

# Rolling out the Shitflow Diagram

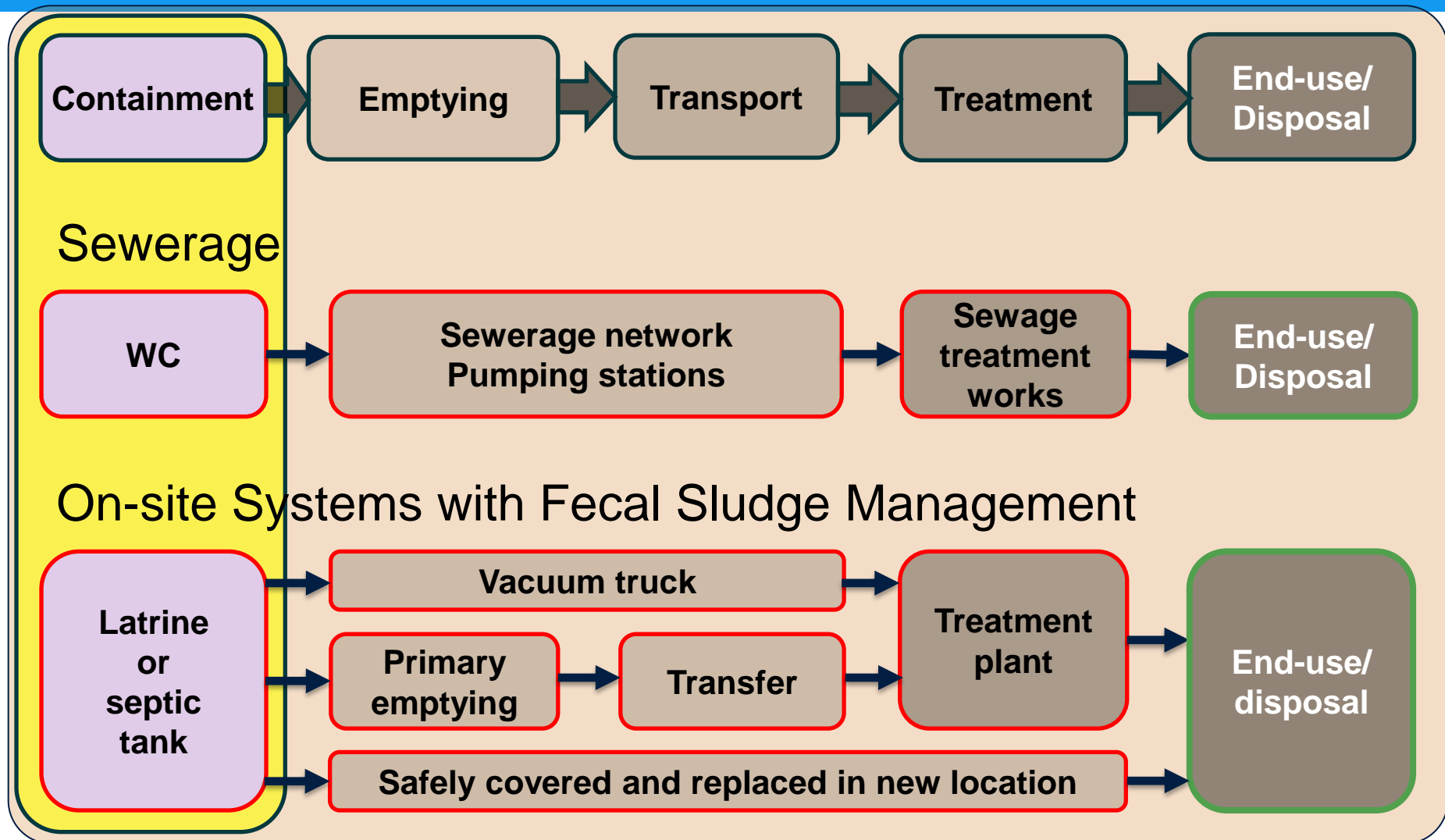
Peter Hawkins, Senior Water and Sanitation Specialist  
AfricaSan 4, 27 May 2015



# The Sanitation Service Chain

## MDGs

## Post-2015 SDG Proposals



# Estimating Fecal Waste Flows: Lusaka

Type of System		Collection		Transport		Treatment	
		Collected	Not Collected	Delivered	Not Delivered	Treated	Not Treated
Sewered	11%						
On-site (permanent)	76%						
On-site (single use)	12%						
Open defecation	1%						



# Estimating Fecal Waste Flows: Lusaka

Type of System		Collection		Transport		Treatment	
		Collected	Not Collected	Delivered	Not Delivered	Treated	Not Treated
Sewered	11%	100%		90%		35%	
On-site (permanent)	76%	38%		75%		35%	
On-site (single use)	12%	100%					
Open defecation	1%	0%					

# Estimating Fecal Waste Flows: Lusaka

Type of System		Collection		Transport		Treatment	
		Collected	Not Collected	Delivered	Not Delivered	Treated	Not Treated
Sewered	<b>11%</b>	<b>100%</b>	0%	<b>90%</b>		<b>35%</b>	
		11.0%	0.0%				
On-site (permanent)	<b>76%</b>	<b>38%</b>	62%	<b>75%</b>		<b>35%</b>	
		29.0%	47.4%				
On-site (single use)	<b>12%</b>	<b>100%</b>	0%				
Open defecation	<b>1%</b>	<b>0%</b>	100%				



# Estimating Fecal Waste Flows: Lusaka

Type of System		Collection		Transport		Treatment	
		Collected	Not Collected	Delivered	Not Delivered	Treated	Not Treated
Sewered	11%	100%	0%	90%		35%	
		11.0%	0.0%				
On-site (permanent)	76%	38%	62%	75%		35%	
		29.0%	47.4%				
On-site (single use)	12%	100%	0%				
Open defecation	1%	0%	100%				
UNSAFE		1%	47%				



# Estimating Fecal Waste Flows: Lusaka

Type of System		Collection		Transport		Treatment	
		Collected	Not Collected	Delivered	Not Delivered	Treated	Not Treated
Sewered	<b>11%</b>	<b>100%</b>	0%	<b>90%</b>	10%	<b>35%</b>	
		11.0%	0.0%	9.9%	1.1%		
On-site (permanent)	<b>76%</b>	<b>38%</b>	62%	<b>75%</b>	25%	<b>35%</b>	
		29.0%	47.4%	21.8%	7.3%		
On-site (single use)	<b>12%</b>	<b>100%</b>	0%				
Open defecation	<b>1%</b>	<b>0%</b>	100%				
<b>UNSAFE</b>	<b>1%</b>	<b>47%</b>		<b>8%</b>			



# Estimating Fecal Waste Flows: Lusaka

Type of System		Collection		Transport		Treatment	
		Collected	Not Collected	Delivered	Not Delivered	Treated	Not Treated
Sewered	<b>11%</b>	<b>100%</b>	0%	<b>90%</b>	10%	<b>35%</b>	65%
		11.0%	0.0%	9.9%	1.1%	3.5%	6.4%
On-site (permanent)	<b>76%</b>	<b>38%</b>	62%	<b>75%</b>	25%	<b>35%</b>	65%
		29.0%	47.4%	21.8%	7.3%	7.6%	14.2%
On-site (single use)	<b>12%</b>	<b>100%</b>	0%				
Open defecation	<b>1%</b>	<b>0%</b>	100%				
<b>UNSAFE</b>	<b>1%</b>	<b>47%</b>		<b>8%</b>		<b>21%</b>	



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# Estimating Fecal Waste Flows: Lusaka

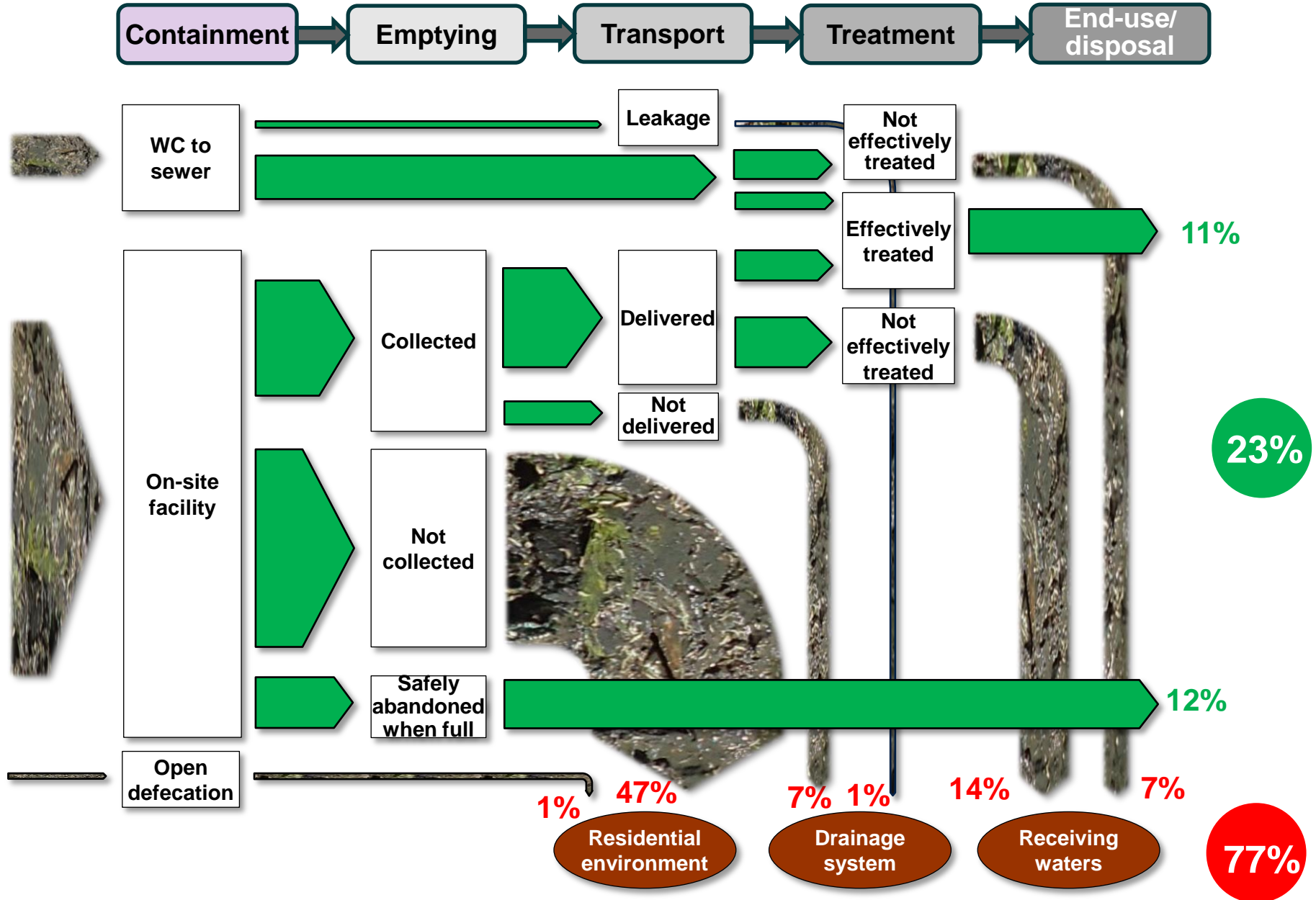
Type of System		Collection		Transport		Treatment		SAFE 23%
		Collected	Not Collected	Delivered	Not Delivered	Treated	Not Treated	
Sewered	11%	100%	0%	90%	10%	35%	65%	3%
		11.0%	0.0%	9.9%	1.1%	3.5%	6.4%	
On-site (permanent)	76%	38%	62%	75%	25%	35%	65%	8%
		29.0%	47.4%	21.8%	7.3%	7.6%	14.2%	
On-site (single use)	12%	100%	0%					12%
Open defecation	1%	0%	100%					
UNSAFE 77%		1%	47%	8%		21%		



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# Lusaka Shitflow Diagram (SFD)



# What is an SFD?

## □ It IS

- 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 effective communications and advocacy tool
- An overview from which to develop sanitation priorities

## □ It is NOT

- Based on actual volumes/mass – these are determined by other related factors
- A representation of public health ***risk*** (*risk = hazard x behavior*)
- A precise scientific analytical tool

# SFD Context: Service Delivery Assessment

What systems exist and who is responsible?

		<div>\$</div> <div>Containment</div> <div>Emptying</div> <div>Transport</div> <div>Treatment</div> <div>End-use/disposal</div>				
<b>Enabling</b> <ul style="list-style-type: none"> <li>Policy</li> <li>Planning</li> <li>Budget</li> </ul>	<ul style="list-style-type: none"> <li>- Is on-site san recognized? Targets? Institutional roles? Private sector? Regulation?</li> <li>- Investment coordination and prioritization mechanisms? Implementation capacity?</li> <li>- Sufficient budget? Sanitation expenditure identifiable?</li> </ul>	0	1	1	1	0
		0	0	0	0	0
		0	0	0	0	0
<b>Developing</b> <ul style="list-style-type: none"> <li>Expenditure</li> <li>Equity</li> <li>Outputs</li> </ul>	<ul style="list-style-type: none"> <li>- How much is being invested in sanitation?</li> <li>- Community engagement? Poor-inclusive?</li> <li>- Rate of growth and quality of service sufficient to make impact? Being monitored?</li> </ul>	0	1.5	0	0	0
		0	0	0	0	0
		0	0.5	0.5	0	0
<b>Sustaining</b> <ul style="list-style-type: none"> <li>Maintenance</li> <li>Expansion</li> <li>User outcomes</li> </ul>	<ul style="list-style-type: none"> <li>- O&amp;M costs known and covered? Standards monitored and enforced?</li> <li>- San promotion? Planning expansion of services? Private sector development?</li> <li>- How much is the service chain "leaking"? Is it reaching the poor?</li> </ul>	0	1.5	1.5	0	1.5
		0	1.5	1.5	0	0
		2.5	2.5	1	1.5	1.5

Example: Balikpapan, Indonesia



# The SFD Promotion Initiative – Origins

- First SFDs published by WSP in 2013 to provide a concise overview of sanitation in a city
- Proved very effective for advocacy, intuitively understood by both decision-makers and 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

- **GLZ/SuSanA – coordinator**
- **Centre for Science and Environment (CSE), Delhi**
- **SANDEC/EAWAG, Switzerland**
- **University of Leeds, UK**
- **WEDC/University of Loughborough, UK**
- **WSP/ World Bank**
- **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: to October 2015
  - 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



# Thank You For Your Attention



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sanitation program

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