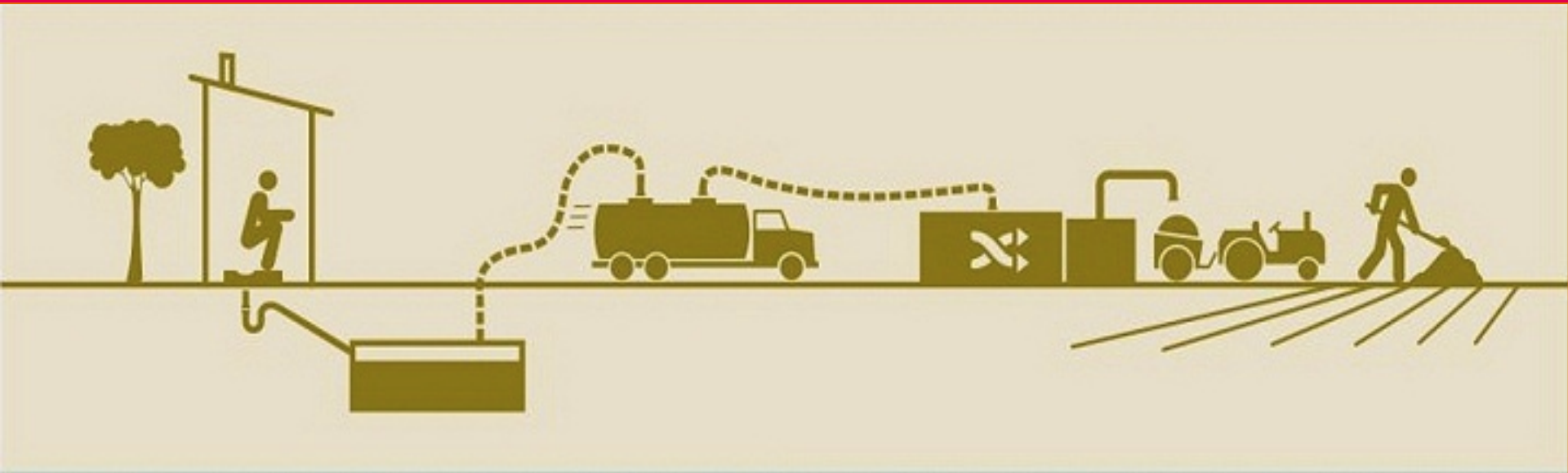


# Faecal Sludge Management Scenario in Odisha



Workshop on Septage Treatment Technology (by CEPT University)  
Hotel Hyatt, Pune  
21 October 2016

Pragyan P. Nayak  
WASH Consultant

# What is inside

- Overall Sanitation situation (World, India, Odisha)
- Urban Sanitation Status in India & Odisha
- Urban Statistics of Odisha
- Sanitation situation-State Perspective
- State Government reform works
- Piloting “Project Nirmal”
- Project Vision & objectives
- Expected Outcomes
- Institutional arrangements
- Intervention Cities
- Current FSM System in Angul and Dhenkanal
- Progress of “Project Nirmal” at a Glance
- Key Findings of Baseline Study
- Shit Flow Diagram - Angul Municipality
- Shit Flow Diagram – Dhenkanal Municipality
- Key Challenges
- Way Forward

# OVERALL SANITATION SITUATION

## World

- 2.5 billion - no access to improved sanitation facility
- 761 million- public/shared facilities
- 693 million- below standard facilities
- 1 billion (15% of world population)- Practices OD

## India

- 626 million Indians practice OD

Source: **UNICEF-WHO Joint Monitoring Programme (2012).**

## Census India

- 46.92% (Rural-30.74% and Urban-81.36%) HH have Latrine
- 53.08% (Rural- 69.26% and Urban-18.64%) of households have no latrine facility
- 49.84% (Rural-67.32% and Urban-12.63%) of households practicing OD

## OD

- Smaller the size of the city, the greater the prevalence of open defecation.
- 20,000 households, the open defecation is practiced by 68% of the population.

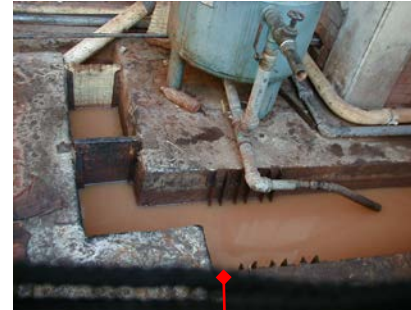
# SANITATION SITUATION: INDIA



Overflowing sewer



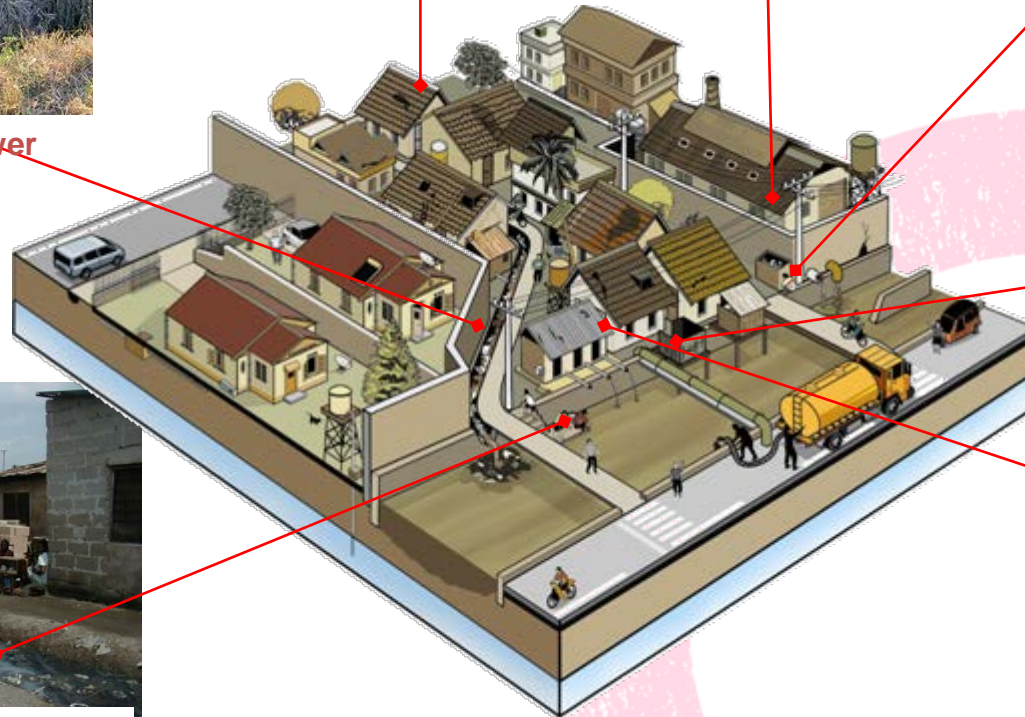
Abandoned Public Toilet



Industrial effluent



Open defecation



Polluted open water



Open washing places



Unhygienic toilet

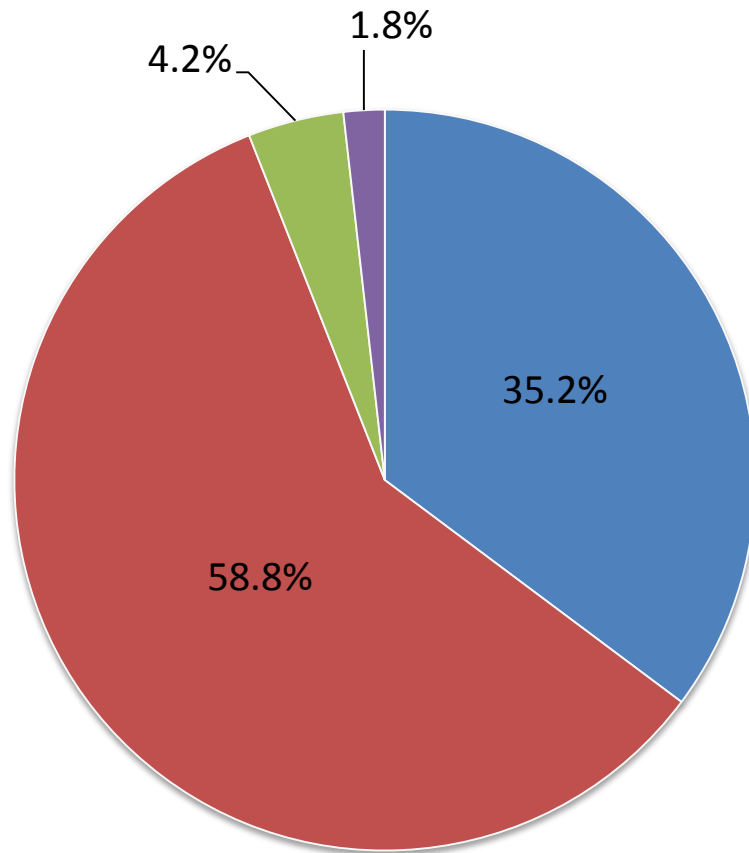


# Urban Sanitation Status - Odisha

	India	Odisha
Total HHs	78.8 Million	1.5 Million
IHL	64 Million (81.2%)	982,744 (64.8%)
Water Closet	57 Million (72.3%)	892,153 (58.8%)
Pit Latrines	5.6 Million (7.1%)	63,372 (4.2%)
Other Latrines	1.3 Million (1.7%)	27,219 (1.8%)
No Access to IHL	14.7 Million (18.65%)	534,329 (35.2%)

Data Source: Census 2011

# Urban Sanitation Status in Odisha



## Access to Individual HH Toilets

■ No access (Community Toilet 2%, OD 33%)

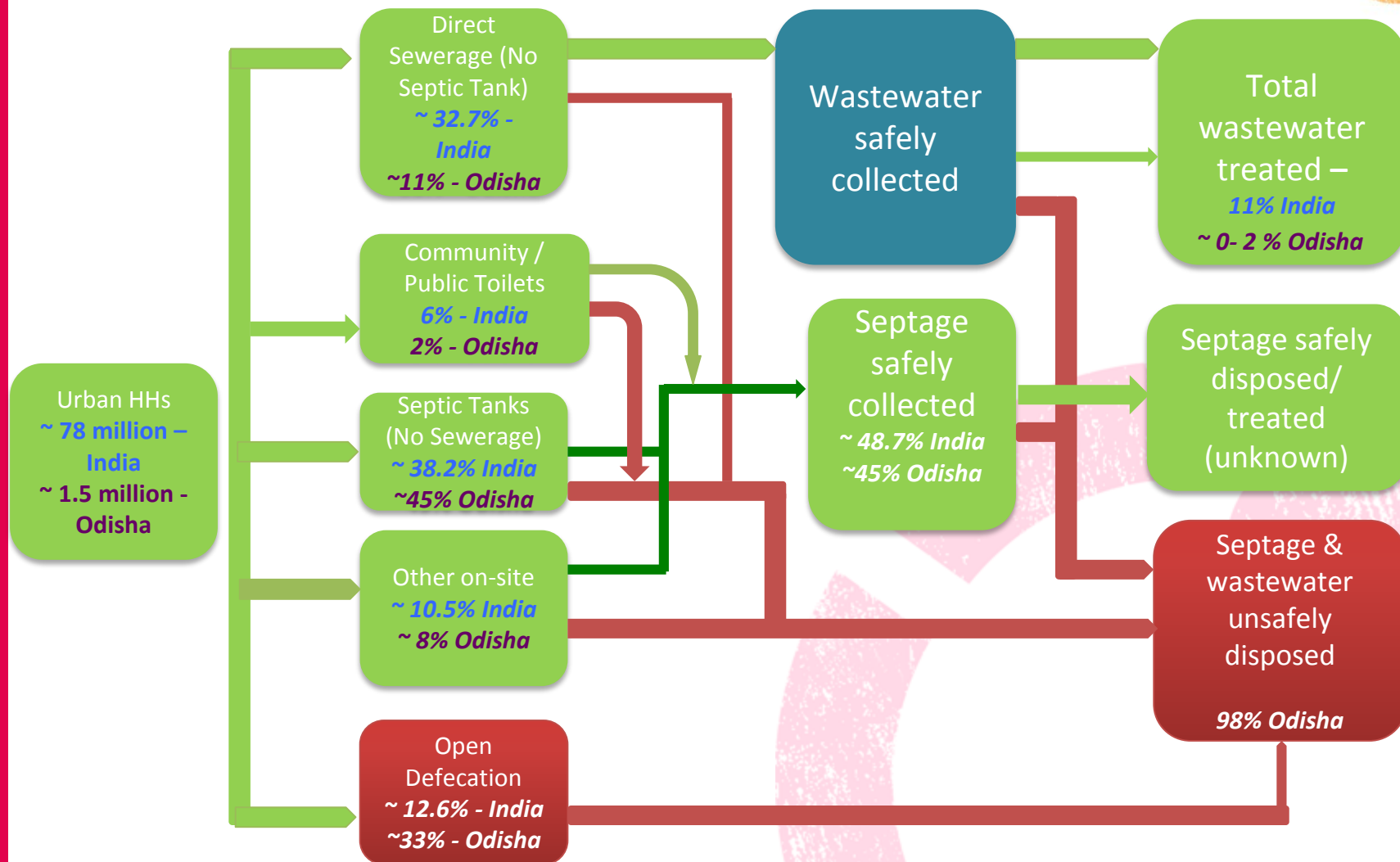
■ WC

■ Pit Latrines

■ Others

Data Source: Census 2011

# Urban areas in Odisha have higher OD and lower safe disposal



Data Source: Census 2011

# Urban Statistics Odisha

Description	Data
Total no. of ULB	110
No. of Municipal Corporations	5
No. of Municipalities	45
No. of NACs	60
Population	7,003,656
HHs	1,517,073
Male-Female Ratio	51.8 : 48.2
%age of Urban Population in State	16.69%
Decadal growth	26.94%

Data Source: Census 2011



# Toilet without FSM = Promoting Open Defecation



**One truck of Sludge dumped open = 5,000 people defecating in open**

If we are discharging openly at least one cesspool from each 110 ULBs in Odisha, we are actually promoting 5,50,000 urban people defecating in open everyday.

# Sanitation situation-State Perspective

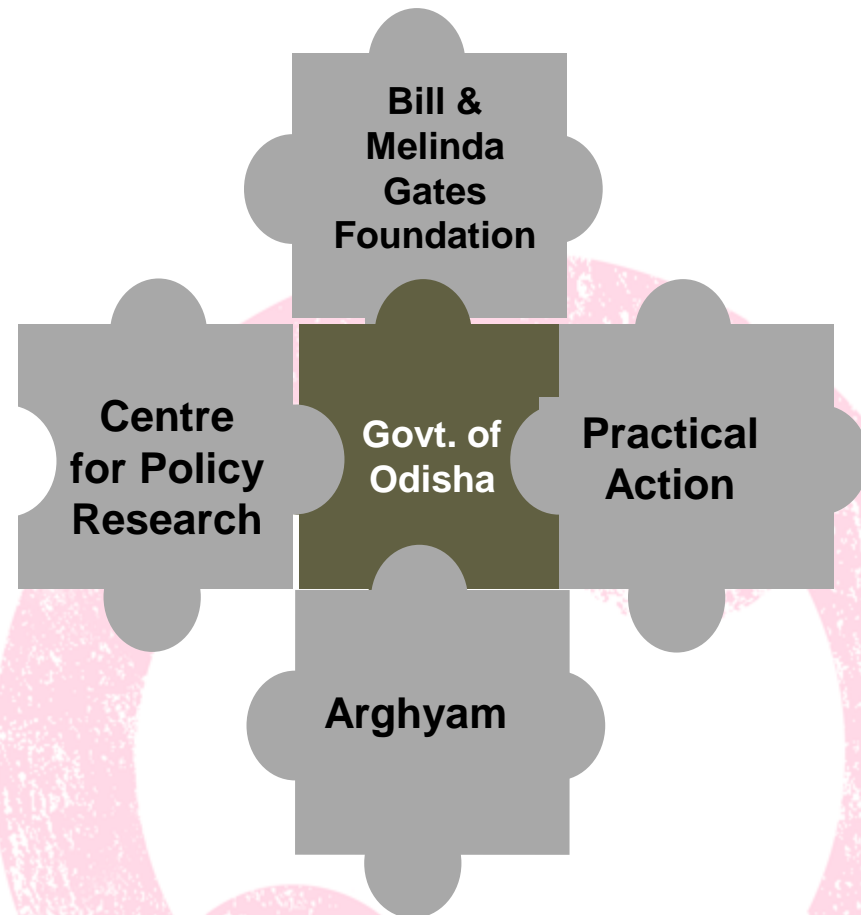
- No regular Faecal Sludge Management (FSM).
- Disposed untreated in the open environment resulting equal threats as Open Defecation does.
- As per OWSSB, July 2016 report
  - Only three of the Municipal Corporations in the state have adequate sewerage provisions
  - Only 2% treated by any formal sewage treatment system.
- Access to septic tank/pits by cesspool vehicles.
- No models demonstrating city wide success in the State.

# State Govt. reforms works..

- A 15 MLD capacity sewerage system commissioned in Puri.
- Three no.s of STPs combined treatment capacity of 100 MLD - under execution at Bhubaneswar & Cuttack.
- Two no.s of STP at Rourkela (48 MLD) and Sambalpur (40 MLD)- Administrative approval in process and preliminary activities initiated.
- Preparation of DPR for Sewerage System in Berhampur under progress.
- Septage management in nine cities included under 'AMRUT' launched by Gol.
- The draft DPRs for septage treatment facility in 5 cities prepared by OWSSB. Land processes accorded.
- The Odisha Urban Septage Management Guideline 2016.
- 86 no.s of 3KL Cesspool Emptier for 57 ULBs.

# Piloting “Project Nirmal”

- **Project Duration:** January 2015 – December 2017
- **Project location:** Angul & Dhenkanal
- **Project Implementation Agencies:** Practical Action, Bhubaneswar; and Centre for Policy Research, New Delhi
- **Project Funding Agencies:** Bill & Melinda Gates Foundation, Arghyam Trust
- **Project Government Partners:** Housing and Urban Development Department, G/o Odisha, and Municipal Corporations of Angul & Dhenkanal



## Vision of Project Nirmal

- Demonstration of sustainable sanitation service delivery for small towns
- Increased coverage of households and institutions
- Enabling institutional and financial arrangements, and
- Increased private sector participation.

## Project Objectives

- Demonstrate State Government and ULB commitment towards sanitation service delivery in small towns.
- Capacity development of states and cities for effective sanitation service delivery.
- Increase in number of people in pilot towns with access to better sanitation services.
- Improve city-wide planning approaches for sanitation.
- Demonstrate models for FSM.



# Expected Outcomes

## National

- Improve city-wide planning approaches for sanitation
- Demonstrate FSM models for next phase of SBM (U)

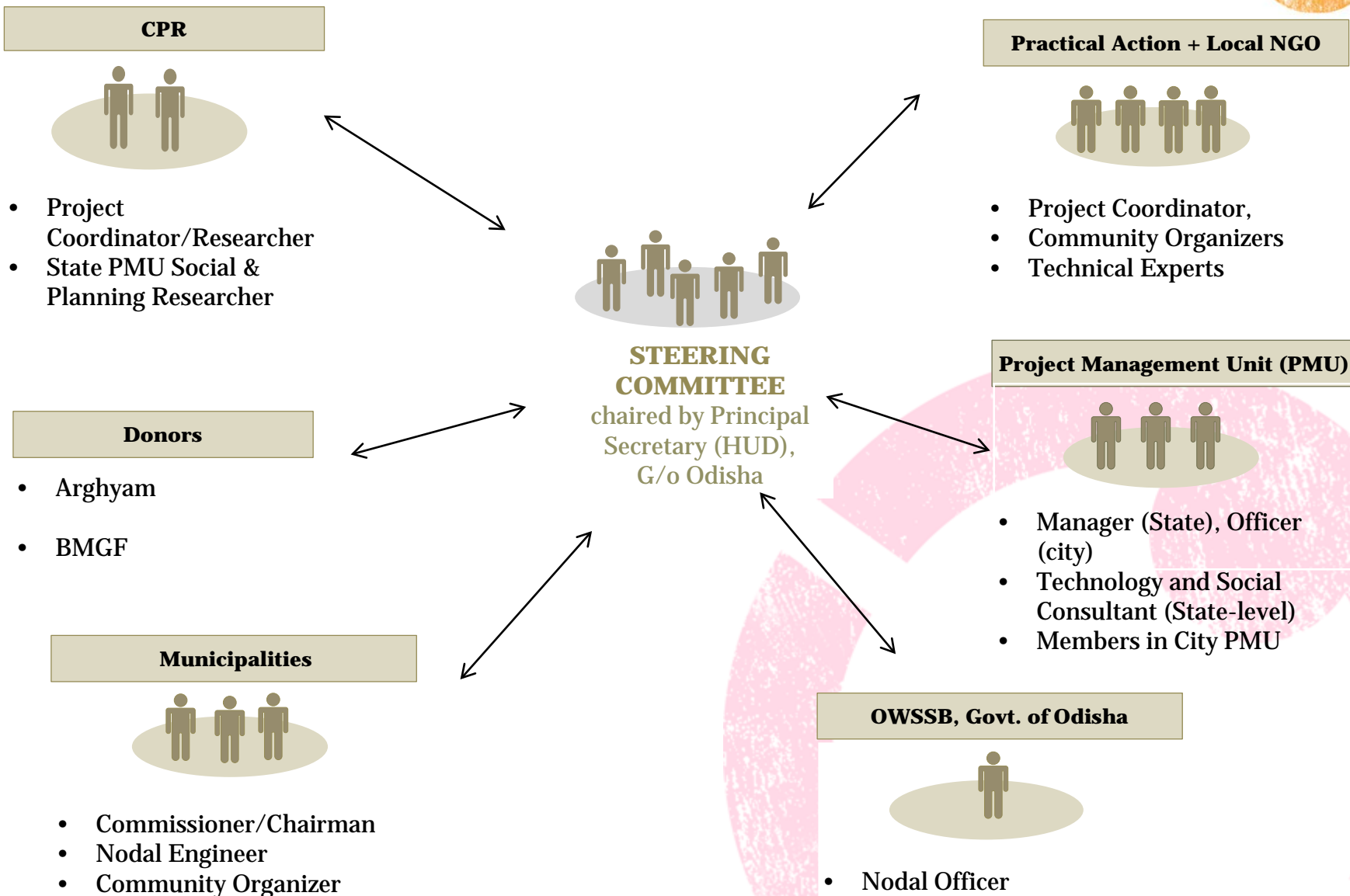
## State

- Demonstrated State Government and ULB commitment towards sanitation service delivery in small cities
- Long-term sustained capacity development of states and cities for effective sanitation service delivery

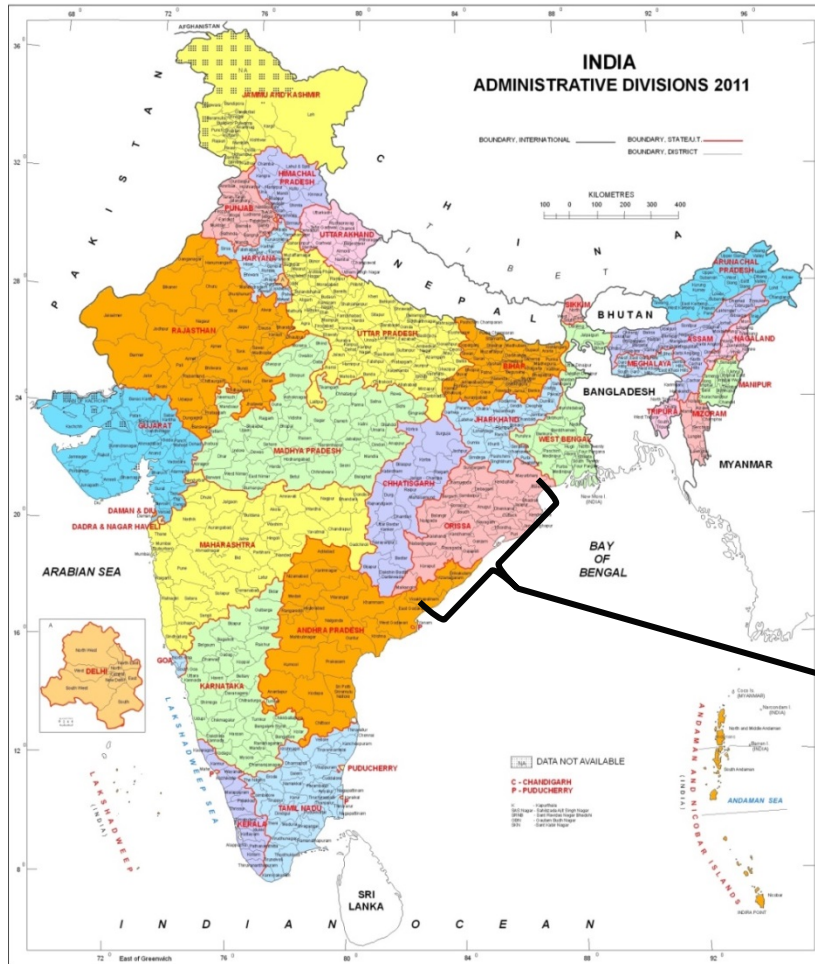
## City

- Pilot demonstration of city-wide FSM services
- Operationalization of strong community engagement in sanitation
- Increased number of households in pilot cities have access to better sanitation services

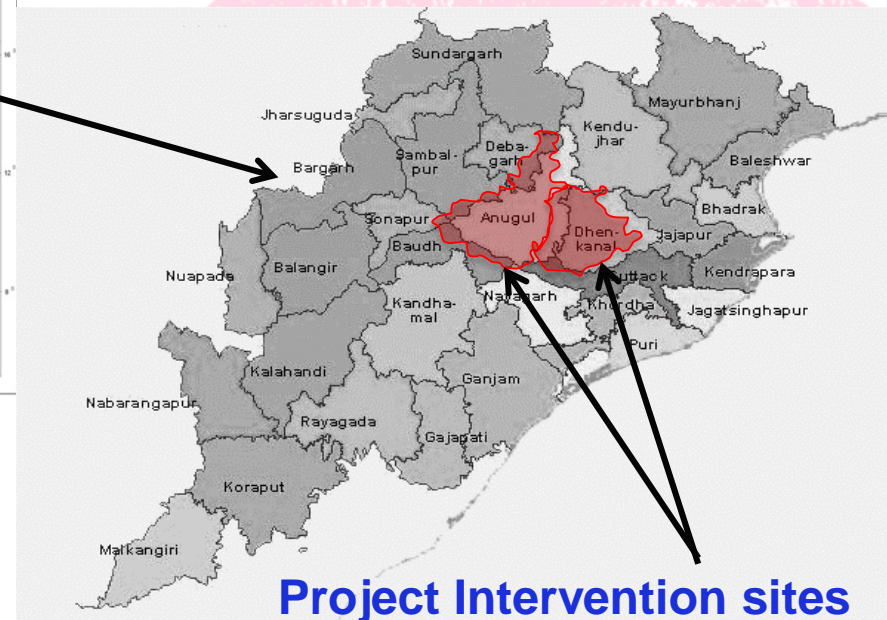
# Institutional arrangements



# INTERVENTION CITIES



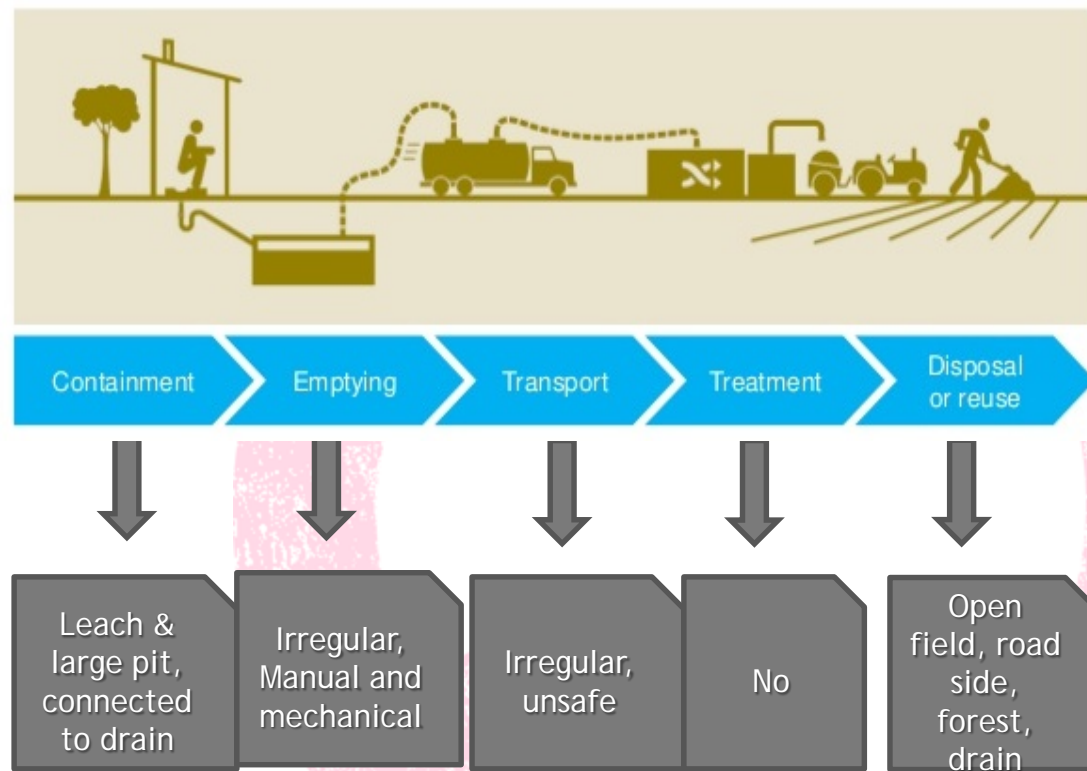
City Name	Anugul (M)*	Dhenkanal (M*)
Urban Population	43,795	67,414
Number of Households	9778	14908
Coverage of Septic Tanks (%)	62.1 %	60.7 %
Water Supply (%)	66.7 %	67.3 %
Slum Population (%)	42.10 %	13.20 %
IHL %	78 %	75%



Data Source: Census 2011



# Current FSM System in Angul and Dhenkanal



# Progress of “Project Nirmal” at a Glance



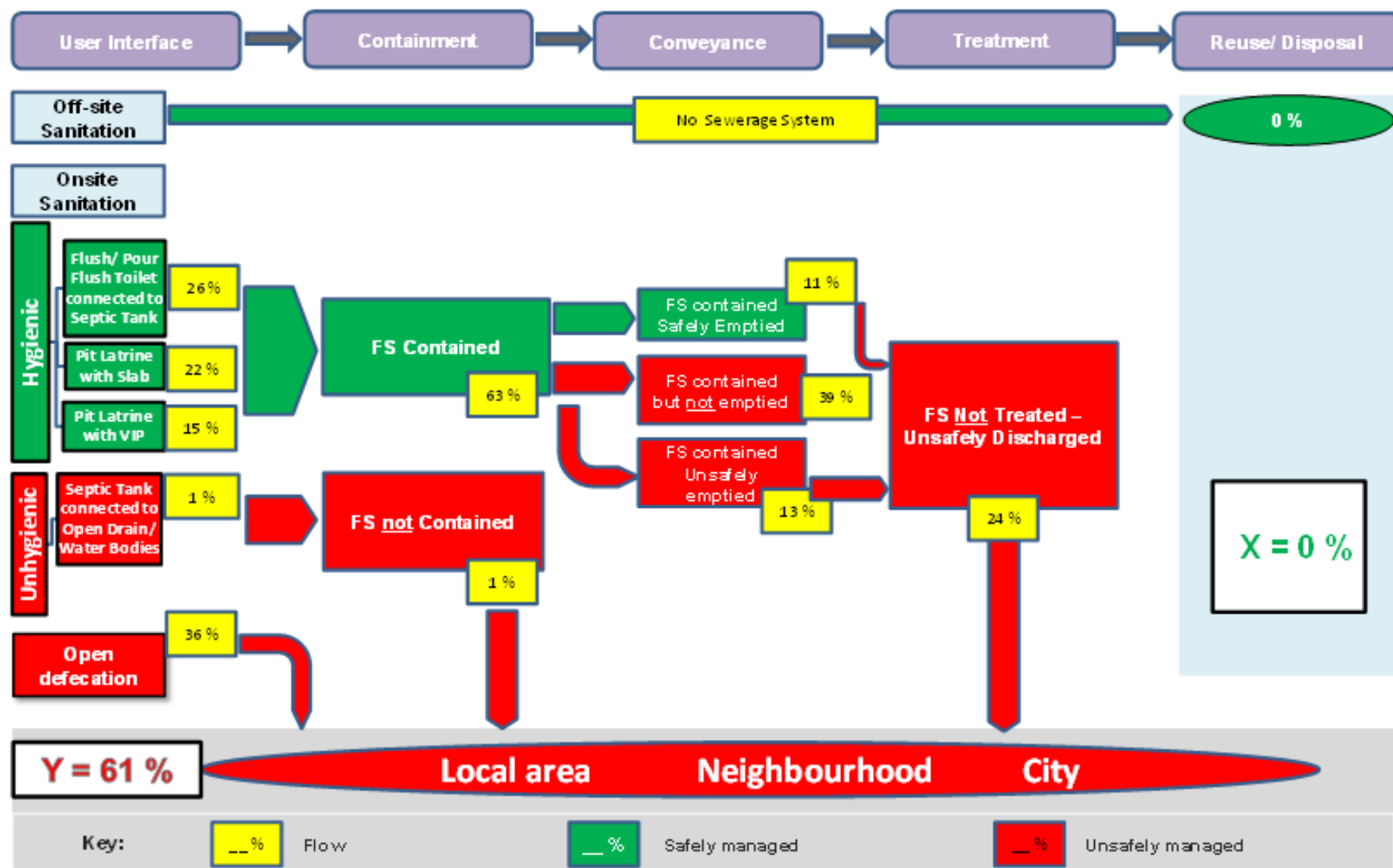
- City selection
- Request letter from ULB
- MoU with state Govt.
- State and City Launch Workshops
- PSC Notifications
- Municipal Council resolutions
- PMU at city and state level
- Slum/Ward Sanitation Committee formation July 2015
- City Sanitation Task Force (CSTF) July 2015
- District Coordination Committee (DCC) Oct 2015
- Baseline Study
- IEC Campaigns
- Participatory Market System Development (PMSD)
- GIS Mapping
- Land assignment process
- Capacity Building



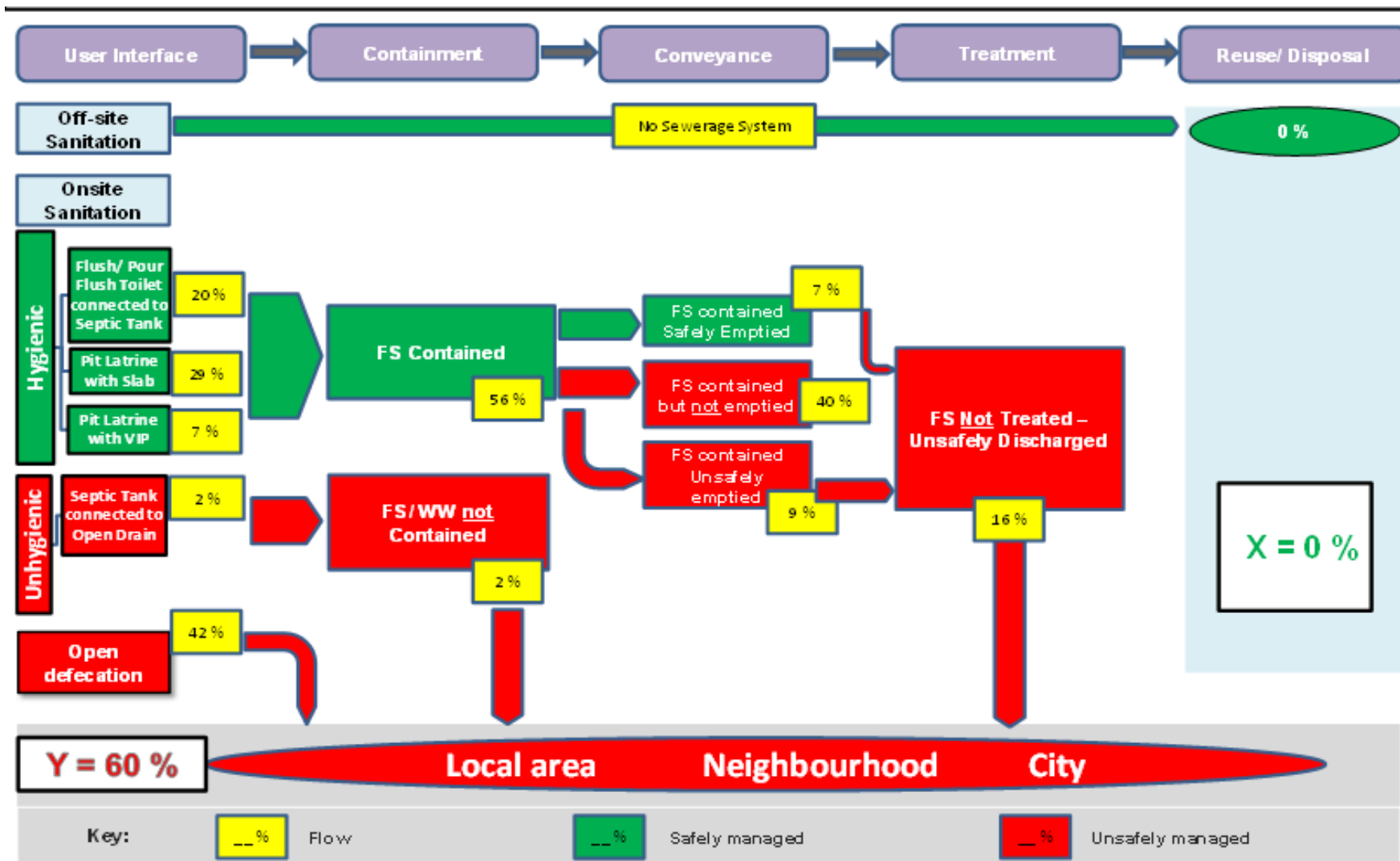
# Key findings from Baseline Study

City Name	Anugul (M)*	Dhenkanal (M*)
Urban Population	43,795	67,414
Number of Households	9778	14908
Number of Wards	23	23
Number of slums	27	18
Sample size	2540	4253
Individual Toilet or Shared Toilet (%)	64.3	57.5
OD (%)	36	42.4
Community Toilet	NIL	NIL
Sewerage system	NIL	NIL
Emptying	Municipality cesspool vehicle not functional. Manually (54%), Private operator (39%)	No Private Operators, Manually (58%), Municipality (42%)
Desludging (%)	36%	29%
CSP	Not developed	Not developed

# Shit Flow Diagram-Angul Municipality



# Shit Flow Diagram-Dhenkanal Municipality



# Key Challenges

- FSM is a new concept.
- Inadequate data & information at city and state level
- Political Dynamics
- Socio-cultural practices
- Absence of infrastructures and services at slums
- Absence of Regulations (FSM)
- Promoting decentralized systems.
- Constructing toilets with proper storage system by Slum communities (cost/space etc.)
- Administrative challenges.
- Land for treatment sites (Govt. processes / Community resistance)
- Liquid waste is not seen as a business so far.
- Higher rates of OD. Need for collective behavioural change.
- Uncertainty about O&M (lack of regulations, resources, expertise)

## Way Forward

- The Government system is gearing towards sensitized actions for treating the generated sludge in the State. Civil Societies and Private Sector needs to join hands with Government to ensure achievement of cleaner cities.
- Creating awareness among the urban/slum communities on the adverse impact of open defecation is vital towards building clean and healthy cities.
- The government and municipal authorities need to come out with required guidelines and policies for FSM.



# Thank you!



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[www.practicalaction.org](http://www.practicalaction.org)