

TAZAMO - Community Water and Sanitation Project



End of Project Report

DAPP

Development Aid from People to People in Zambia



Foundation Connect International

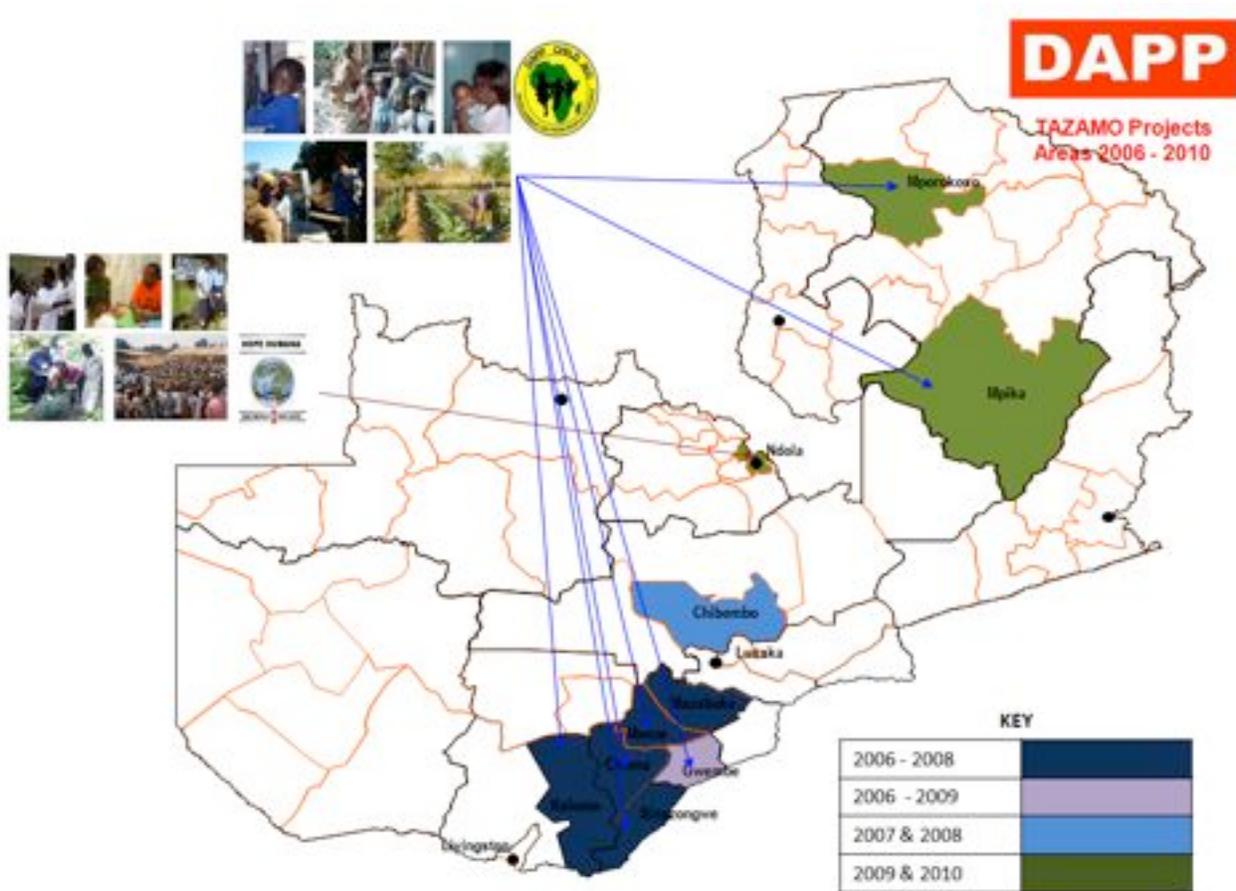
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Introduction

The project TAZAMO (Tanzania, Zambia and Mozambique) called Community Water and Sanitation started in 2006. In the first year up to the third year, DAPP started to implement the project in Southern Province in Sinazongwe, Choma, Kalomo and Monze Districts. The second year saw the inclusion of Chibombo before the project moved to continue in Ndola on the Copperbelt and in Mpika and Mporokoso in Northern Province after reaching the completion of community development cycle.

With an exception of Ndola, the project where located in rural areas, therefore, the approach was also slightly different as the project focused on the poor urban areas and support groups. In rural areas, the approach was focused on Village Action Groups.

The map of Zambia below shows the Project Areas from 2006 to 2010. A key is provided in the far right below the map to show the districts where the project was implemented.



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Activities carried out:

1. Water points and use

1.1. Manual Drilling

In 2010 alone, the project has completed 14 manual drilled boreholes in Mpika. However, 50 other boreholes were drilled in other districts in Northern Province as a result of the successes from Mpika. The manual drilling is working well in the province due to the soil formation and private individuals are interested in the service. The manual drilling is also on trial in Mumbwa district in Central Province.

During the time of its existence, the project has thus completed 105 manually drilled boreholes and fitted with rope pumps.

The project has established 12 drilling teams against the goal of 8 with basic SMART groundwater development skills relevant to their operational area. They have been able to drill boreholes, install rope pumps and train local caretakers.



Manual drilling in Mumbwa, Child Aid Nampundwe



Manual drilling in Mpika, Northern Province

1.2. Construction of new wells and rehabilitation

The project rehabilitated 3 and 80 wells in Mpika and Mporokoso Districts respectively. In addition to 43 new wells where completed in Mpika and 40 in Mporokoso. This brings the total number of wells completed in 2010 to 166 and are all fitted with rope pumps. However, since 2007, the project has completed 123 new wells and has rehabilitated 277 wells making a total of 400 wells all fitted with rope pumps with an addition of 105 boreholes. Approximately 18,810 people are benefiting from the established water points.

The construction of wells fitted with rope pumps has brought a lot of benefits to the people in the operation areas such as reduced distance to nearest water point, improved income and improved nutrition supplement through gardening. The household survey analysis below shows the improvement in gardening activities as a result of time served from fetching water at distances beyond 500 meters, reduction diarrhoea incidents in Northern Province.

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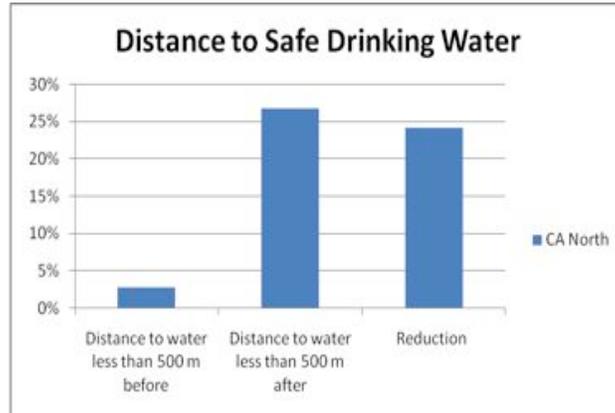


Figure: The household survey showing that 27% of households are in the operation area is accessing water at a distance less than 500 meter.

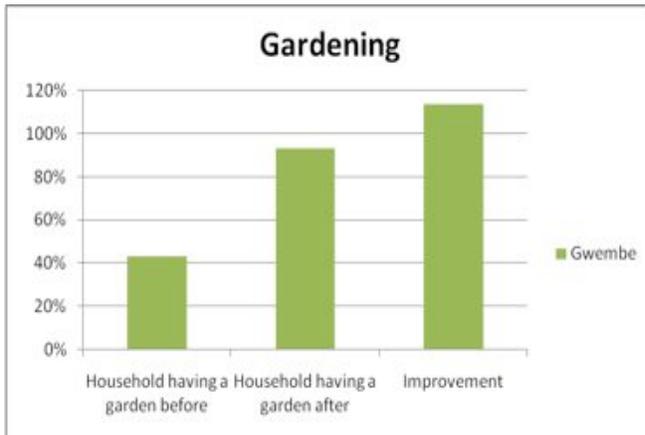


Figure: In Gwembe District, the household survey indicates an increase of over 100% in the number of households with productive gardens

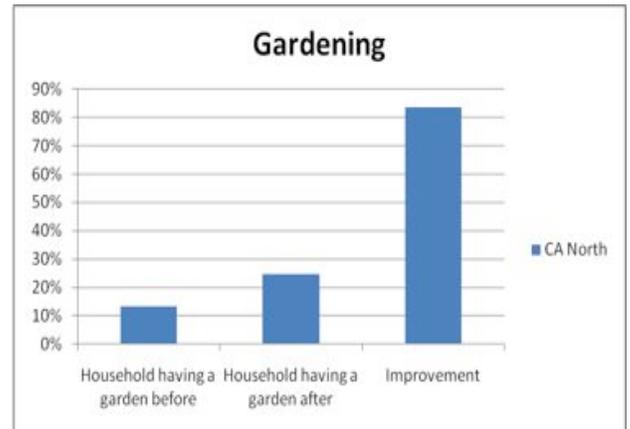


Figure: Showing over 80% increase in households with productive gardens

1.3. Rope pump production

The Rope pump producer in Mpika, Chama Mwana Rope Pump Producers, has produced 36 Rope pumps in the year under review. Since the establishment of the rope pump production in 2008, they have produced 298 rope pumps in total – 70 of which have been sold to private individuals.

Apart from rope pump production, the producer is making other smart technology accessories such drill bites and taps for hand washing. The project has provided an opportunity for the producer to provide other services to the communities by producing garden tools, hardware material and welding services, thus providing the entrepreneur with sustainable economic empowerment.

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The first DAPP rope pump workshop in Monze is still operational and has produced a total of 330 rope pumps in the last three years as tabulated in the table 1. Located about 6km from town centre it is the its success has led to the training and establishment of 5 Rope pump entrepreneurs in basic rope pump production capacity like the one in Mpika in Northern Province and has been supervising them to ensure proper rope pump production.

Table 1: *Rope pump Production*

Year	Rope pumps produced	Client
2008	165	Connect/ EC
2009	145	Connect/ GAIA
2010	20	Private persons
Total	330	

The workshop is currently being run by three private individuals who worked for DAPP before.

The major clients have been DAPP supported projects. Only 6% of the total production has been bought by private individuals. This may be attributed none aggressive marketing and visibility to increase the clientele after the TAZAMO project ended. Besides rope pump production, the workshop carries out installation and servicing of the pumps. For operation and maintenance, the main requirement is ropes and the skill to install new ropes. Other than the workshop, the institutional capacity for operation and maintenance was not fully developed.



Figure 7: *Functioning rope pump* **Figure 8:** *Rope pump in the process of repair (replacement of rope, requires replacement of rope, cleaning of the well and replacement of well cover) Sioko village, Choma. Chinyengele village, Magoye.*



Rope pump production in Monze

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1.4. Water re-charge systems

The project drilled 17 recharge systems in Mazabuka in 2008. During a visit at the end of the project, it was discovered that all the wells were working well and were not drying up during hot seasons. Beneficiaries talked to in Mazabuka's Magoye area in Southern Province said that there was constant provision of water in wells with re-charge systems as opposed to wells without. The wells, which are all fitted with a rope pumps are serving over 10 households each with clean and safe drinking water and irrigation.



Figure 1: Blackwell Chinyenge, holding a holecover, showing the place where the recharge hole is located.



Figure 2: showing re-charge hole



Figure 3: Blackwell Chinyenge recharged water point yields water the whole year round.

However, some households which benefited from the recharge systems were not caring for the recharge holes. The plug covers had been removed and the recharge holes clogged with mud. Another beneficiary, the recharge area had been ploughed over. The water level in the well was very low (about 18 meters).

During project implementation monitoring was done by Area Leaders. However, after the completion, the well owners are fully in-charge. Sustainability of the system depends on the care and maintenance of the recharge hole. This includes ensuring that the recharge area does not get covered with mud; to ensure that water run-off collect in the trough; unplugging the cover of the recharge-hole after the rain to allow the water to go into the hole and covering the hole thereafter.

1.5. Weir Dam

The project planned to construct 5 weir dams. However, due to price increase in commodities, especially cement, the goal was reduced to 3. At the end the project, only 2 weir dams are constructed in Monze and Gwembe districts in Southern Province. The weir dams are

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The weir dam at Bunyete in Gwembe District



The weir dam also provide water for animals from surrounding villages

The constructed weir dam at Bunyete was completed in December 2009 and is providing water to approximately 750 people from the surrounding villages, over 1,500 animals and irrigation to over 20 gardens near the dam. The construction of the dam is poised to attract basic development infrastructure in the area as government intends to construct a health centre near Bunyete School which was not the case because of water scarcity in the area. The nearest health centre is over 17 kms away.

A water maintenance committees has been established which includes the headman and have put up rules to protect the dam from environmental degradation and retard both social economic and biodiversity retention.

2. Sanitation and Hygiene

2.1. Latrine Construction

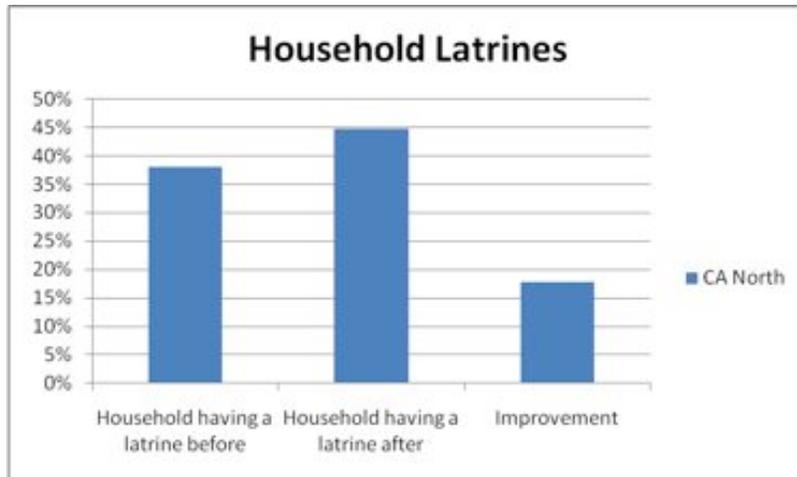
In Mporokoso, the project constructed 200 household stand alone latrines as subsidies, while in Mpika, 100 were done. All the latrines have been built using nicely molded san plates that are easy to clean in order to maintain hygiene and also are durable to be used on other latrines once the current one is filled up. In 2009, the project trained latrine masons and gave them a pocket of cement, moulds and tools for making san plates so that they sale to household either on cash or credit. However, the idea did not work well, therefore, in 2010 it was decided to provide san plates on subsidy.

Since 2007, the project has constructed 3,004 Household stand alone toilet facilities in all the project areas.

The achievements in latrine construction have been as a result of well trained 124 latrine masons.

The graphs below shows, the how the project has improved in the provision of improved latrines since in Northern Province as an example.

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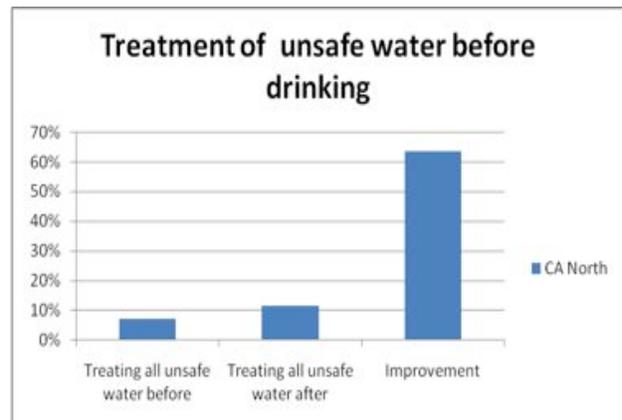


The household survey shows an increase in sanitation coverage in the project areas in Northern Province

2.2. Household Hygiene

The project promoted the making and use of hygiene facilities at household level such as compost pits, dish racks and tippy taps.

The household survey analysis in Ndola and the North shows increased treatment of unsafe drinking water, a practice that can be attributed to increased awareness of water-borne diseases and access to water purification gadgets such as the water filter.



Increase in hygiene practices such as treatment of water before drinking can be attributed to hygiene campaigns and education in the communities by VAG members in the North and Support Group Members/ Youth Club members in Ndola

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Hand washing (Using the tippy tap) has highly improved in the North especially with the School WASHE project which has adopted some Connect WASHE concepts and SAMRT Tech products and the tippy tap



A man washing hands with a tippy tap in Gwembe



A woman dries plates on a dish rack in Choma

3. Marketing

Marketing of smart technology (low cost) products was done at both community and district levels. At community levels, the project held community meetings and also made models of tippy taps, rope pumps at gardens and latrines.

At district/national level, it was mainly during district agriculture and commercial shows and national exhibitions such as the trade fair. Exhibitions were made at stands and brochures were also distributed. The project has thus sold **1089 +19 BOXES** +water filters and has sold 70 rope pumps to private individuals in Mpika alone.

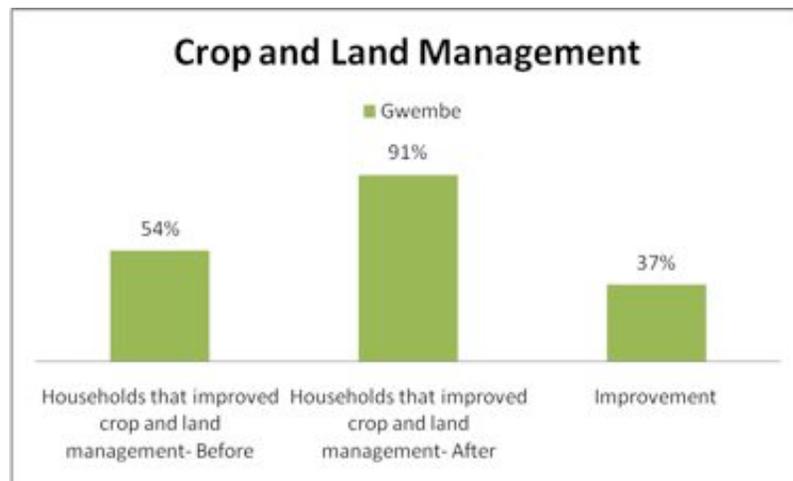
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4. Environment

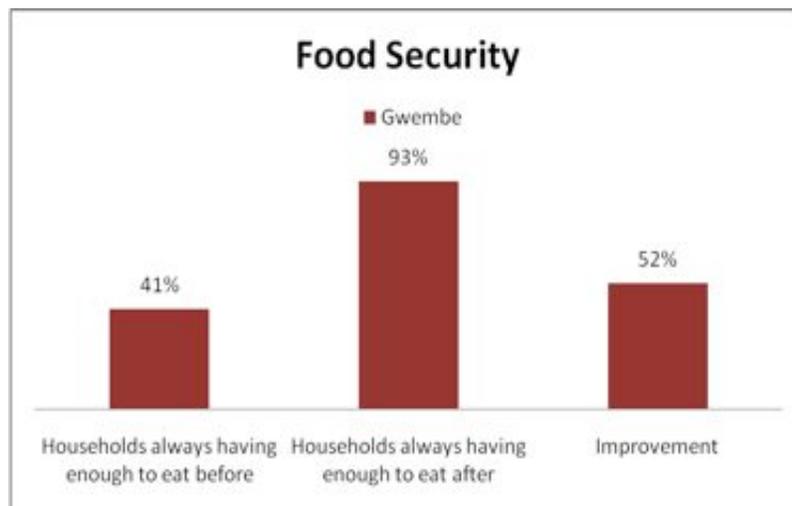
4.1. Good Farming Methods

In order to improve crop yield and consequently environmental sustainability, the project promoted good farming methods among beneficiary households. Capacity was built in Community Agriculture Committee to train Village action Groups members in good farming practices, thus promoted included the improvement of soil fertility and lessening of water evaporation through not burning of crop residues and by using minimum tillage, good crop rotation as well as growing legumes, use of compost and or animal manure. The project also educated the households on implementing systems to reduce water runoff in the fields in sloppy lands such as in Gwembe by constructing contours after pegging, planting of vitevar grass along contours and or leaving grass strips, planting trees and other good measures.

The illustrations below show results of household adaptation of good farming methods and consequent increase in food production in Gwembe District.



Graph: Increased crop and land management following project capacity development



Graph: Household data showing over increase in food security by vaguely above half the situation before project improvement

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Contours of vitevar grass in the Gwembe. Usually, crops are grown in between the ridges.

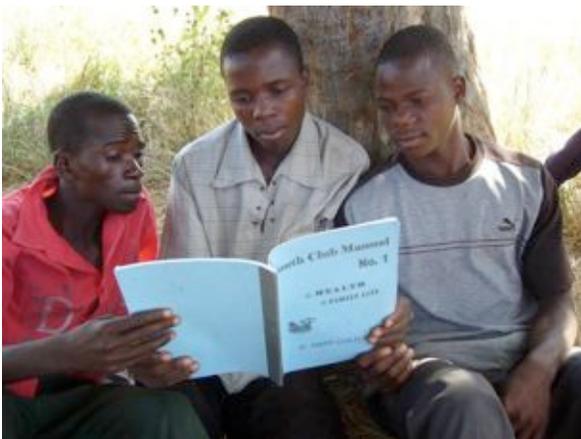
5. Community Development

5.1. Community Sensitization

The project has been involved in many community sensitization activities at community and district levels. At community level, the project worked closely with key players such as the Village Actions Groups, the Area Leaders, the youth, community health workers, head men and other community committees to carry out sensitization on hygiene, health and other community development actions.

5.2. Youth Activities

In 2010, the project worked with 103 youth clubs in Ndola, Mpika and Mporokoso with a membership of 2, 046. Youth club members meet weekly to learn life skills, health topics and also make actions on how to participation in community development activities. The youth carried out sensitization meetings in communalities through drama in public places.



Youth read together the youth manual in Choma



School WASHE Peer educators in Ndola pose with certificates after WASHE training

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In Ndola, the project involved youth from schools in activities such as drama and singing festivals in order to promote the use of drama and songs in schools as a medium to relay information on HIV and AIDS and other negative vices among youths. The youth received training to equip them with basic knowledge in order for them to carry out activities in the community.

Stories from the Field

Income Generation in Choma

The rope pump is used by most beneficiaries for gardening as well as household chores including drinking. Among beneficiaries who have continued to with gardening are the beneficiaries in Sioko village in Choma. Sioko VAG has twenty members. They produce tomatoes, cabbages and onions. The VAG members have come together and have been tendered to supply Spur Super Market with tomatoes and other vegetables weekly. The super market demands 30 boxes per week to satisfy their needs. This means three members of the VAG supply 30 boxes of tomato (10 boxes of the tomato per week at ZMK 75,000 per box each household) raising ZMK 750,000 per household per week from tomato sale alone.

Another farmer Mr. Samson Simaunga of Siachitema village in Kalomo, who benefited from gardening seed input in 2009, said he had raised ZMK 8million from the sell of vegetables in 2010. At the time of the visit, most gardens had been submerged due to heavy rainfall.

The major challenge raised was lack of market for their produce. It is essential that market linkages are created linking farmers to potential markets such as super markets, guest houses, boarding schools etc. In general, it has been acknowledged that vegetable growing has increased even in districts which previously got their vegetables from outside such as Kalomo district.



Figure 4: Vegetable growing, Sioko Village, Choma



Figure 5: Pruning the leaves in the vegetable field, Sioko village, Choma



Figure 6: Winter maize from vegetable garden, Mukwiza village, Kalomo

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Annex I

Open Discussion Evaluation - Northern Province

The project conducted and captured the views of groups and individuals in the program areas in Mpika and Mporokoso districts. At various forums, discussions were held with Village Action Groups members, Youth club members, Village headmen and district. Below is a summary of the general responses:

1) What do you think are the need in future on water, hygiene and sanitation in your area/community?

The needs of the people in the North are:

- *More wells and rope pumps – because most of the people use tradition scoop holes and protected wells for water supply.*
- *In terms of sanitation more than 85% of the households use traditional latrines. Therefore there is need for improved latrines with san plates. Therefore, the san plate platform also needs to be improved so that the latrines could easily be cleaned and for hygiene*
- *The needs of the people with regard to water supply are ensuring that it is safe; especially water for drinking*
- *As for hygiene, more sensitisation on hand washing at critical times and introduction and popularising the Tippy – Tap hand washing facility.*

2) How do you see micro-credit as a possibility of buying water filters, rope pumps, boreholes and latrines and maybe other things?

The community sees Micro-credit as a possibility in rope pumps and digging of boreholes through as self –supply and Income Generating Activities (IGAs) to improve food security.

3) What does your community or Ward need in future from DAPP?

On the future needs from DAPP:

Micro-credit in rope-pumps and bore-holes; IGAs; Education in health, agriculture and community development; Small livestock loan and crop production; Community school support, rural youth economic empowerment programs and rope pump spares outlets.

4) Are you still in need of: (tick what is relevant for your community)

Subject item	Yes	No
Boreholes	✓	
Rope pump	✓	
Latrine	✓	
Water Filter	✓	
Tippy Tap	✓	
Food production	✓	
Irrigation	✓	
Micro credit	✓	
Bio gas		✓
Solar energy		✓
Education on health subjects	✓	
Education on income generation	✓	
Education on community organization strengthening		

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Annex II

Open Discussion Evaluation – Ndola

The project conducted 58 group and or individual discussions in Ndola District captured the views of groups and individuals. At various forums, discussions were held with Action Groups members, Youth club leaders and members, Area leaders and district authorities.

5) **What do you think are the need in future on water, hygiene and sanitation in your area/community?**

The needs of the people in the Ndola are:

- *Sanitation: To promote improved latrines using san plates*
- *Hygiene: Community involvement in keeping surrounding clean, promoting hand wash via IEC materials and factsheets using tippy taps*
- *Water: Chlorine for water purification, water filters and piped water*

6) **How do you see micro-credit as a possibility of buying water filters, rope pumps, boreholes and latrines and maybe other things?**

- *Micro credit:*

7) **What does your community or Ward need in future from DAPP?**

On the future needs from DAPP:

- *Direct support for Orphans and Vulnerable Children*
- *To provide support group of people living with HIV and AIDS with Income Generating Activities for economic empowerment and poverty alleviation.*
- *Health Education on new challenges on HIV and AIDS and other diseases.*
- *Agriculture input support*

8) Are you still in need of: (tick what is relevant for your community)

The graph below is a summary of the needs according to the sample of 58 respondents.

