Introducing the Fecal Waste Flow Diagram Approach

Isabel Blackett, World Bank Global Water Practice
Barbara Evans, University of Leeds
Where it Emerged From…

- Global review of urban sanitation experience*
- Secondary data and interviews on fecal sludge management from 12 developing country cities in four regions:**
  - **Traditional focus on sewerage** by IFIs and governments, but
  - **Most urban dwellers with sanitation access use on-site systems:** <10% of urban Africa has sewer access
  - **Virtually all poor people** use informally managed on-site sanitation systems
  - **Failure to manage the whole sanitation service chain** results in gross fecal contamination of the environment

** The Missing Link in Sanitation Service Delivery, 2014 World Bank - WSP
Results of the Status Quo

- Poor sanitation in informal areas not generally addressed, although often a major city-wide public health hazard
- Policy and spending usually biased towards sewerage – subsidies for the rich
- On-site systems often seen as a temporary solution and therefore neglected by city authorities and poorly managed
- Data on sanitation not collected city-wide so problems not properly identified and prioritized
- As usual, the main victims are poor people, women and other vulnerable groups
The Sanitation Service Chain

**MDGs**

**Post-2015 SDG Proposals**

**Sewerage**

- Containment
- Emptying
- Transport
- Treatment
- End-use/Disposal

**On-site Systems with Fecal Sludge Management**

- Latrine or septic tank:
  - Vacuum truck
  - Primary emptying
  - Transfer
  - Treatment plant
  - End-use/disposal

- Sewerage network:
  - Pumping stations
  - Sewage treatment works
  - End-use/Disposal

**Safely covered and replaced in new location**
Dakar, Senegal

On-site facility

Open defecation

WC to sewer

Containment → Emptying → Transport → Treatment → Reuse/Disposal

Effectively treated

Discharge without treatment

Legally dumped

Dysfunctional pumping

Illegally dumped

Unsafe emptied

Safely emptied

Unsafe abandoned when full

Domestic environment: 2%

Drainage system: 10% 5%

Receiving waters: 6% 17%

SAFE: 31%

UNSAFE: 69%
What is a Fecal Waste Flow Diagram (SFD)?

- It IS
  - An effective communications and advocacy tool
  - A tool for engineers, planners and decision-makers
  - Based on contributing populations and an indication of where their excreta goes
  - A representation of public health hazard
  - An overview from which to develop sanitation priorities

- It is NOT
  - Based on volumes/mass – these are determined by other related factors
  - A representation of public health risk
    \[ \text{risk} = \text{hazard} \times \text{behavior} \]
  - A precise scientific analytical tool
Urban Context: Service Delivery Assessment
What systems exist and who is responsible?

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<tr>
<th>Enabling</th>
<th>Containment</th>
<th>Emptying</th>
<th>Transport</th>
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<th>End-use/disposal</th>
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<td>Budget</td>
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<td>- Is on-site san recognized? Targets? Institutional roles? Private sector? Regulation?</td>
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<td>- Investment coordination and prioritization mechanisms? Implementation capacity?</td>
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<td>- Sufficient budget? Sanitation expenditure identifiable?</td>
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<td>Outputs</td>
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<td>- How much is being invested in sanitation?</td>
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<td>- Community engagement? Poor-inclusive?</td>
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<td>- Rate of growth and quality of service sufficient to make impact? Being monitored?</td>
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<td>Expansion</td>
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<td>User outcomes</td>
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<td>- O&amp;M costs known and covered? Standards monitored and enforced?</td>
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<td>- San promotion? Planning expansion of services? Private sector development?</td>
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<td>- How much is the service chain “leaking”? Is it reaching the poor?</td>
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Example: Balikpapan, Indonesia

- Poor
- Developing
- Good
The SFD Promotion Initiative – Origins

• First SFDs published by World Bank - WSP in 2014 to provide a concise overview of sanitation in a city

• Proving to be very effective for advocacy, intuitively understood by both decision-makers, technical professionals

• Well received by sanitation practitioners globally, and spontaneously adopted by many

• Promotion initiative
  - Disseminate the approach
  - Provide technical support guidelines and tools
  - Maintain its credibility
  - Benchmarking and progress monitoring
The SFD Promotion Initiative – Partners

- GIZ/SuSanA – coordinator
- Centre for Science and Environment (CSE), Delhi
- SANDEC/EAWAG, Switzerland
- University of Leeds, UK
- WEDC/University of Loughborough, UK
- World Bank Global Water Practice – Water and Sanitation Program
- Bill & Melinda Gates Foundation – funding
The SFD Promotion Initiative – Objectives

- Develop an interactive web platform hosted by SuSanA:
  - Drafting tool, blank templates, guidance documents, interactive training package
  - Uploaded SFDs with quality controlled by a SuSanA Task Force
  - Fully searchable via both text and an interactive map of cities with an SFD

- Continuously develop, document and disseminate SFD progress
The SFD Promotion Initiative – Phasing

- **Phase 1: February 2016**
  - Draft methodology and tools
  - Establish website
  - Upload 50 quality-controlled SFDs

- **Phase 2:**
  - Refine methodology, tools and templates
  - Develop guidance documents and interactive training package
  - Establish Task Force to moderate website
  - Receive and quality control SFDs for posting on website