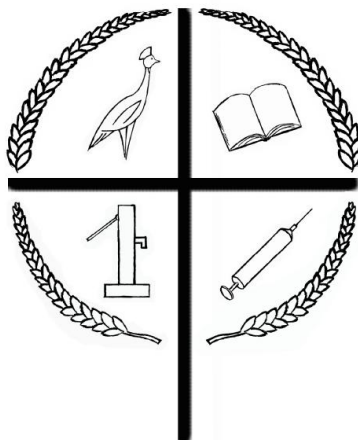


BUSOGA TRUST WATER DEVELOPMENT BASELINE SURVEY REPORT



DISTRICT: Masindi

SUB-COUNTY: Pakanyi

DATE: 9th - 16th January 2008

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Introduction:

The Busoga Trust seeks to provide clean water and sanitation to the people of Uganda. Whilst there are a number of Government and NGO initiatives also undertaking this goal, there is still a huge lack of safe water and sanitation coverage. As you will see below, safe water coverage may be as low as 30%.

There are a number of reasons why the water and sanitation coverage is so low, despite the efforts of numerous organisations. Apart from the sheer scale of the work involved, the way in which certain organisations operate may hinder their good intentions. With regard to the provision of clean water, the failure of many initiatives to establish a strong Water User/WATSAN committee means there is no long-term system in place to maintain and repair protected sources. This issue is often confounded by the use of cheap and poor quality materials. In such circumstances, a good intention can in fact have a detrimental effect on a community. After many years of using dirty water, people may become slightly immune to some of the bacteria within it. However, once they are provided with a clean water source, their immunity rapidly declines. If they are then forced to return to the traditional dirty source, they will no longer be able to cope with the many types of bacteria within it, and will become even more ill than before.

Regarding hygiene and sanitation, there are some more subtle issues facing organisations working in this sector. Whilst poor hygiene and sanitation practice will usually be due to a lack of knowledge and/or funds for implementing that knowledge, there are also a number of cultural issues preventing the development of hygiene and sanitation. For example, in many cultures, the use of latrines is frowned upon or even not permitted at all. Consequently, when working in this sector, it is vitally important to be sensitive to local cultures and traditions. The Busoga Trust has developed a concept called the 'Home Improvement Campaign' (HIC). The HIC has proved hugely successful over the last year, and has the advantage that it can be adapted to suit the tribal differences faced in each of the communities in which we work.

The objectives of this survey were:

- § To assess the status of water supply and sanitation in Pakanyi Sub-county, Masindi
- § To examine the factors responsible for hindering or facilitating the increase in water supply, and improved hygiene and sanitation
- § To develop appropriate strategies for the effective implementation of the water and sanitation programme

Furthermore, it has provided the opportunity to become sensitised to the local traditions and languages, prior to initiating our water and sanitation programme.

Masindi District is bordered by the Districts of Apac in the East, Gulu in the North, Luwero and Hoima in the South, and Lake Albert in the West. The population is estimated to be around 480,000. Masindi lies at an altitude of between 621-1,158 m in a savannah climatic zone. Temperatures average above 25 degrees centigrade and annual rainfall ranges between 100-1000mm.

Methodology:

The Sub-county of Pakanyi consists of 5 Parishes, 83 Villages and a population of approximately 50,000. Due to the large size and population of the area to be surveyed, an appropriate sampling technique was necessary.

A key factor that had to be taken into account was the varying size of villages, both in terms of geography and density of population. Variance in the geographic size of a village was likely to have an impact on access to water sources, and variance in population density was likely to affect both access to water and sanitation levels. As such it was decided to survey 3 villages per Parish; the smallest, the largest and the median. In order to identify these villages, information on Village, Parish and Sub-county populations was obtained from the Masindi District Planning Office. However, there had only been two population censuses in recent times, one in 1991 and the most recent in 2002. Consequently, based on the growth rate between these two censuses, the Historical Growth Model (HGM) was employed to project the populations in 2008 (see Appendix A). Using these population projections, three villages were identified for survey in each Parish.

However, two main complications arose when it came to implementation. Firstly, since the census of 2002, due to the increasing population, the original three Parishes (Labongo, Kyatiri and Kyakamese) have been split into five Parishes (Labongo, Kyatiri, Kyakamese, Kihaguzi and Kiruli). Furthermore, many of the larger villages have since been split into more villages. Secondly, the process of surveying at a household level requires the support and assistance of local officials, especially the Village leaders (LCI). As such, the villages that we surveyed were, to a large extent, dictated by the availability and cooperation of the LCI's. However, the importance of sampling villages with a range of populations was still heavily emphasised. See table 1 for a list of the Villages surveyed.

Table 1: List of Parishes and Villages surveyed

Parish	Village	No. of households sampled
Labongo	Wolyoba	10
Labongo	Kihonda	10
Labongo	Kiryampate	10
Labongo	Kabatega	10
Labongo	Kyamugwera	10
Labongo	Kisanja	10
Kihaguzi	Kituuka	10
Kihaguzi	Kigunia	10
Kyakamese	Kasomoro	10
Kyakamese	Nyakatoogo	10
Kyatiri	Kibibira	10
Kyatiri	Kyababiara II	10
Kiruli	Nyakarongo	10
Kiruli	Kisegura	10

Within the villages mentioned in table 1, we carried out three main activities.

1. A household level baseline survey assessing issues relating to water, sanitation, hygiene and the safe water chain (see Appendix B).
2. An assessment of every available water source in each village including discussions with local water users, digital photos of sources, technical checks, and water quality testing.
 - Water quality testing was carried out on a total of 16 protected and unprotected sources (2 protected springs, 3 shallow hand-dug wells and 11 traditional/open sources). Water samples were collected in clean sterilized bottles and analysed using a potable potakit, and TDS and conductivity meters. Parameters considered were physico-chemical (colour, odour, taste, turbidity, pH, TDS, conductivity) and Bacteriological (E.coli).
3. Focus groups within certain villages in order to provoke group discussions about the main issues affecting people regarding water and sanitation.

Furthermore, meetings were held with a number of officials, including the District Water Officer, the District Planning Officer, the Sub-county Chief, and the Sub-county Health Assistant.

Results:

Household Baseline Survey:

As shown in table 2, the results of the baseline survey are shocking, but not unexpected. Among the most disturbing results are the 31% protected water source coverage, the 10% improved latrine coverage and the 6% hand washing facility coverage.

Table 2: Overview of results of household baseline survey

Category	Average results
H/H size	
<i>Children</i>	4.48
<i>Adults</i>	2.26
<i>Total</i>	6.74
Water	
<i>Protected water source coverage (%)</i>	31.43
<i>Distance to source (km)</i>	0.80
<i>Time spent per day collecting water (mins)</i>	58.79
Sanitation	
<i>Latrine coverage (%)</i>	52.86
<i>Improved latrine coverage (%)</i>	10.00
<i>Bathroom coverage (%)</i>	22.14
<i>Rubbish pit coverage (%)</i>	8.57
<i>Kitchen coverage (%)</i>	63.57
Hygiene	
<i>Hand washing facility coverage (%)</i>	5.71
<i>Hand washing facility w/t water coverage (%)</i>	5.00
Safe water chain	
<i>Clean water container coverage (%)</i>	52.14
<i>Clean water container w/t scoop coverage (%)</i>	42.86

Whilst we are ever grateful for the support and transparency of the many Local Government departments who provided us with their own information, the large discrepancies between the Local Government figures and our own are eye opening, and highlight the importance of carrying out such baseline surveys ourselves. Table 3 outlines some of the key conflicting data.

Table 3: Conflicting data for Busoga Trust baseline survey and local Government figures*

Category	Busoga Trust Figures	Local Government
Safe water coverage	31%	71% & 55% (two different sources)
Improved latrine coverage	10%	44%

*Sources: Masindi RWSS MIS, Pakanyi Sub-county Three Year Integrated Sustainable Rolling Development Plan (2007/08-2009/10) and Busoga Trust Pakanyi Sub-county Water and Sanitation baseline survey.

Water Source Survey:

The water source survey revealed similar figures to those of the Local Government. In the 14 villages surveyed (plus Pakanyi LC1) there were a total of 32 protected sources. Of these, 21 were functional, giving 66% functionality. According to the Masindi RWSS MIS, there is 61% functionality. However, these figures are slightly misleading when the yield and quality of functional sources is taken into account. Our survey showed that of the functional sources, a high percentage were providing a very low yield, and would often dry up in the dry season. This was especially a problem with the protected springs. See Appendix C for descriptions of all the water sources.

Water testing highlighted the importance of protected water sources, and the dangers of using water from open water sources. The results of the tests are shown in table 4. There is clearly a high degree of bacterial and physical contamination in each of the unprotected sources. The causes of this contamination may include any or all of the following; dipping of dirty Jerry cans in the water, stepping in source while collecting water, rotting debris, use of the water source by animals, and dirty run-off water caused by rains that may include human faeces.

With the exception of Kyediraya source which contained high iron content, the water tested from all the protected sources conformed to the national standards.

Table 4: Water quality results

Water source	Type of water source	Results							
		E.coli/ 100mls	TDS/ mg/l	Turbidity / NTU	pH	Conductivity/	Colour	Taste	Odour
National standards		0	2000	<20	5.5-8.5	4000	Nil	Soft	Nil
Kabanyole	Spring	0	58	15	6.39	116	Brown	Soft	Nil
Kigunya	Spring	2	15	8	6.33	30	Brown Yellowish	Soft	Nil
Kyediraya	HDW	0	30	70	6.47	60	brown	Soft	Nil
Nyakabare P/sc	HDW	0	35.3	5	6.45	70.6	Nil	Soft	Nil
Kyabibare 2	HDW	0	16.7	5	6.22	33.4	Nil	Soft	Nil
Kyababyara	Open source	620	37.3	85	6.69	64.6	Brown	Soft	earthy
Kyabaremuka	Open source	140	12	5	6.36	24	Nil	Soft	Nil
Zephaniya	Open source	80	38	5	6.6	76	Nil	Soft	earthy
Bihanga	Open source	90	22	8	6.27	44	Nil	Soft	Nil
Kyarukerya	Open source	430	23	80	6.7	46	Brown	Soft	earthy
Nyakari	Open source	200	11	60	6.22	22	Brown	Soft	earthy
Kayigwa	Open source	40	21	5	6.27	42	Nil	Soft	Nil
Outa	Open source	70	14	8	6.13	28	Nil	Soft	Nil

Yagu	Open source	30	13.7	5	6.32	27.4	Milky	Soft	Nil sulfide smell
Kasomoro	Open source	380	21.3	80	6.64	42.6	Brown	Soft	sulfide smell
Jachani	Open source	520	19.3	80	6.39	38.6	Brown	Soft	sulfide smell

Focus Groups:

The focus groups tended to back-up the information gathered in the household baseline survey. However, the open nature of the discussions also revealed a number of other issues faced by the communities regarding water and sanitation. These issues are outlined in the 'Challenges and Recommendations' section below.

Whilst this report has been based on the facts and figures determined by the baseline survey, information such as accurate Village, Parish and Sub-county populations was simply unattainable within our timeframe. However, having been granted access to the Community Information System (CIS) by the Pakanyi Sub-county chief, we were able to obtain accurate population figures (see table 5).

Table 5: Populations according to the Community Information System (CIS)

Parish	Village	Population			Age			No. households	Ave h/h pop
		Male	Female	Total	0-5 yrs	6-17 yrs	18+ yrs		
Labongo	Walyoba	161	164	325	57	130	138	60	5
Labongo	Kihonda	158	162	320	72	96	152	64	5
Labongo	Kiryampate	138	146	284	49	110	125	56	5
Labongo	Kyabatega	117	103	220	40	59	121	40	6
Labongo	Kyamugwera	176	175	351	74	111	166	73	5
Labongo	Kisanja	156	164	320	47	122	151	60	5
Kihaguzi	Kituka central	191	260	451	118	178	231	100	5
Kihaguzi	Kigunia I	214	199	413	91	139	176	67	6
Kyakam ese	Kasomoro	216	190	406	95	144	167	79	5
Kyakam ese	Nyakatoogo	115	115	230	47	91	92	39	6
Kyatiri	Kisekura	241	267	508	95	203	210	100	5
Kyatiri	Kyababiara II	219	208	427	103	142	180	93	5
Kiruli	Nyakarongo	423	381	804	212	286	342	130	6
Kiruli	Kitegura	344	355	699	169	236	316	150	5

Challenges and recommendations:

Water

1. Lack of 'Water User' or 'WATSAN' committees.

- Almost without exception, every protected water source visited had no functional 'Water User' or 'WATSAN' committee. This creates two problems: 1) there is no sense of ownership within the community so people may abuse the source through a lack of respect. 2) There is no system for maintaining and repairing sources. Consequently, as soon as a source develops a problem, it becomes permanently dysfunctional, even if it would only take a few pounds to repair it.
- The establishment or re-establishment of such committees for both existing and new sources is necessary. This requires sensitisation of communities to explain the importance of such committees, and adequate follow-ups to ensure their sustainability.

2. Knowledge of the way in which water can transmit disease.

- Many households do not boil water if it looks clean. There is a general assumption that if water looks clean, then there are no bacteria.
- This issue can be tackled through sensitisation of the community via the Home Improvement Campaign.

Sanitation

1. Lack of adequate latrines.

- The major challenges hindering increased 'improved' latrine coverage include; lack of knowledge, termites, collapsing soils, hard rock, lack of funds for concrete slabs, laziness and cultural barriers.
- Sensitive sensitisation through the Home Improvement Campaign and the introduction of relevant technologies is required. For example, eco-san latrines may be used where the ground is not amenable for excavation. There is also scope for research, in partnership with other organisations, to find solutions to specific problems in the area such as that posed by termites.

2. General lack of knowledge:

- As with many of the communities in which we work, there is a general lack of knowledge regarding hygiene and sanitation. This includes knowledge about things you and I would feel is implicit. For example, the importance of; a hygienic latrine, washing hands after using the toilet, not

putting cooking utensils on the floor, keeping animals away from human food etc.

- All these knowledge based problems may be tackled through the Home Improvement Campaign.

Specific challenges for BT staff

1. Language barrier

- The Sub-county has a number of different tribes including Banyoro, Arululu and Lugubala. As a result, communities use a range of language including Runyoro and Swahili. However, English, Lusoga and Luganda are not widely spoken.
- It will be necessary to employ at least one member of staff in Masindi who is competent in Runyoro and/or Swahili. However, this employee must not simply be a translator. Inevitably, when dealing with sensitive issues relating to hygiene and sanitation, especially when there are cultural taboos involved, much delicate information can be distorted in translation. It is therefore necessary that this employee is himself a trained Community Development Officer (CDO).

2. Money orientated communities and lack of volunteerism

- This is a problem that is often highly localised within certain communities. One may find that whilst one community is very helpful and proactive, the neighbouring community may be unwilling to help or participate unless there is an immediate monetary return for their efforts. It has been found that this particular issue often has political roots. Many of the people who were less helpful during the survey were from communities who were keen supporters of the present Central Government. It seems that because of their support of the Government, they expect the Government to provide things like clean water, and are therefore unwilling to help an NGO at any personal cost (even if it is just a few moments of their time).
- Though it may seem radical, because there are so many other communities who are keen to work with the Busoga Trust as a team to provide clean water and develop hygiene and sanitation, it may be prudent to work only with communities who are willing to cooperate. There seems no point in trying to force or coerce people to cooperate if they are not interested.

3. Limited accessibility

- Many of the homesteads and water sources visited were inaccessible by car, resulting in Busoga Trust employees having to walk very large distances.
- Though vehicles are required for transporting larger groups of people and more especially materials, at least two motorbikes will be necessary to enable CDO's to access rural communities.

General recommendations:

Much of the success of this baseline survey is attributable to the help and support of Local Government departments. It is very apparent that without their support in community mobilisation, not only would this survey not have been possible, but nor will the successful implementation of the prospective water and sanitation program. It is vitally important that we work in partnership with such departments and operate a policy of transparency of information, as ultimately we are working toward a common goal.

It is apparent from the water source survey that Pakanyi Sub-county has ample potential for drilled boreholes, shallow hand-dug wells and contained springs. However, given the number of non-functional sources already present in the area (30-40%), it seems prudent to initially focus efforts on their rehabilitation. It goes without saying that such a programme would necessitate the comorbid development of Water User and WATSAN committees. However, should we choose to undertake such a task, it will be absolutely vital to ensure the support and cooperation of the Local Government. Many of the non-functional sources are in fact Government sources. If we were to start rehabilitating them, without the support of the Local Government, we could be seen to be trying to belittle the Local Government in front of the local population.

This survey has highlighted the pressing need for the provision of water and the development of hygiene and sanitation in Pakanyi Sub-county. The Busoga Trust is in a position to achieve this through the implementation of the Home Improvement Campaign, the construction of new safe water sources and the rehabilitation of current sources.

**Masindi (Pakinyi sub-county) population projections for 2008 –
Appendix A**

District	County	Sub-county	Parish	Village	Pop (1991)	Proj. pop (2008)	Notes
Massindi	Buruli	Pakinyi	Kyakamese	Ibaralibi	352	948	Projections made using Historical Growth Model
Massindi	Buruli	Pakinyi	Kyakamese	<u>Kaborogota</u>	527	1,419	$P = Po(1+r)^n$
Massindi	Buruli	Pakinyi	Kyakamese	Kasomoro	306	824	Where:
Massindi	Buruli	Pakinyi	Kyakamese	Katugo	327	881	P = Proj pop
Massindi	Buruli	Pakinyi	Kyakamese	Katumba	425	1,144	Po = Last rec pop
Massindi	Buruli	Pakinyi	Kyakamese	Kibamba	500	1,346	r = Growth rate
Massindi	Buruli	Pakinyi	Kyakamese	Kibirani	443	1,193	n = years past
Massindi	Buruli	Pakinyi	Kyakamese	Kijuga	344	926	
Massindi	Buruli	Pakinyi	Kyakamese	Kiruli	634	1,707	NB. r based on growth between censuses of 1991 and 2002
Massindi	Buruli	Pakinyi	Kyakamese	Kisindi	353	951	
Massindi	Buruli	Pakinyi	Kyakamese	Kisindizi 1	397	1,069	Growth rates:
Massindi	Buruli	Pakinyi	Kyakamese	Kisindizi 2	256	689	Kyakamese = 0.06
Massindi	Buruli	Pakinyi	Kyakamese	Kisweramahinda	225	606	Kyatiri = 0.042
Massindi	Buruli	Pakinyi	Kyakamese	<u>Kitanyata</u>	890	2,397	Labongo = 0.035
Massindi	Buruli	Pakinyi	Kyakamese	Kyakamese	328	883	
Massindi	Buruli	Pakinyi	Kyakamese	Kyamudikya	380	1,023	Villages to be surveyed underlined and in italics
Massindi	Buruli	Pakinyi	Kyakamese	Kyangamwoyo	309	832	
Massindi	Buruli	Pakinyi	Kyakamese	Kyarumbeiha	500	1,346	
Massindi	Buruli	Pakinyi	Kyakamese	Kyantwenge	420	1,131	Villages chosen where:
Massindi	Buruli	Pakinyi	Kyakamese	<u>Nyakakoma</u>	225	606	Two pop extremes plus closest to median pop Designed so sample is not biased by effect of diff pop size on water and san issues
Massindi	Buruli	Pakinyi	Kyakamese	Nyakarongo	312	840	
Massindi	Buruli	Pakinyi	Kyakamese	Mnyakatoogo	225	606	
Massindi	Buruli	Pakinyi	Kyakamese	Pakanyi	305	821	Three parishes now split into 5 where:
Massindi	Buruli	Pakinyi	Kyakamese	Waiga	344	926	Kyakamese - Kyakamesa & Nabongo Labongo - Labongo &
Sub-total Pop.					9327	25,115 606 - 2397	

Range							
Median							1501.5
	Massindi	Buruli	Pakinyi	Kyatiri	Katugo	297	598
	Massindi	Buruli	Pakinyi	Kyatiri	<u>Kibibira</u>	1056	2,125
	Massindi	Buruli	Pakinyi	Kyatiri	Kinoijogoro 1	182	366
	Massindi	Buruli	Pakinyi	Kyatiri	<u>Kiboijogoro 2</u>	182	366
	Massindi	Buruli	Pakinyi	Kyatiri	<u>Kisekura</u>	613	1,234
	Massindi	Buruli	Pakinyi	Kyatiri	Kyakayaga 1	278	559
	Massindi	Buruli	Pakinyi	Kyatiri	Kyakayaga 2	278	559
	Massindi	Buruli	Pakinyi	Kyatiri	Kyatiri	827	1,664
	Massindi	Buruli	Pakinyi	Kyatiri	Nyakabale	643	1,294
	Massindi	Buruli	Pakinyi	Kyatiri	Nyakasagazi	827	1,664
Sub-total						5183	10,431
Pop.							
Range							366 - 2125
Median							1245.5
	Massindi	Buruli	Pakinyi	Labongo	<u>Hanga</u>	2116	3,798
	Massindi	Buruli	Pakinyi	Labongo	Kasenyi-Bokwe	768	1,378
	Massindi	Buruli	Pakinyi	Labongo	Kidwere 1	412	739
	Massindi	Buruli	Pakinyi	Labongo	Kidwere 2	412	739
	Massindi	Buruli	Pakinyi	Labongo	Kigumba-		
	Massindi	Buruli	Pakinyi	Labongo	Kyamugweri	250	449
	Massindi	Buruli	Pakinyi	Labongo	Kigunia	432	775
	Massindi	Buruli	Pakinyi	Labongo	Kihaguzi	613	1,100
	Massindi	Buruli	Pakinyi	Labongo	Kihonda	551	989
	Massindi	Buruli	Pakinyi	Labongo	Kijumbura	433	777
	Massindi	Buruli	Pakinyi	Labongo	Kilanyi	339	608
	Massindi	Buruli	Pakinyi	Labongo	Kisabagwa	232	416
	Massindi	Buruli	Pakinyi	Labongo	Kisanja	401	720
	Massindi	Buruli	Pakinyi	Labongo	<u>Kituuka</u>	903	1,621

	Massindi	Buruli	Pakinyi	Labongo	<i>Kyabatega</i>	140	251
	Massindi	Buruli	Pakinyi	Labongo	Labongo	282	506
	Massindi	Buruli	Pakinyi	Labongo	Nyakyanka	142	255
	Massindi	Buruli	Pakinyi	Labongo	Walyoba	251	450
Sub-total						8677	15,572
Pop.							
Range							251 - 3798
Median							2024.5
Grand total						23,187	51,119

Appendix B
BUSOGA TRUST WATER DEVELOPMENT SURVEY FORM

District..... Sub-county..... Parish.....
 Village..... Date..... Interviewer's Name.....

H/H name	H/H size		Water				Sanitation							
	Children	Adults	Source of water	Distance in km	Time spent per day	Reliability		Have latrine	Has walls	Has roof	Has privacy	Improved latrine	Bath room	Rubbish pit
						Yield	Qty							

Appendix C
Pakanyi Sub-county – Water Source Survey

Parish	Village	Source	Notes
Labongo	Walyoba	1. Walyoba drilled borehole	<ul style="list-style-type: none"> • Drilled by ‘Habitat for Humanity’ • Constructed in 2000 • Not functional – pipes very old and now broken • LHPM asked community to raise 400,000/= for repair, but have failed to do so.
		2. Kyabalemuka open water source	<ul style="list-style-type: none"> • A number of households draw water from this poor traditional source
		3. Kyedireya shallow hand-dug well	<ul style="list-style-type: none"> • Constructed in 1995 • During rainy season, the water changes colour and becomes brown • Most households have abandoned the source
		4. Kyakatalikawe protected spring	<ul style="list-style-type: none"> • Constructed by ‘Masindi family health project’ • Source has a low yield and does not have a watsan committee
		5. Kyente shallow hand-dug well	<ul style="list-style-type: none"> • Donated by a Scottish Scout group. Was donated to school, but is also widely used by community • Well is functional, but in poor condition. The handle and bearings are worn and will not last much longer
	Kihonda	1. Kihonda drilled borehole	<ul style="list-style-type: none"> • Drilled by ‘Drillcon’ in 1998 • Used by 250 households – approximately 562 people • Not functional - Caretaker reported that after 4 years, it started yielding dirty water (mixed with mud). It appears that the cause is that the bottom casing is broken
		2. Kihonda open water source	<ul style="list-style-type: none"> • Was once protected, but has been dismantled by community due to its low yield. Now just an open source.

			<ul style="list-style-type: none"> This is now the only source for Kihonda village
	Kiryampate	1. Us same water source as Kihonda	
	Kyabatega	1. Open water source	<ul style="list-style-type: none"> Near to chairman LC1 home, there is an open water source. The source does not dry up during the dry season, and serves many households.
		2. Wayiga protected spring	<ul style="list-style-type: none"> Constructed by 'PAF' programme in 2003 Low yield
		3. Ihoko protected spring	<ul style="list-style-type: none"> Low yield, but recharge rate increases during rainy season 45 households use source
		4. Kyalukeya open water source	<ul style="list-style-type: none"> Used by around 35 households
	Kyamugwera	1. Open water source nr Kayigwa's home	
		2. Sabiti open water source	<ul style="list-style-type: none"> In swamp
		3. Kaitangou protected spring	<ul style="list-style-type: none"> Constructed by 'DWSSCG PAF' (poverty alleviation fund) Low yield
		4. Kyasiire open water source	<ul style="list-style-type: none"> Community share water with animals
		5. Waiga protected spring	<ul style="list-style-type: none"> Constructed in 2001 Also used by members of a neighbouring village (Kisanja)
	Kisanja	1. Kalembura shallow hand-dug well	<ul style="list-style-type: none"> Constructed in 2003 Functional – good working order
		2. Baalija shallow hand-dug well	<ul style="list-style-type: none"> Constructed by PAF in 2007 Low yield

Kihaguzi	Kituuka	1. Kabanyolro protected spring	<ul style="list-style-type: none"> • Used by around 40 households and one primary school • Functional – good working order
		2. Kili protected spring	<ul style="list-style-type: none"> • Constructed by PAF in 2003 • Functional – good working order
		3. Majimuzuri open water source	<ul style="list-style-type: none"> • Used by around 55 households
		4. Businge open water source	
		5. Anya protected spring	<ul style="list-style-type: none"> • Constructed by PAF in 2003 • Functional – good working order
		6. Outa open water source	<ul style="list-style-type: none"> • Used by around 24 households
		7. Nyakabale protected spring	<ul style="list-style-type: none"> • Functional – good working order
		8. Ezubo protected spring	<ul style="list-style-type: none"> • Low yield
	Kigunya	1. Protected spring	<ul style="list-style-type: none"> • Functional - good working order
		2. Nyinga open water source	<ul style="list-style-type: none"> • Dirty water • Used by around 46 households
		3. Zephania open water source	<ul style="list-style-type: none"> • Used by around 40 households
		4. Abeere open water source	<ul style="list-style-type: none"> • Used by around 30 households
		5. Zephania II open water source	<ul style="list-style-type: none"> • Used by around 20 households
		6. Balinda protected spring	<ul style="list-style-type: none"> • Low yield

		7. Kigunya protected spring	<ul style="list-style-type: none"> • Not functional – pipe broken so water just coming up from the base • Used by around 120 households.
Kyakamese	Kasomoro	1. Kyabeba shallow hand-dug well	<ul style="list-style-type: none"> • Not functional - Handle and bearings are broken • Serves 2 communities – Kasamoro and Pakanyi
		2. Kyakaruuli shallow hand-dug well	<ul style="list-style-type: none"> • Constructed in 2004 • Used by around 76 households • Watsan committee is not functioning
		3. Lugadya open water source	<ul style="list-style-type: none"> • Used by around 15 households • This source is around 2.5 m to the Kyakaruuli well
		4. Jachani open water source	<ul style="list-style-type: none"> • Used by around 24 households • This is the property of the vice chairman • People move a long way to reach other protected sources.
	Pakanyi (127 households in total, pop of 474):	1. Gwooki shallow hand-dug well	<ul style="list-style-type: none"> • Good working order
		2. Pakanyi PS borehole	<ul style="list-style-type: none"> • Pipes have been weakened since last term so now water not coming up as there are holes in pipe • No watsan committee
		3. Pakanyi health centre borehole	<ul style="list-style-type: none"> • Not functional for at least 4 years • Little info as there is no longer any form of water committee
		4. Shallow hand-dug well nr to Pakanyi trading centre	<ul style="list-style-type: none"> • Constructed in 1992 • Not functional for around 4 years • Abandoned due to people stealing parts • So now community drawing water from Walyoba LC1

	Nyakatoogo	1. Wabitengo open water source	<ul style="list-style-type: none"> • Used by around 20 households
		2. Kiayito shallow hand-dug well at PS	<ul style="list-style-type: none"> • Newly constructed (last year) and in good working order
		3. Kikayito II hand-dug well	<ul style="list-style-type: none"> • Newly constructed (last year) and in good working order
		4. Lukilyo open water source	<ul style="list-style-type: none"> • Used by around 15 households
Kyatiri	Kyababiara II (around 800 households in area)	1. Jopamato shallow hand-dug well	<ul style="list-style-type: none"> • Functional – good order
		2. Yaku open water source	<ul style="list-style-type: none"> • Used by around 60 households
		3. Parombo open water source	<ul style="list-style-type: none"> • Used by around 80 households • Once a child fell into source • Doesn't dry up
		4. Pakiya open water source	<ul style="list-style-type: none"> • Used by around 98 households
	Kibebira	1. Ucere open water source	<ul style="list-style-type: none"> • used by around 40 households
		2. Kibebira PS shallow hand-dug	<ul style="list-style-type: none"> • Constructed n 2005 • Good order • Poor environment/surroundings – people washing clothes etc
		3. Anyonga Negi shallow hand-dug well	<ul style="list-style-type: none"> • Used by around 42 households

		4. Wakuma open water source	<ul style="list-style-type: none"> Used by around 20 households
Kiruli	Nyakarongo	1. Kyamulangi open water source	<ul style="list-style-type: none"> Used by around 87 households
		2. Kinyara nyare open water source	<ul style="list-style-type: none"> Used by around 50 households
		3. Kichwa mutwe open water source	<ul style="list-style-type: none"> Used by around 69 households
		4. Borehole	<ul style="list-style-type: none"> drilled in 2005 not enough water from outset not is not functioning needs check to id problem
	Kisegura	1. Kisegura open water source	
		2. Wandera open water source	
		3. Kitegura shallow hand-dug well	<ul style="list-style-type: none"> Constructed in 2005 No watsan committee so now is broken down for around 1 year