

How to Interpret SFD



Excreta Flow Diagrams: Orientation Workshop

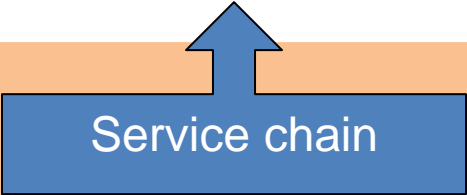
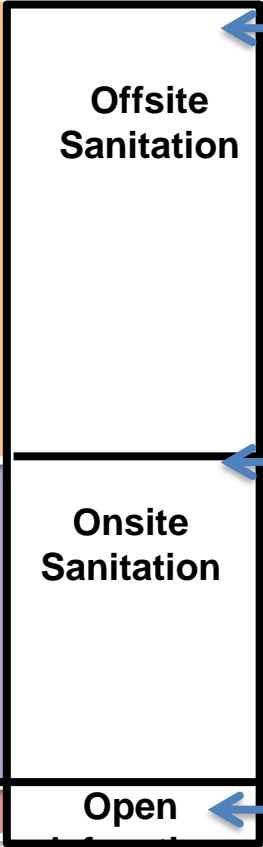
21 July, 2021

Harsh Yadava

How to read an SFD

- Please read the SFD along with the report
- The red colour denotes unsafe management and green colour denotes safe management
- The width of the arrow depends on the corresponding percentage
- Percentage mentioned on the diagram refers to the contributing population and not volume of excreta
- The supernatant is effluent from the septic tanks

← Name of City and date
of SFD production



Percentage of
population dependent
on a sanitation system

Offsite Sanitation

Onsite Sanitation

Open Defecation



Key:

Variable nr : % of flow



Safely managed



Unsafely managed



Containment

Emptying

Transport

Treatment

Offsite
Sanitation

Onsite
Sanitation

Open
defecation

Red or Green: Whether the arrows would be red or green is dependent on whether the system at that stage is contained or not.

Contained: Sanitation Technology and/or system which ensures safe level of protection from Excreta i.e. pathogen transmission to the user or general public is limited.

Not Contained: Sanitation technology and/or system which does not ensure safe level of protection from Excreta. i.e. pathogen transmission to the user or general public is likely.

WW: Waste Water
FS: Faecal Sludge
SN: Supernatant

Local area

Neighbourhood

City

Key:

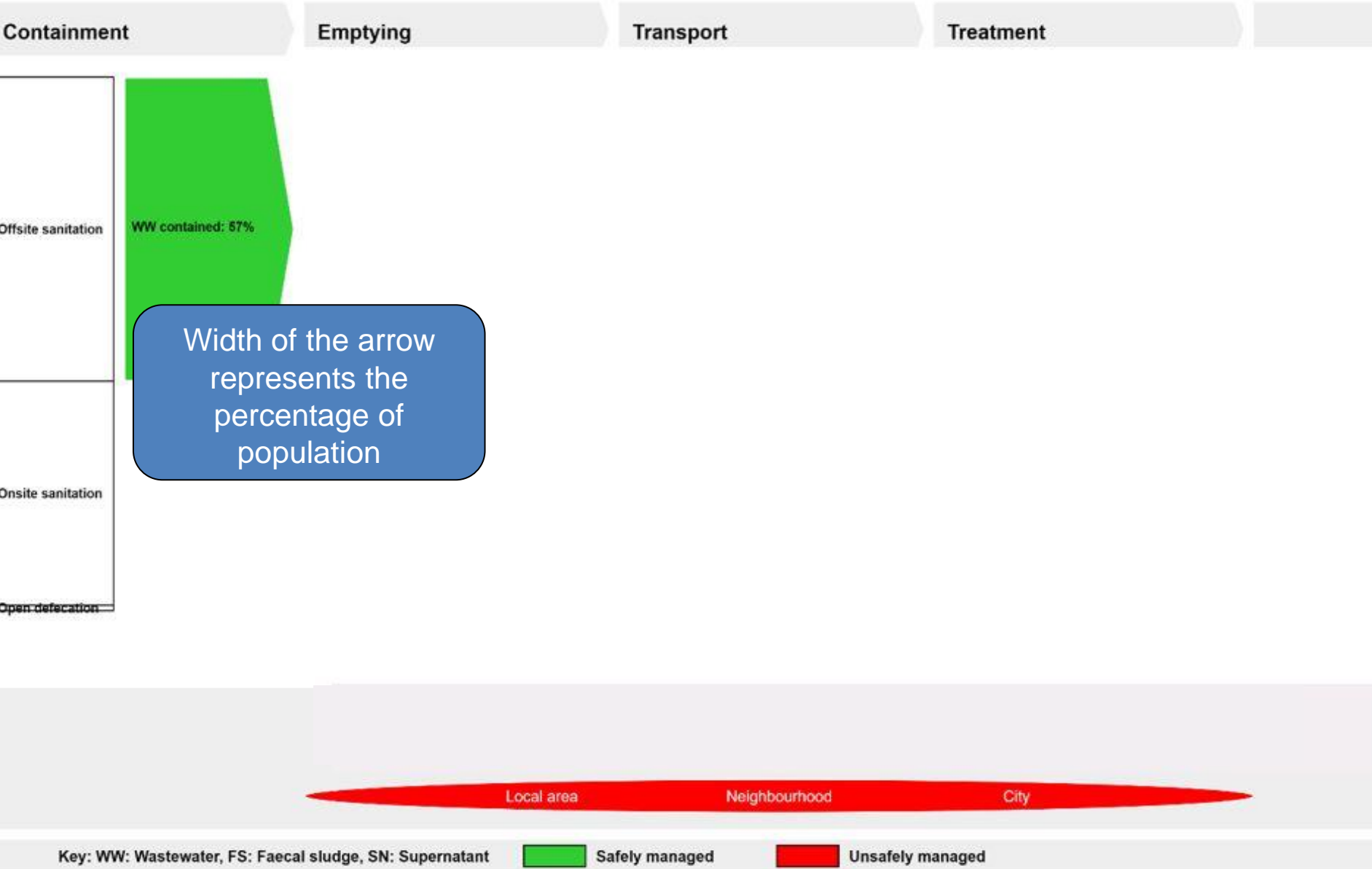
Variable nr : % of flow

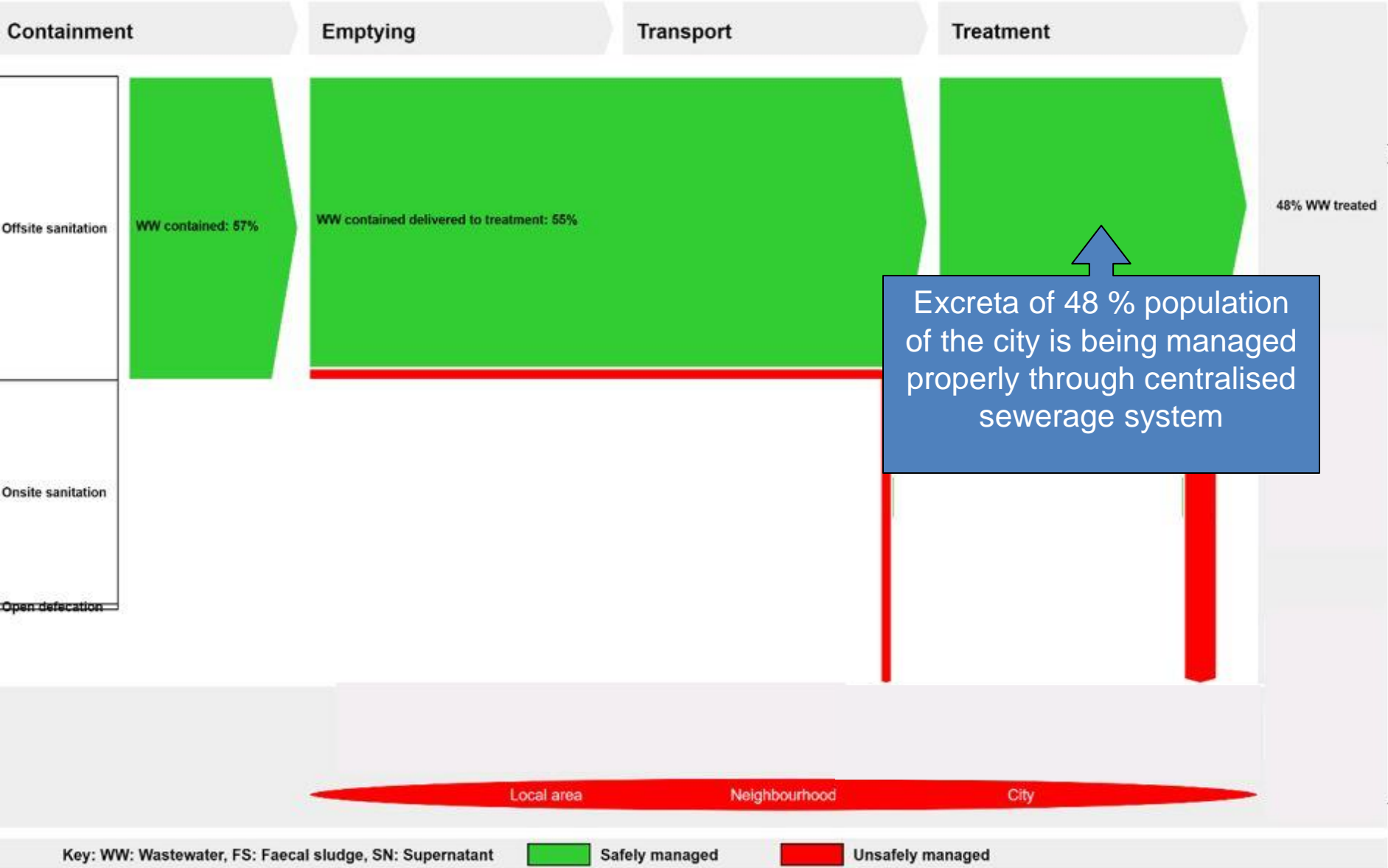


Safely managed

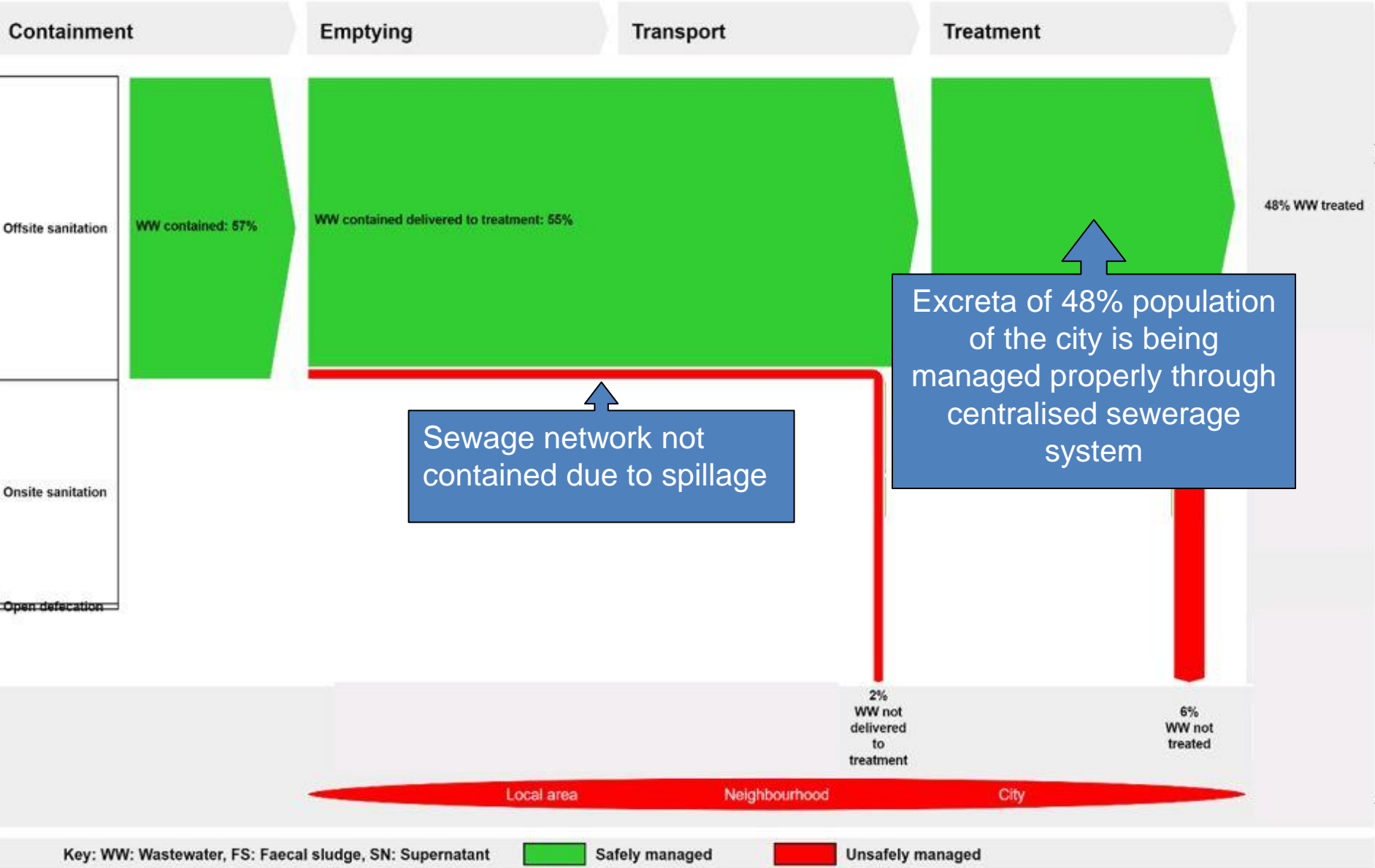


Unsafely managed





Excreta of 48 % population of the city is being managed properly through centralised sewerage system





Containment

Emptying

Transport

Treatment

Offsite sanitation

Onsite sanitation

Open defecation

FS contained: 26%

FS not contained: 16%

Local area

Neighbourhood

City

Key: WW: Wastewater, FS: Faecal sludge, SN: Supernatant



Safely managed



Unsafely managed



Containment

Emptying

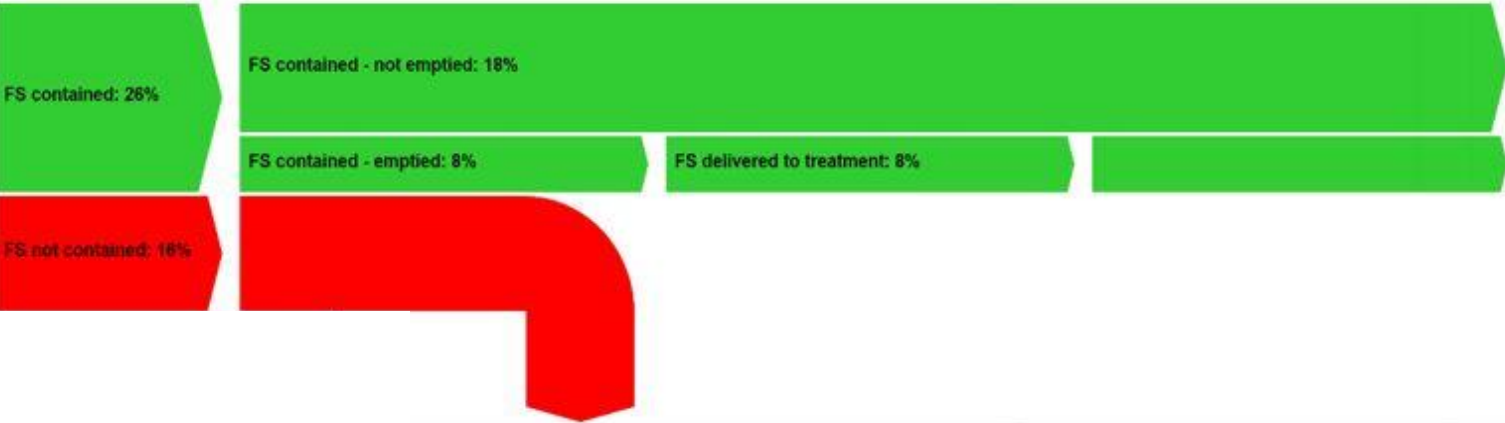
Transport

Treatment

Offsite sanitation

Onsite sanitation

Open defecation



18% FS contained - not emptied

8% FS treated

16% FS not contained - not emptied

2% WW not delivered to treatment

6% WW not treated

Local area

Neighbourhood

City

Key: WW: Wastewater, FS: Faecal sludge, SN: Supernatant

 Safely managed

 Unsafely managed



Containment

Emptying

Transport

Treatment

Offsite sanitation

Onsite sanitation

Open defecation

1%
Open
defecation

Local area

Neighbourhood

City

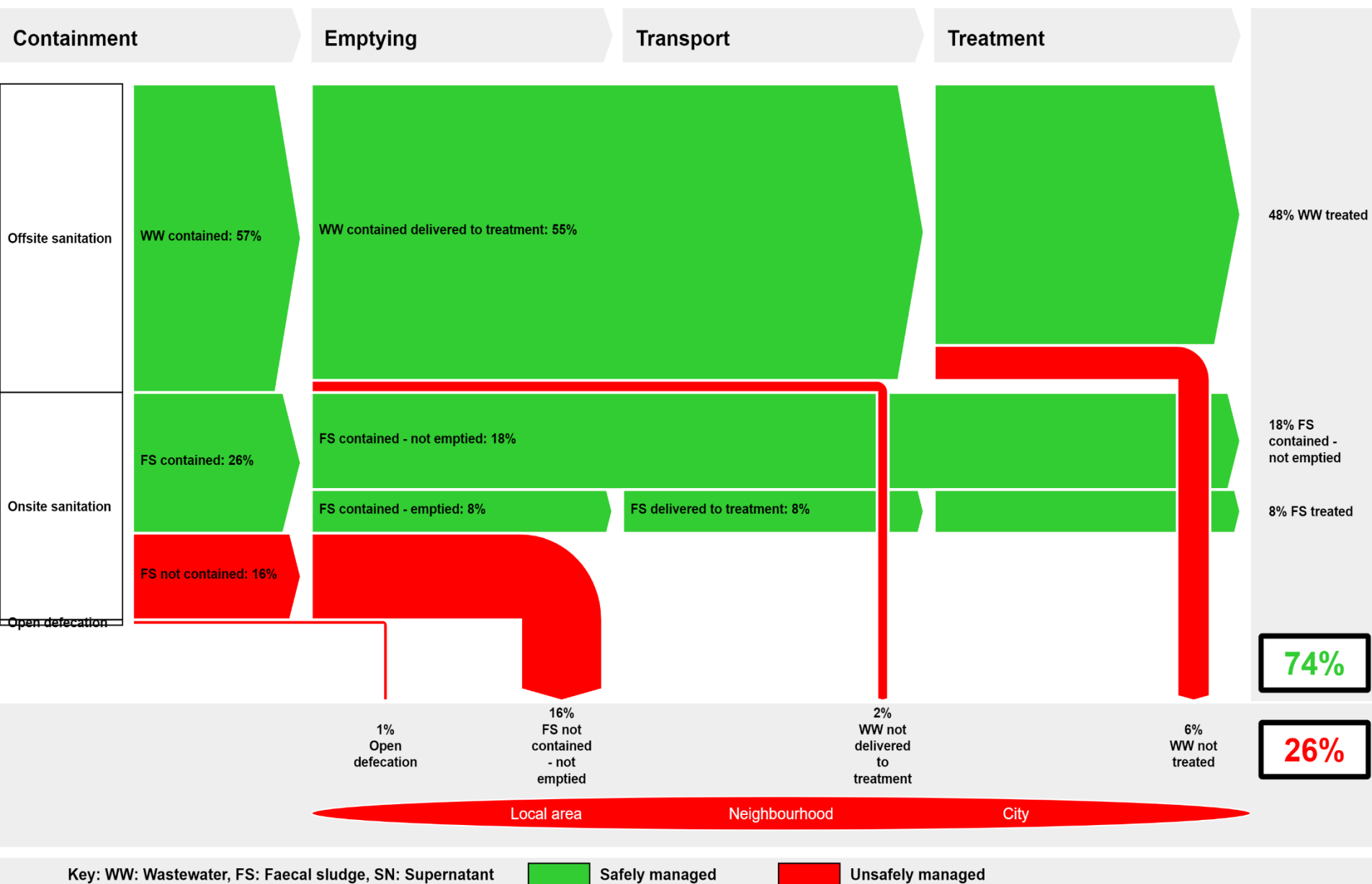
Key: WW: Wastewater, FS: Faecal sludge, SN: Supernatant



Safely managed



Unsafely managed

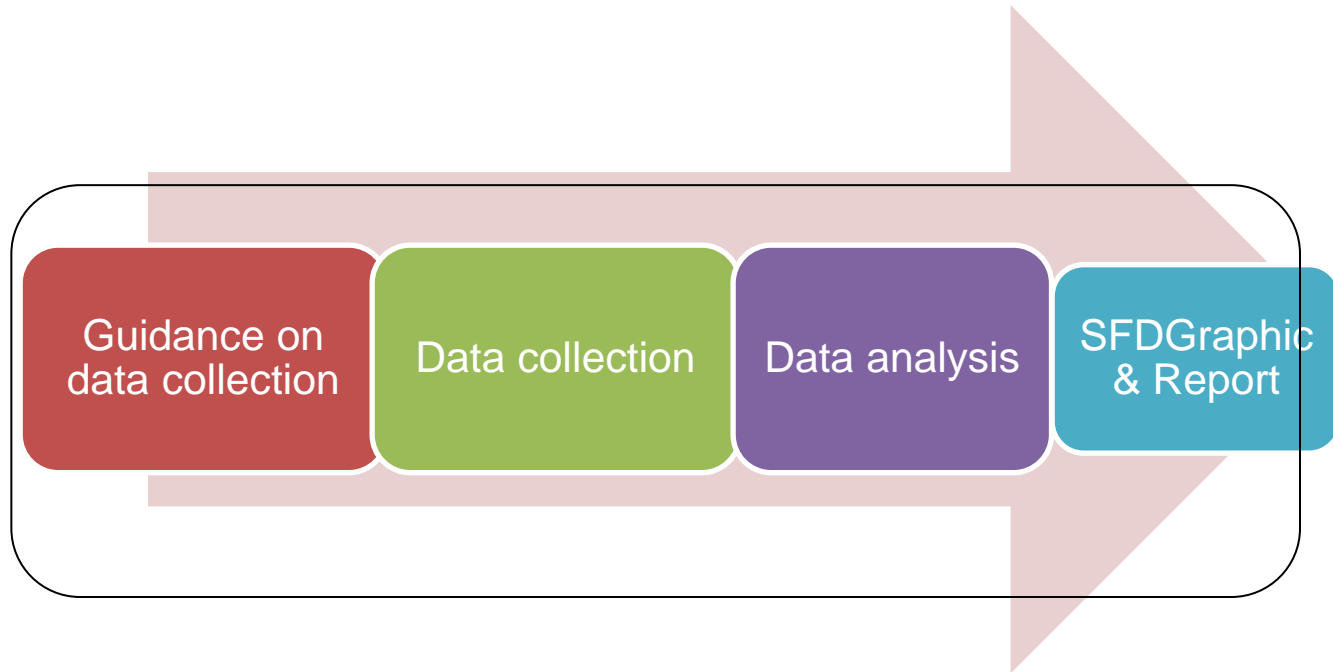


Methodology for Data Collection



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What is the SFD Process?



- **First identify the stakeholders!**

No.	Stakeholder group
1	City council / Municipal authority / Utility
2	Ministry in charge of urban sanitation and sewerage
3	Ministry in charge of urban solid waste
4	Ministries in charge of urban planning, environmental protection/ health, finance and economic development, agriculture
5	Service provider for construction of on-site sanitation technologies
6	Service provider for emptying and transport of faecal sludge
7	Service provider for operation and maintenance of treatment infrastructure
8	Market participants practising end-use of faecal sludge end products
9	Service provider for disposal of faecal sludge (sanitary landfill management)
10	External agencies associated with FSM services: e.g. NGOs, academic institutions, donors, private investors, consultants

1. SECONDARY DATA COLLECTION



- I. Census conducted by central govt. or any type of enumeration conducted by local govt/ULB
- II. Published and grey literature
- III. Government documents (SBM, SS Ground Water Reports etc)
- IV. Performance reports (CPCB, SPCB etc)
- V. Department of water supply and sanitation
- VI. Guideline for the Design and Approval of On-Site (SubSurface) Disposal of Domestic Sewerage. Africa
- VII. Construction Bye laws, Sewage disposal bye-laws etc. in South Africa

2. Primary Data Collection

- **Qualitative data**, that can be obtained through, for example:
 - **Key Informant Interviews (KIIs)** – either conducted in person or remotely managed. Key informants may include community leaders and people in charge of different aspects of sanitation in the city
 - **Observation of service provision and facilities** through the sanitation service chain
 - **Focus Group Discussions (FGDs)** with community representatives or service providers

Questions and data collection methods to analyse the range of sanitation service chain

	System type	Containment	Emptying	Transport	Treatment	End-use/disposal	Possible sources of information
System technologies and methods used in the city	Off-site sanitation: Wastewater direct to sewer (centralised)	<p>It is simple Just</p> <p>ask the Question What is?</p> <p>and seek how many/much?</p>					
	Off-site sanitation: Wastewater direct to sewer (decentralised)						
	On-site sanitation: Excreta contained on-site						
	On-site sanitation: Excreta not contained on-site						
	Open defecation						

How to Prepare SFD Graphic





- Data collection and analysis.
- Getting values for Sanitation Value Chain.
- Generating graphic at <https://sfd.susana.org/>
- Writing an SFD report using SFD report template.
- Submitting it at SFD helpdesk for review and publish.

Why is report needed?

- The SFD Graphic indicates where the problems lie in an urban area, but without understanding the local context you cannot understand why these situations occur.
- The SFD Report will help to answer questions such as-
“Why is only half of the excreta produced onsite collected?” or “
why is only half of the wastewater that reaches the treatment facilities treated?”
- The SFD Report provides information on the institutional frameworks, roles and responsibilities, regulatory aspects, and other issues that directly or indirectly impact the provision of sustainable sanitation services. It also includes the assumptions used to prepare the SFD Graphic



Structure of Report

- The SFD Graphic
- The service delivery context description;
- The service outcomes, described along the sanitation service chain;
- Stakeholder engagement and references.

Levels of SFD reports and Details



- In order to accommodate different and objectives of SFD the SFD PI has developed for levels of SFD;
- ***SFD Lite:*** Allows users to prepare their first SFD in an easier and faster way the SFD PI developed it;
- ***SFD Lite requires less preparation, minimum amount of supporting data & referenced sources for the data; the results can be presented in a very brief reporting format (8-12 pages)***
- **Initial level:** ideal for advocacy purposes and initiating dialogue around sanitation services with key stakeholders;
- **Intermediate level:** when a more 'robust' and credible report is needed
- **Comprehensive level:** good for supporting discussions into investments and planning for improved sanitation services

Thank you

Email us at: sfdhelpdesk@cseindia.org

SFD Promotion Initiative

sustainable
sanitation
alliance

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

On behalf of



Federal Ministry
for Economic Cooperation
and Development


UNIVERSITY OF LEEDS

 **WORLD BANK GROUP**
Water

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