Pro-poor and Economically Viable Decentralised FS Treatment in Kenya

By
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Water Sector Trust Fund
BACKGROUND CONTEXT

80% on-site sanitation

to complete the sanitation chain

Removal and treatment of faecal sludge

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**

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Water Sector Trust Fund  
P.O. Box 49699-00100  |  Tel: (020) 272 9017, 18, 19  |  Email: info@waterfund.go.ke  |  Site: www.waterfund.go.ke
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

Town 1
Town 2
Town 3
Town 4
Town 5

Low income area A
Low income area B
Low income area C

SANITATION SERVICES CHAIN

Storage
Emptying
Transport
Treatment
Safe disposal / Reuse
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.

<table>
<thead>
<tr>
<th>Plant Name</th>
<th>Capacity</th>
<th>Land Use</th>
<th>Description</th>
<th>Capital and O&amp;M costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTF 22</td>
<td>22m³/day</td>
<td>0.25 ac</td>
<td>Gravity flow (no electricity)</td>
<td>low</td>
</tr>
<tr>
<td>DTF 50</td>
<td>50m³/day</td>
<td>0.5 ac</td>
<td>Gravity flow (no electricity)</td>
<td>low</td>
</tr>
<tr>
<td>EMPURA DTF</td>
<td>75m³/day</td>
<td>0.25 ac</td>
<td>Pumping and aeration</td>
<td>medium</td>
</tr>
</tbody>
</table>

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

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**Tariff to discharge at the DTF**

<table>
<thead>
<tr>
<th>Most common size</th>
<th>Small tanker (5 – 10 m³)</th>
<th>Medium tanker (11 – 15 m³)</th>
<th>Large tanker (16-20 m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 – 13 $</td>
<td>11 – 23 $</td>
<td>16 – 34 $</td>
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</tbody>
</table>

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

Low-cost technology
→ low discharge fee

Distances shortened

Transportation costs reduced

WaterFund
Financing the Water Sector

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UP-TO-DATE ACHIEVEMENTS (January 2019)

10 DTF 22 completed and operational

2 DTF EMPURA soon to be completed

1 DTF 22

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 absorb additional funding to increase access of basic sanitation through the UBSUP programme