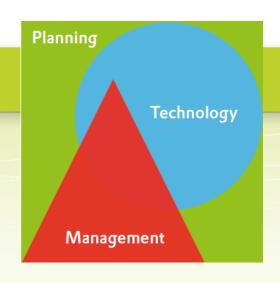


# Piecing The Puzzle:

# Integrated FSM Planning at City Wide Level



Philippe Reymond







# FSM: a topic under the spotlight

- Most cities in low-income areas are based on on-site sanitation systems
- The financial effort to cover these cities with sewer systems is not realistic
- It is often possible to build on an existing private sector

- ⇒ Faecal sludge management is the best alternative in many cities
- ⇒ Recognition from the sector, with the launch of massive investments in the field



## BUT...



FSTPs over- or underloaded – dysfunctional



Massive environmental pollution



Lack of integration of the FSM stakeholders in planning



Uncontrolled discharge and reuse



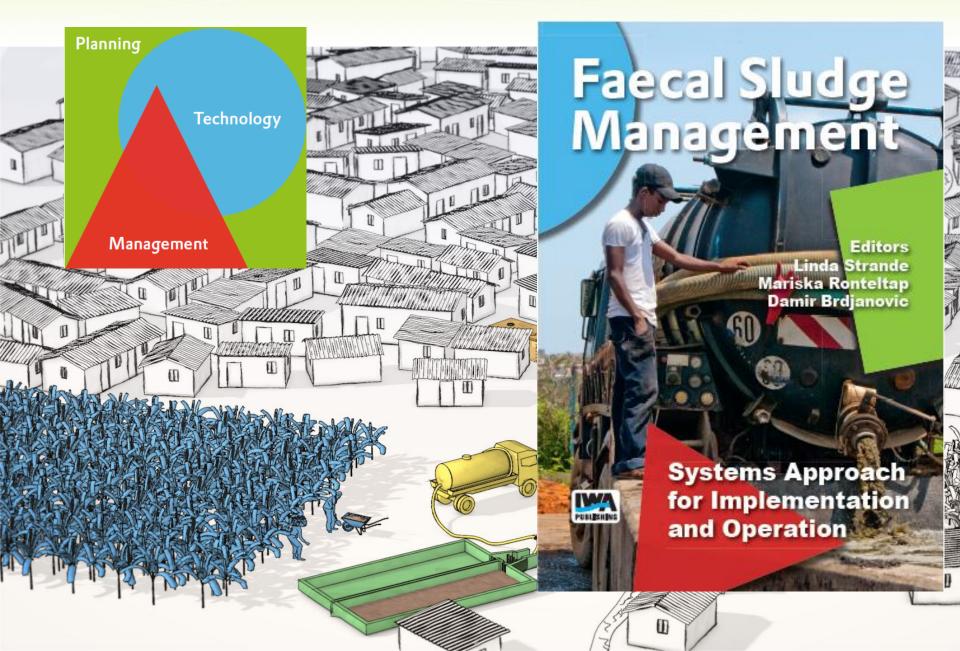
## Many FSM projects fail...

#### Main reasons:

- Top-down approach, blueprint designs
- Same approach as for wastewater projects
- Lack of consideration of FS stakeholders' needs and priorities

FS ≠ wastewater FS stakeholders ≠ wastewater stakeholders

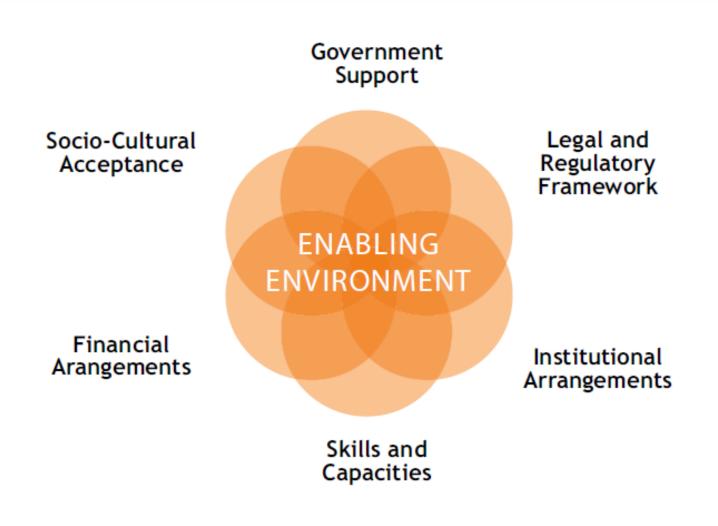
# Necessity of an integrated approach to FSM

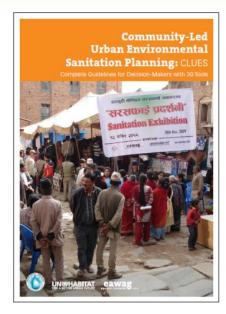


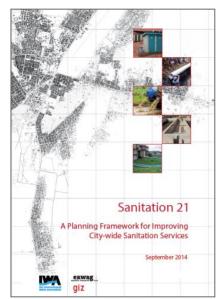
| Standard<br>project                   | FS                         | <b>SM</b> planning from A  | to Z eaws   | ag                   | Partici<br>sta                             | patory<br>ges                                |
|---------------------------------------|----------------------------|--|---|----------------------|--|--|
| phases                                |                            | Activities   | Outcomes  | Chapters             | C.UES                                      | SAN21  |
| Exploratory<br>study                  | А                          | Preliminary assessment of the initial situation and first inventory of stakeholders  | Overview of the situation; facilitators are identified  | 14<br>15             | Process ignitio                            | Establish a city<br>sanitation task<br>force |
|                                       | Inception report           |  |   |                      | š  | *-3  |
|                                       | В                          | Identification and preliminary characterisation of the<br>stakeholders and their relationships   | All stakeholders are identified and characterized   | 15                   | the planning process                       |  |
| udies                                 | С                          | Initial launching workshop, including field visit with all the stakeholders  | Stakeholders are sensitized to sanitation reality and aware about the project's objectives  | 16.5                 | h of<br>nning                              | Und  |
| Preliminary (pre-feasibility) studies | D                          | Assessment of: - Sanitation practice and needs, reuse interests - Institutional setup, government support - Legal and regulatory framework - Existing organisational modes - City structure and heterogeneity of sanitation practices - Existing financial flows - Climate | Sanitation practices are identified, as well as urban heterogeneity; Strengths, weaknesses, opportunities and threats are identified (SWOT analysis); The enabling environment is described | 14                   | Detailed assessment of the curre situation | Understand the existing contex               |
| Ē                                     | Е                          | Selection of potential organisational modes  | Orientation of the process towards realistic options  | 12                   | 3 <u>6</u>                                 | ntex   |
| Pæli                                  | F                          | Identification of sites for treatment  | Stakeholders have indicated existing and potential sites  | 14.4                 | he c                                       | ~  |
|                                       | G                          | Characterisation and selection of key stakeholders   | Stakeholder who have interest in and/or influence on the process are identified   | 15.4 to 15.5         | urren                                      |  |
|                                       | Preliminary studies report |  |   |                      | =  |  |
| ıdy                                   | Н                          | Quantification and characterisation of sludge  | Process leaders know what has to be treated   | 2                    |  |  |
|                                       | I                          | Characterisation and selection of sites  | Appropriate sites are selected  | 14.4                 |  |  |
|                                       | J                          | Preselection of combinations of technologies,<br>organisational modes and financial mechanisms   | Scenarios are elaborated  | 5,11,12,<br>13,15,17 |  |  |
|                                       | K                          | Detailed evaluation of selected options, including:  Requirements of technology combinations, pros and cons, O&M  Organisational mode and institutional setup; roles &   |   |                      | Ideatific                                  | ldein  |



## Importance to integrate all FSM stakeholders







Source: www.sandec.ch/clues





## Typical problems faced by FSM stakeholders

- Lack of agency to participate
- Constraints in the sludge emptying business
- Lack of resources /capacities
- Tensions between stakeholders
- Awareness and behaviour



Identification of the key-stakeholders: an iterative process!

Different project phases

Different participatory stages

**Evolution of stakeholders'** role and responsibilities

Assessment of the initial situation



Identification of service options



Action planning



Implementation



# From Analysis to Involvement

- Which participation level, which tools? -

|                  | Low influence                 | High influence  |
|------------------|-------------------------------|---|
| Low<br>Interest  | Information                   | Consultation -Information                             |
| High<br>interest | Consultation –<br>Empowerment | Consultation – Collaboration Empowerment / Delegation |



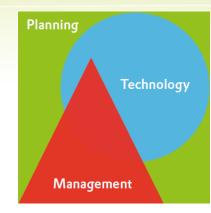
# From Analysis to Involvement





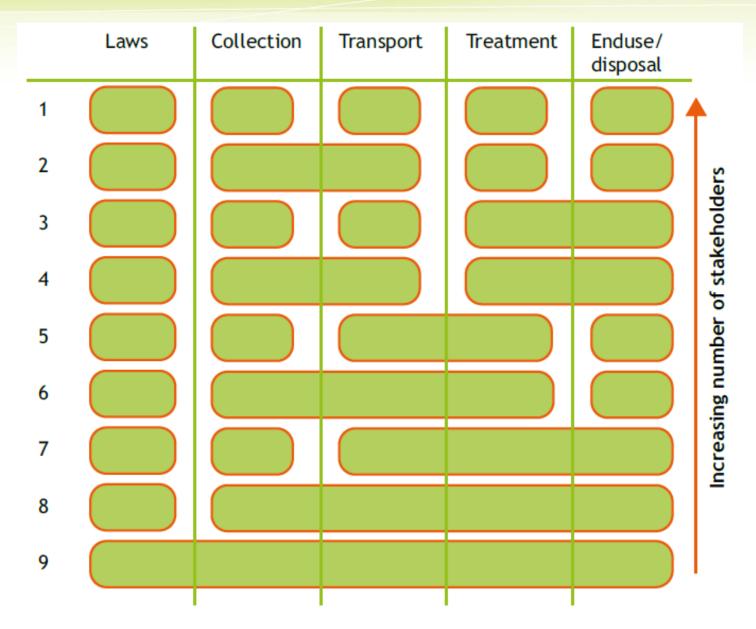
## Organisation of the supply chain

 What are the different management schemes and what are the constraints of each of them?



- How to adapt to local capacities, how to assess the needs?
- How to develop a functional institutional framework?
- Who pays, to whom and how much?
- How to estimate the cost of service?



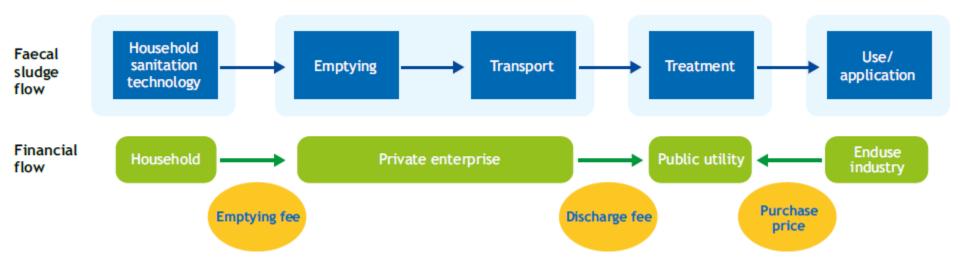


Source: Bassan (2014), Institutional Frameworks for Faecal Sludge Management, in FSM book (Chapter 12).



## **Examples of management schemes**

#### Common discrete collection and treatment model

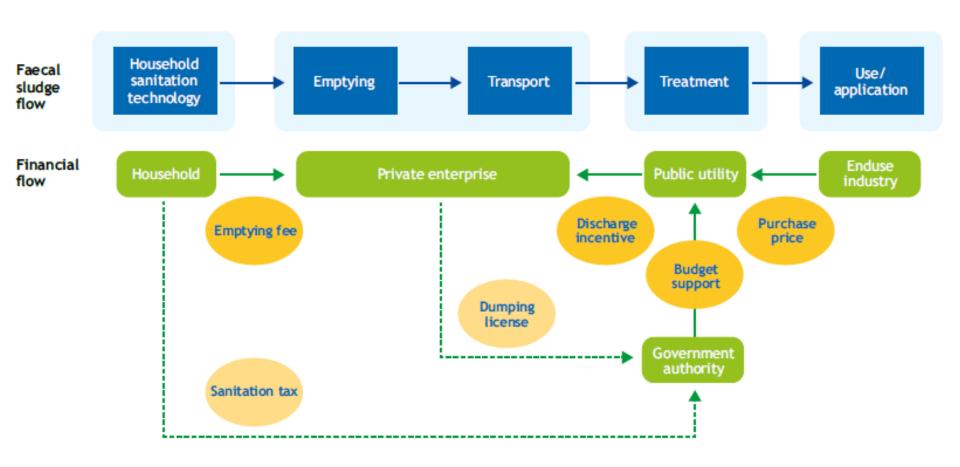


Source: Tilley and Dodane (2014), *Financial Transfers and Responsibility in Faecal Sludge Management Chains*, in FSM book (Chapter 13).



## **Examples of management schemes**

#### Licensing and incentivised discharge model



Source: Tilley and Dodane (2014), Financial Transfers and Responsibility in Faecal Sludge Management Chains, in FSM book (Chapter 13).



#### Case studies

#### Dakar, Senegal

- ⇒ Association of emptiers
- ⇒ Call centre
- ⇒ Emptier guarantee fund

#### Malaysia

- ⇒ Scheduled desludging
- ⇒ Strong lead from Government and Company (Indah Water)

- Philippines (esp. Dumaguete and San Fernando City)
  - ⇒ Different institutional arrangements in different cities



### **Conclusions & Recommendations**

Inclusion of all key-stakeholders in the planning process

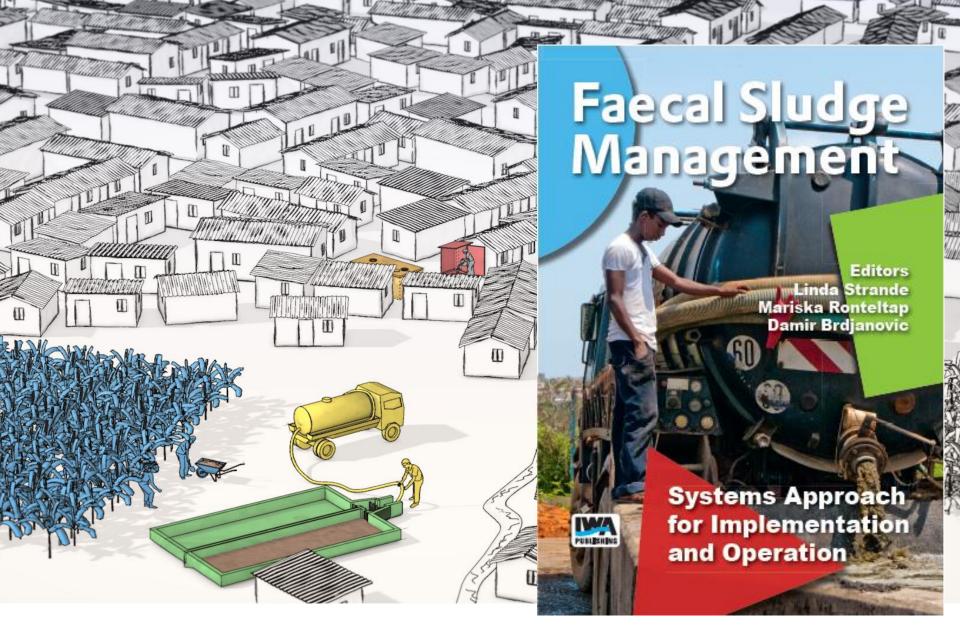
FS ≠ wastewater

- Integration of the private sector in FSM schemes
- Integrated planning approach enforced in the terms of reference of consultants
- Consideration of economies of scale, e.g. call centre, scheduled service
- Improve access to credit for service providers



## **Conclusions & Recommendations**

- Stakeholder engagement: an investment leading to save money and time later
- In the book: a simplified approach for rapid assessment and key stakeholder involvement
- Empowerment of often neglected stakeholders
- Creation of an enabling environment
- In Sokodé, participatory planning opened the way to funding through the African Water Facility



Thanks for your attention!

www.sandec.ch/fsm\_book philippe.reymond@eawag.ch