

Pro-poor and Economically Viable Decentralised FS Treatment in Kenya

By
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Water Sector Trust Fund

BACKGROUND CONTEXT



EMPTYING

private sector → \$ set by market price



TREATMENT

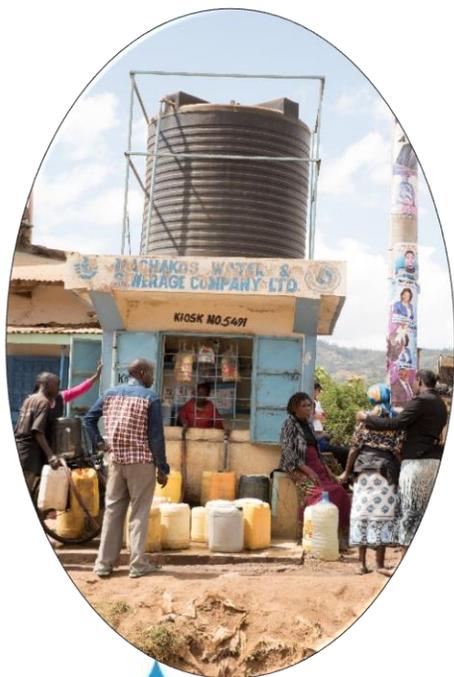
Lack of sludge disposal options → only 4% WW and FS receives treatment



WATER SECTOR TRUST FUND



Water Sector Trust Fund is a Kenyan State Corporation mandated to finance water and sanitation services for the poor and underserved communities in rural and urban areas



WSTF investments

Rural



Urban



Water
resources



Result based
financing



UBSUP PROGRAMME

UP-SCALING BASIC SANITATION FOR THE URBAN POOR



Objective: to develop and implement a concept to increase access to basic sanitation for households in the low-income areas.

The concept addresses the entire sanitation services chain and can be scaled-up at a national level.



Investments: US\$ 16.9 million from the Gates Foundation, the German Government through KfW, and the Government of Kenya



Technical assistance by GIZ: US\$ 5.7 million for concept development and implementation



Financed through Water Sector Trust Fund (WSTF)



Implemented by Water Services Providers (WSP)



400,000 beneficiaries by the end of 2020

TARGET BENEFICIARIES



Low income area A



Low income area B



Low income area C



Storage



Emptying



Transport



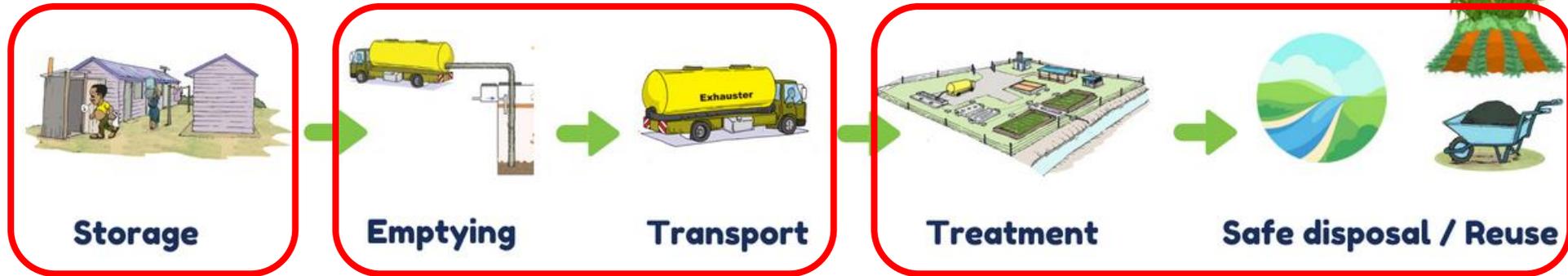
Treatment



Safe disposal / Reuse

SANITATION SERVICES CHAIN

SANITATION SERVICES CHAIN



Promotion of improved toilets (*pour flush + septic tank*) in LIA through monetary incentive



Enabling business environment for exhausting services: *support to the WSP and the private sector to develop their business model*



Implementation of Decentralised Treatment Facilities (DTF) for faecal sludge: *grant funding, support in construction, operation, management and maintenance*

DECENTRALISED TREATMENT FACILITY – DTF

Small scale decentralized plant to treat faecal sludge from septic tanks and pit latrines through mechanical and biological treatment. DTF are established conveniently in the vicinity of the targeted low income areas.

DTF 22

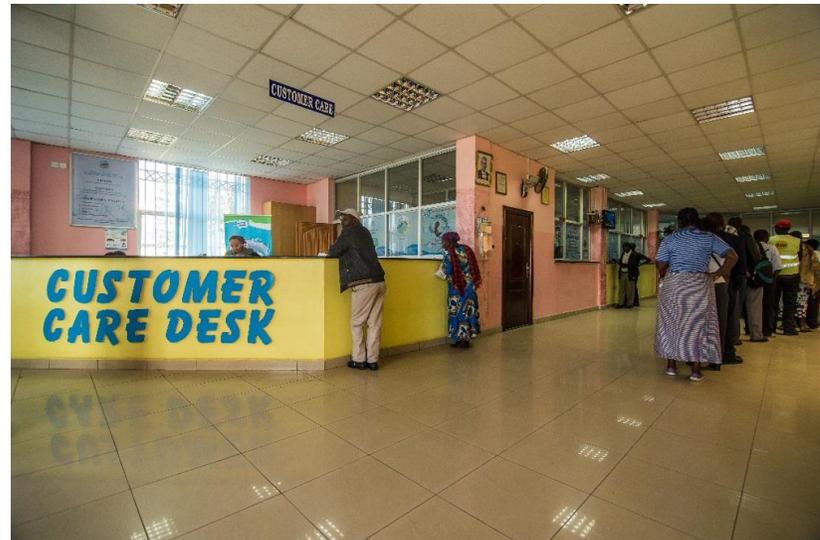
22m³ per day ; 0.25 ac
Gravity flow (no electricity)
Capital and O&M costs: low

DTF 50

50m³ per day ; 0.5 ac
Gravity flow (no electricity)
Capital and O&M costs: low

EMPURA DTF

75m³ per day ; 0.25 ac
Pumping and aeration
Capital and O&M costs: medium



Asset of the local **Water Services Provider** who:

- owns
- manages
- operates and
- maintains the facility



BUSINESS MODEL

Key parameters:

- Must satisfy a demand
- Social acceptance
- Pro-poor oriented
- Affordable and competitive but should cover the costs and make profit
- Low capital and running costs
- Ensure safe disposal of treated effluent



Tariff to discharge at the DTF

Most common size

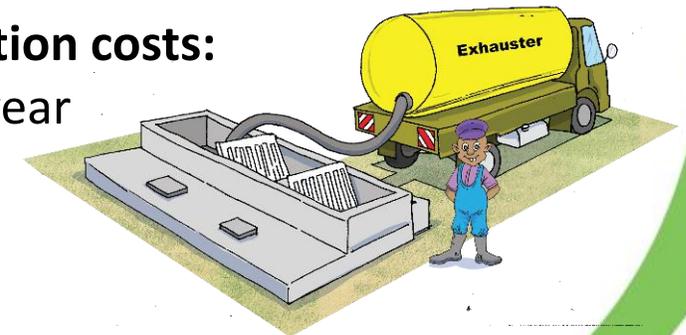
Small tanker (5 – 10 m ³)	Medium tanker (11 – 15 m ³)	Large tanker (16-20 m ³)
6 – 13 \$	11 – 23 \$	16 – 34 \$



Low tariff
around \$10 per
discharge

DTF (22 & 50) capital costs:
between \$ 80,000 and \$ 100,000

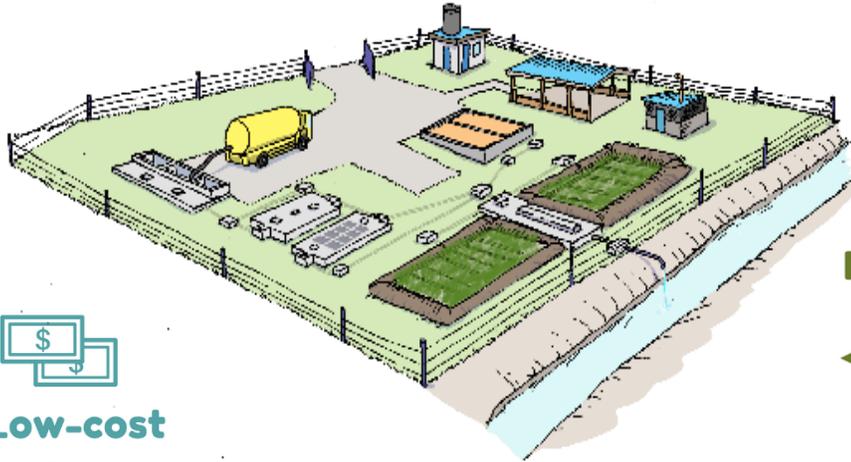
DTF (22 & 50) operation costs:
around \$ 5,600 per year



SUBSEQUENT FEES



**Reduced emptying fees
for low income residents**



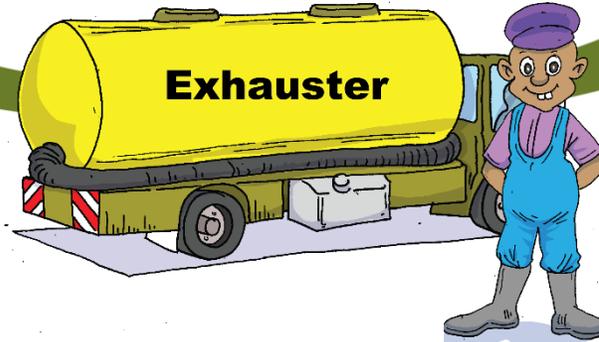
Distances shortened



**Low-cost
technology
→ low
discharge fee**



**Transportation
costs reduced**



UP-TO-DATE ACHIEVEMENTS

(January 2019)



10 DTF 22
completed and operational



2 DTF EMPURA

1 DTF 22

soon to be completed



6 DTF 50 to be constructed

LESSONS LEARNED AND NEXT STEPS

- UBSUP is a tested and proven concept and is operational 26 towns in 19 counties
- Developing and piloting a concept take time *(3 to 5 years)*
- High demand in terms of improved toilets and DTF *(so far 14,421 toilets and 10 DTF constructed and in use)*
- WSTF has built-up a relationship of trust with the water utilities across the country *(45 water utilities have applied for funding to implement UBSUP)*
- UBSUP has enhanced capacities of the main stakeholders who are now able to undertake UBSUP activities with minimum support
- UBSUP standardized processes and tools facilitate the implementation at scale

Kenya provides a favorable ground to implement the concept further and is ready to adsorb additional funding to increase access of basic sanitation through the UBSUP programme