

PIT EMPTYING BUSINESS IN TEMEKE-DSM



TANZANIA COUNTRY PROGRAMME

IN PARTNERSHIP WITH



TEMEKE MUNICIPALITY




TEDEGRO



EDAT-TANZANIA

MTWARA SUSTAINABLE SANITATION WORKSHOP FROM 6TH TO 9TH SEPTEMBER, 2010

TOPICS

- 1.0 Water Aid Country Programme – **WaterAid**
 - 2.0 Operation of Pit Emptying Using Gulper Technology – **TEDEGRO**
 - 3.0 Private Sector Involvement in Sanitation and Hygiene Interventions- **EDAT**
 - 4.0. Local Government Support
- 

1.0 Water Aid

- Water Aid is an international NGO working with poor communities to ensure that they have access to safe and clean water as well as adequate and reliable sanitation facilities.
- It is a UK based charity organisation, and it is working in Tanzania started in 1984 in Singida where it started working under auspices of Anglican Church.
- Currently, it works in ten districts in Tanzania mainland with rural and urban as service delivery programmes and policy programmes focusing on research, lobbying and sensitization.
 - Districts; Babati, Singida, Tabora, Nzega, Mbulu, Kiteto, Urambo, Dodoma Urban, Mpwapwa and Temeke
- Water Aid DSM Urban programme started its operation in 1998, focusing on community management, water schemes, S & H promotions activities in TEMEKE MUNICIPALITIES.

1.1 WaterAid Urban Sanitation Country Programme.

Introduction

- Irish Aid Funded Sanitation Project (April 2008 – March 2011)

Implementation

- Year 1 – Testing technologies(Latrines & Emptying Services)
- Year 2 – Scaling up S & H
- Year 3 – Lobbying, Monitoring & Evaluation

Project areas: Temeke (Azimio) and Ilala (Vingunguti) - DSM

1.2 WaterAid Urban Sanitation Country Programme Cont'

Title: Piloting innovative and effective approaches for the scaling up of S&H promotion in unplanned urban areas

- **3 Components**
 - 1) Unsubsidized production and supply of appropriate and affordable latrines
 - 2) Testing and piloting affordable latrine emptying services appropriate for urban unplanned settlement
 - 3) **Local government support**

1.3 Water Aid Urban Project

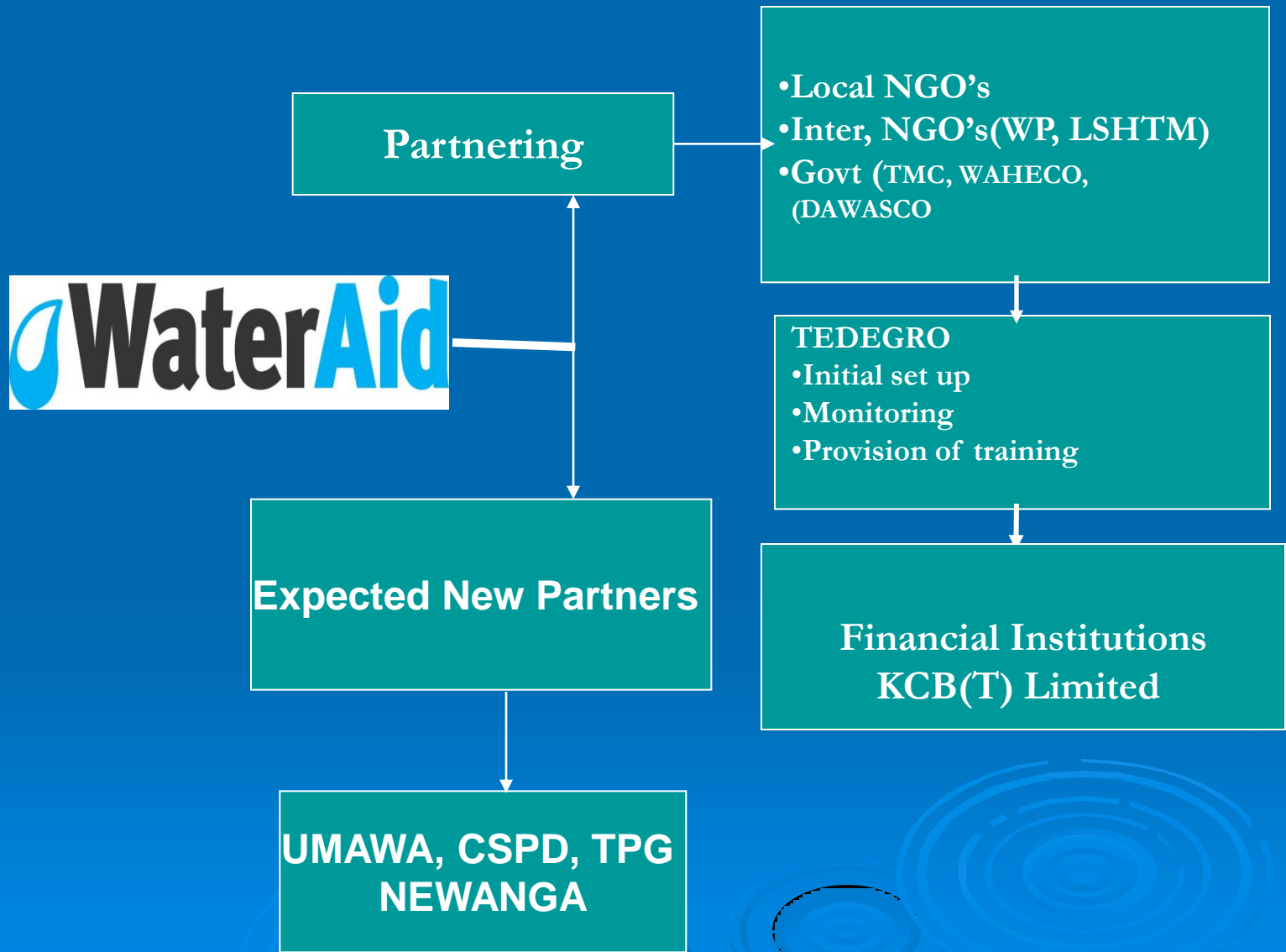
Water Aid Urban Sanitation:

- Focusing on innovative ways of getting poor households to access simple and low cost sanitation facilities (Toilets and Emptying Services)

1.4 Water Aid Urban Sanitation Project Design

1. Carry out research of emptying services and latrine technologies
2. Applying marketing approached to promote demand for sanitation
3. Encourage Private Sector to invest on the manufacture distribution and sale of sanitation facilities

1.5 Working Arrangement



1.6 Urban unplanned settlement - DSM

- 70% of Dar es Salaam is unplanned
- No access basic sanitation facilities



1.7 Poor Latrines Urban Unplanned Settlements

- 93% of urban areas resort to on site sanitation
- 7% Connected Central Sewerage System
- 32.2% Unimproved latrine



1.8 Unhygienic Pit Emptying Services



Risks Involved:

- Land slide
- Latrine collapsing
- Contract infections
- Deaths (7 cases reported in TEMEKE)

1.9 Research studies between WaterAid – TMC

- Water Aid in collaboration with Water and Sanitation Programme (WSP) conducted demand assessment for improved sanitation services and products in unplanned areas of Tanzania year 2007, highlighted the need for a viable hygienic pit emptying technology in urban unplanned settlement in Dar es Salaam

Thank you for listening!!!!!!!!!!!!!!



2.0 Operation of Pit Emptying Using Gulper Technology – TEDEGRO

Definition of Gulper;-

Is a human powered, direct action hand pump which can suck sludge out of pit latrines in fifty (50) litre increments. Once the sludge is pumped is transferred to a mini tanker which is built on the chassis of a motorbike. When full, the sludge is transported to the Waste Stabilization Ponds for dumping.

- Height: 7feet (equivalent to 63
- Pumping Capacity: 500 – 750 litres (10- 15 drums) at once
- . Mini tank capacity: 300 litres.

NOTE

The first Gulper was designed and manufactured in the UK, but now available locally and manufactured by Harness Africa Limited DSM.

2.1 Operation of GULPER



2.2 Household - street by Handcart Trolley if Motorbike has no access



2.3 Lifting a sludge drum by Chain Mechanism



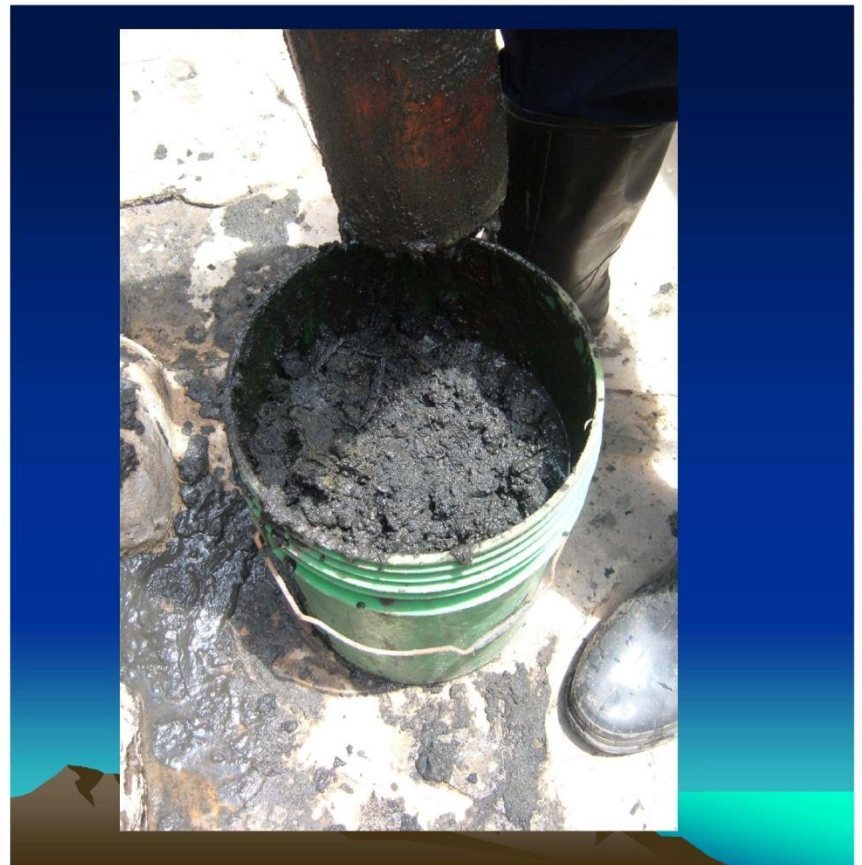
2.4 Tipping in tank



2.4 Transporting to the waste stabilization pond



2.5 Other equipment: Sand Grabber



2.6 Pricing and Costing

- Revenue
 - Cost per trip (300ltres).....TZS 25,000
 - Daily expenditure involved:
 - Operator cost.....TZS 5,000
 - Fuel.....TZS 2,000
 - Dumping fee.....TZS 3,000
 - Total Cost.....TZS10,000
- Gross Profit per trip.....TZS 15,000

NOTE: Number of trips per day =3

Total Gross Profit per day.....TZS 15,000 x 3 = TZS 45,000

2.6 Challenges

Technical

- Solid waste and sand in pit latrines during emptying
- Long distance traveling to WSP (7 kms)
- Lack of spare parts (old model motorcycle)

Management

- Unfaithful operators
- Inequitable DAWASCO dumping tariffs, 300ltrs pay 3,000 and 6000ltrs pay TZS 3,000

Financial

- Low income community

Social

- Behaviour change of the community

2.7 Challenges Cont'

Topographical

- High water table
- Sand Areas
- Geographical location



2.7 Lessons Learnt

- Community acceptance
- Reduction of cholera outbreak in chronic areas – Azimio & Scandal Wards in Temeke Municipal.
- Proper financial management and record keeping are key to gulper operations.

Thank you for Listening!!!!

The background of the slide features several concentric, light blue circular ripples that resemble water droplets hitting a surface, scattered across the lower half of the page.

3.0 Private Sector Involvement in S & H Interventions- EDAT -TANZANIA

Under Water Aid Urban Sanitation Project

EDAT was commissioned to implement intervention at Community level to carry out mobilization, capacity building and facilitate private sector to secure loans from banks and participate effectively in the latrine emptying business.

3.1 WaterAid Approach on S & H Interventions

1. Donor Approach: (Former)

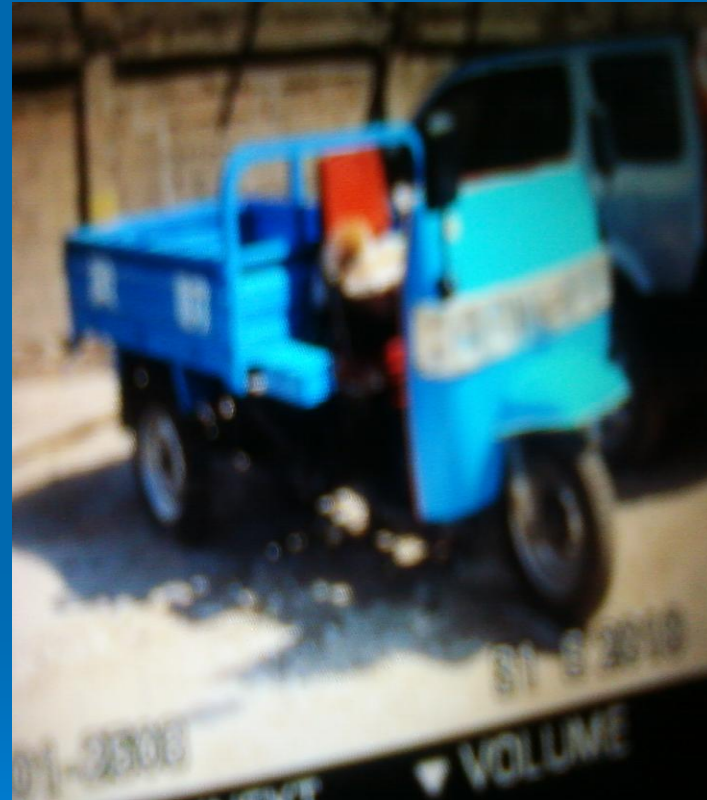
WaterAid Supported
CBO TEDEGRO - 50%
Grant , 50% Credit to
pilot test – Gulper
Technology using
Sludge Mini - transport
Motorbike



3.1 WaterAid Approach on S&H Interventions Cont'

2. Private Sector Approach

No financial
WaterAid support
on initial set up of
the business -
Klean kleaners,
CSPD, UMAWA,
TPG, NEWANGA



3.2 WaterAid – EDAT Contract

• Mobilization

- ✓ private sector mobilization
- 8 local NGOs
- ✓ designing of business model

• Capacity Building

- ✓ Scope out capacity
- ✓ Enrolment of private sector
- ✓ Entrepreneurship and business skills training
- ✓ 8 Local NGO's trained



3.2 WaterAid – EDAT Contract Cont'

➤ Facilitate private sector to secure loans

- ✓ Identification of bank for securing loan
- ✓ Survey terms and conditions, interest rates
- ✓ FDR arrangement with KCB (T) Ltd
- ✓ Local NGOs opened accounts
- ✓ Prepare simple business plans
- ✓ Submission of application for loans
- ✓ 4 Local NGO's earmarked to access loans of TZS 5,000,000 each



3.3 Lessons Learnt

- 1) Using FDR arrangements loan can be accessed at an interest rate of 10 to 12%
- 2) Availability of loans will speed up the scaling up, promotion and raise profile of sanitation and hygiene interventions
- 3) Employment creation for low income earners

Water Aid Way Forward

1. 4 Local NGO's to secure loans from KCB (T) Ltd to purchase motorbikes and scale the pit emptying services in DSM
2. Pilot & test temporary transfer station-Kigamboni Ward
3. Demand assessment for constructing DEWATS
4. Construction of DEWATS agreement made between WA,BORDA and EEPCO
5. Sustainability: Local availability of pit latrine emptying equipment and financing from commercial banks.

Initial Capital Cost

➤ Motorbike.....	TZS 2,700,000
➤ Gulper.....	TZS 150,000
➤ Loft Tank.....	TZS 70,000
➤ 50 litres drum.....	TZS 50,000
➤ Tank Modification.....	TZS 150,000
➤ Total Cost.....	TZS 3,120,000

KCB(T) Ltd Bank Officers in TEMEKE



IT IS POSSIBLE!!!!!!!!!!!!!!

**TO COMMERCIALIZE PIT EMPTYING
SERVICES HENCE IMPROVING SANITATION
AND HYGIENE IN URBAN - UNPLANNED
SETTLEMENT**

THANK YOU FOR LISTENING!!!!!!!!!!



4.0 Local Government Support

TEMEKE MUNICIPAL COUNCIL

1. Creating good working environment (recognition and linkage of projects from municipal level to community level)
2. Provision of extension workers to support, monitor and supervise Water Aid projects through mobilization team WAHECO
3. Advocate for pro-poor rights (service) and lobby for pro-poor tariffs (DAWASCO)
4. Provide health, hygiene, occupational health safety trainings for gulper operators
5. Promoting S&H interventions

PROMOTING S & H INTERVENTIONS - TMC

