

# *How Community group manages Water project:*

*Community water project at Keko Machungwa informal settlement in Dar es Salaam.*

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# 1.0 BACKGROUND

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Dar es Salaam is a major city with a population of 4,364,541(2012 Census). The growth of the city's population is 5.6 per percent per year from 2002 to 2012. The city's growth does not match the service delivery such as provision of water and sanitation. With the growth of population and informal settlements of more than 70 percent, the challenges of service delivery have increased.

Dar es Salaam Water and Sewerage Authority (DAWASA) has a role of water provision in the city but about a third of the households in the city are estimated to be connected to the piped water network, because of few water sources reliable, people need to draw from a variety of sources. Over 50% of the population makes use of neighbors' sources, and over 50% also buy from vendors, and the same proportions are also engaged in rainwater harvesting from their own roofs. Some 30 percent of residents use shallow wells, 17percent from surface water sources and 8% claim to use public taps (Mwandosya and Meena 1998).

In most informal settlement there is limited network system for piped water. For those few who have pipes they do sell to neighbors. Other sources include purchasing from vendors who uses pushcarts to supply water in the community. Some few individuals have drilled boreholes and they do sell to community as well. Community water points are very limited and hence provide a big opportunity for private people to sell water at a commercial price compared to community points particularly water vendors who sell water at a higher price of 300/=Tshs to 500/=Tshs (USD\$ 0.18 to 0.29) per twenty liters bucket and the price usually goes higher to 800/=Tshs per bucket. The limited access of water has attracted many to sell water mostly individually but the question of quality of water has remained a challenge. The water sold by vendors mostly it is difficult to know its source of and in other cases the borehole drilled is done locally with limited involvement of experts to measure the quality of water. The challenge of access of clean water affects many in the city of Dar es salaam but mostly poor people living in informal settlement where there is lack of water supply network and alternative sources of water such as boreholes, shallow wells, and water vendors remain as the only options to depend on.

CCI and community groups known as Federation initiated a programme of community water project to assist the people in informal settlement to have access for the clean water. The projects are initiated after doing the community led enumeration and Mapping process to determine the community needs and priorities. The enumeration which was done at Keko Machungwa in 2011

revealed that access to clean water was a major challenge which triggers the group to initiate a water project.

### **1.1 Access of water at Keko Machungwa settlement**

Keko Machungwa is an informal settlement located in Miburani ward – Temeke Municipal. The settlement is about 5 km from the city centre. It has a population of 14,644 people with 4,180 households. Water and sanitation is among the

challenges the residents are experiencing in this settlement. The absence of water network system from DAWASA has made community to use other different sources of water available such as boreholes owned by individual and institutions, shallow wells and water vendors who are using pushcarts.



*Figure 1: Geri cans used by water vendors for supplying water*

In 2008 CCI mobilized federation groups in the settlement with the aim of doing small savings and loaning at the same time using the unity formed to address development issues starting from collecting the information through enumeration and mapping and use the information as the base for planning and

addressing issues within the community. One of

the groups initiated at Keko machungwa was Amka group. The group is among the bigger network of community groups known as Tanzania Urban Poor Federation doing savings and loaning as well as initiating development projects. The group was initiated in the 2008. It has 37 members among them are four men

## **2.0 BOREHOLE WATER PROJECT MANAGED BY AMKA GROUP**

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### **2.1 The role of community led survey and Jenga Fund in facilitating the establishment of the project.**

The idea of initiating the water project came after conducting a study through enumeration and mapping which was led by community themselves of Keko machungwa with support from CCI in 2011. The

results of the study showed that community members were accessing water from several sources such as vendors who were selling at the cost of 300/=Tshs (USD\$ 0.18) per 20 liters bucket, boreholes and shallow wells. From the results of the enumeration, it was noted that it was very difficult for many households to get enough water for family use due to high cost involved, time spent for getting water which was in average 10 to 30 minutes because of the que and several sources had unsafe water. In average the minimum house at Keko Machungwa has 7 people while the maximum has up to 40 members. This means in one house there could be several rooms rented to different families. The discussion with Keko



**Figure 2: Other private people have connected Pipes connected from water sources for supplying water in households**

machungwa residents revealed that a normal family of 7-10 people can use between 7 to 15 buckets of water per day. If the water is from vendors that means 3,300/=Tshs (USD\$1.10) is spent on water only per day, and if it is from other sources like boreholes it is 1,100/=Tshs (0.65) per day. Other sources of water are individual and institution boreholes and shallow wells. Despite of access to other alternative of water sources, the quality of it was another issue of concern; some of the boreholes are close to toilets, water sold by vendors sometimes are dirty and usually are from unknown sources. All these concerns and the need of water made a group to establish a water project after conducting the study. Enumeration was very crucial in determine what are the community needs and how to address them. In other ways, the study

was a good way to engage local officials who had little information on the existing situation particularly on water and Sanitation.

In May 2011 the group applied for loan through Urban Poor Fund locally known as JENGA. The construction started and completed in September 2011 while the actual operation started in 2012 after installing the electricity for pumping water. JENGA fund has been very essential in giving loans to groups for establishing the projects as well as using the fund for leverage finance. Federation members are contributing towards the funding and managing it with Support from CCI. The presence of loans through JENGA fund was a big opportunity for the group to utilize.

For a big project such as this one of drilling boreholes it would have been very difficult for poor community to access loan particularly from other financial institution like banks which does not offer loans for such project and if they do it is for high interest. The availability of affordable loan of 22,000,000/=Tshs (USD\$ 13,134) with low interest of 10% encouraged the group to initiate the project since already the demand was high. The loan will be paid in 8 years.

## 2.2 A mobilized community

Organized community has been through establishment of community groups known as Federation. Among the key issue the groups are doing is to do savings and loans and through their savings approaches they are



*Figure 3: Community at Keko offering their support to the project through trench digging*

able to mobilize more community into savings and development agenda. In this way the Federation is using mobilization of saving schemes as a way to build and organize communities for wider development issues. At keko Machungwa a total of 6 groups has been established with a total membership of 200. These include one youth group and women who are the majority in these groups. Particularly at Amka group there are 37 members with only 4 Men. The role of community organizing to form collective has been noted first through the conduction of enumeration and data collection. In this processes whole community data are collected by community themselves and analyzed with intention of mobilizing the whole community for wider Development.

Despite of the project to belong to one group, the federation groups at Keko Machungwa and community around the area participated in offering their labour power to support the project. Some of the work done includes trench digging for laying pipes. The community was motivated to support the project in an overwhelming way. The activity of trench digging of 70 meters long was finished and pipes were layed in a day. In addition, the organized community serves costs, if the work of trench digging was done by paying the labour power the group would had spent 200,000/= Tshs (USD\$ 119) as labour charges. The act of community members in a settlement and other neighboring settlements coming together with Municipal and local officials to offer their labour power was very inspiring to community members and it showed how important the project meant to the community of Keko Machungwa.

### 2.3 How the project is being managed?

Through CCI in collaboration with Temeke municipal under WAHECO team, the group was able to get training on project management before starting the operation. The training helped the community to have an understanding on how to manage the project well. This includes the issue of division of roles and responsibilities among project committees, entrepreneurship skills, reporting and monitoring of the projects performances and the loan repayment issues.



*Figure 4: Community accessing water at a water point installed.*

**Project committee:** The group decided to appoint 5 people among the larger group of 37 people to form a committee for supervising the project. The committee comprises of Chairperson, Secretary,

treasurer and two members. Apart

from the project committee, 6 people have been identified within the group to sell water at each water point. The project started with 3 points and has expanded another additional of 4 points which

brings a total of seven water points within the settlement with only 6 operating.

**Regular meetings and record keeping:** The committee has agreed to have weekly meetings to discuss the progress of the projects as well as to present the financial report on how much they have collected in a week. For record keeping the group has books for



**Figure 5: Amka in a group meeting**

each operator in each water point recording the amount of water sold in a day as well as for a treasurer. After the end of the day all the operators have to submit the money they have collected to the treasurer. For keeping the records safe, they are signing in both books, a collector has to sign in a treasurer book how much he/she has collected in a day and likewise the treasurer has to sign in a collector's book how much she/he has received

from a collector. On weekly meetings a secretary together with treasure they have to prepare a report which has to be presented to a project committee as well as a group (Amka) meeting which also meets weekly. This has enable accountability to the assigned committee as well as facilitates the transparence to the group on how the project is being managed.

The advantage the group have noted in managing the project is group members being closer or in one location which has made the information to be easily accessible if there is a problem as well as if it happens a care taker of the water point is not available at a particular day, they can be easily replaced by another group member rather than stopping the service provision.

**Income and Expenses for running the project:** The group is able to get 40,000/=Tshs (USD \$24) to 60,000/=Tshs (USD\$35) per day in all six water points which means the average income per month is 1,400,000/=Tshs. (USD\$ 836) Through this income they are able to pay the expenses for themselves which are 150,000/=Tshs( USD\$ 90) per month for electricity to pump water to the tank, the regular repairing of the pipe which was mentioned

as a problem had to cost at least 30,000/=Tshs (USD \$18) per month as well as a total of 360,000/=Tshs (USD\$ 215) per month as the cost for 6 water points care takers who are paid 60,000/=Tshs (USD\$36) per month. In order to save the cost, the care taker were chosen within the group as a way of enabling the group members to get income but also to reduce the cost of running the project compared to if they would have hired someone else the cost would have been up to 100,000/=Tshs(USD \$60) to each care taker per month. Other expenses are technical which are occasional. Another monthly expenses they have to pay is the loan of which they paying at least 200,000/=Tshs (USD\$ 119) per

month. So far they have managed to pay a total of 4,934,650/=Tshs(USD\$ 2,946) as a part of the loan out of 22,000,000 (USD\$ 13,134) which they are suppose to pay for 8 years. From the monthly expenses explained, the benefit per month is 660,000/=Tshs (USD\$ 394) which they have been able to keep in their bank account.

NAME	ID	SALES	INCOME
ARENG	MITA	MITA	MAUZO
01/01/2012	ANZA	ISHA	
	001634	001636	
			MUZZAJI Juma 5500
			Mulbrahim
01/01/2012	001636	001641	
	ANZA	ISHA	
			Juma
			MUZZAJI

Figure 6: Records kept by water kiosk operators showing the amount of water sold and income per day.

**2.4 How the land issue was addressed in this project?**  
 Access of land is a common challenge particularly in informal settlements when addressing the infrastructure and service delivery since the space is always limited. Prior to establish the project the group had to look for land which was challenging, later one of the group member who is a landlord had a space at her compound and



agreed to provide the land for free since he was among the group members. That was a breakthrough to the group to initiate the project. A group had to involve family members and write an agreement on the provision of land.

### **2.5 Engaging Local Government**

Local government from the lower level of settlement to municipal was engaged in the process. This was done from the initial phase of planning, construction and monitoring the quantity of water. During the trench digging a team of 6 people from WAHECO which is a department under the municipality participated in digging as a part of mobilizing community. This relationship has continued in providing technical assistance as well as water quality control which is done after every six months or when necessary. The relationship built has helped to build trust and credibility to other stakeholders and customers as it is the only borehole in the settlement which is monitored and the quality of water is controlled by the government, which makes the project to be trusted by community members.

### **2.6 Managing competitors.**

Within Keko Machungwa settlement there are about 9 boreholes managed by individual, group and institutions. About 4 boreholes have salt water which leaves 5 boreholes highly competitive. The action which the group has taken to attract more customers

*Offering good price*, while others are selling at 50/=Tshs for twenty liters bucket and 100/=Tshs (USD \$ 0.05) for two buckets of Ten liters, for amka group they are selling at the same price of 50Tshs (USD\$ 0.02) for twenty liters bucket and offers three small buckets of ten liters for 100/=TShs (USD\$ 0.05), so there is an additional of one bucket of ten liters compared to others.

*Well maintained water Quality*: Making sure that the water is well monitored and treated by technical people from Temeke Municipality. This is usually done after six months where the flushing of the borehole is done to clean it. This has made the community to gain trust over the cleanness of the water sold compared to others whom they haven't involved the technical people in measuring and monitoring the cleanness of water.

## 2.7 Challenge

- Electricity power has been a challenge in water supply to this project. This is coupled with small water tank which cannot last long for supplying water when power is not available. The plan of the group is to use solar power in future to overcome monthly expenses of electricity as well as power cut off.

## 3.0 LESSONS LEARNED

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- Close monitoring of performance and conducting review is very important in community projects. This eliminates the deceitful acts particularly on income generated by water point's operators.
- The need for legal enforcement on the agreement of land provision for such projects is very important to be considered.
- Record keeping and Transparency on the management of the projects particularly on income need to be put open to members involved in the project. This reduces conflicts and allows members to contribute to the sustainability of the project. Mapping and surveys done by community increases community knowledge, cohesion and social capital within the community and build local capacity to plan and implement. It also supports the government engagement and support to the community.
- Where there is difficult to get support from government, the organized community with collective voice encourages government and other stakeholders to learn from practical experience by setting precedents.
- The need for Municipal in collaboration with DAWASA to monitor closely the water quality standards for private owned water supply sources.
- Better involvement of the urban poor in the planning and implementation process ensures that the facilities delivered are appropriate and convenient to the end users.