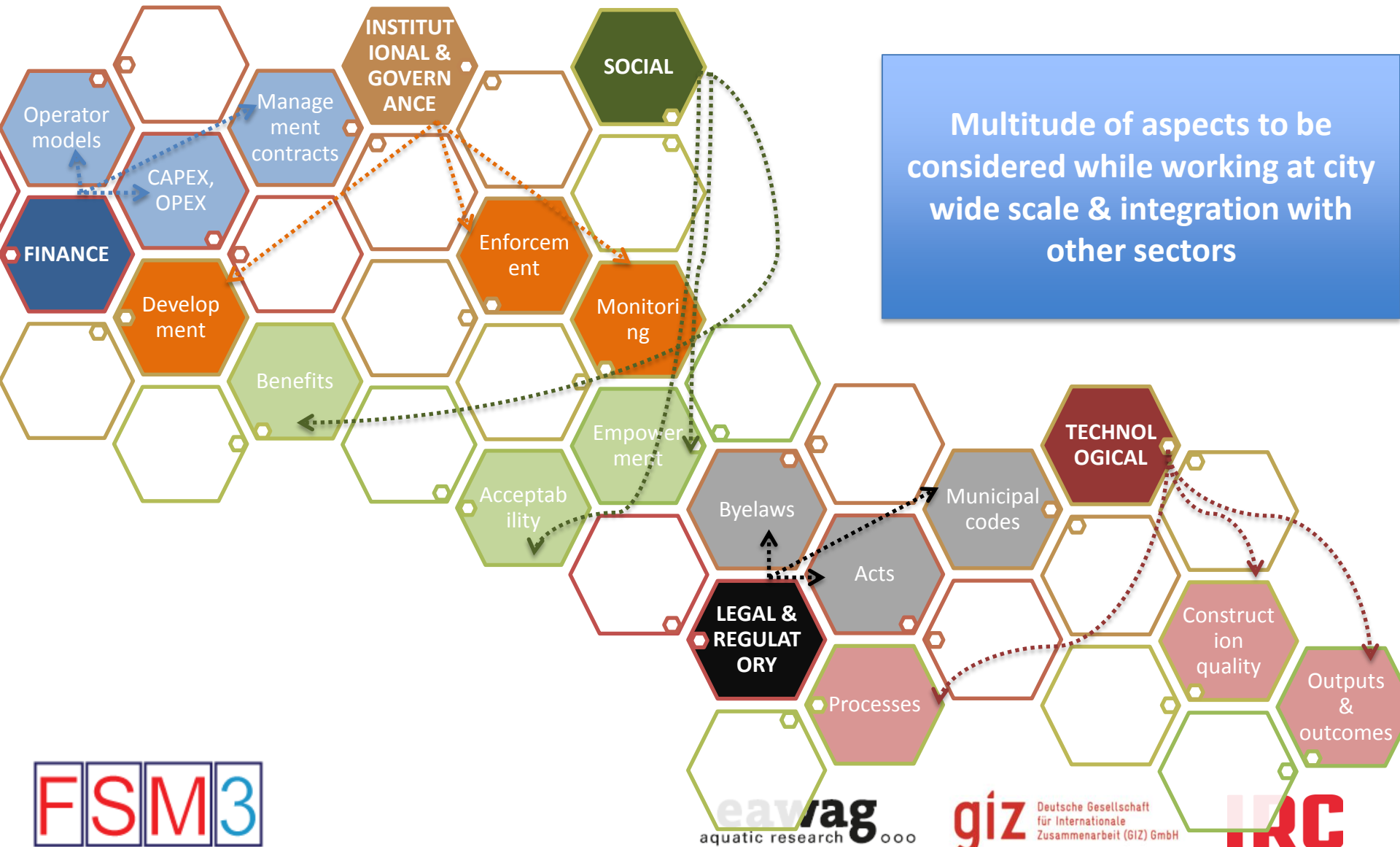
City

- Local Municipal Bye-Laws
- Building Regulations

Public Health and Sanitation is a part of the ‘constitutional responsibility’ of Municipalities under 12th Schedule of the Constitution (74th CAA,1992),

Corporate Social Responsibility investments on the upswing

Cross-cutting Dimensions



Planning Tool 2: Exercise Details

Group formation

- (1) City type - Arid
- (2) City type - Coastal
- (3) City type - Hilly

City wide Septage Management

Exercise & Timing

- (1) Briefing the exercise (5 mins)
- (2) Understanding using handouts given to participants (10 mins)
- (3) Exercise – reflection, recording of outputs (30 mins)
- (4) Cross-learning (15 mins)
- (5) Moderated discussions on outputs from different dimensions, wrap up (30 mins)

Input sheet

- (1) Background
- (2) Demographics
- (3) Infrastructure status
- (4) Spatial settings
- (5) Pointers for reflection

Output Sheet

- (1) Value Chain elements
- (2) Identifying gaps and challenges
- (3) Recording actions for overcoming gaps

Recording Sheet... for participants

(consider solid and liquid wastes separately)

Value Chain elements	Gaps and challenges	Actions to overcome challenges
Access to toilets	High proportion of insanitary toilets	<ol style="list-style-type: none"> 1. Phase wise conversion to sanitary toilets 2. Incentives 3. Public sanitation – permanent / transition
On-site Storage (Primary treatment)		
Desludging & Transport		
Treatment of Septage & Effluent (Secondary treatment)		
Reuse /& Recycle		
Safe disposal		

Pointers for reflection...

Pointers	Pointers	Pointers
Adequacy of information for decisions	Devolution / transfer of functions	Legislative framework (rights, byelaws, acts, ...)
Availability of information (on GIS preferably..)	Financial management, revenues, recovery, ...	Presence of institutions, responsibilities
Role of Households	Tariff mechanisms	Integration with other sectors
Role of city	Monitoring and complaints redressal	Inter-departmental co-ordination
Role of private sector / operators	Capacities of stakeholders	HR issues and institutional size
Processes clarity	Role of local institutions	Information sharing
Enforcement of processes	Quality of work	...
...

Moderation Output sheet...

(consider solid and liquid wastes separately)

Value Chain elements	Actions Common to all city types	Actions specific to city types		
		Arid	Hilly	Coastal
Access to toilets	Phase wise conversion to sanitary toilets ●	1. Incentives ●	1. Public sanitation – permanent / transition ●	1. Community level sanitation ●
On-site Storage (Primary treatment)		1. .. 2. .. 3. ..		
Desludging & Transport		1. .. 2. .. 3. ..		
Treatment of Septage & Effluent (Secondary treatment)		1. .. 2. .. 3. ..		
Reuse /& Recycle		1. .. 2. .. 3. ..		
Safe disposal		1. .. 2. .. 3. ..		

Reflection during Moderation ...

(categorize actions under different lens)

- **Nature of cross-cutting dimensions**
 - **T** – Technical; **S** – Social factors; **F** – Finance;
I – Institutional & Governance; **L** – Legal & regulation
- **Possible implementation time for actions**
 - **S** – Short term; **M** – Medium term; **L** – Long term
- **Responsibility to undertake actions**
 - **C** – City alone; **S** – State or parastatals alone;
P – Private sector; **CSP** – Joint action

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- WELCOME TO THE WORKSHOP -

