

Market Structuring of Fecal Sludge Management for the Benefit of Poor Households in Dakar

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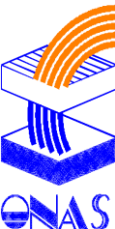
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Outline

- Context
- Programme objectives
- Expected results
- Programme activities
- Key results

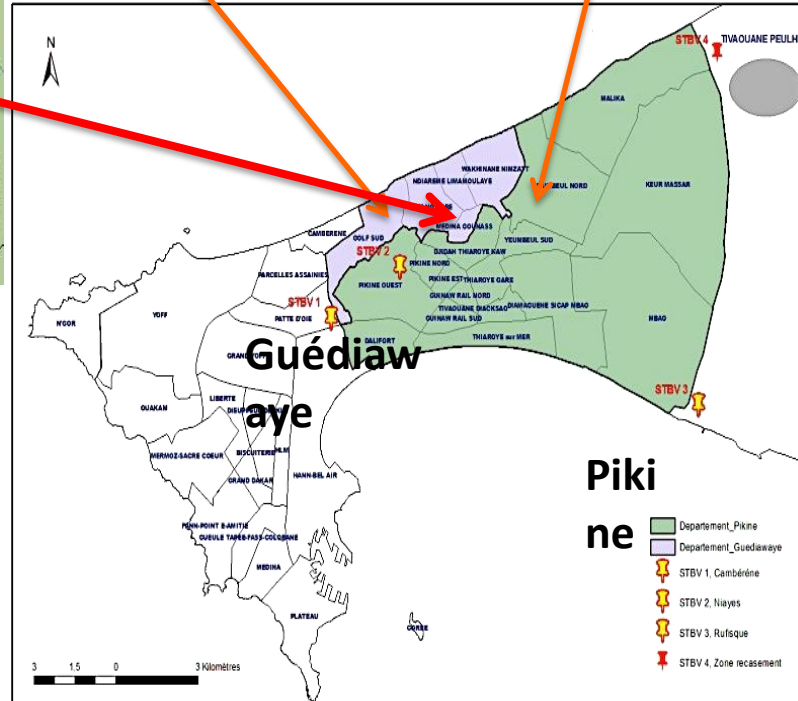
FSM Stakeholders in Senegal

- ❖ Government
 - National Hygiene Service (control)
 - ONAS (investment and regulation)
- ❖ Emptiers
 - Manual
 - Mechanical
- ❖ Municipalities: emptying (sludge ton trucks)
- ❖ Donors

Intervention area



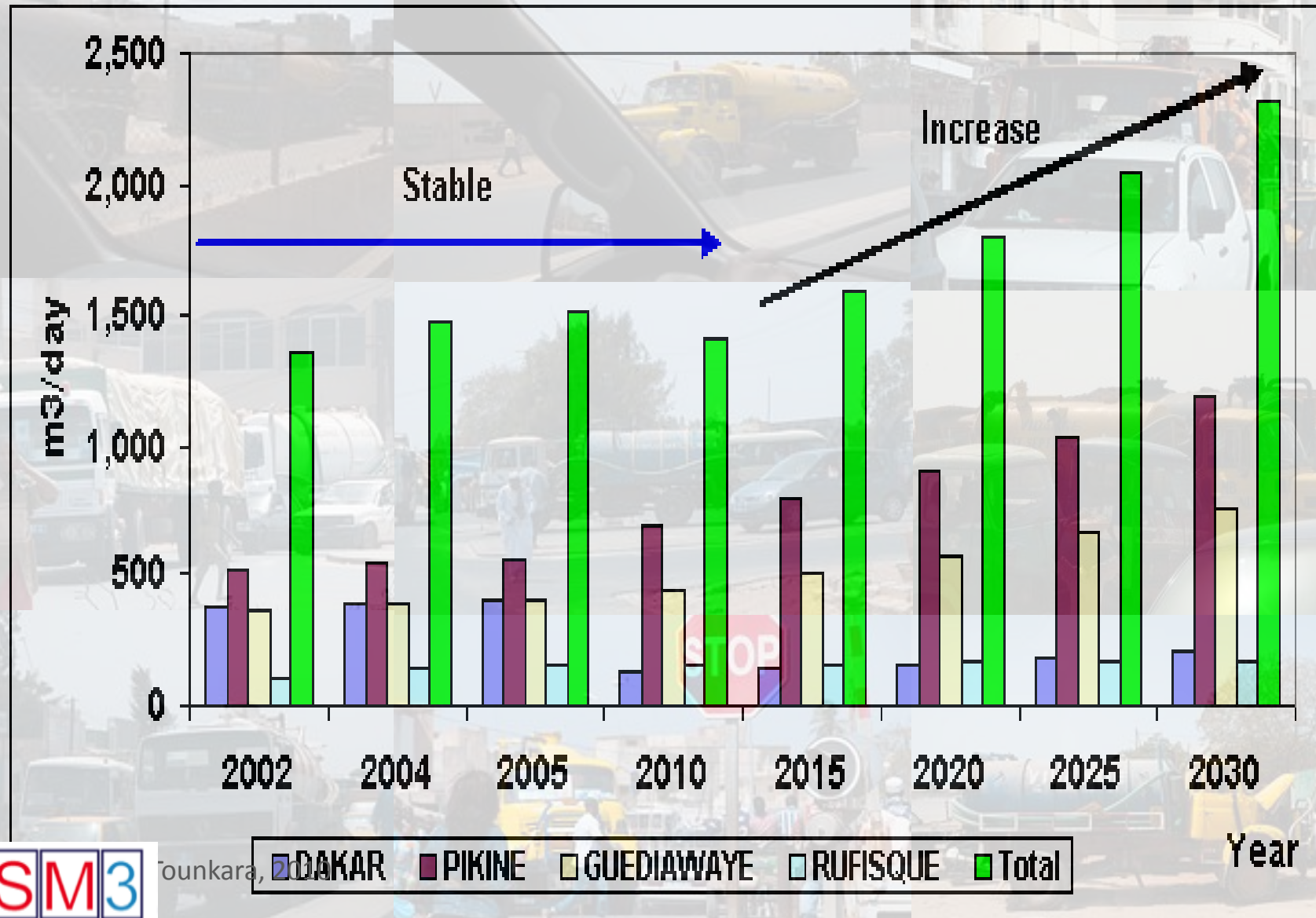
1'200'000 inhbts



- Majority of HH earn < 2 USD /day
- Over 75% HH use pit latrines and septic tanks
- Sanitation service = 130 USD/y/HH

(PDA; 2010)

One day in Dakar traffic...so much FECAL SLUDGE !!!



Manual desludging is widespread !!!

- Manual emptying is predominant in Dakar (52%)
- Attraction of Manual desludging
 - ❖ Price:
 - Less than ½ the cost of mechanized desludging (60USD/y/HH)
 - Requires no capital equipment,
 - There are no barriers to entry.
- Problems of Manual desludging
 - ❖ Strong negative externalities to surrounding neighborhood.
 - ❖ Health consequences to desludgers, households, etc.



A fleet of “mobile sewer” for household pit emptying

- Trucks are old: Average age of the fleet - 25 to 30 years
- Second hand truck bought in Europe after 20 years of lifecycle
- **50% fewer incidences of diarrhea among children in households using mechanical desludging**

Broken value CHAIN

From 1996-2011 – focus on provision of infrastructure

- **1996** Creation of ONAS
 - State's will to fight against the marginalization of the sanitation sector in favor of drinking water
 - Logical consequence of the creation of a Ministry solely responsible for the sanitation sector
- **2003** – PAQPUD promotion of none-sewered solutions
 - High costs of existing collective solutions
- **2004** first FSTP (03) in Dakar
- Since **2005**, initial R&D partnership to develop innovative technologies with Eawag
- **2006** Commissioning of three FSTP are currently functional in Dakar (under ONAS operation till 2012).



SUSTAINABLE VALUE CHAIN

Since 2011– Introduction of services and innovative technologies to build a sustainable FSM value chain

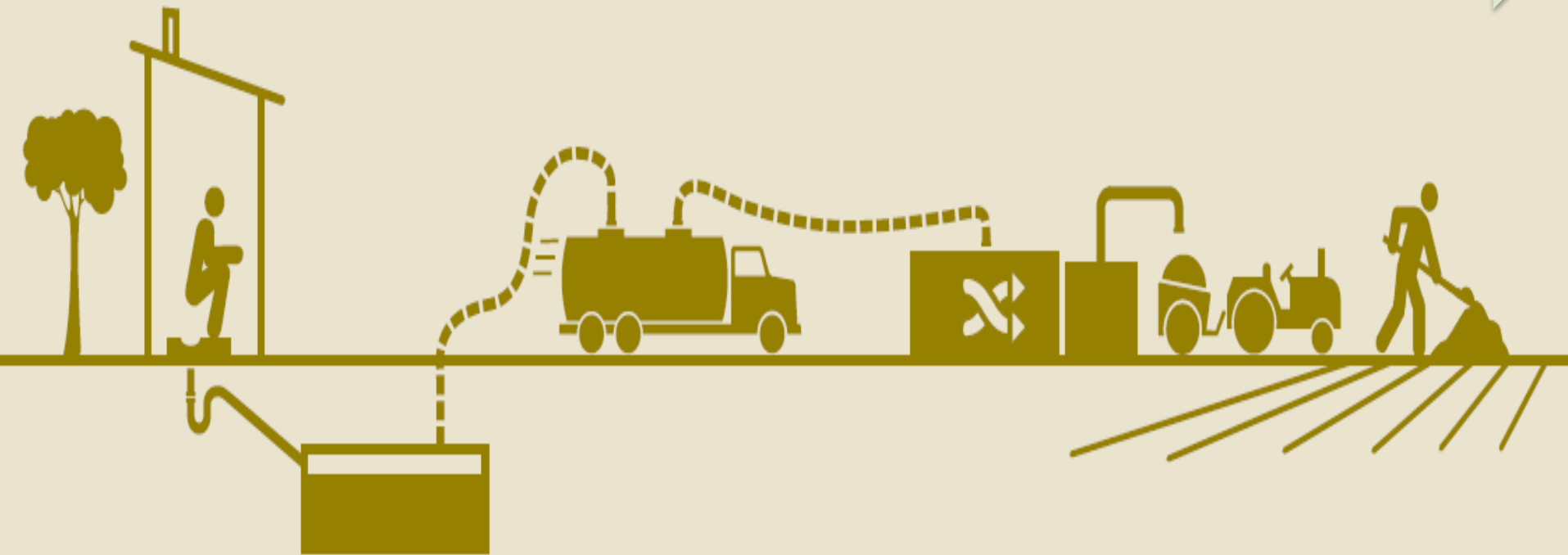
CAPTURE

STORAGE

TRANSPORT

TREATMENT

REUSE



The goal is to making sanitation services safe and sustainable by addressing the failure to effective collection and transport, treat and reuse waste from on-site facilities.

Expected Results

- 200,000 additional persons practice mechanical desludging.
- 1,089,000 persons have improved their hygiene conditions.
- The Number of HH practiced manual emptying declined from 47% to 30%.
- Annual household spending on sanitation evolves from 130US\$ in 2012 to 58US\$ at the end of 2015.
- The volume of the treated FS evolves from 217,000 to 350,000 m³/year.
- At least 270,000 persons in the secondary cities have access to the mechanical desludging services.

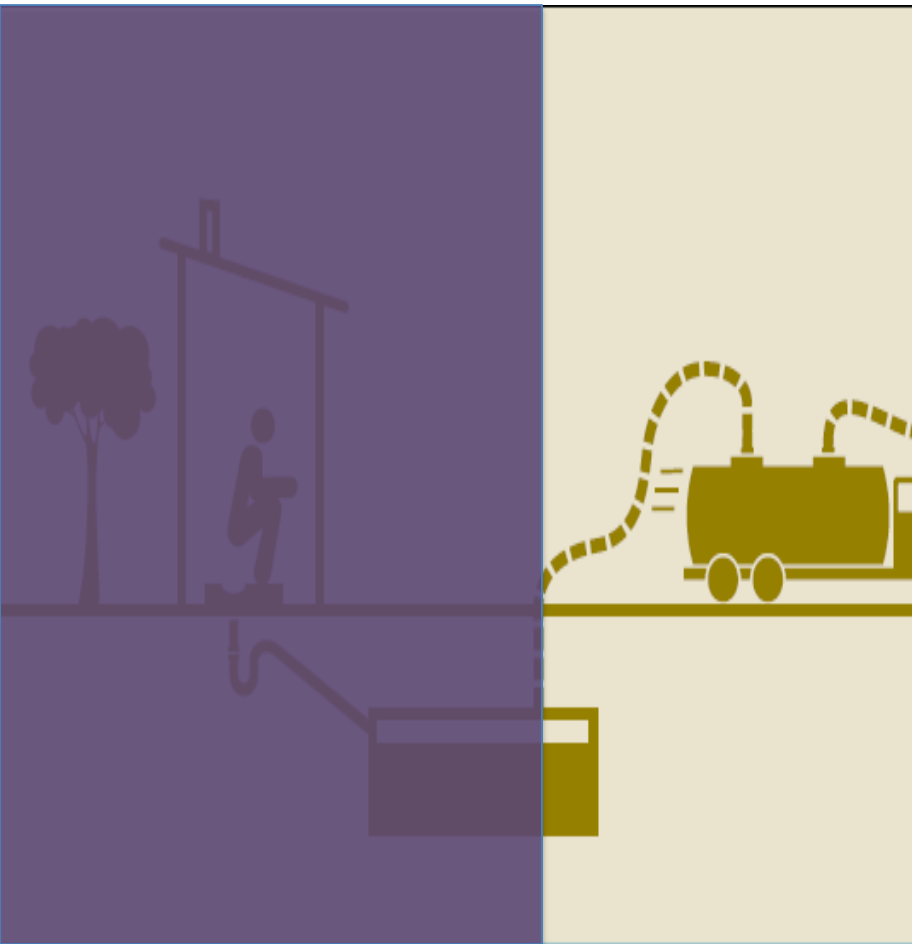
Program Activities

Capture and Storage

- ❖ Develop at least 2 to 3 innovative toilet technology and services models for flood-prone areas
- ❖ Expected results – Replicable business model to service up to 5,000 families in flood-prone areas of Pikine by 2015.
- ❖ Put in place a technical and financial model replicable in Senegal's secondary cities and other towns in Africa.



Program Activities



Industrial organization of FS emptying and transportation

- ❖ License for operation
- ❖ Rationalize the collection service (cartography, geo-localization, platform to manage the supply and demand)
- ❖ Access to investment (cheap loan)
- ❖ Testing of innovative technology (BMGF Omni-ingestor)

Auction impact



Guarantee Fund Achievements



17/12/2014

Program Activities

Industrial organization of FS processing – financial viability

- ❖ Conductive policy and regulatory framework to increased private sector participation and private investment
- ❖ Technology for marketable resource recovery (energy, fertilizer, water)
- ❖ Financial viability of FS processing (positive return on investment)
- ❖ BMGF – Omni-processor to be tested



Key Results

- First contract signed for the operation of 3 FS processing plants in Dakar
- A customer management platform (call center) that will offer affordable service fees to poor HH in Pikine / Guediawaye
- Project leadership invited at ONAS weekly board of Director meetings
- Improved relationship between ONAS (national authority) and none-pipe sanitation service providers
- Increased visibility of FS emptiers job profile (TV interviews, participation to leading international events, trained personnel)
- Database of 59 000 HH Septic Tank have been referenced.
- Database of 135 trucks referenced
- Network of partner for testing innovative technologies and business model
- A reference case for many other utilities

To you it's 'Shit'. To us it's
BREAD & BUTTER
Shit Business is Serious Business

Thank
you



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