



Mortenson Center in
Engineering for Developing Communities
UNIVERSITY OF COLORADO BOULDER

Fecal Sludge Management To Achieve SDG Goal Safely Managed Sanitation

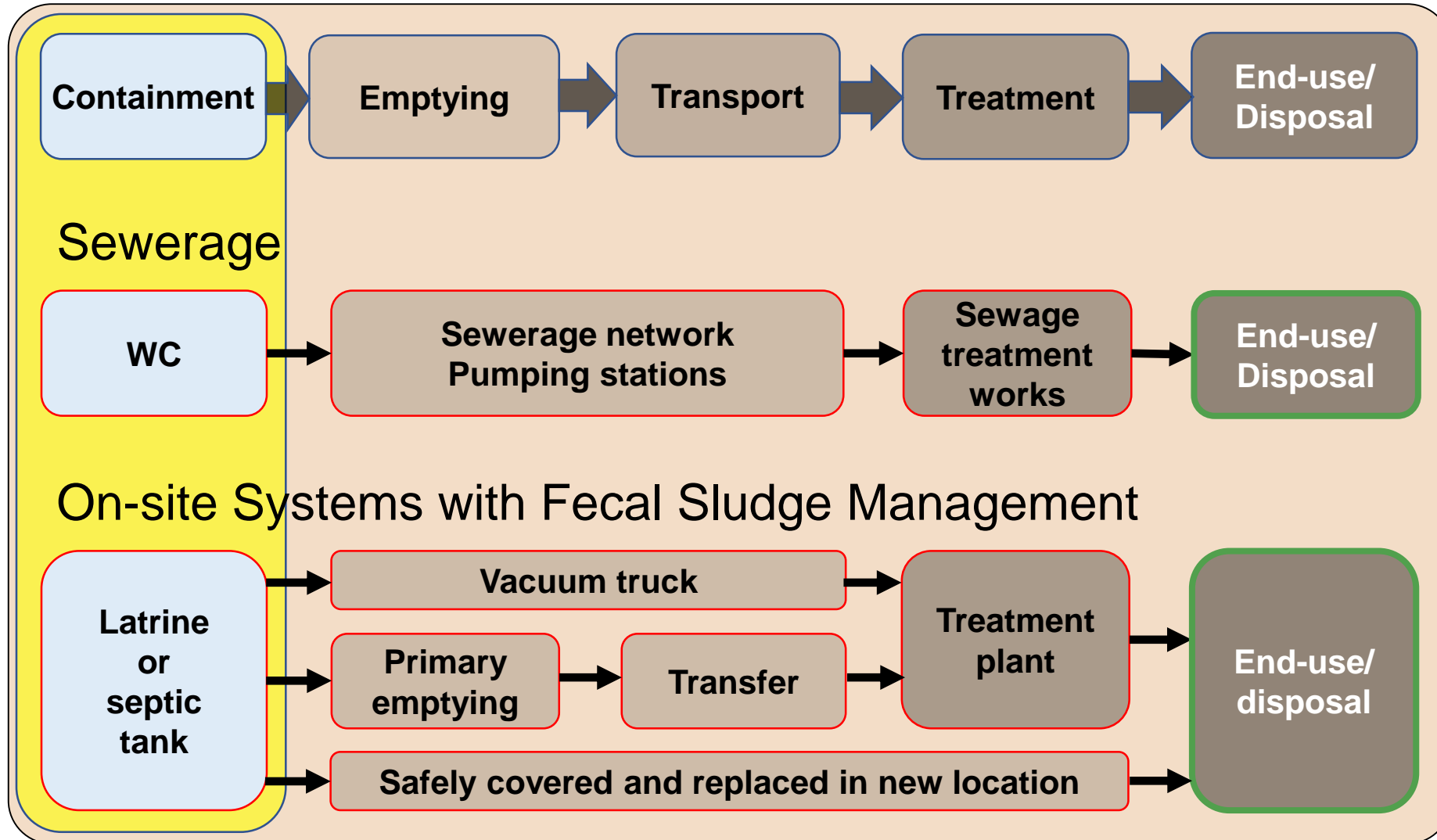
Eddy Perez



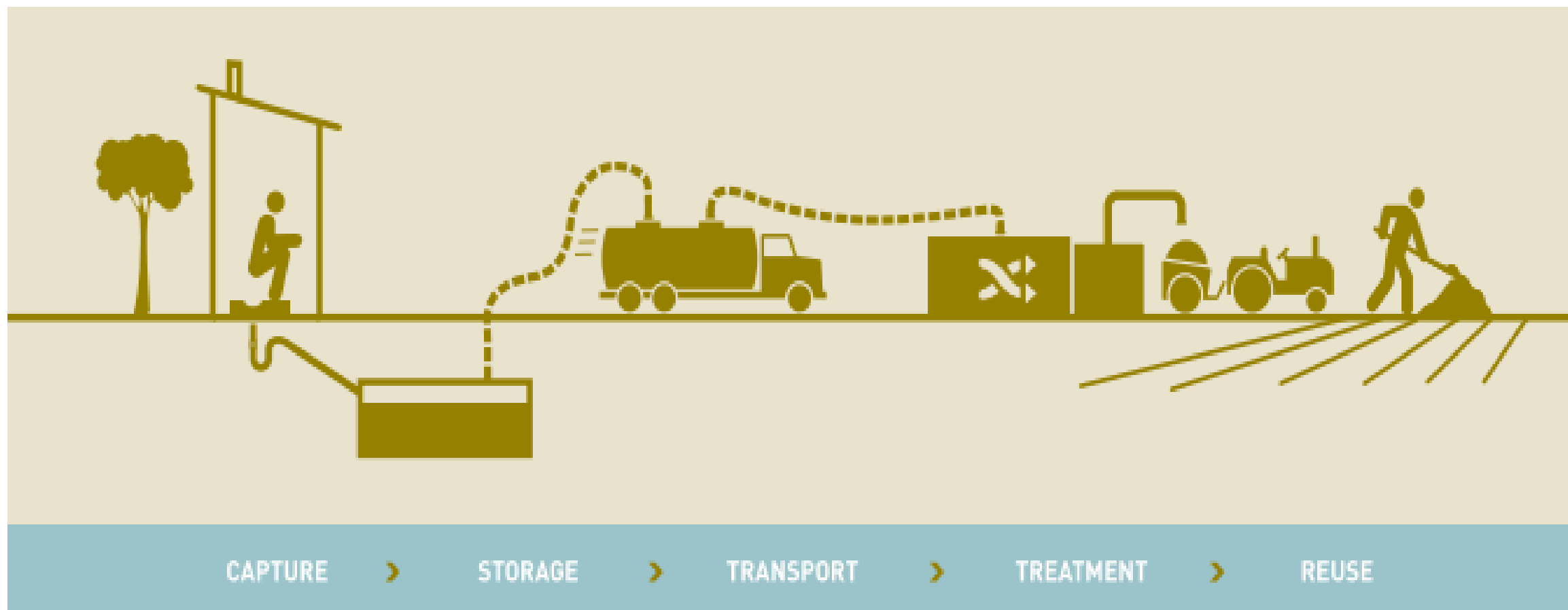
The Sanitation Service Chain

MDGs

SDGs – FSM/Safely Managed Sanitation



Sanitation Value Chain



MDG/SDG	Service ladder	Progressive realization
SDG 6.2	Safely managed sanitation	Private improved facility where faecal wastes are safely disposed on site or transported and treated off-site;
MDG continuity	Basic sanitation	Improved facility which separates excreta from human contact (private)
	Shared sanitation	Improved facility which separates excreta from human contact (shared with other hh)
	Unimproved sanitation	Unimproved facility does not separate excreta from human contact
	No service	Open defecation



2.9 billion people used safely managed sanitation services in 2015

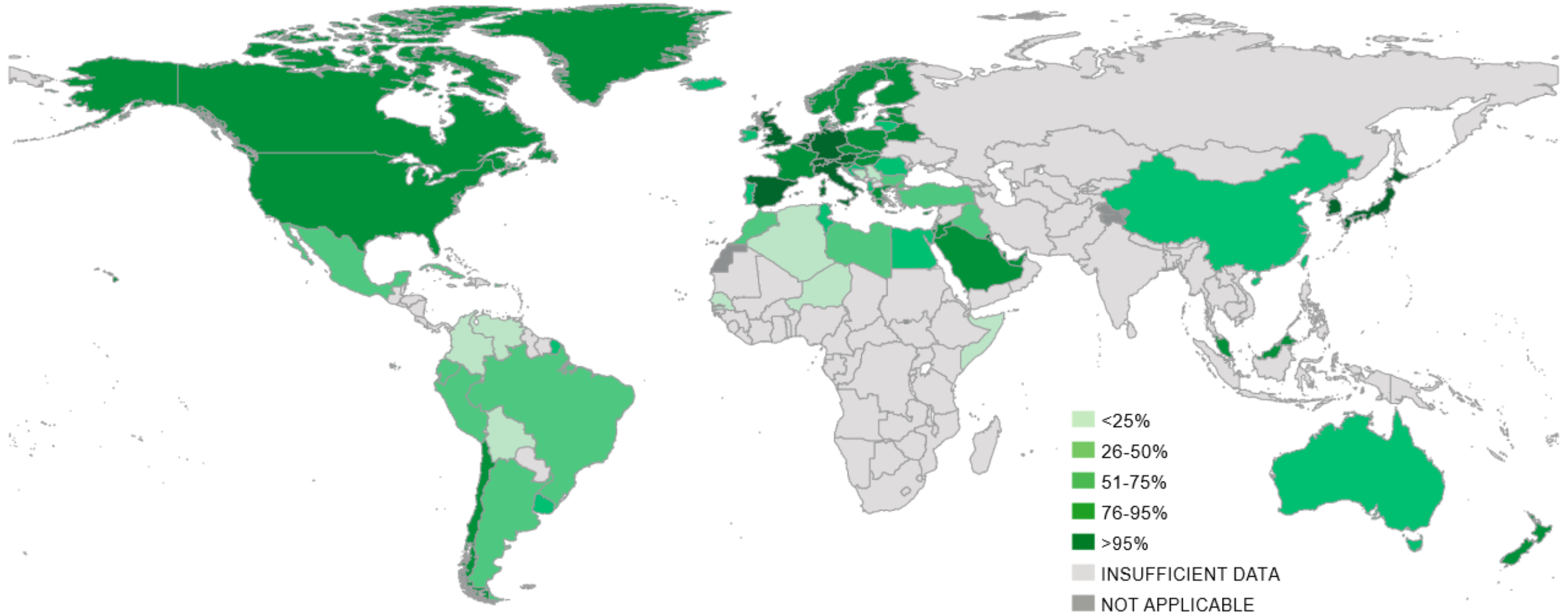


Fig. 38 Proportion of population using safely managed sanitation services, 2015

68% of the global population used at least basic sanitation services in 2015

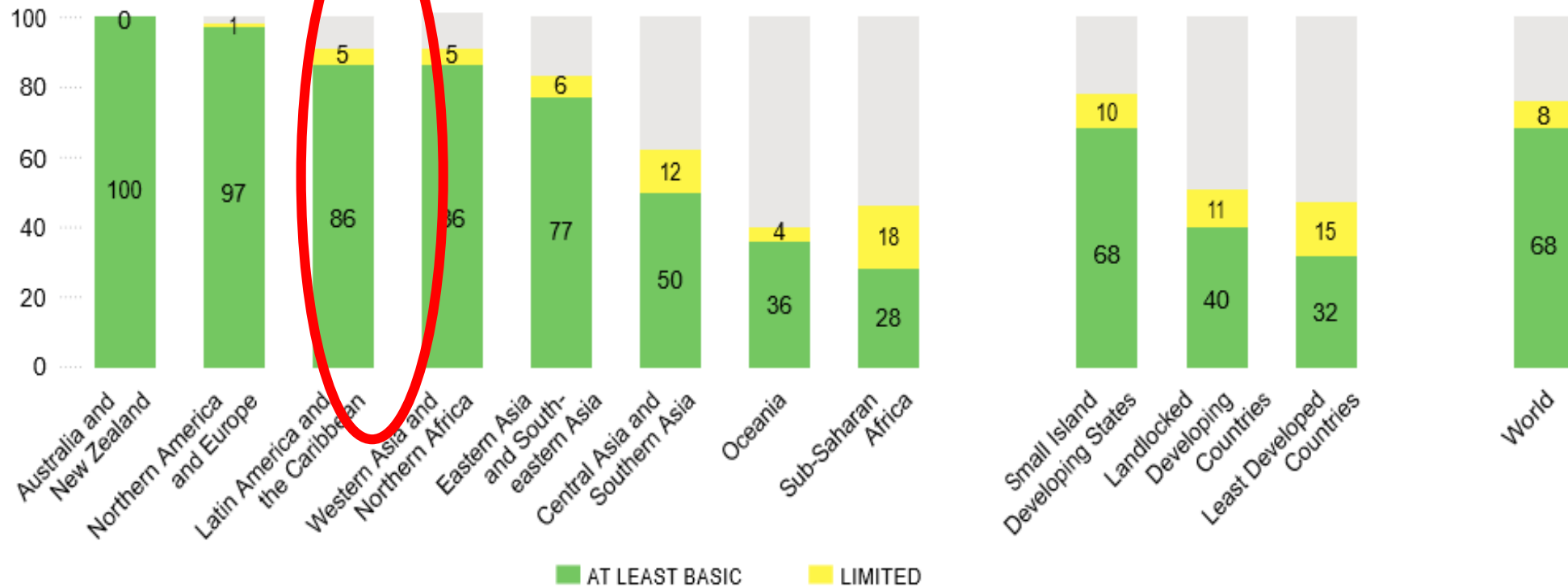


Fig. 19 Proportion of population with at least basic or limited sanitation services, 2015 (%)

Twenty-Seven percent of Urban Population in LAC benefits from Safely Managed Sanitation Services

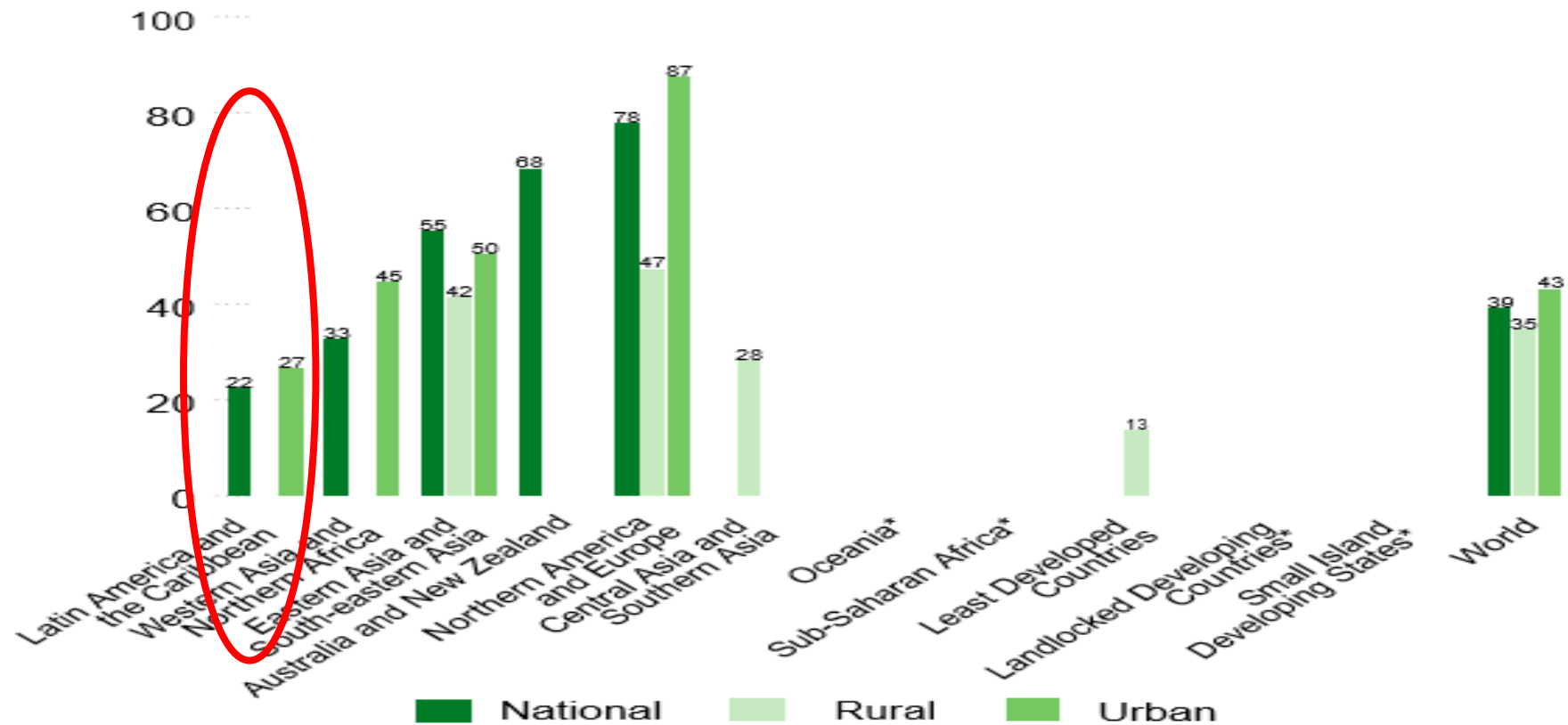
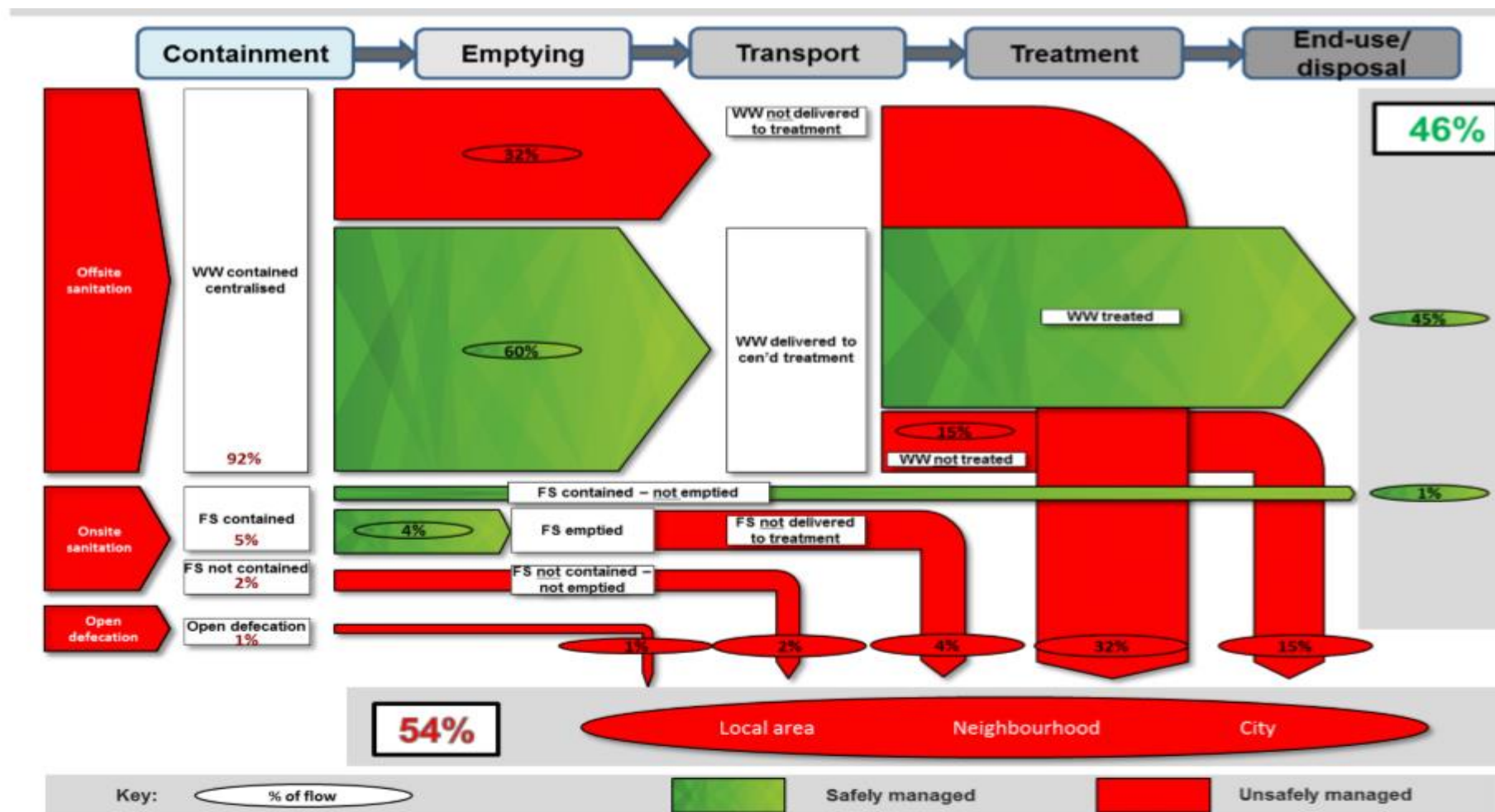


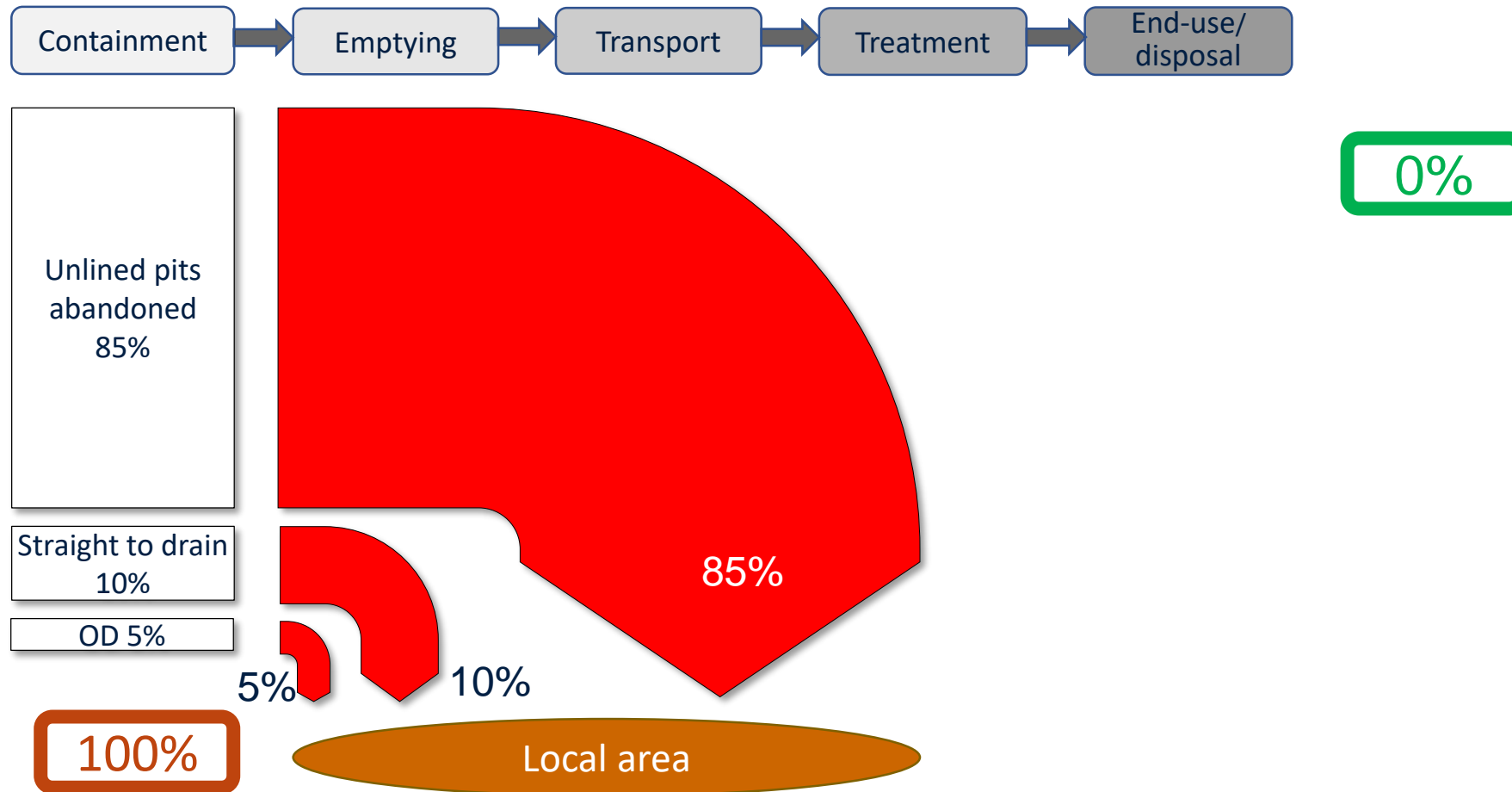
Fig. 39 Proportion of population with safely managed sanitation services in 2015, by region and urban/rural residence

SFD - Lima, Peru - 2016

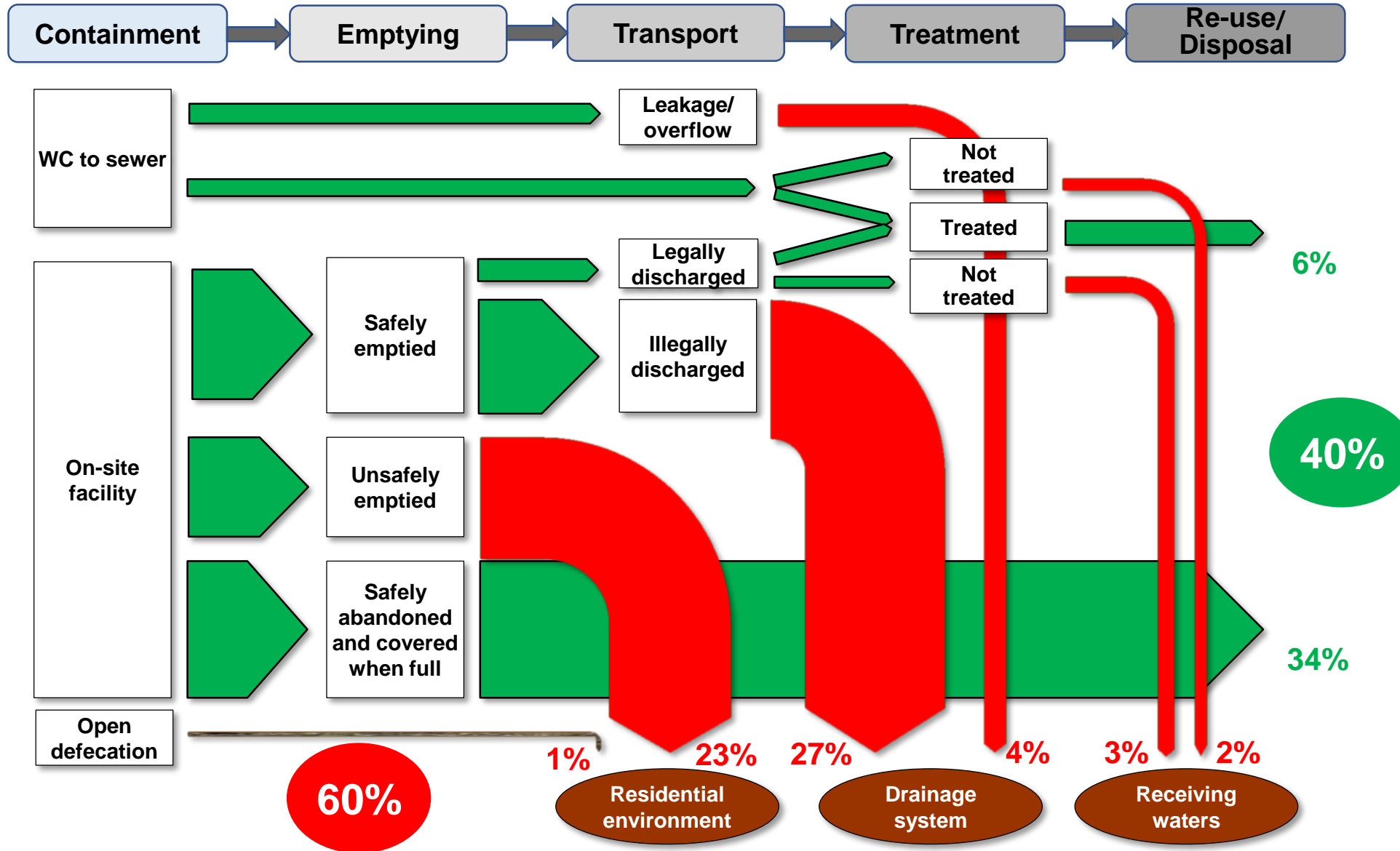


Source: SFD Report Lima, Peru, 2016 , WEDC and WSP

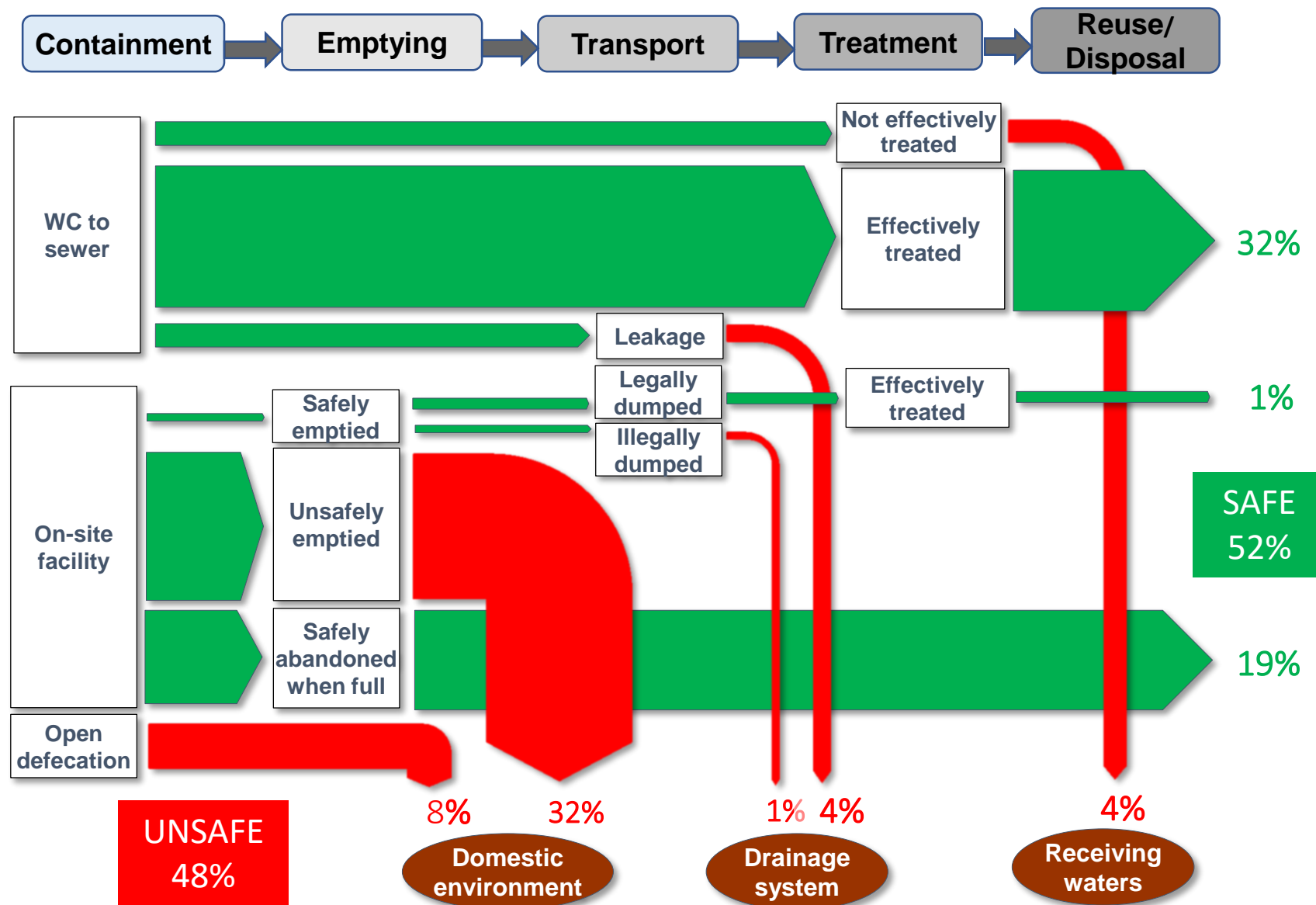
SFD - Slum analysis for Lima, 2015



Maputo Fecal Waste Flow - Whole City



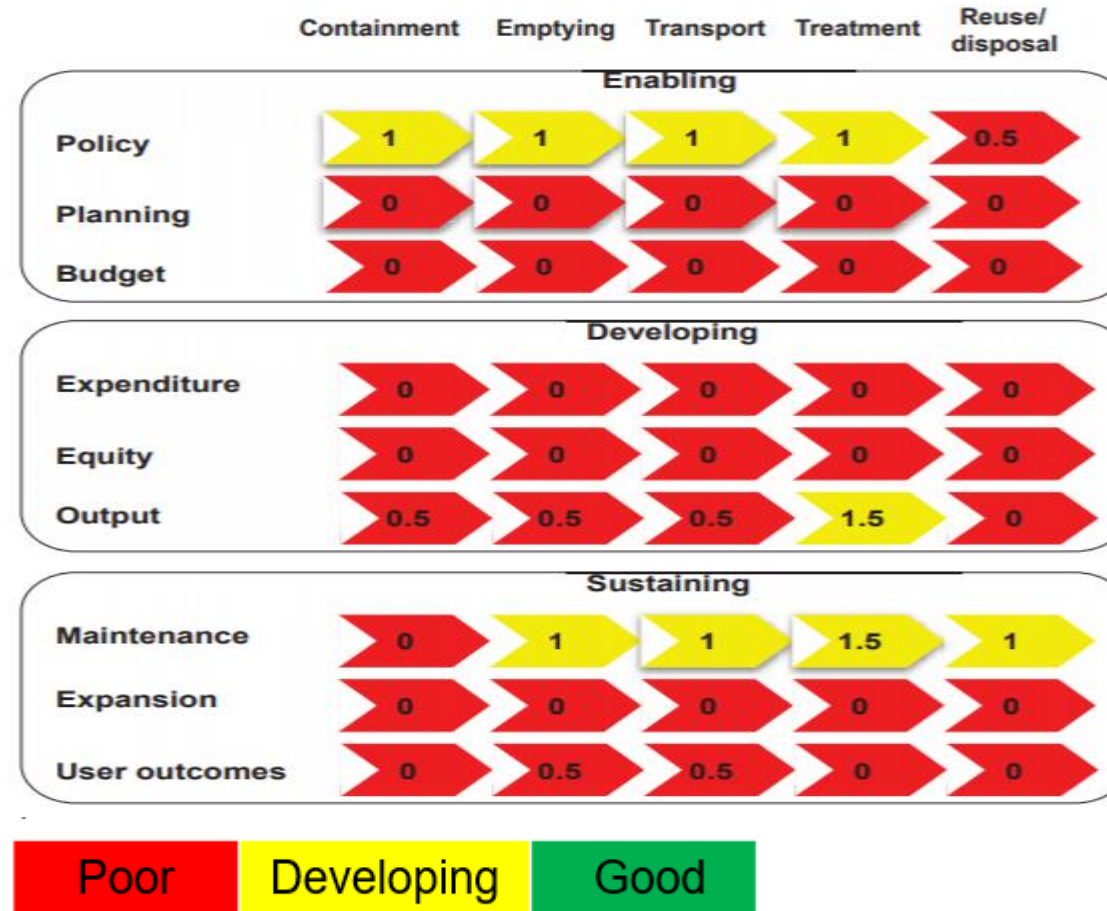
Managua, Nicaragua



Source: The Missing Link in Sanitation Service Delivery A Review of Fecal Sludge Management in 12 Cities, 2013, WSP

FSM Service Delivery Scorecard for Managua, Nicaragua

Enabling Policies, Service Providers, Financing



Sanitation services that are not safely managed lead to fecal contamination of neighborhoods and drainage systems within city



Source: Sanipath, Emory University, Christine Moe - Ghana

Innovation in Technologies and Business Models



Sanergy "Fresh Life" toilets in Nairobi, Kenya



Sanivation in Kenya

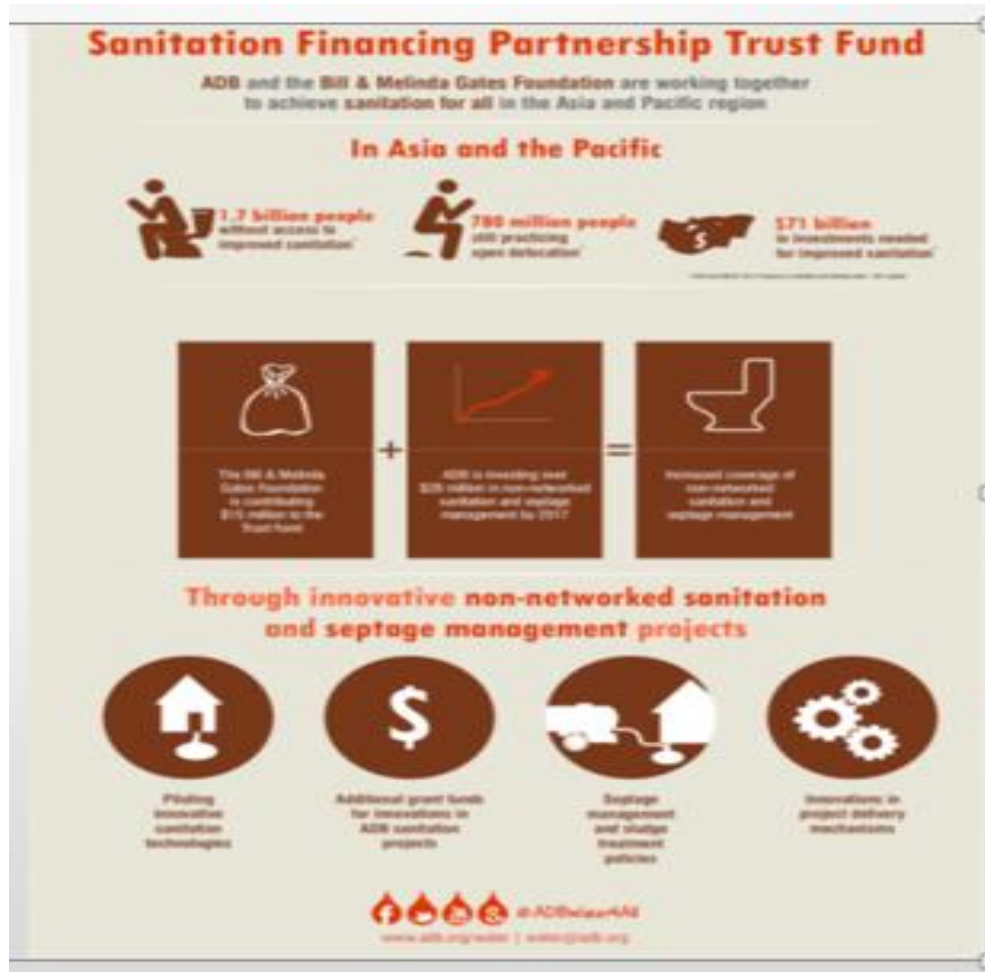


WSUP Clean Team in Kuamsi, Ghana

Innovative Financing

Partnership between ADB and BMGF for on-site urban sanitation and Safe Fecal Sludge Management

Targeted Financing in Ghana




World Bank OBA grant for urban poor targeted sanitation

Subsidizing on-site sanitation facilities and desludging services for poor urban families


Manila, Philippines: Service Delivery to the Rich & The Poor




Dakar, Senegal – Enabling a Private Market for FSM




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PROGRAM FOR THE STRUCTURING OF THE FECAL SLUDGE MARKET
FOR POOR PEOPLE IN DAKAR SUBURBAN AREAS
(Pikine and Guédiawaye)




THE CALL CENTER:
an innovative tool for the
development of the fecal sludge
market in Senegal




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PROGRAM FOR THE STRUCTURING OF THE FECAL SLUDGE MARKET
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(Pikine and Guédiawaye)




THE EMPTIER GUARANTEE FUND:
Easier access to funding



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PROGRAM FOR THE STRUCTURING OF THE FECAL SLUDGE MARKET
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PAYMENT OF DOMESTIC SEPTIC TANK EMPTYING
SERVICE THROUGH MOBILE MONEY:
improving people's financial access to
mechanical emptying services



Draft

Institutional and Regulatory Framework for Fecal Sludge Management (FSM):

Mega City Dhaka

Prepared by:

Working Committee formed by the Local Government Division,
Ministry of Local Government, Rural Development and Cooperatives

November 2015

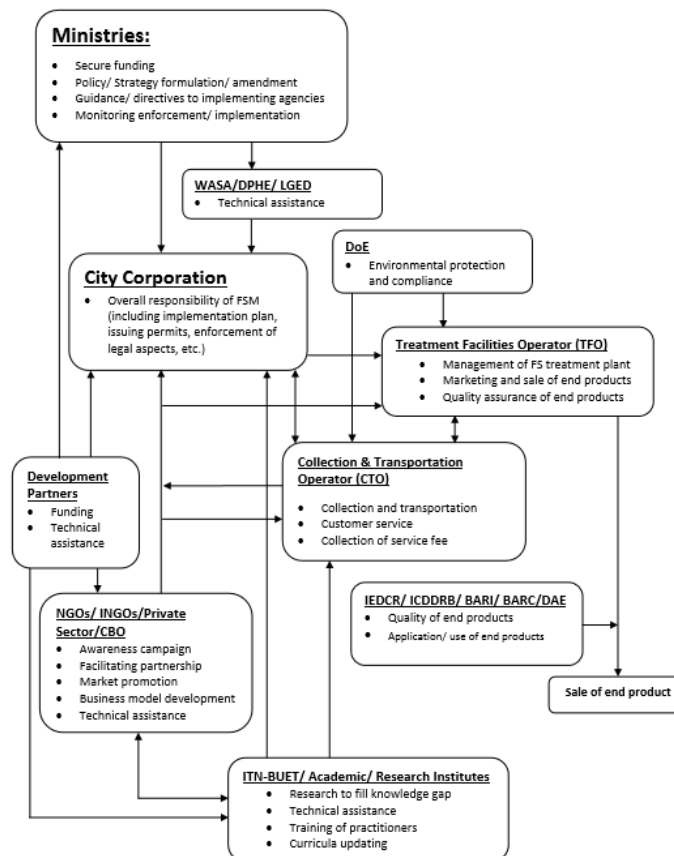


Figure 2: Institutional set up for fecal sludge management (FSM) in City Corporations

5.2 A Proposition of Fund Flow for FSM Services

Flow of funds from one step to another has to be considered carefully so that the FSM services are sustained. Considering the existing situation of fecal sludge management in a city, and the level of awareness among different stakeholders of the importance of FSM, a financial flow approach for the FSM service chain can be considered as suggested below (Figure 3).

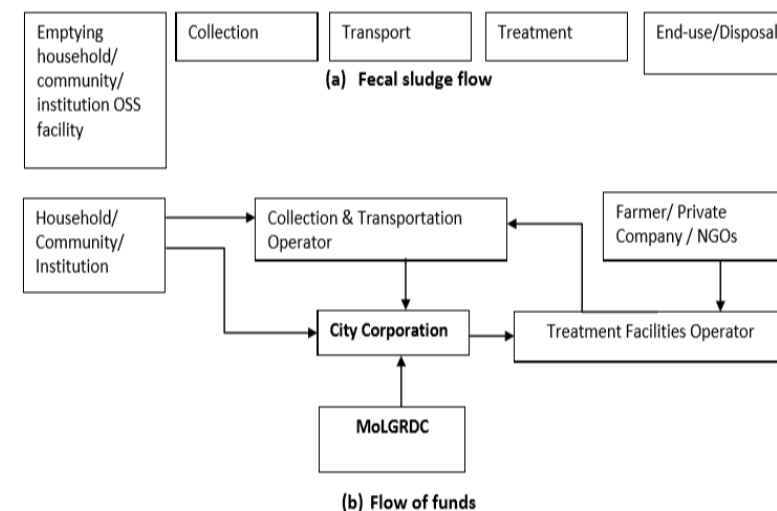


Figure 3: (a) Direction of sludge flow from HH to enduse/ disposal of treated sludge;
(b) Direction showing flow of money from different stakeholders for FSM service chain

Urban Sanitation Challenge for Ghana

A competition running from October 2015 to December 2018 opened to Metropolitan, Municipal, and District Assemblies (MMDAs) in Ghana. The challenge will include a series of monetary prizes and honorary awards.

Judging Criteria for Round 1	Overall weight
Increasing access to safe sanitation	20%
Comprehensiveness of the approach throughout the sanitation value chain	18%
Service delivery models	16%
Behaviour Change and community engagement	12%
Operational and environmental sustainability	10%
Financing strategy	10%
Reduction of inequality of access	10%
Monitoring of sanitation progress	4%
Overall	100%

Durban, South Africa

Institutional Transformation of Urban Utilities to Customer Focused Service Providers to Households Not Connected to Sewers

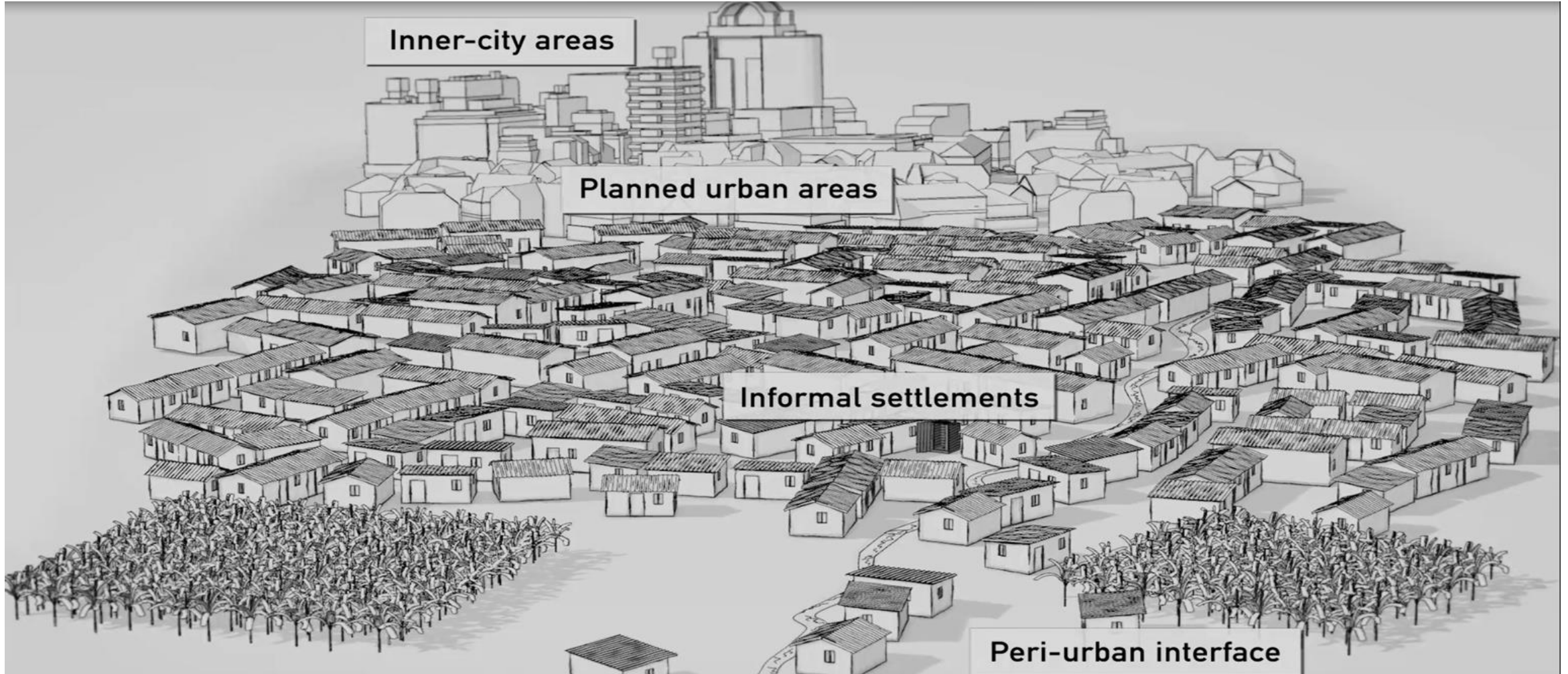
eThekweni Water and Sanitation



- Cost-recovery
- 3.6 million customers, 3000 staff
- Customer-orientated – ALL types of customers.
- Jurisdiction NOT based on technology
- Ring-fenced operations
- Progressive tariffs
- Internal cross-subsidies,
- Accessing all national programs possible
- Appr. 10% of budget spent on customer training
- Cooperating with other partners
- Strong research relations
- Incredibly innovative

A Call To Action

Citywide Inclusive Sanitation



A cross sectoral advocacy effort to stop doing business as usual in urban sanitation and ramp up efforts

Recommendations

- ✓ Reform policy, legislation and institutional mandates for utilities, local authorities, regulator to provide sanitation and FSM services on-site systems and unplanned settlements
- ✓ Build capacity in utility/local gov't to address on-site sanitation/FSM in unplanned low-income neighborhoods
- ✓ Aim for an effective mix of services along the sanitation chain
- ✓ Design a financing strategy for Sustaining sanitation services – including equitable subsidy policy for on-site sanitation and FSM as well as for sewers and WWTPs
- ✓ Enable private sector FSM service providers overseen by utility/local gov't
- ✓ Align and establish linkages with local gov't management of solid waste, drainage, land use, and enforcement of sanitary regulations