

Lessons learnt from developing SFDs at scale



SFD Promotion Initiative

sustainable
sanitation
alliance

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

On behalf of

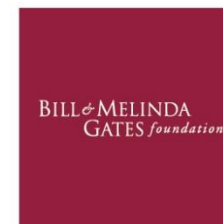


Federal Ministry
for Economic Cooperation
and Development



eawag
aquatic research ⁰⁰⁰

Sandec
Sanitation, Water and
Solid Waste for Development



The Shit Flow Diagram Promotion Initiative (SFD-PI)

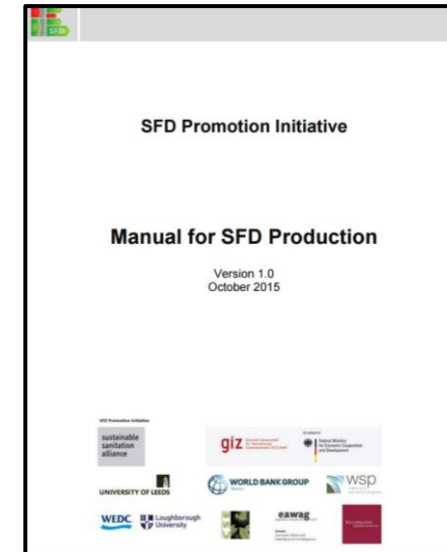
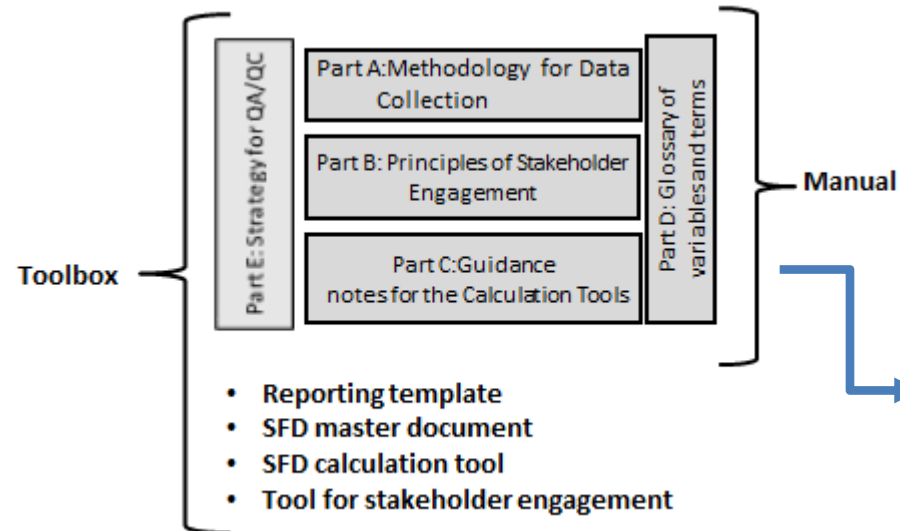


- Based on a study carried out in 2013 for WSP on urban sanitation/FSM in 12 cities worldwide
 - Peal, A., Evans, B. E., Blackett, I., Hawkins, P., & Heymans, C. (2014). Fecal Sludge Management: analytical tools for assessing FSM in cities. *Journal of Water, Sanitation and Hygiene for Development*, 4(3), 371-383. doi:[10.2166/washdev.2014.139](https://doi.org/10.2166/washdev.2014.139)
 - Peal, A., Evans, B. E., Blackett, I., Hawkins, P., & Heymans, C. (2014). Fecal Sludge Management: a comparative assessment of 12 cities. *Journal of Water, Sanitation and Hygiene for Development*, 4(4), 563-575. doi:[10.2166/washdev.2014.026](https://doi.org/10.2166/washdev.2014.026)
- Objective: to further develop the SFD approach
 - developing a robust approach to estimating fecal flows
 - providing easy-to-use tools to support cities and towns to estimate fecal flows
 - creating a dataset which allows a fuller analysis of the state of sanitation in a wider range of cities

Standardised methodology



- Review of secondary literature.
- KII with service providers and stakeholders.
- Structured observations and direct measurements.



Manual for SFD production

Analysis of the context in each city to reveal critical points of failure in the provision of urban sanitation services

Online tools



SFD Graphic Generator - Google Chrome

sfd.susana.org/data-to-graphic

Apps Campusweb Fac staff Portal VLE PDR GRAD VFM-WASH VeSV WASH 2016 Symplectic project Leeds4Life Faculty Services RIVO GitHub Editorial Manager Purchasing Homepag SFD Portal SFD Online SFD Tool AfClix DMS Office265

About - Toolbox - Resources - News & Events - SFDs Worldwide Login to Helpdesk

SFD Graphic Generator

Use this page to create an SFD graphic for any city.
When you are ready to start, click one of these two buttons.

Start new SFD graphic

Or

Load an existing SFD graphic

For detailed instructions click [More details](#)

Load an existing SFD file

Choose one of your own SFD files

City:

Or

Select a library SFD file:

Load the selected SFD file

For detailed instructions click [More details](#)

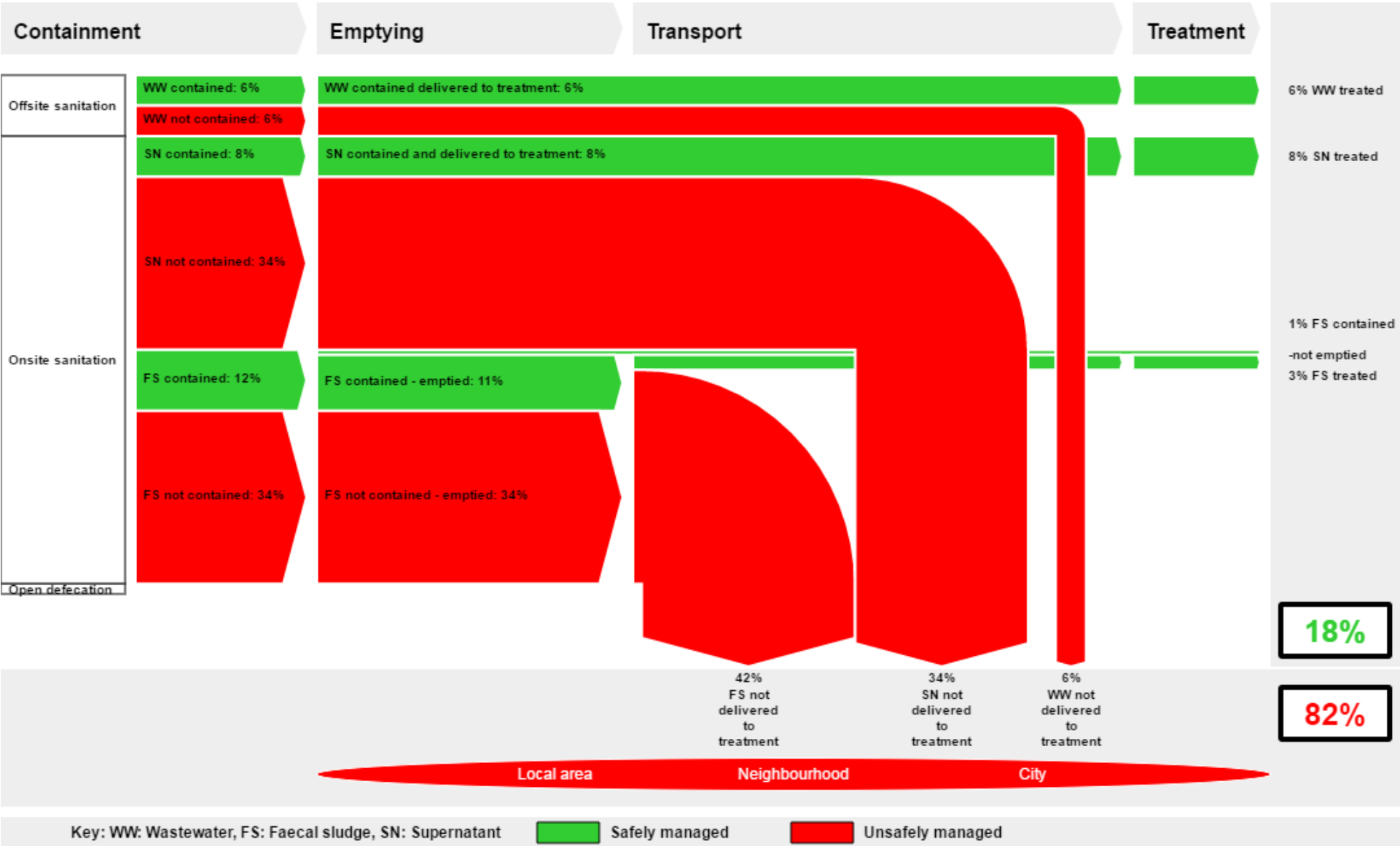
Step One: Select the sanitation systems in use in your city

Use the cursor to hover-over the selection grid and then click on the selected systems.

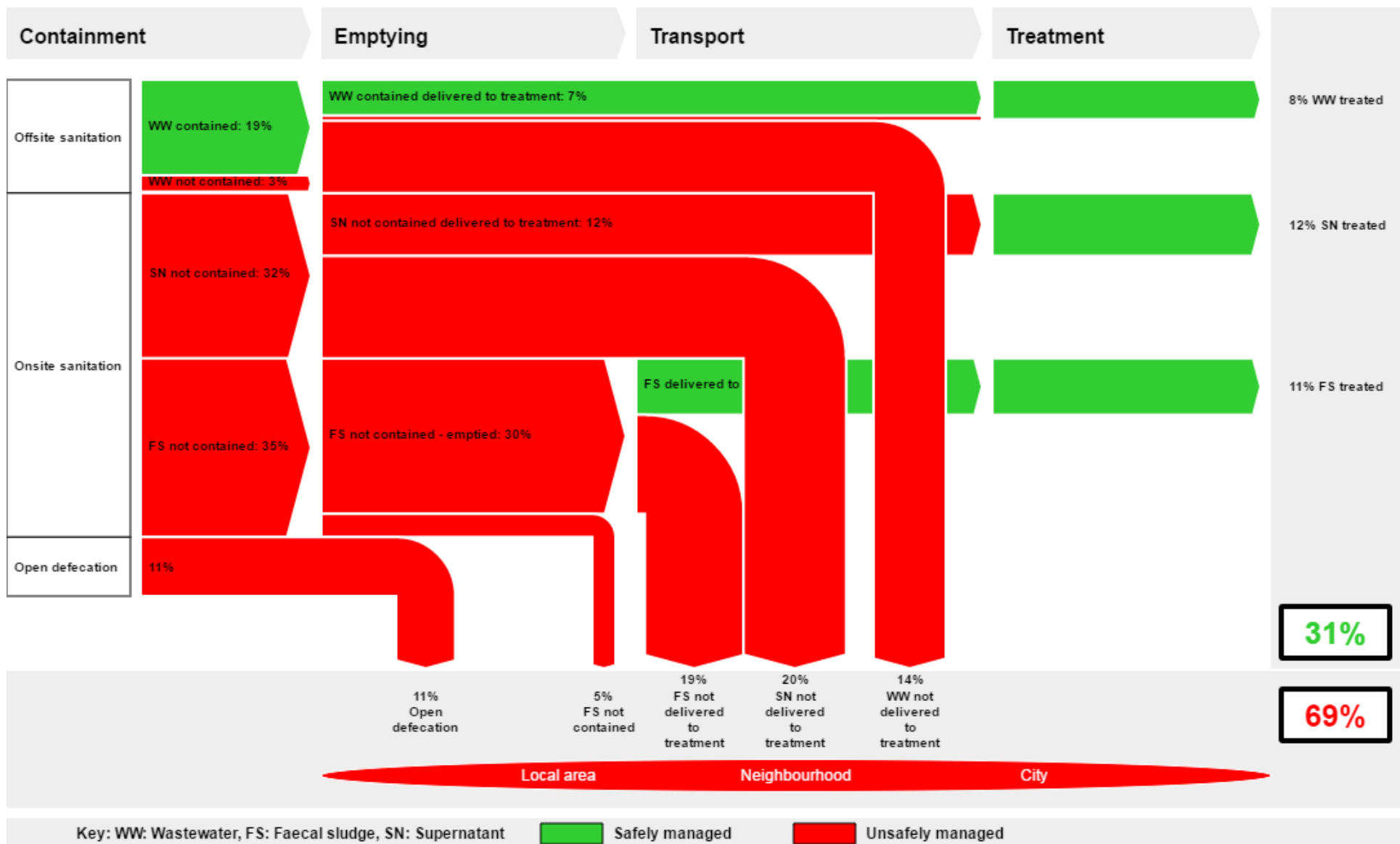
For detailed instructions click [More details](#)

List A: Where does the toilet discharge to? (i.e. what type of containment technology, if any?)	List B: What is the containment technology connected to? (i.e. where does the outlet or overflow discharge to, if anything?)									
	to centralised combined sewer	to centralised foul/separate sewer	to decentralised combined sewer	to decentralised foul/separate sewer	to septic pit	to open drain or storm sewer	to water body	to open ground	to 'don't know where'	no outlet or overflow
No onsite container. Toilet discharges directly to destination given in List B		T1A1C2			Significant risk of OW pollution	T1A1C6		T1A1C3	T1A1C3	Not Applicable
Septic tank					Significant risk of OW pollution	T1A2C3				
Fully lined tank (sealed)					Significant risk of OW pollution					
Lined tank with impermeable walls and open bottom	Significant risk of OW pollution	Significant risk of OW pollution	Significant risk of OW pollution	Significant risk of OW pollution	Significant risk of OW pollution					Significant risk of OW pollution
Lined pit with semi-permeable walls and open bottom										Significant risk of OW pollution
Unlined pit										Significant risk of OW pollution
Pit (all types), never emptied but abandoned when full and covered with soil										Significant risk of OW pollution

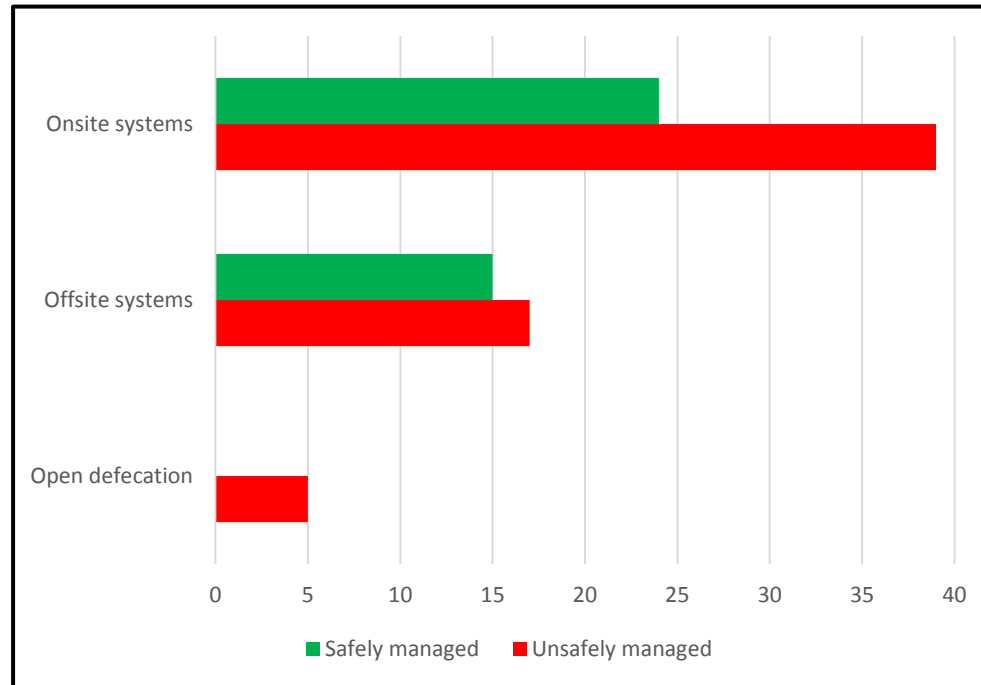
latest news



Cuttack, India
 Date prepared: 28/07/2015
 Version: Final



Summary data from studies so far (47 cities)



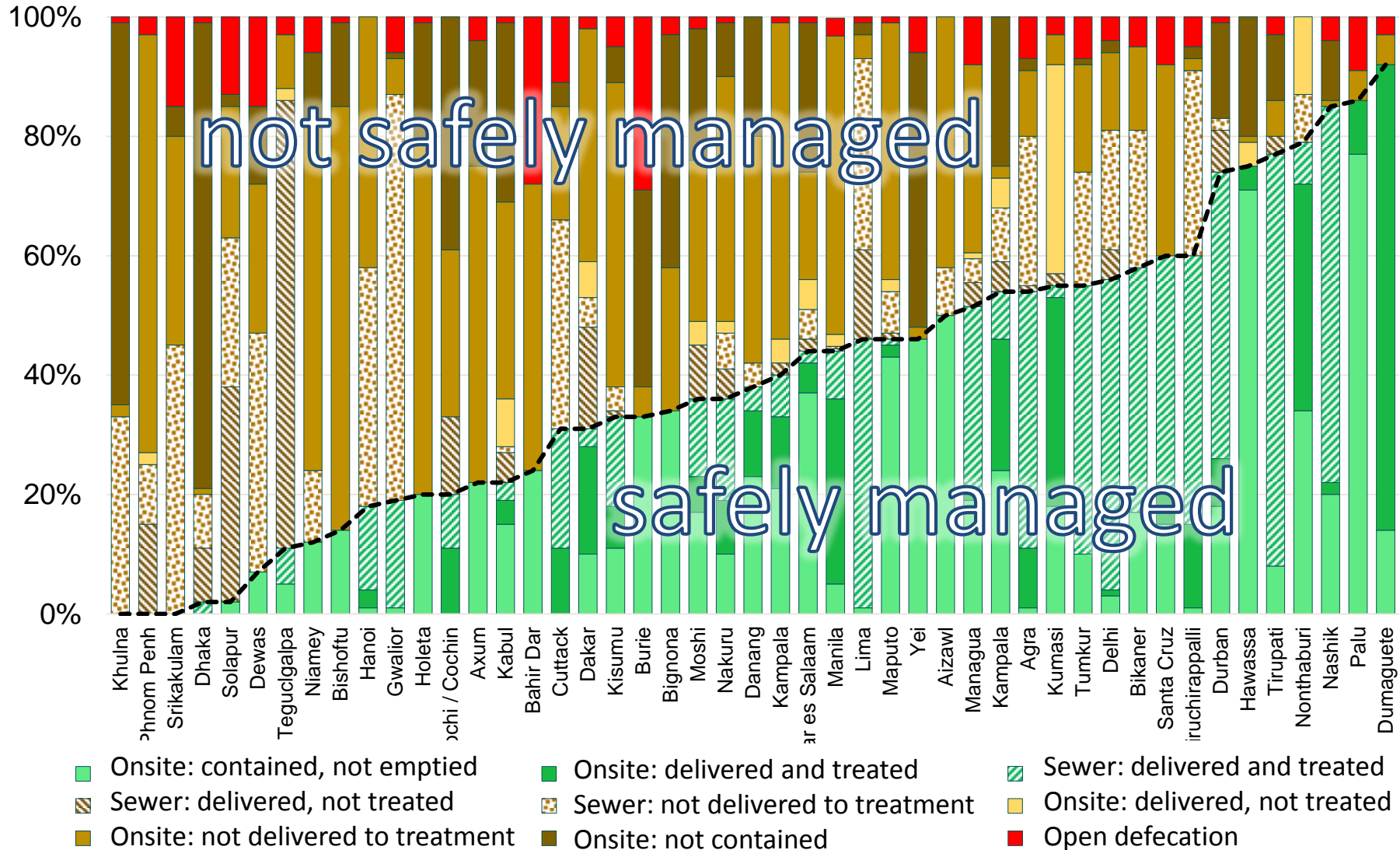
Excreta disposal (% of totals) in 48 cities from South and Central America, Africa and Asia

<http://sfd.susana.org/>

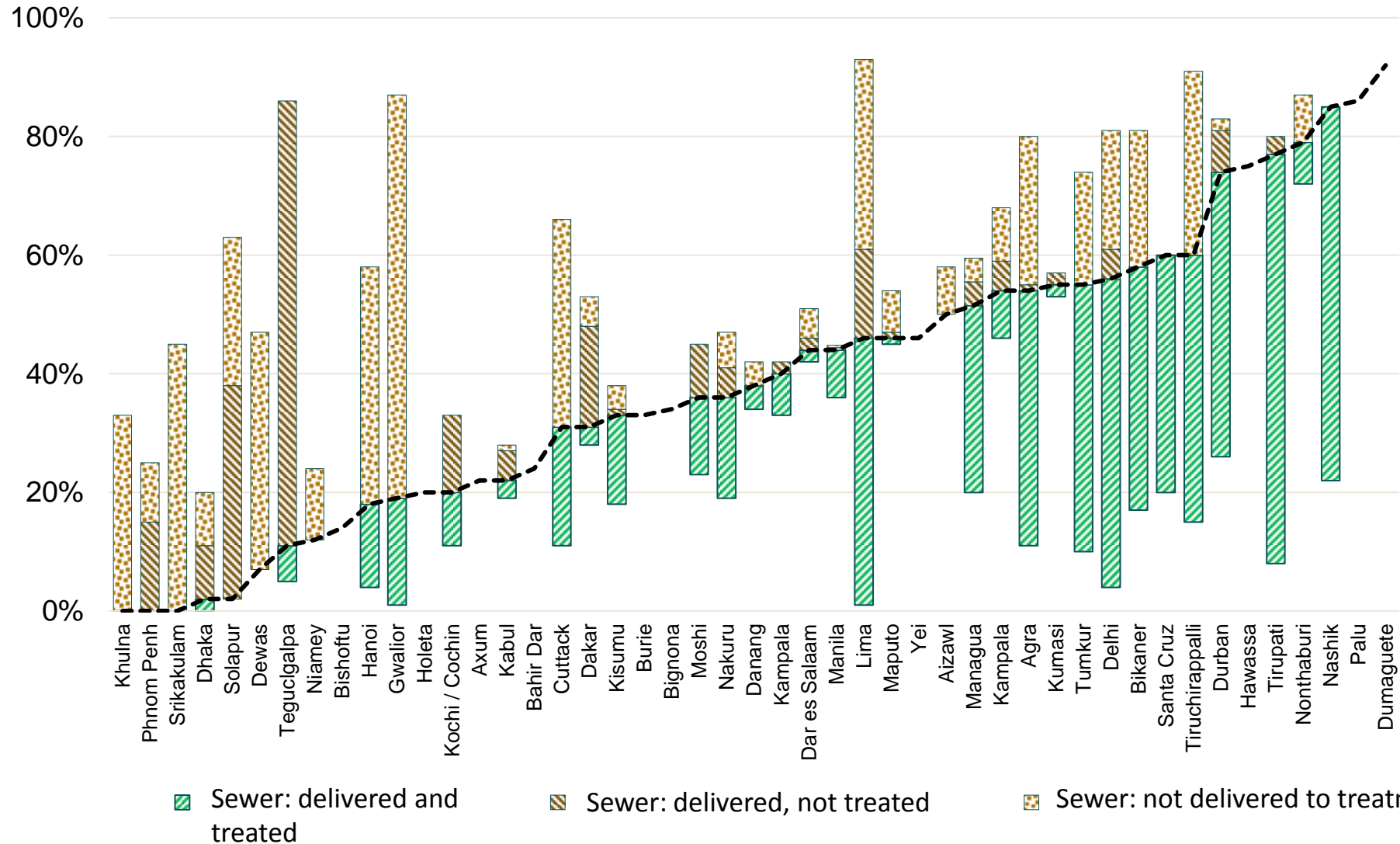
Summary data from studies so far (47 cities)



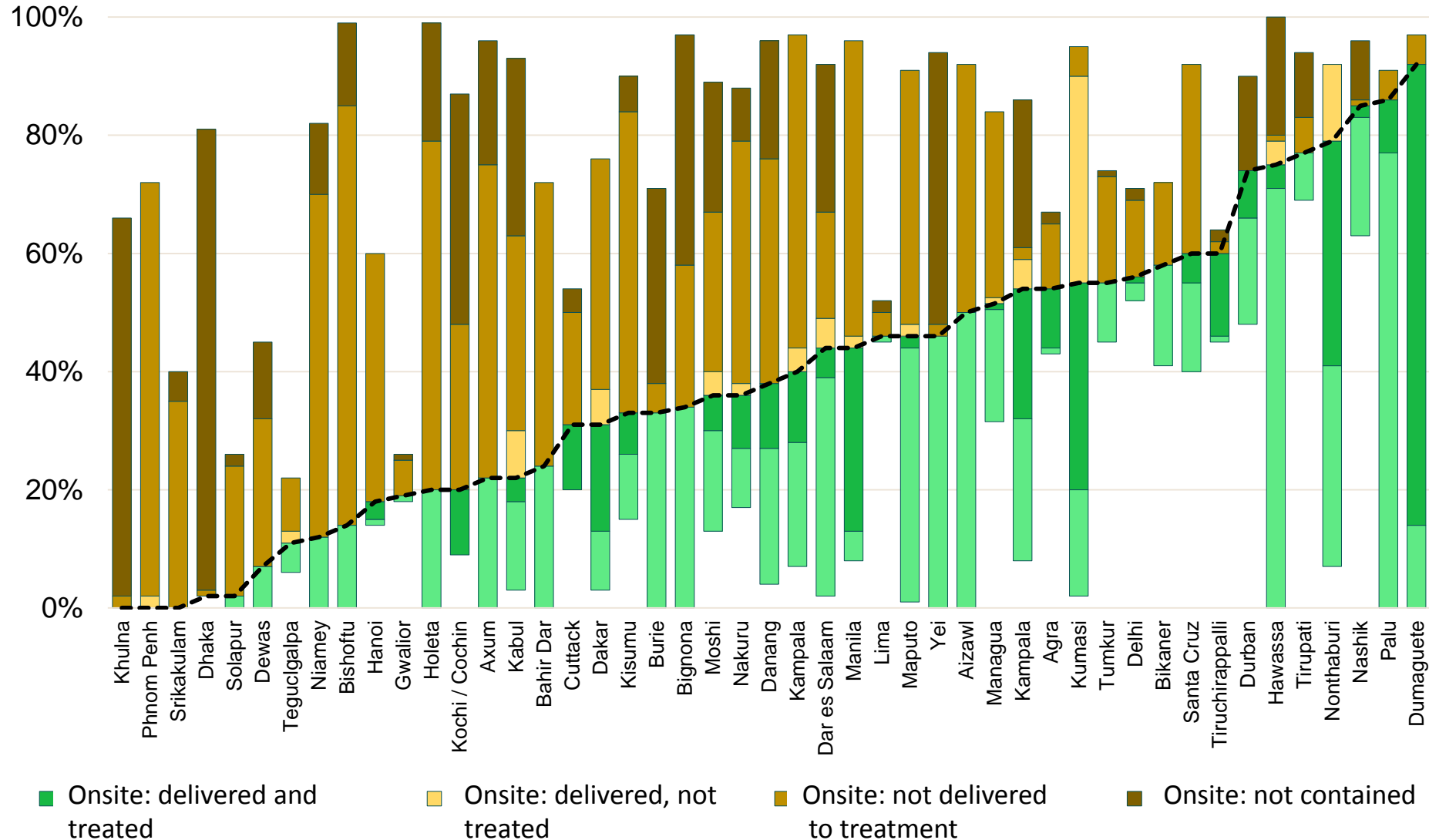
Summary data from studies so far (47 cities)



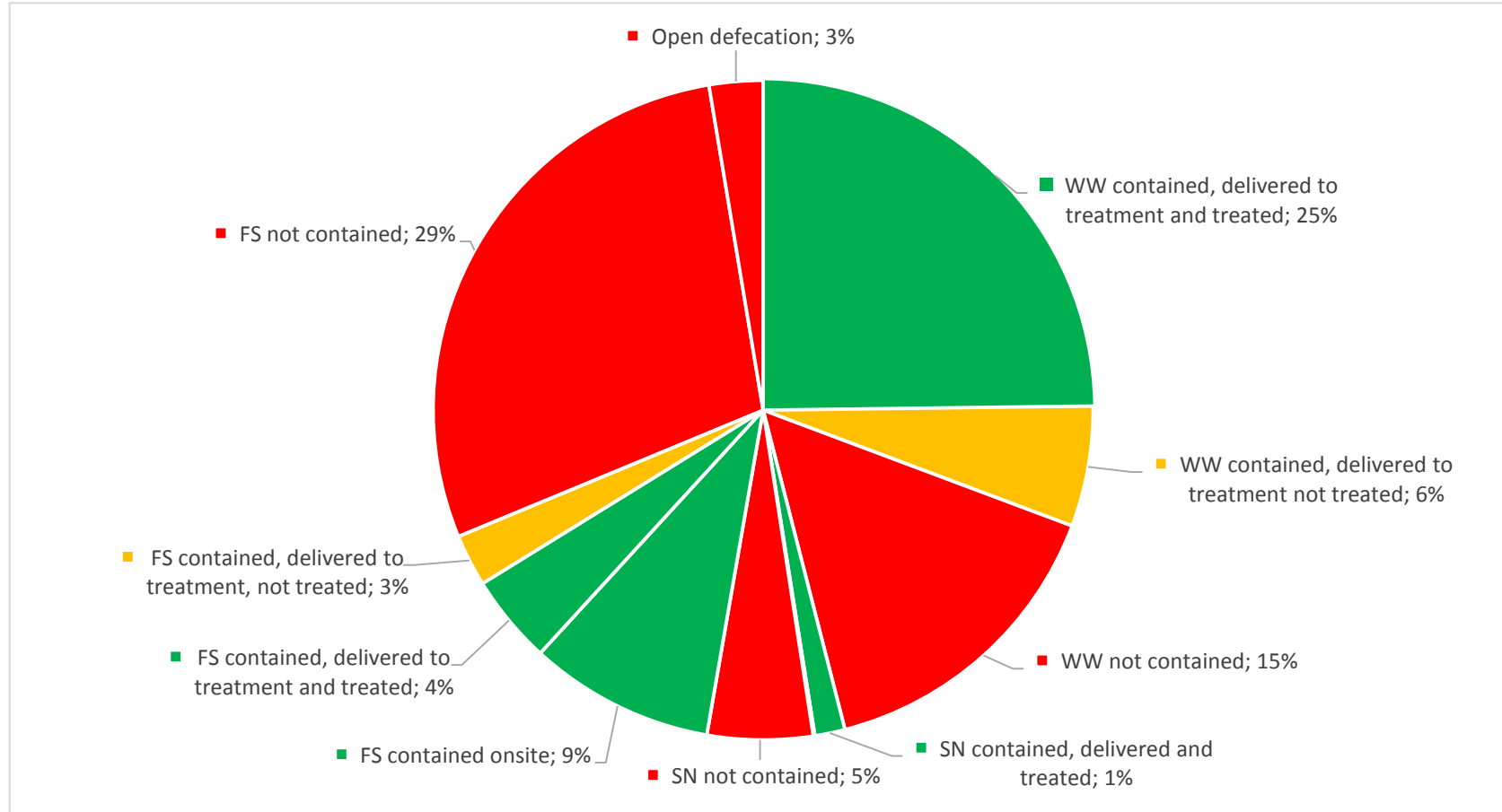
Summary data from studies so far (47 cities)



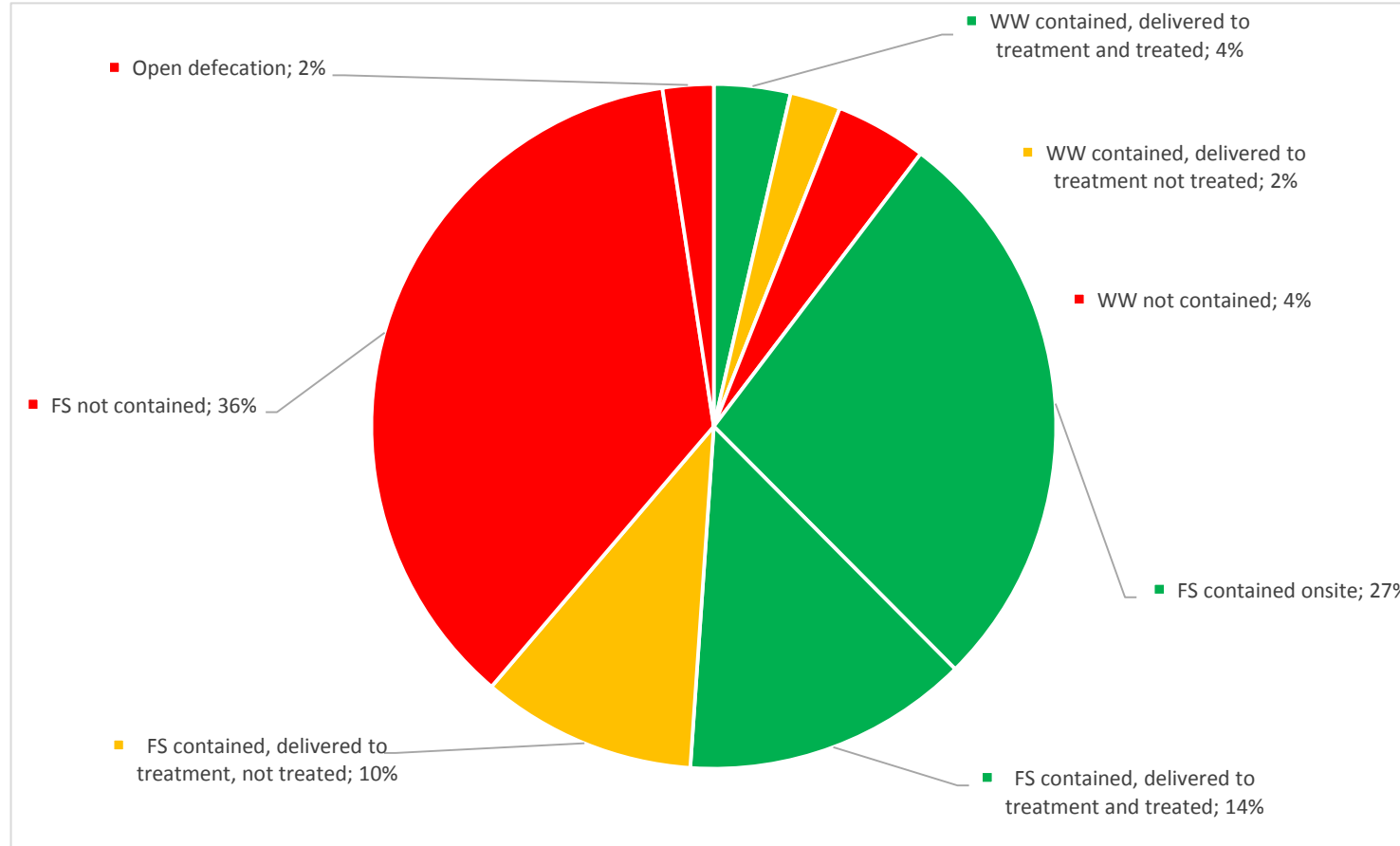
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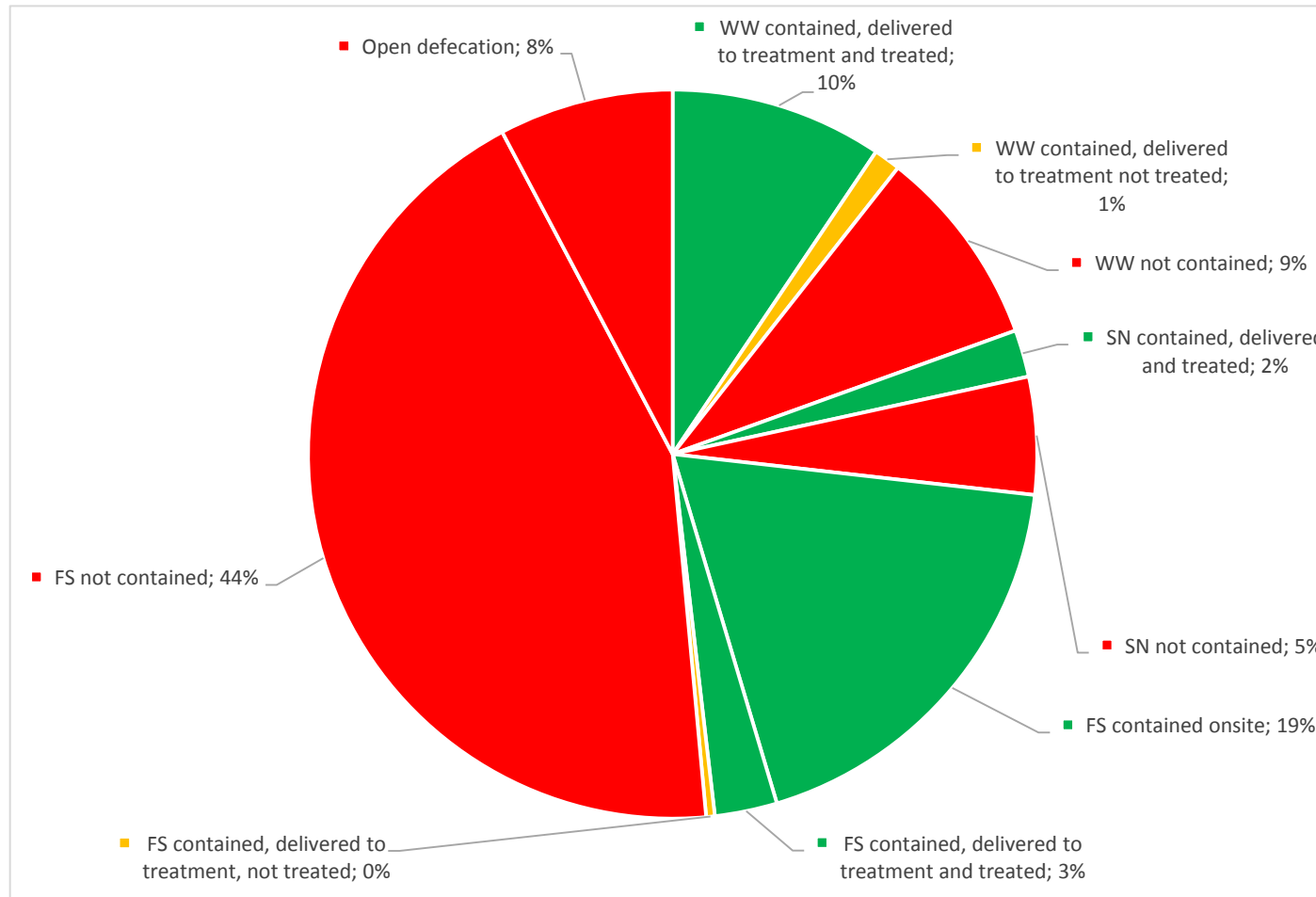
Summary data from studies so far (32 cities)



Summary data AFRICA so far (14 cities)



Summary data INDIA so far (14 cities)



Take away lessons from the research



- Many onsite systems are NOT WHAT THEY SEEM
- The distinction between “onsite” and “offsite” is not always helpful (a lot of “onsite” effluent/ supernatant gets into the drainage network for example)
- Getting data on emptying is difficult, particularly manual emptying – formalisation would improve management information
- Modelling septic tanks is challenging in the absence of data on relative risks of the solid and liquid fractions
- Depending on the context SFDs can have varying levels of detail
- SFD-PI does not convert flows to volumes because volumetric production rates are extremely variable. Local monitoring would improve management information

Ongoing and follow up work



A screenshot of the SFD website homepage. The page has a dark background with a close-up image of turbulent water. At the top, there is a navigation bar with five menu items: 'About', 'Toolbox', 'Resources', 'News & Events', and 'SFDs Worldwide'. The 'SFDs Worldwide' item is highlighted in green. Below the navigation bar, the main heading reads 'Improving understanding of urban sanitation'. Underneath this, a sub-heading states 'SFDs are a new way of visualizing excreta management in cities and towns'. A bright green starburst graphic contains the word 'NEW!'. Below the starburst, a green text box says 'The new SFD Graphic Generator is ready for use!'. The entire content is framed by a thin black border.

<http://sfd.susana.org/>