

# 4th International Fecal Sludge Management Conference

19-22 February 2017, Chennai, India

**Dissemination of technological and social innovations  
for better management of fecal sludge in Africa :  
approaches, lessons learned and challenges.**

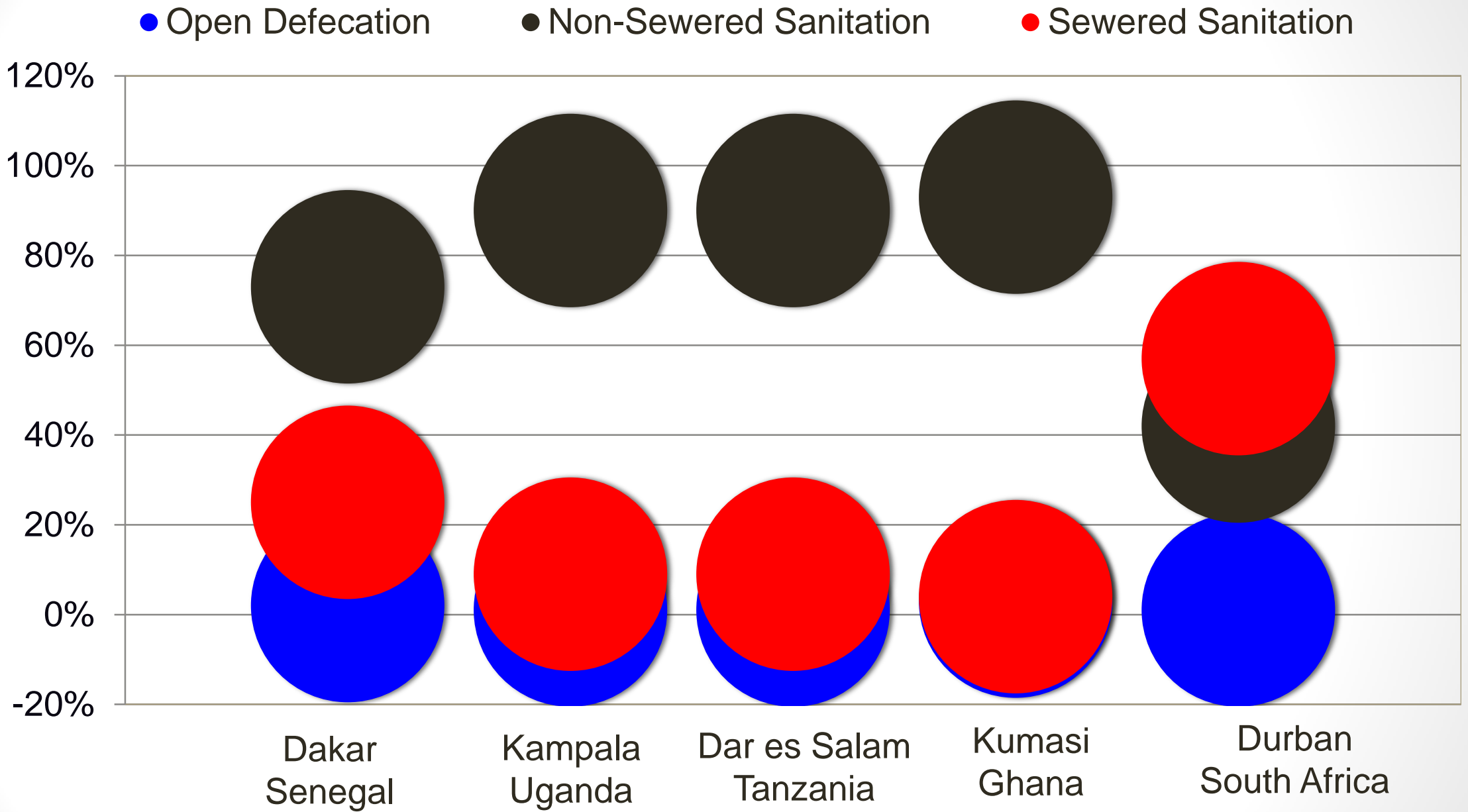
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# Background

- ❑ 2.6 billion people practice open defecation or do not have access to improved sanitation.
- ❑ 2.7 billion people worldwide are served by onsite sanitation technologies.
- ❑ This number is expected to grow to 5 billion by 2030.
- ❑ There is any efficient management system in place for the collection, transportation and treatment of FS.
- ❑ FSM is seen as a “temporary” or stop-gap solution and primarily for illegal or informal settlements (WSP)





# Shit Flow Diagram (SFD), Africa

- ❑ SFD are a new way of visualizing excreta management in cities.
- ❑ It shows how excreta is or is not contained as it moves from defecation to disposal or end-use, and the fate of all excreta generated.
- ❑ SFD are a useful tool to inform urban sanitation programming.
- ❑ SFD are a communication tool



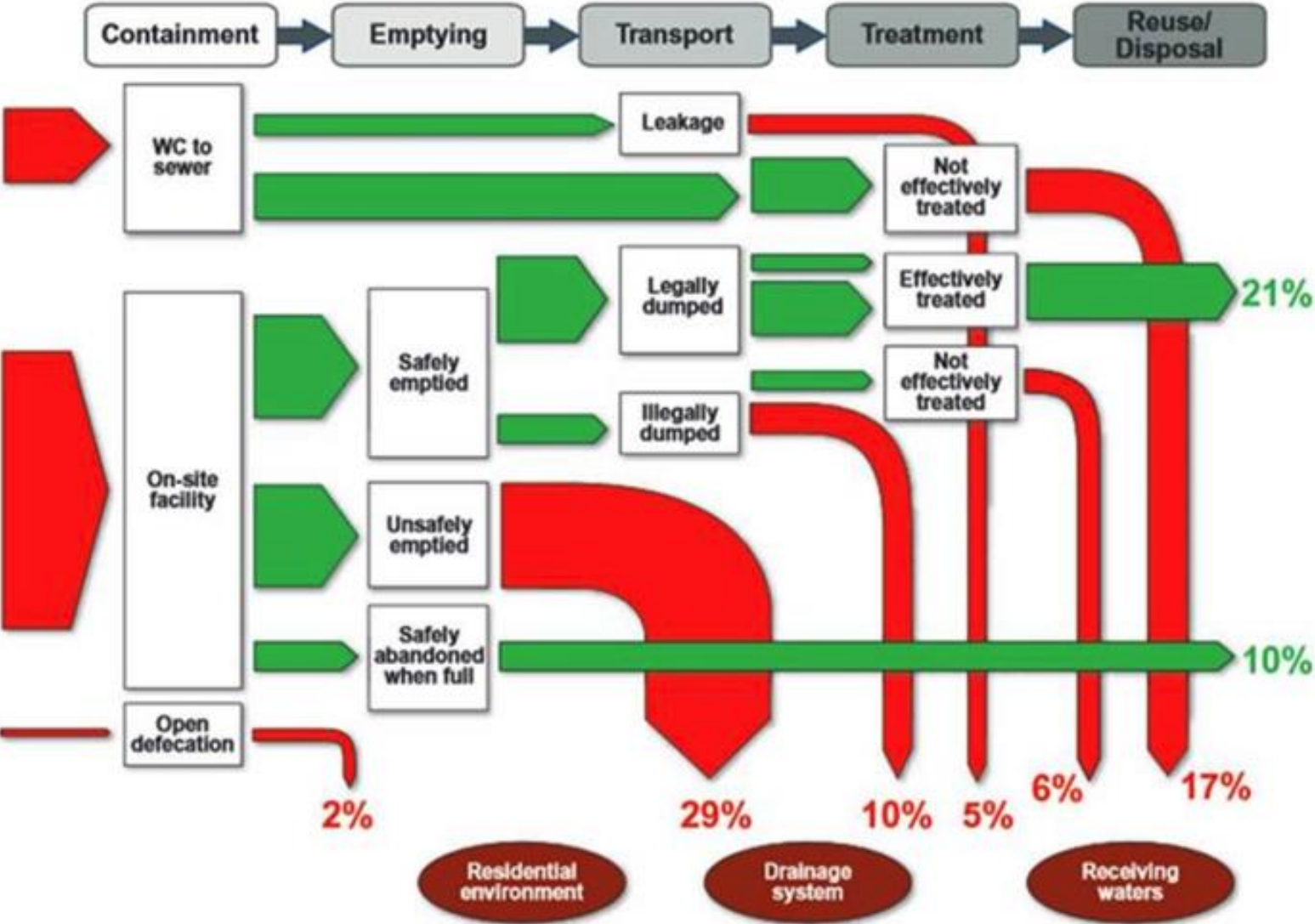
# Comparison of SFDs across Africa

| City | Country | Proportion of population using sanitation type |         |                    | Treated (Safe) |
|------|---------|--|---------|--------------------|----------------|
|      |         | OD   | On-site | Off-site (sewered) |                |

**45 to 70% of liquid waste are unsafely managed !!!**

|                      |              |    |     |     |     |
|----------------------|--------------|----|-----|-----|-----|
| <b>Dar es Salaam</b> | Tanzania     | 1% | 90% | 9%  | 43% |
| <b>Maputo</b>        | Mozambique   | 1% | 89% | 10% | 46% |
| <b>Kumasi</b>        | Ghana        | 3% | 93% | 4%  | 55% |
| <b>Durban</b>        | South Africa | 1% | 42% | 57% | 74% |

# Dakar's shit flow diagram (SFD)



# Challenges

- ❑ Manual emptying (40% to 60% of practice)



- ❑ Quality of emptying equipment : Trucks too old and inefficient



High emptying cost

# Challenges

- ❑ Limited awareness of policy makers on FSM
- ❑ Unclear legal and regulatory framework for FSM
- ❑ Knowledge gap on profitable treatment technologies





# Way forward ... development of social and technological innovations !

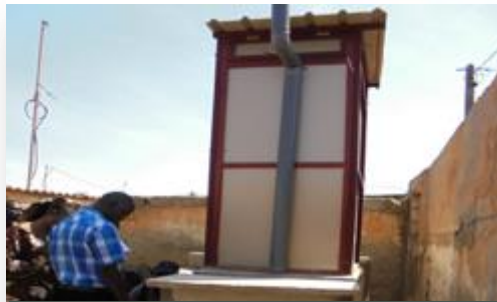
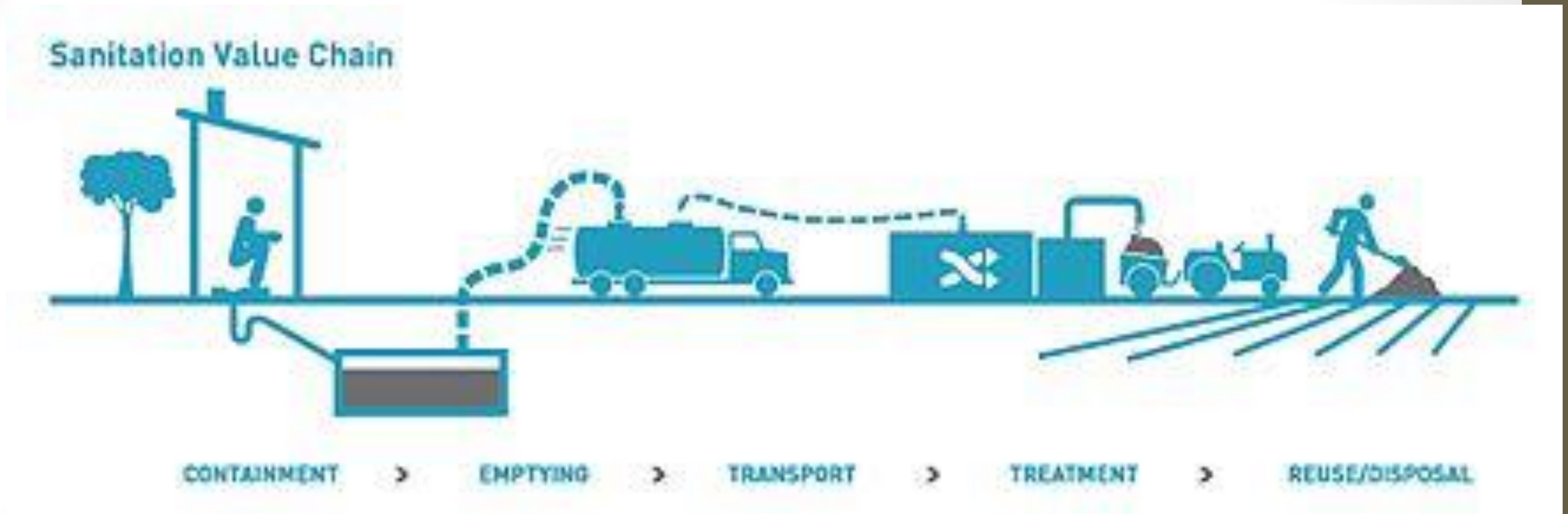
- **at country level (pilot):** Program of structuring of FS market for the benefit of poor HH in Dakar (PSMBV - ONAS)
- **at regional level :** Reinforcing Capacity of African Sanitation Operators on Non-Sewer and FSM systems through peer-to-peer learning partnerships (RASOP-Africa)



BILL & MELINDA  
GATES *foundation*



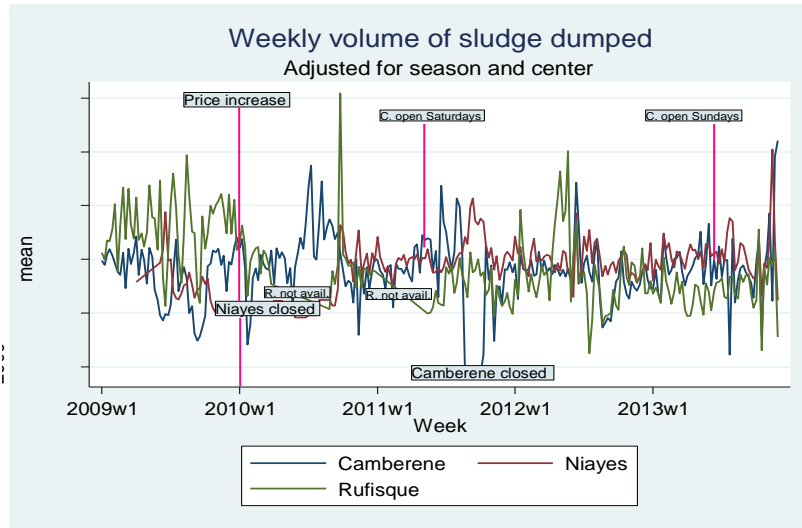
# Dakar achievements ...



International tender for adapted toilet !

- ❑ License for operation
- ❑ Call center
- ❑ Access to investment for truck renewal
- ❑ Testing of innovative technology (BMGF Omni-ingestor)
- ❑ Increasing private sector participation and investment
- ❑ Paradigm shift : link sanitation and business
  - Privatization of the existing FSTP
  - Janicki Omni-processor

# Dakar achievements ...



- ❑ Mechanized desludging increased substantially !!!



- ❑ Reduction of the cost of mechanical emptying !!!

# Dakar's lessons learned ...

- ❑ A successful project on FSM requires a holistic approach
- ❑ The private sector must be the engine of FSM !!!
- ❑ The introduction of high-value system is essential to a significant cost reduction!
- ❑ Innovations (certification, call center, guarantee funds, etc.) have been decisive in the improvement of service delivery.
- ❑ A clear institutional organization with a public sector in its real role of regulator is essential for success.

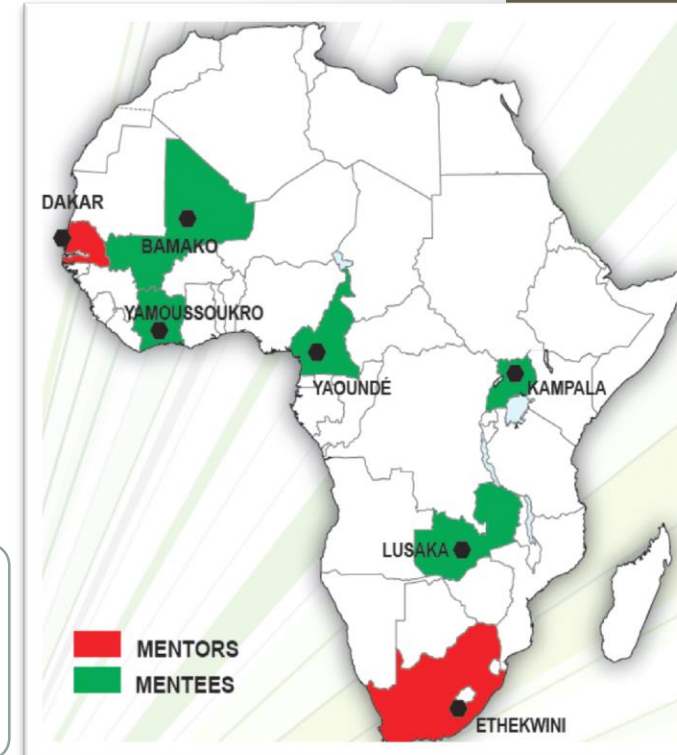
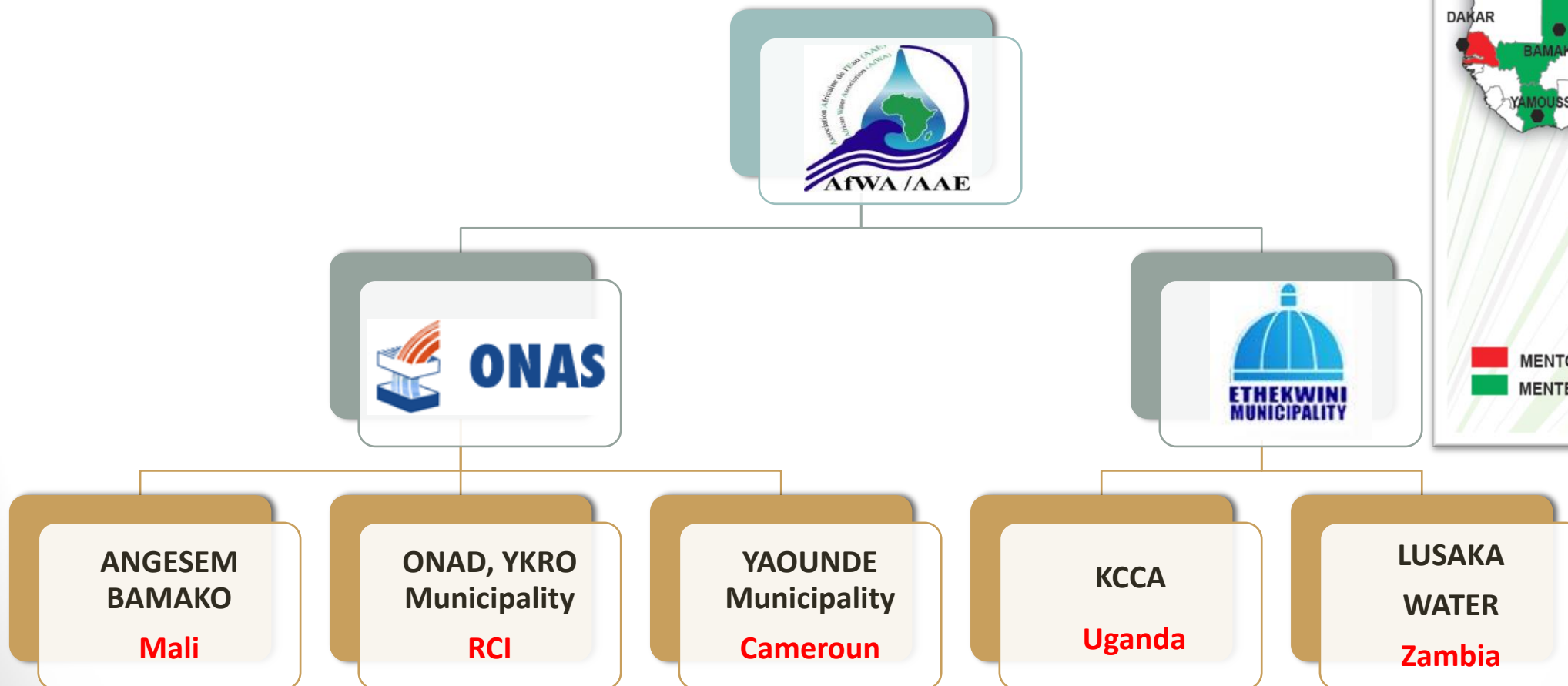
# Dakar's lessons learned ...

*What role should each actor play?*

| Public Sector   | Private sector  |
|---|---|
| <ul style="list-style-type: none"><li>• Regulation and enforcement</li><li>• Research</li><li>• Mobilization of investment</li><li>• Strengthening of the PPP</li></ul> | <ul style="list-style-type: none"><li>• Service delivery</li><li>• Innovations</li><li>• Studies and monitoring</li></ul> |

| Populations  | Donors  |
|--|---|
| <ul style="list-style-type: none"><li>• Beneficiaries</li><li>• Watchfulness for a continuous improvement of the service</li></ul> | <ul style="list-style-type: none"><li>• Investment</li><li>• Incentives for Innovations</li><li>• Control</li></ul> |

# ... Dakar's results dissemination: RASOP-Africa Program, a sanitation operators partnership



## ... RASOP-Africa Program main objectives

- ❑ To adapt and spread technical guidance to promote NSS and FSM
- ❑ To build the capacity of sanitation operators in 5 countries through SOP
- ❑ To support sanitation operators to develop strategic sanitation plans and regulatory framework
- ❑ To get on hand a city-model for the development of FSM in Africa

## ... RASOP-Africa Program main achievements

- ❑ Matching and formalizing partnerships between mentees and mentors
- ❑ Organization of launching workshops at country level
- ❑ Benchmarking visits
- ❑ Initial evaluation
- ❑ Adaptation of the FSM toolbox
- ❑ Audits visits
- ❑ Dissemination





## ... RASOP's scaling up model in 7 steps

1. Recruitment and training of experts by group of cities
2. Initial assessment based on the use of the FSM toolbox
3. Elaboration of a PIP for each city
4. Strategic Planning Workshop
5. Selection of projects (investment projects)
6. Round table of donors
7. Implementation

## ... RASOP's lessons learned

- ❑ Strong tool for advocacy and dissemination of innovations
- ❑ Access to existing and applied solutions through a partnership (South-South)
- ❑ Need to be shorten for a rapid identification of solutions
- ❑ Must based on skilled Consultants (training endless important!!!)
- ❑ Don't copy and paste solutions from mentors but ... ADAPT!!!
- ❑ Involve Donors at the early stage of the process
- ❑ Must be driven by a strong structure, experienced in conducting partnerships (such as AfWA)

*Thank for your kind attention!*