serving the deserving?

WATER AND ELECTRICITY

1. Introduction

Water and electricity are the lifeblood of development. Hardly any sustainable activity can continue without water and one of the major findings of this survey was the indispensable role of electricity. Transformers transform the lives of people, in particular the young people who use electricity above all for their livelihoods. However it remains a scarce commodity to the extent that one young person commented:

Since people cannot live without water, it is fortunate that only 6% in the survey said that there was no water available. The bewildering multiplicity of water projects encountered in the survey demonstrates that serious efforts have been made to increase water supply and projects are working very well, in some villages all the districts surveyed except Magu and Musoma, through systems of piped water and deep wells with pumps.

"to get electricity is a dream" (Makete)

The situation was much less rosy with regard to electricity. Although its presence transformed social services, communication and even access to livelihoods, it remains a scarce commodity.

Only 31% of respondents said that they had access to electricity. While in Arusha Urban, 92% had electricity, in three districts (Kisarawe, Musoma Rural and Magu) more than three quarters had no electricity at all.

Services may exist, but do they work? Are they effective? These should be the criteria for evaluating all the important factors that impact on our lives such as social services, water and electricity, communications, infrastructure and the opportunity to make a living while contributing effectively to the life of our communities. Therefore the best evaluators are those who want to access and use such services.

The rights and needs of young people are often not prioritised in relation to these services. That is why this particular survey, carried out by TAMASHA with support from Twaweza, is unique firstly because the principal surveyors were young themselves, drawn from youth groups active in each district surveyed and secondly because they looked at all these factors from the perspective of young people themselves.

All the data is these briefs come from this survey in 32 villages in 8 districts of Tanzania. Arusha Urban, Iringa Urban, Kisarawe, Longido, Magu, Makete, Musoma Rural and Temeke carried out in 2010

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2. Key findings

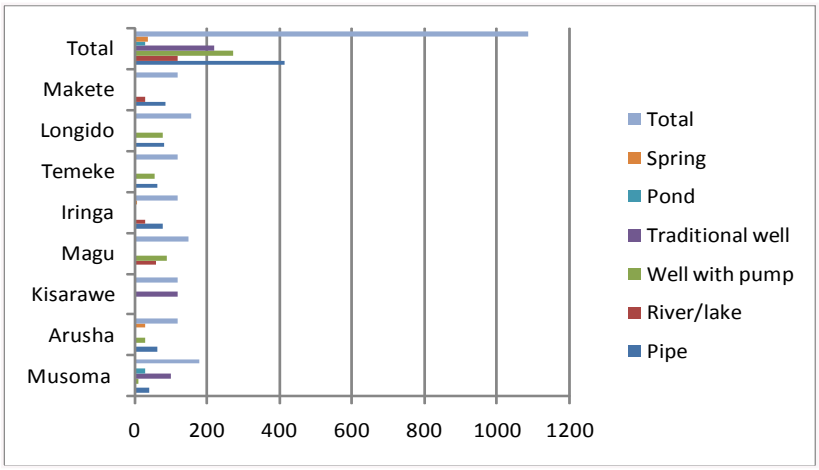
Key Finding One:

Availability is a relative term (how do you measure availability?)

You cannot measure availability merely by the existence of water projects because the availability of water is affected by many other factors.

Water sources used

District Water source



With regard to the table, each source was affected by different factors.

- **Piped water:** The highest number of respondents have access to piped water (43%). This, however, does not mean that they have piped water in their own homes.
- Piped water often does not flow regularly. In Iringa, they said they can go three or four days without water, while in Madaraka, Musoma, they get water twice as week.
- Many buy their water by the bucket from those with piped water and are dependent on the timetables of those tap owners.

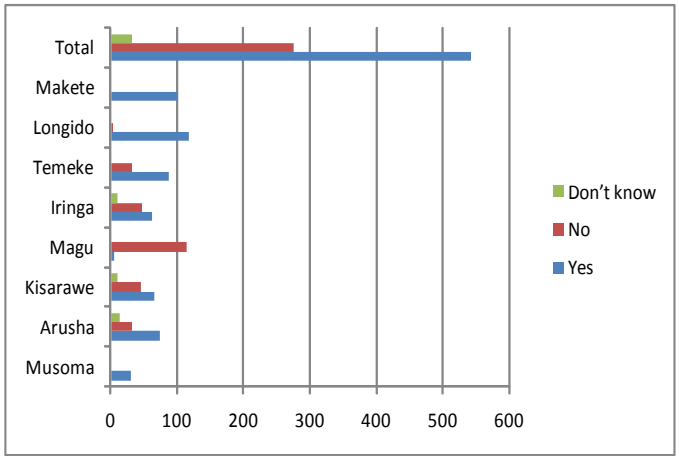
- **Ground water sources:** 38% use water from rivers, lakes, traditional wells and ponds which cannot be said to be clean and safe water. In addition, particularly in the dry season, when natural wells and ponds (used by 23% those surveyed) dried up, the availability of water dropped drastically. In some cases, water is accessible only once a week. (Longido)

- **Breakdowns:** Many villages who depend on piped water, or water pumped from deeper wells are left contemplating water projects that have broken down,

The problem of availability and the issue of breakdowns are also reflected in the level of satisfaction with existing water sources. Water projects exist in all districts except Magu, and, to a large extent, Musoma where the piped water project has multiple breakdowns. The highest number of respondents (33%) are satisfied with the state of water projects but 14% are not satisfied and a very large number (28%) don't know, which would also imply dissatisfaction. Only in Temeke, Longido and Makete are the majority satisfied.

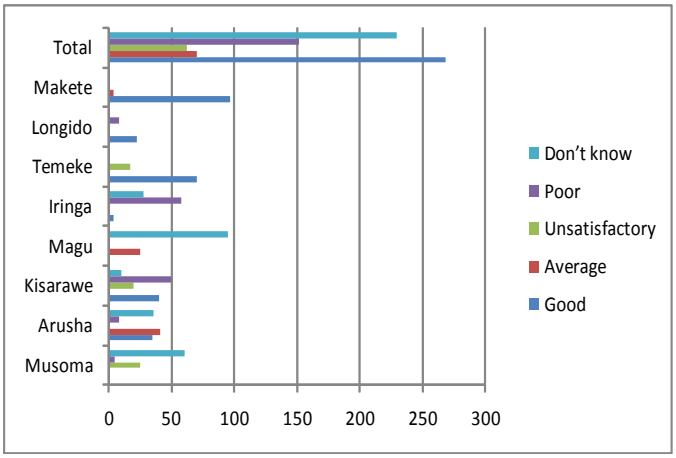
Public water projects

Awareness of projects



In Musoma, they complained that pipes in one water project in Madaraka had not been repaired for more than 30 years. In Longido, a functioning water system has broken down because of conflicts of ownership. The young people who protected the system originally are now confused and don't know what to do.

State of the projects



Thus in many cases, one can only say that water projects exist but guaranteed availability of water is still a dream.

In the case of electricity the situation is much worse. Only 31% have access to electricity. Of these, 61% said that their electricity was provided by TANESCO while 9% and 12% got their electricity from generators and solar power respectively. Solar power is expanding rapidly. In Magu and Temeke, more people had solar power than depend on TANESCO. Maybe they are the lucky ones as the availability of electricity at present is a very relative term in light of the ubiquitous power cuts.

Key Finding Two:

Availability depends on distance, time and cost

Distance to water projects and the time taken to fetch water also affects the availability of water as the time taken reduces the amount of water that can be fetched as well as the time to do other activities.

Time taken to fetch water

District	Time					
	30 mins	1 hour	2 hours	3 hours	4+ hours	Don't know
Arusha		54	4	2		
Iringa	120					
Kisarawe	28	42	50			
Longido	12	18	9			
Magu		29				91
Makete	20	22	18			
Musoma		18	16	18	48	
Temeke	120					
Grand total	300	183	99	20	48	91

The time for fetching water has been reduced a great deal, particularly Iringa and Temeke. However, in other areas, people still have to spend a large part of their day fetching water. Musoma is the worst off. 48% of respondents need more than 4 hours to fetch water. They are followed by Kisarawe where, in the two villages without a deep well, 42% spend two hours on fetching water

Young people (particularly girls and young women) are the most affected since:

- They have to fetch water for school.
- Sometimes they have to forego school in order to fetch water, for example in Longido during the dry season
- Young women fetch most of the water. This means that they have less or no time for other activities.

Cost also determines how much water people fetch and what source they use. The majority (58%) said they do not have to pay for water, although there are other costs, such as the cost of diesel for the water pump (Longido), 20% pay by bill and 21% buy water by the bucket.

While water bills are uniform, the cost of water per bucket varies considerably ranging from 30/- in Iringa to 100/- in Arusha and Magu. Therefore people in Arusha and Magu, are likely to use less water. Even in Iringa, they said that the cost of the bucket, given the number of buckets required, forces them to take water from the River Ruaha which has already been contaminated. The cost is also affected by breakdowns as the village where they now pay 100/- used to have free water until the pump broke down.

Cost is a major issue in terms of electricity provision also:

- **Costs of connection to the national grid**

Poles and wires passing through a village are no guarantee of electricity. Examples were given in Musoma, Longido, Makete and Iringa of villages

sporting poles and wires but no electricity because they could not afford the costs of connection. In Isakalilo, Iringa, they estimated the cost of to be 2.5 million shillings.

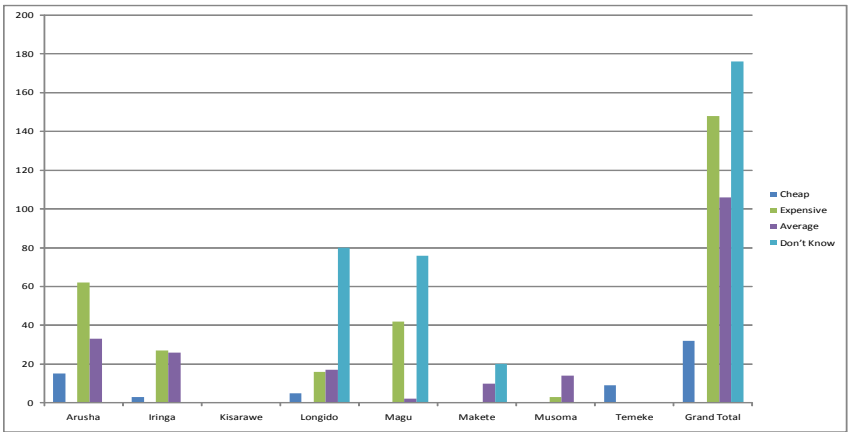
• Cost of electricity

Of those who knew about the cost of electricity, 11% only felt it was easily affordable, mainly in Arusha, while 51% felt it was expensive. The cost of electricity therefore put it outside the range of many people who would otherwise use it.

'I won't have electricity till I die because there is no way I can afford it' Isakalilo, Iringa

Cost and value of electricity

Cost of electricity



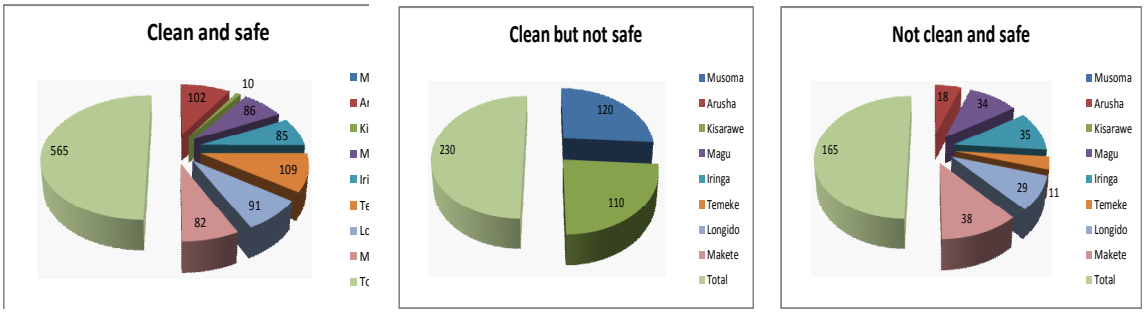
Key Finding Three:

People's health is compromised by the lack of clean and safe water and electricity

The availability and quality of water are major factors affecting the health of young people but, only in Arusha did more than 80% o the respondents say they have access to safe and clean water. 43% of respondents said their water was not safe and 20% said their water was neither clean nor safe.

Because of insufficient projects, many of which have broken down, people are forced to depend on lakes, rivers and natural wells. Cost also means that they use unsafe sources of water which are free.

Quality of water



Out of 120 respondents in each district.

Lack of water also affects health in other ways. Many health centres still have no clean and safe water, or no water at all. For example in Masaki, they have to buy water to take medicine. The majority of schools still have no water also.



Quality of water

Lack of electricity also affects the efficient functioning of health centres.

- **Tests and equipment:** services provided are reduced because of lack of electricity for example some diagnostic tests, and equipment which depends on electricity.
- **Services during the night**: Many health centres close during the night but even those that remain open depend on kerosene lamps. Even in a new health centre such as the one in Masaki, Kisarawe:

'Since the dispensary has no electricity, pregnant women contribute to kerosene so that they can get light from kerosene lamps. The patients also have to buy water '
Kisarawe

Key Finding Four:
Impact of water and electricity on livelihoods of young people
Water and electricity, or the lack of it, seriously affect the livelihood opportunities of young people:

- **Education:** The presence of water at school leads to better latrines and healthier pupils. It also increases classroom time as pupils will not be going in search of water. The presence of electricity makes it possible for students to access television programmes and study at night.
- **Time consumption:** The more time young people have to spend fetching water, the less time they have for a livelihood activity. This affected the girls in particular both because they fetch the water and because they need the water to fulfil their traditional gender roles of washing, cooking and cleaning.
- **Water and income generation:** No examples of irrigation farming were given in the survey but young people gave some examples of how they use water for livelihoods,
  - Livestock in Longido
  - Brick making in Makete and Musoma
  - Car wash in Iringa

Water pipes are broken in the area to make a big pond. The youth have been using that water for watering their gardens. They were arrested by the police and water department accused for cutting the pipes which is not true. Although there has been further damage to the pipes, they have not been repaired for 38 years Kamugegi, Musoma

However, even use of water by young people can become problematic as shown in the example from Musoma.

- **Unpaid labour:** Young people are also expected to do the community's work of protecting their water sources for free.

The survey gave multiple examples of this unpaid labour by young people: digging the ditches for water pipes, cleaning ponds and wells,. These are all very worthy activities, but if young people have to give a large amount of their time to such activities, it is very difficult for them to make their own living.

- **Electricity and livelihood options:** Electricity promotes development of young people and leads to an increase in their income as well as that of the community. Youth are the main users of electricity for their businesses such as barbershops, salons and phone charging, as well as other personal affairs while older men use it almost exclusively for the family (Longido)

'The majority who have electricity are businessmen who use it mainly for business and very little for household. They have contributed to development in the village because their business activities continue till 11.00 or 12.00 at night. Before that, everything closed at 8.00'
Magu

Key Finding Five:
The lives and development of young people are seriously affected by whether water and electricity are available

The lives and development of young people are strongly influenced by the availability or otherwise of these two utilities, water and electricity. Yet there is little geographical equity as there are with huge disparities between districts, wards within districts and even villages within wards. Is it possible to talk about equality of opportunity when:

- One girl has to use more than three hours in her day fetching water because the water point is so far away while others use less than 10 minutes
- Some schools have a regular source of water on the compound while other children often don't go to school during the dry season because they have to search for water for the family.
- One family accesses clean and safe water while another has to depend on traditional wells, or polluted rivers/ponds only
- One family only has to pay 50/- for a bucket of water while another has to pay up to 200/- or more
- One young person has electricity in the home and can therefore do her homework in peace while another has to make do with a paraffin lamp, if s/he is lucky
- Another young person can develop her/his business because of electricity while the majority cannot
- One young person can use her mobile phone without any problem, including for internet etc. while another has to walk 10 kilometres every time she has to charge her phone because of the lack of electricity.

In Kisarawe, two of the villages pay 50/- a bucket for their water since the wells are situated in their villages while the other two villages have to pay 200/- as well as transport costs for the same bucket of water. Thus either families have to reduce their expenses for food, education and other necessities or they use the traditional wells which are neither clean nor safe.

Such major differences between one location and another promote or restrict the efforts of young people to remain healthy, and to conduct their own livelihoods. Overall, 50 years after independence,

it is a shock to see villagers in at least 25% of the villages in the survey dependent on unsafe, shallow, natural wells, which dry up in the dry season and the majority of Tanzanians still not benefitting from electricity, even when there are no power cuts.

Conclusion

While there have clearly been considerable efforts to expand the supply of clean and safe water to communities, a lot more effort is still required as availability is often only nominal. This is seriously exacerbated by the breakdown of so many existing projects.

The situation is much worse with regard to electricity which is identified by young people as key to enabling them to diversify their sources of livelihood. Transformers transform lives. However, given the current state of electricity supply in the country it is unrealistic in the short term to expect the national grid to satisfy the demand for electricity. Indeed, one wonders what TANESCO would do if large numbers of people were suddenly able to afford the connection costs.

What can be done? Young people as part of the solution

The water situation would greatly improve if there were better maintenance systems in place. Given the widespread unemployment and/or unemployment of young people, it makes sense to employ young people to protect and maintain the projects. This would not necessarily be full time employment but would be much more effective than continuing to depend on their 'volunteering' unpaid labour when they have to make a living for themselves, and then pay the substantial costs of repair (or the uncountable costs of leaving them in disrepair.

With regard to electricity, it is clearly unrealistic to expect major expansion of the national grid in the near future, hence the need to look for alternative sources. A few districts are already showing significant use of solar power. For example, it would seem to be in the best interests of mobile phone operators to set up solar powered charging centres for phones small towns and villages. These could be set up in youth centres and the young people would be responsible for running the centres, while, at the same time, earning some money for the development of the centre.

At the same time, corporates could also support the education and health sectors by providing solar panels. Small scale informal sector parks could also be provided with solar power to enable young people to diversify their livelihood options . Otherwise it does seem that for the majority of Tanzanians electricity is an unattainable dream in their life time.