

# PIT EMPTYING SERVICE USING GULPER TECHNOLOGY



## TANZANIA COUNTRY PROGRAMME

IN PARTNERSHIP WITH



TEMEKE MUNICIPALITY



TEDEGRO, NUMAGRO,  
UMAWA



EDAT-TANZANIA

E A PRACTITIONERS WORKSHOP URBAN SANITATION WORKSHOP FROM 29<sup>TH</sup> TO 31<sup>ST</sup> MARCH, 2010

# TOPICS

- 1.0 Water Aid Urban Sanitation Program
- 2.0 Sanitation Situation in DAR unplanned settlements
- 3.0 Overview Pit Emptying Technology
- 4.0 Financing approach, costing & pricing
- 5.0. Local Government Support
- 6.0 Challenges & Way forward

# 1.0 Water Aid Urban Sanitation Country Program

- Water Aid is an international NGO working with poor communities to ensure that they have access to safe, clean water, adequate and reliable sanitation facilities.
- UK based charity - Tanzania (Dodoma) 1984 working under auspices of Anglican Church.
- Currently 10 districts: Babati, Singida, Tabora, Nzega, Mbulu, Urambo, Dodoma Urban, Mpwapwa and Temeke
- WA Activities service delivery programmes, policy programmes focusing on research, lobbying , Promotion of S& H Interventions.
- 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 and Ilala - **DSM**

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

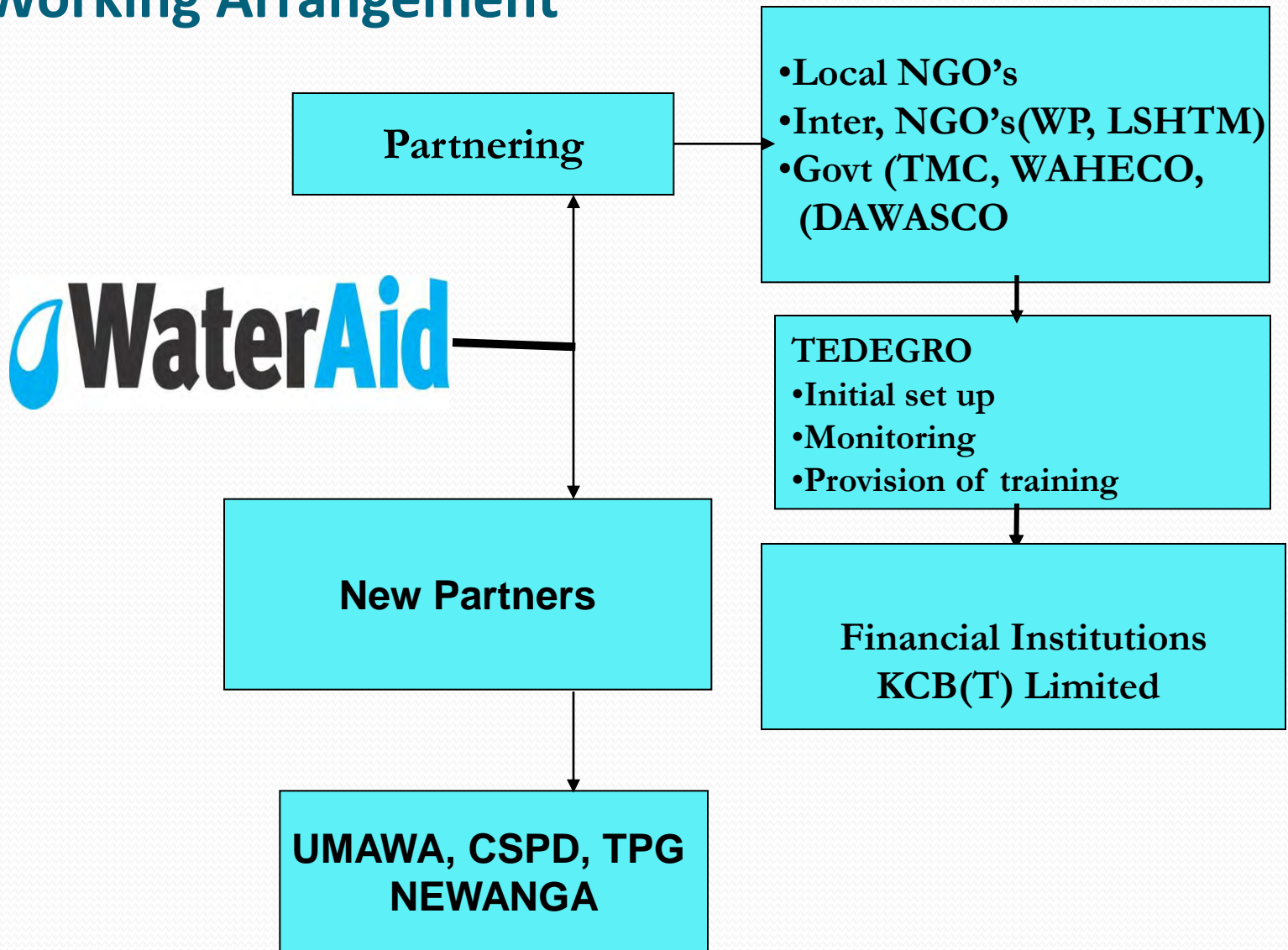
## 1.2 WaterAid Urban Sanitation Country Programme Cont'

**FOCUS** : Poor households to access simple and low cost sanitation facilities (Toilets and Emptying Services)

### **PROJECT DESIGN**

- Research
- Promote the demand for sanitation
- Private sector investment (manufacture distribution and sale of sanitation facilities).

## 1.3 Working Arrangement



## 2.0 SANITATION SITUATION

### Urban unplanned settlement - DSM

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



## 2.1 SANITATION SITUATION cont'

### Poor Latrines Urban Unplanned Settlements

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





## 2.2 Sanitation situation Cont' Unhygienic Pit Emptying Services



**Risks: Land slide, Latrine collapsing, Contract infections, Deaths (7 cases reported in TEMEKE)**

2007 Research: “ Demand Assessment for Improved Sanitation Services and Products in Unplanned Areas of DSM” , highlighted the need for a viable hygienic pit emptying technology in urban unplanned settlement in DAR

## 3.0. OVERVIEW OF GULPER TECHNOLOGY

### INTRODUCTION & OPERATION



# OVERVIEW OF GULPER CONT'



## 4.0 WATERAID FINANCING APPROACH

### 1. Donor Approach: (Former)

(50% Grant , 50% Credit)

### 2. Private Sector Approach

(100% loan securing)

### 3. EDAT

(mobilization, capacity building, facilitate

Private Sector to secure loans)



# 4.1 CAPITAL COST/ PRICING /Costing

**Capital Cost:** 3M ( 500 litres )/ 5M( 750 litres)

Income: Cost per trip ( 300litres) .....TZS 25,000

Daily expenditure:

- Operator cost.....TZS 5,000
  - Fuel.....TZS 2,000
  - Dumping fee.....TZS 1,000
  - Total Cost..... TZS 8,000
- Gross Profit per trip..... TZS 17,000

**NOTE: Number of trips per day =3**

Total Gross Profit per day.....TZS 17,000 x 3 TZS 51,000

## 5.0 LOCAL GOVERNMENT SUPPORT



- Linkage of projects from municipal level to community level
- Provision of extension workers to support, monitor and supervise Water Aid projects
- Advocate for pro-poor rights (service) and lobby for pro-poor tariffs (DAWASCO)
- Provide health, hygiene, occupational health safety trainings for gulper operators
- Promoting S&H interventions

# 6.0 CHALLENGES & WAY FOWARD

## 1. CHALLENGES

- Poor type of toilet/latrines (Standard, design)
- Improper use of toilets/latrines (Solid waste and sand)
- Poverty
- Long distance traveling to dumping sites (WSP 7 kms)
- **Topographical** (High water table Sand Areas. Geographical location)

## 2. WAY FORWARD

- Scaling up the service to other unplanned areas of DAR and Cities
- Construction of Decentralized waste water treatment systems (DEWATS) for reuse of waste water and transfer stations to minimize distances and operation costs
- Establishing sustainable financing methods for securing loan for PS

## Success Story from householder (Gulper User)

- **Using the Gulper technology.** *There was absolutely no presence of the sludge that had been all over some few minutes ago. There was no smell at all. This was such a beautiful experience that I decided to popularize the service to my friends for free. I could tell them to accept the service and if it does not work, I would be responsible for any costs incurred. From that time on, I will always use the Gulper and I advise you too to try it because it is value for your money –TEMEKE-AZIMIO*



**END**

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