REPORT ON OMUKABINGO GROUP EXCHANGE VISIT AND TRAINING ON CONSTRUCTION OF THE FERRO ÇEMENT TANK (10,000 LITERS)

DELIVERED BY KATOSI WOMEN DEVELOPMENT TRUST

AT BUKWAYA VILLAGE IN NTENJERU SUB COUNTY MUKONO

5TH TO 11TH FEBRUARY 2019

Introduction

Katosi Women Development Trust (KWDT) on the 5th of February 2019 hosted a team of 5 women of Omukabingo from Rukungiri district. The visit aimed at equipping the visiting team with skills in construction of ferro cement tanks, through a hands-on training that was undertaken by a team of 2 women (Nalongo Musoke from Muwumuza Women's group and Nabusayi Prossy from Bukwaya women's group) both of them tank masons with over 7 years' experience.

Brief background about KWDT

KWDT has for the last 20 years worked with rural women, to establish and increase house hold incomes; support rural communities to increase access to water, improved hygiene and sanitation, build capacities of women to take up leadership roles and engage in the development of their communities, formal education through construction of schools all complimented with environmental conservation as a crosscutting theme. KWDT currently brings together 541 women organized in 19 women groups in 5 sub counties in Mukono.

Sustainability of the WaSH facilities is challenged due to lack of knowledge and skills to establish, manage and maintain them. KWDT's approach of empowering women to manage the development initiatives in the communities is through equipping them with the necessary knowledge and skills to take on these new roles and responsibilities.

Training content

Day one: 5th February 2019; Arrival and briefing on importance and pillars of rain water harvesting. This included catchment, conveyance, storage and outlet. This was delivered by Kulumba Leonard from KWDT.

Day two: 6th February 2019; This commenced with theory where participants were taken through foundation measurements for both small and big size tanks (10,000 and 20,000 liters). Participants were able to understand the sizes of both tanks, for example small is 5 feet diameter and big is 9 -10 feet diameter. The trainees participated in foundation digging and then applied a mixture of cement, concrete, lake and river sand. Initially they made a corresponding circle made of wire mesh and plastic sheet and put it in the base of the foundation before applying concrete.

Later in the afternoon, participants were taught the different ratios of cement, lake sand, river sand for the different construction stages of the tank, this was done by Nabusayi Joyce and Nalongo Musoke.

Mixing ratios are as follows:

	Items	**10,000 ltr**	**20,000 ltrs**	
1	**Foundation**			
	Cement	2	3	bags
	Aggregate	3	4	Wheelbarrows
	Lake sand	1	2	Wheel barrow
	River sand	2	2	Wheel barrow
2	**Interior lining**			
	Cement	2	3	bags
	Lake sand	2	3	Wheel barrow
	River sand	2	3	Wheel barrow
	Water proof cement	2	4	Packets
3	**Interior final lining**			
	Cement	1	2	bags
	Water proof cement	4	6	Packets
4	**External and cover plastering**			
	Cement	2	3	bags
	Lake sand	2	3	Wheel barrow

	River sand	2	3	Wheel barrow

NB: *In the final interior lining, the trainees were told to make sure that the sand used has no stones at all as these can lead to cracks hence leakage.* They therefore had to use a net type used to dry coffee to shift the stones out.

Day three: 7th February 2019; The trainees participated in making of a welded mesh frame and its different components i.e chicken mesh, and binding wire as poles. Enclosing (dressing) of the frame with gunny bags and tied with sisal ropes. First lining of the mesh from the interior with a mixture of sand, cement and water proof cement. This was done under the instructions of the chief masons Nalongo and Nabusayi,


Day four: 8th February 2019; On the fourth day participants were taken through the second lining of the interior of the frame with a similar mixture as the first lining. They also carried out third lining of the interior which was a mixture of ordinary cement and water proof cement. This is the final lining of the interior.

Day five: 9th February 2019; Removal of exterior plastic wrapping and plastering of the tank. The trainees were taught how to measure the cover which corresponds on the tank diameter and then fixing it on the top. The tank cover has to be lined with expanded metal lathe. Final plastering of the exterior and the use of wooden poles as stakes for the cover support as it gets heavier during plastering.

Day six: 10th February 2019; This marked the last activity on tank construction with plastering of tank top and application of rough-cast on tank exterior.

Day seventh day: 11th February 2019; The participants left the KWDT centre in the morning aboard a taxi.

Due to limited time the participants were not able to participate in the following stages because the tank was technically still wet and needed between 4 – 10 days to cure:

1. The removal of wooden stakes and washing-out the tank interior.
2. Fixing of the outlet (tap)
3. Fixing of the conveyance (guttering)

N B All trainees took notes of the training for reference.

Conclusions

It was a life changing experience for the women, they were happy to have gotten the skills and enthusiastic to put into practice what they had learnt. It was also exciting to work with fellow women and to contribute towards the efforts as we strive to increase access to water.

Compiled by KWDT

Annex: items for 10,000-liter tank

ITEMS REQUIRED FOR CONSTRUCTION OF A FERRO CEMENT TANKS OF 10,000 LITERS

	ITEMS	Quantity	Measure
1	Cement	12	Bags
2	Welded mesh	9	Pcs
3	Binding wire	7	Kgs
4	Chicken wire mesh	1	Rolls
5	Water prof cement	12	Kgs
6	Nails	3	Kgs
7	Polythene	8	Meters
8	Sisal rolls	4	Pcs
9	Pipes PVC 3" light	1	Pc
10	Comers	1	Pc
11	Clips / cramps	14	Pcs
12	Gutters	4	Pcs
13	Gunny bags	12	Pcs
14	Plumbing & fittings	1	Set
15	Threading		
16	Aggregate	1	Trip
17	Lake sand	1	Trip
18	River sand	1	Trip
19	Outlet	1	Pcs
20	Stoppers	2	Pcs
21	Joint	1	pcs
22	Labour		