



**United Nations Human Settlements Programme
UN-HABITAT**

**LAKE VICTORIA REGION WATER AND SANITATION
PROGRAMME**

**APPRAISAL REPORT
BUGEMBE TOWN**

September 2008



Disconnected Public Standpipe in Budumbuli West

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Fig 1 - Location map Bugembe

1 BUGEMBE TOWN COUNCIL PROFILE

1.1 Historical Background.

Bugembe Town Council dates back to about late 1930's as the seat for Busoga sub-region. It is the seat of the *Obwa Kyabazinga bwa Busoga*. In early 1950s it was declared a planned area and the first physical plan developed in 1953. It is a home for most retired civil servants in Busoga. From late 1960s, the demand for a town council of Bugembe started and it was only on 26th April 2008 that the demand was answered and the Town council was created with effect from 1st July 2008 and accordingly gazetted. It was prior to its gazettement as a town council a parish of Mafubira Sub-county.

1.2 Location

Bugembe Town Council is located in the eastern part of Jinja District along the Jinja–Tororo highway, about 4 km from Jinja Municipality, which is the second largest town of Uganda in the Country. In the south it is bordered by the second largest fresh water lake in the world (Lake Victoria). Bugembe Town Council is one of the gazetted Urban Councils in Jinja District; the other is Jinja Municipal Council, Buwenge which became a Town Council in February 1997 and Kakira which was gazetted at the same time with Bugembe. Bugembe Town Council is bordered by Mafubira sub county in the north and east, while in the west it is bordered by Jinja Municipality, it is located in Butembe County.

1.3 Management and Decision Levels

The Town Council operates within the mandate of the Local Government Act Cap 243. There are two governing bodies namely political (Civic organ and the administrative structure, which work together in a complementary manner to decide on how to prioritise development programmes.

The Town Council Local Government is the top most political organisation headed by the Town council chairperson. It is the policy-making organ with responsibility of decision making as for instance, formulating development plans. The Council is the implementing agency for the Town Council. It is headed by an elected chairman who works with a team of councillors also elected at different levels of the local government.

The Town Clerk heads the technical arm of administrative as reflected in the organogram of the administrative structural arrangement (Fig. 1). He is the head of all the employees of the town council and responsible for implementing all legislative decisions of the council. He also heads the council technical planning committee, which is supposed to determine and synthesise key projects for implementation to be approved by the council.

Bugembe Town Council has 6 core technical departments namely: (i) Administration, (ii) Finance and Planning, (iii) Public Health and Environment, (iv) Works and Engineering, (v) Audit, and (vi) Community Based Services. The Water Supply sector is run by the National Water and Sewerage Corporation, a government parastatal.

The Technical Planning Committee advises the Council on the viability, feasibility and profitability of proposals deemed relevant for the development in the Local Government. The committee meets at the beginning of every month and again meets the executive committee at the end of the month.

The Executive Committee, also formed under the guidelines of the Local Government Act, oversees development activities across sectors within the Town Council. This committee comprises the Chairperson, a vice chairperson also secretary for child welfare and education and the secretaries for Finance, production and Gender, Health, Environment and sports, and Works.

Bugembe Town Council consists of five wards (parishes) of Wanyama, Katende, Budhumbuli West, Budhumbuli East and Nakanyonyi with 8 Cells (villages) (Table 1). Each ward is manned by a Town agent (parish chief) at the council whose duties include the following:

- a) Preparation, issuing and interpretation of planning and budgeting policies
- b) Issuing and interpretation of guidelines to Project Development committees for project's management and operations
- c) Facilitation of the planning process during every year by collection of data and engaging the community to participate in the process
- d) Submitting approved Parish plans for incorporation in the development plan
- e) Informing village councils of decisions relating to their proposals and budgets and any other information affecting the councils.
- f) Participation in revenue mobilisation exercises of the Council.

Table 1: Administrative Units of Bugembe Town Council

Ward Names	Village / Zone
Wanyama	Wanyama East and Wanyama West
Katende	Katende East and Katende West
Budhumbuli east	Budhumbuli East
Budhumbuli West	Budhumbuli West
Nakanyonyi	Nakanyonyi and Katwe



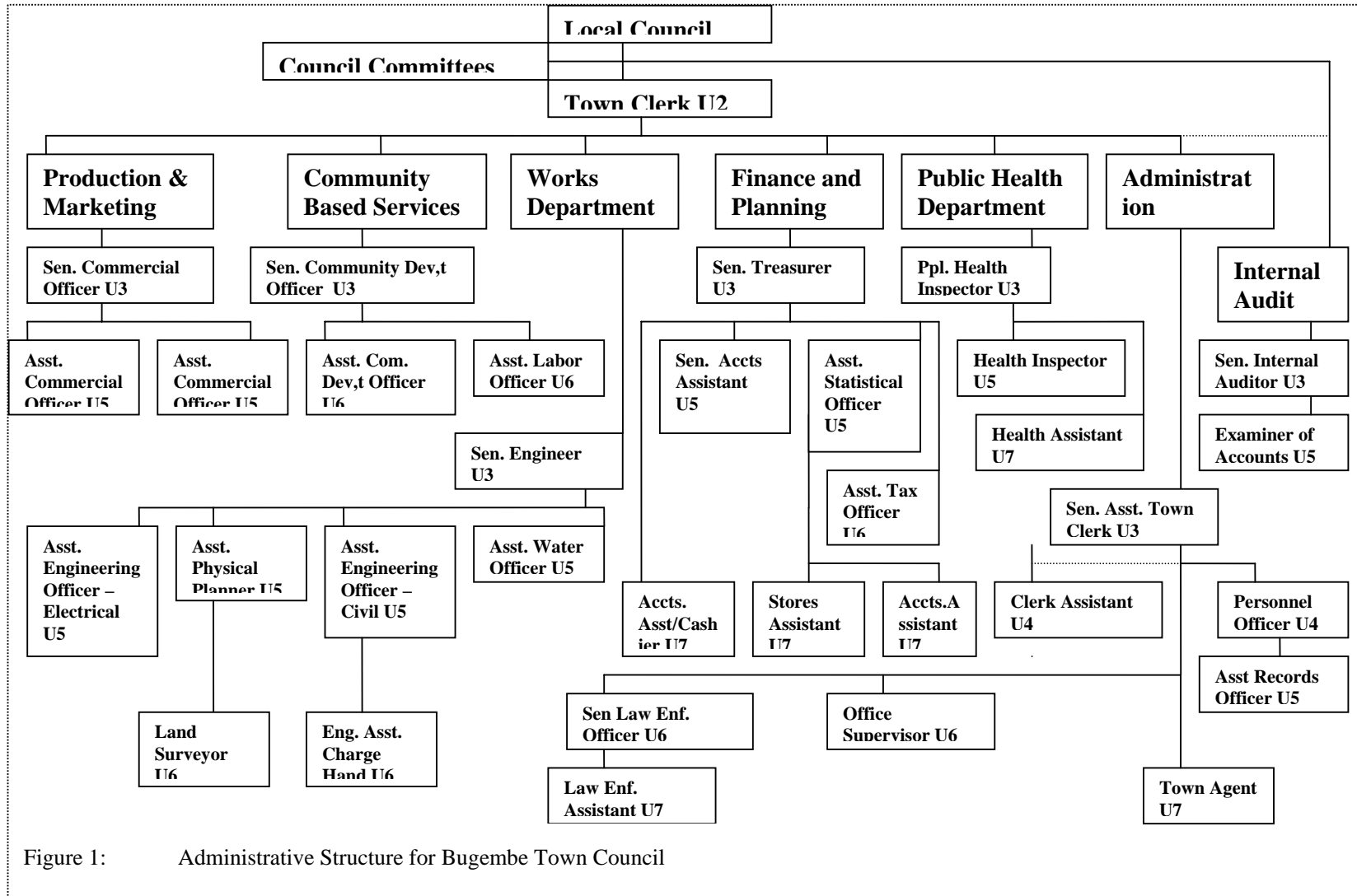


Figure 1: Administrative Structure for Bugembe Town Council

1.4 Population

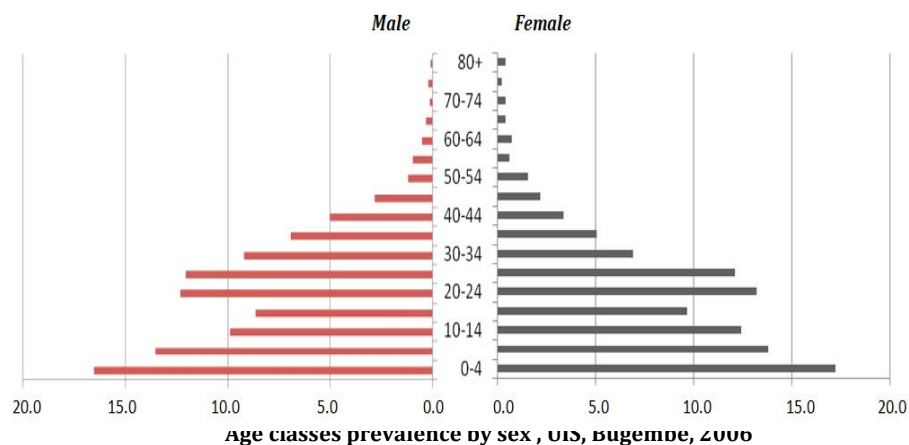
Bugembe Town Council has an estimated total population of about 30,000, based on the provisional census data of 2002 of 26,836 people, assuming a growth percentage of 3%.

Table 1: Bugembe Population per Parish and by Gender

Parish/ Ward	Male	Female	Total
Wanyama East	1,112	2,279	3,391
Wanyama West	833	2,250	3,083
Katende East	1,009	2,216	3,225
Katende West	899	2,226	3,125
Katwe	983	2,107	3,090
Budhumbuli East	1,303	2,684	3,987
Budhumbuli West	1,189	2,467	3,656
Nakanyonyi	873	2,195	3,068
Total	8,201	18,424	26,625

Source: Based on Provisional Census results of 2002.

Bugembe Town Council has very high population density. The population growth rate is high of about 3.5% with a very youthful dependant population (40% of the population is under 15 years of age). Interestingly, also the age group of 20 – 30 years is relatively high (about 25%) as a result of a strong influx of young people coming from the rural areas looking for job opportunities. (see below)



Bugembe is a traditional headquarters for the Busoga region it attracted the Basoga notables to settle there mostly those who were employed by government. The majority of the people of Bugembe are Busoga. (The ethnicity of the Town population has a composition of 85% Basoga). Lusoga is the main language spoken, though English is the official medium of communication.

Settlement is not quite planned along the roads within the town; in some parts like Budumbuli nucleated settlements it is a common phenomenon and in a total mess.

1.5 Livelihoods

There are no significant differences in resource endowment among the 5 wards. However, since most activities are centred in Budhumbuli, the economic activity is quite high.. The market and taxi park are found in this ward though during day because of the nature of town

being on the Jinja-Kampala-Tororo high way, the taxi operation tends to move to the Katende and Wanyama wards for easy capture of the passengers to Jinja Municipality.

The major economic activities are produce buying and processing of coffee, maize, and beans. There are also retail and wholesale shops, bars, restaurants, butcheries and fish stalls.

Middle class people have put up good residential houses throughout the 5 wards but most notably in Katende East cell of Katende ward. Small scale industries namely coffee mills, maize mills, saw mills, welding workshops are scattered in the five wards. This is due to lack of a physical plan for Bugembe Town Council.

There are two petrol stations, one in Budhumbuli west and another in the Nakanyonyi ward. There are no major industries to employ the unemployed.

Being a semi-rural town most people are engaged in subsistence farming. However, at night most economic activities take place at the along the Jinja-Tororo highway where many people converge during evening hours.

1.6 Land and Topography.

Bugembe Town Council has a total area of 8 sq km. Few people own leasehold; the land tenure is largely customary. As far as relief is concerned, Bugembe is on the slope of Igenge hill with undulating lowlands towards the lake.

Soil erosion is a common phenomenon in Katende, Wanyama and Budhumbuli wards. The soils are relatively fertile a fact that has enabled the growth of maize, matoke, and cassava in areas away.

1.7 Vegetation

The vegetation of Bugembe has suffered from urbanisation and by the demand for fuel and space for man's activities. Generally the swampy areas still stand in their original form.

1.8 Rainfall and Climate

Bugembe Town Council has a tropical climate with comparatively small seasonal variations of temperatures, and is humid and windy throughout the year. Bugembe receives rainfall of about 1300- 1600 mm per annum, which is well distributed with peaks in March to May and October to November. There are two relatively dry seasons between December to March and another one from June to July.

1.9 Vulnerable Groups

The most vulnerable groups in the Town Council are the aged, sick, orphans; land-less, unemployed, widows, abandoned wives whose husbands go to look for jobs outside the Town Council, single men and single women. These vulnerable groups are often helpless, physically constrained, and lack basic necessities.

1.10 SWOT Analysis

Bugembe Town Council carried out a SWOT analysis during the preparation of their 3-years rolling Development Plan (2008). A copy is provided on the next pages.

Table 1 - SWOT Analysis of Bugembe Town Council

Sector	Strength	Weakness	Opportunities	Threats
Administration	<ul style="list-style-type: none"> • Presence of technical personnel • Presence of political leadership • Availability of necessary infrastructure, equipment and facilities • Strong working relationship between political leadership and technical staff 	<ul style="list-style-type: none"> • Limited understanding of technical issues by political leadership. • Available infrastructure not enough. • Lack of office equipments and facilities. 	<ul style="list-style-type: none"> • Availability of Capacity Building Funds at the District. • Availability of funds (LGDP II) for infrastructure development • Availability of start up funds. 	<ul style="list-style-type: none"> • Funds for capacity building not released by district. • Under funding of the Council • Community ignorant of laws and regulations governing council operations.
Finance and Planning	<ul style="list-style-type: none"> • Presence of technical personnel • Availability of necessary infrastructure, equipment and facilities. 	<ul style="list-style-type: none"> • Knowledge and skills of Technical staff not sufficient. • Number of technical staff not enough • Lack of equipments (computers) and essential stationary • Roles and responsibilities of staff not properly streamlined • Lack of financial and accounting system • Poor revenue mobilization capacity. 	<ul style="list-style-type: none"> • Availability of Capacity Building Funds at the District. • Advertisement might permit recruitment of staff • Availability of sponsors for training in accounting. 	<ul style="list-style-type: none"> • Dwindling revenue sources and falling incomes • Negative perceptions of staffs by community • Pressure to provide finances from other sectors even when such resources are not available.
Works and technical services	<ul style="list-style-type: none"> • Availability of funds from the centre. • Priority during planning and allocation of financial resources. 	<ul style="list-style-type: none"> • Lack of technical staff (Available staff on voluntary terms of employment) • Total lack of equipments (surveying) to facilitate 	<ul style="list-style-type: none"> • Availability of technical personnel at the district • Presence of many income sources (LGD 	<ul style="list-style-type: none"> • Lack of physical plan for the council • Lack of capable local companies to undertake technical projects

Sector	Strength	Weakness	Opportunities	Threats
		technical services. <ul style="list-style-type: none"> Lack of infrastructure e.g. workshop and drawing office. 	II, PAF, SFG, UN-HABITAT) of funds <ul style="list-style-type: none"> Availability of construction materials locally 	<ul style="list-style-type: none"> Fast physical development of the Town council. Request for compensation for project undertakings that infringe of peoples land.
Education and sports	<ul style="list-style-type: none"> Availability of land for construction of schools and sports facilities. Presence of potential technical people 	<ul style="list-style-type: none"> High pupil class room ratio Lack of Government aided secondary school Poor performance of especially some primary schools Lack of sports facilities Dilapidated and unfinished school strictures. Limited support of teacher training Refusal to adopt the National Curriculum by some faith based schools 	<ul style="list-style-type: none"> Availability of funds from the government through programmes (UPE, LGDII) Increased involvement and support of education by the private sector Community's willingness to participate in education related initiatives. 	<ul style="list-style-type: none"> Governments' delay to make secondary education free Non remittance of SFG funds to the council by the district Presence of a large number of potential school going children
Health and Environment	<u>Curative Health:</u> <ul style="list-style-type: none"> Presence of technical staff and facilities Availability of financial resources (LGDII, PHC and conditional grants) Availability of free medical care and drugs 	<ul style="list-style-type: none"> Inadequate staffing Lack of storage facilities for equipments and drugs at Health Centres Inadequate funding 	<ul style="list-style-type: none"> Presence of supportive agencies (NGOs & CBOs) Highly used by the community 	<ul style="list-style-type: none"> Increasing number of people demanding for the services Expensive medical facilities and inputs

Sector	Strength	Weakness	Opportunities	Threats
	<p><u>Public Health:</u></p> <ul style="list-style-type: none"> • Availability of technical staff • Availability of Garbage collection truck 	<ul style="list-style-type: none"> • Lack of refuse truck for garbage collection • Inadequate funding 	<ul style="list-style-type: none"> • Presence of supportive agencies (NGOs & CBOs) 	<ul style="list-style-type: none"> • Increasing garbage quantities • Poor management of garbage at household level
	<p><u>Environment:</u></p> <ul style="list-style-type: none"> • Availability of funds from the centre 	<ul style="list-style-type: none"> • Lack of technical staff • Inadequate funding 	<ul style="list-style-type: none"> • Presence of supportive agencies (NEMA, NGOs & CBOs) 	<ul style="list-style-type: none"> • Environment initiatives not yet popular among decision makers and the community.
Water	<ul style="list-style-type: none"> • Presence of National Water and Sewerage services. • Availability of water sources underground • Availability of means of transport for monitoring 	<ul style="list-style-type: none"> • Lack of technical staff from council • Contracted firms are driven by profit motive 	<ul style="list-style-type: none"> • Presence of supportive agencies (DWD, NGOs & CBOs) • Service highly demanded • Presence of contractors 	<ul style="list-style-type: none"> • Service users not in position to pay promptly • Community not cooperative during installation • Funds inadequate • Lack of physical plan to guide service provision • Lack of funds to compensate community affected during service provision
Community Based Services	<ul style="list-style-type: none"> • Presence of technical personnel • Availability of equipments (Computer) 	<ul style="list-style-type: none"> • Inadequate technical personnel • Inadequate funding at council level • Services misunderstood • Weak link with the district department 	<ul style="list-style-type: none"> • Presence of donor community from where funds can be sources • Presence of technical staff at the district 	<ul style="list-style-type: none"> • Community not aware of departments task

From: Three Years Rolling Council Development Plan – Bugembe TC, August 2008

2 RESULTS OF THE URBAN INEQUITY SURVEY IN BUGEMBE

2.1 Urban Inequity Survey (UIS)

The UN-HABITAT Monitoring Systems Branch and the Water, Sanitation and Infrastructure Branch, in collaboration with the Central Bureaux of Statistics, has completed the implementation of Urban Inequities Survey in 17 secondary urban centres in Kenya (Migori, Kisii, Homa Bay, Siaya, and Bondo), Uganda (Ggaba, Mukono, Bugembe, Masaka, Kyotera, and Mutukula), and Tanzania (Mutukula, Bukoba, Muleba, Geita, Sengerema, Bunda, and Musoma) as part of the LVWATSAN Programme. For each urban centre, information is available to monitor Target 10 – water and sanitation, as well as Target 11 – slum upgrading of the Millennium Development Goals (MDG). This information addresses different components of improved sanitation adequate water, such as sufficiency, safety and acceptability, affordability and physical accessibility and integrates comprehensively a gender component. They also address different components of other human settlements issues such as durable housing, overcrowding, security of tenure, sources of energy, social capital, income and expenditure, demographic characteristics, education, migration, employment, environment, livelihoods, child morbidity and mortality, maternal and child health, women empowerment, in short, a comprehensive set of information on a majority of MDG indicators.

Thus, the objective of the Urban Inequity Survey is, to establish a detailed overview of baseline data, expressed as coverage of basic services (water and sanitation), needs in term of access to infrastructure and other related living conditions. This enables the LVWATSAN Programme to closely monitor the impact of the interventions implemented. As a consequence this survey was carried out before any implementation started, and will be repeated at a later date when interventions have been completed.

2.2 Presentation of the UIS Survey, Availability of Results for Bugembe

The wealth of information collected has been entered into a database system and is available in table, graphs and reporting formats. A comprehensive report is being prepared by the Monitoring Systems Branch of UN-Habitat. Meanwhile it is the intention that these data will be made available for use at Bugembe Town Council level for all interested parties. For that purpose a project office will be opened in Bugembe and the required facilities installed. This would be combined with an integrated GIS system, which includes Physical Planning tools for the town.

In this report some of the UIS results are presented in Tables (Annex 2) giving detailed information on the amount of coverage with water supply and sanitation for the residents of Bugembe. These area arranged per Ward (or Parish), giving a detailed insight in the ways people are provided with access to services.

2.3 Some of the UIS Results Highlighted

Water Supply

- ▶ *Supply system:* Only 5.6% of the households in the low-income areas receive water directly into the compound; for middle and high-income areas this is only 16.9%; virtually all have to rely on public standpipes;

- ▶ *Time to collect water:* For most people it takes less than 15 minutes to collect water; however, in a few areas, notably Katende West, Budhumbuli East and Budhumbuli West for about 20% of the population it takes more than 30 minutes every day to collect water;
- ▶ *Women:* In the majority of the cases it is the adult women who collect water (53.4%); men do the task in 22.4% of the households; children perform the duty in the remainder of the cases;
- ▶ *Disruption:* water supply is reported to be disrupted occasionally (76.5%), being in most cases only a few hours (63.7%) and for more than a day (34.5%);
- ▶ *Treatment at home:* the majority (95%) of the households report that they treat water for drinking purposes by boiling it;
- ▶ *Payment for piped water:* 86.7% of households pay for piped water, 12.8 don't; for the low-income areas these figures are 69.4% and 29.8% respectively.
- ▶ *Payment for water from standpipes:* Surprisingly payment for water from standpipes is far better, as 98.8% of households pay; for water taken from boreholes only 20% pay. However, quite a few standpipes were found to be disconnected because of failure by the consumer to pay;



Public standpipe disconnected

- ▶ *Monthly cost of water:* for most households the cost of water is very modest, 81.6% of the households pay less than UGX 6,000 per month (= US\$ 3.70); notably, the figures are virtually the same for low-income areas, versus middle and high-income areas.
- ▶ *Disposal of waste water:* water used for cooking, bathing, laundry, etc. is disposed of in the street in the majority of cases (73.3%); only 9.6% use soak-away pit.

Sanitation

- ▶ *Type of toilet facility:* The majority of households in Bugembe have a pit latrine with slab (55% and 67.6% respectively for low-income and middle income); the figures for VIP latrines are 10.3% and 28.2% respectively; in the low-income areas a significant proportion (32.6%) has to use a simple open pit without slab; very few people have a flush toilet with septic tank (2%).
- ▶ *Sharing of toilet facility:* Toilet facilities are shared by 91% of the households in low-income areas and 82.1% in the middle and higher income areas. The number of households sharing these facilities is very high: 21.6% is shared by 3-5 households, 25% by 6-9 households and 34.2% by more than 10 households!



*Sanitation
shared by
many....*

- ▶ *Payment for sanitation:* Nobody seems to pay for usage of toilet facilities; 99.9% of the respondents said they did not pay.
- ▶ *Hygiene status:* Frequency of cleaning the toilet is daily for 40-50%, the remaining are cleaned a few times a week or only once a week (24.5%). Most complaints are about the bad smell of the facility (97%).
- ▶ *Drainage of facility:* 95% of the toilets drain into soakaway pits
- ▶ *Hand washing at facility:* Only for 10.9% in the low-income areas, resp. 19.2% in the middle income areas, is a hand-washing facility available at the toilets.

Solid Waste

- ▶ *Disposal:* There is no organised collection of solid waste in Bugembe TC. In most cases it is dumped at (unplanned) dumpsites (62.2%) and burned, or dumped directly into the streets or drains (24.4%).

- ▶ *Nuisance factor:* Many people complain about the bad smell and smoke from burning (38.5%).



Uncollected solid waste

Infant Health

- ▶ *Child had diarrhoea during last two weeks:* One of the questions in the household survey provided relevant data on infant health. The question was: “Did your child – below the age of 5 years – have diarrhoea in the previous two weeks?” The result showed (see Table 3.7 in Annex 2) that the prevalence of diarrhoea among young children is very significant, with the highest percentage from the age of 6 months to 2 years (38.5%) decreasing at the age of 4 years when it drops to about 15%.
- ▶ *Fever in last two weeks:* A similar question was asked whether the child had fever during the last two weeks. Overall, the figure amounted to 44.1% of all infants, with also here the highest incidence in the age group of 6 months to 2 years (54.5%).

Orphans:

- ▶ *Full Orphans:* the overall prevalence of orphan-hood is 6.1% for the age group of children from the age of 0 to 17 years.
- ▶ *Partial orphans:* much higher percentages (15 to 25%) are found in the low-income areas where one of the parents or both have died

These figures were corroborated during this appraisal, when data were obtained from the Town Council and Nakanyonyi Primary School. The number of orphans at this school amounts to 400 (majority half-orphans), being 20% of all pupils.



Widow with orphans

2.4 What is Adequate Water Supply Coverage?

It is important to consider that a household is only considered to have access to improved water if:

1. it has a sufficient daily amount of water for domestic use,
2. at an affordable price,
3. of safe chemical and bacteriological quality, and
4. it is available without excessive physical efforts and time.

It can be demonstrated that *access to improved water* decreases dramatically when quantity, cost, quality, and the burden of collecting water are considered, respectively. When considering only the availability of an improved source the coverage is 52%; when considering the factor whether the quantity is sufficient, this drops to 39%; when the cost is also factored in coverage drops to 15%; finally when all three factors are taken into consideration, quantity, costs and physical effort, the coverage drops to a very low of only 9%.

2.5 What is Adequate Provision of Sanitation?

A household is considered to have *access to improved sanitation* if it has:

- An excreta disposal system, either a *private toilet* or a *public toilet* nearby; having at least a sanitation slab, and preferably with a VIP system;
- Shares such adequate sanitation with a reasonable number of people (maximum of two households), being available for all household members

The UIS Survey in Bugembe clearly shows (see Annex 2) that access to improved sanitation decreases dramatically when the number of households sharing the facility is considered. This is demonstrated in the graph below. For Bugembe (2006) it drops to only 18.8%. Even this last figure is not reflecting the reality that most of the pit latrines cannot be considered to be 'improved sanitation'. Other factors such as the type and quality of the slab covering the pit, presence of VIP vent pipe, quality and permanence of the superstructure, access, degree of privacy, and other factors dictated by local cultural customs, all play an important role.

3 WATER SUPPLY

3.1 Institutional Background

The Directorate of Water Development (DWD) is the lead technical water sector agency of the Ministry of Water, Lands and Environment. It coordinates and regulates all water sector activities and provides support services to the local governments and other service providers. It is responsible for ensuring sustainable and integrated management of the water resources. The National Water and Sewerage Corporation (NWSC), a 100% government parastatal organization is responsible for water and sewerage services. It is responsible for investment, operations and maintenance of the water and sewage treatment facilities. The use of water is regulated through the administration of permits for water abstraction that specify the types of uses that need to be regulated as well as the abstraction fees to be charged. This function is the role of the Central Government through DWD.

The NWSC, through its Jinja Area Office operates the water supply scheme in Bugembe. It has also a small local office in Bugembe Town. The water supply draws water from Lake Victoria at the intake works about 4 kms south of Bugembe town. The intake and treatment works have a capacity of approximately 28,000 m³/day, but presently runs at about half of this capacity producing around 16,000 m³ daily to Jinja, Bugembe and Iganga.

3.2 Water Supply System

3.2.1 General

Bugembe town relies of Jinja water treatment works for its water supply. The town was connected to NWSC distribution pipeline in 2003 after completion of the rehabilitation of the Jinja Water and Sewerage systems in 2002 with funding from the International Development Association (IDA). A total of 40 km of water mains extensions and 1000 new water connections were made of which about 300 were made in Bugembe.

3.2.2 Existing water sources

The principle source of water for the town is water pumped from Lake Victoria, and piped by Jinja Water Supply, operated by NWSC; a few groundwater sources are also found in town in the form of springs, wells and boreholes. Although these secondary sources are being discouraged because of the high level of contamination from faecal matter, residents who cannot afford paying for the piped water from standpipes still depend on them.

3.2.3 Jinja Water Treatment Works

Bugembe relies on the Jinja water treatment works at Walukuba, whose raw water is abstracted from the Lake Victoria and treated at the water treatment plant at the lakeshore. The intake and treatment works are located about 4 kms south of Bugembe. The treatment plant has two water treatment streams, one conventional plant with a nominal capacity of 14,000 m³/d where water undergoes clarification, rapid gravity sand filtration and the chlorination processes. The second stream has a nominal capacity of also 14,000 m³/d but water goes through microstrainers, rapid gravity

sand filtration and chlorination. Thus the estimated practical capacity of the plant is 34,000m³/day, the average production at present is about 16,000 m³/day implying a capacity utilization of about 55%. The mechanical and electrical components of the plant are in excellent condition and competent personnel are employed at the waterworks.



Fig. 2 – Intake and Pump house at Jinja Water Works

3.2.4 Transmission and Distribution Main

The original reticulation system was installed in 1958 and the latest upgrade and rehabilitation works carried out in 2003. The main construction materials for the water distribution system are steel, HDPE and PVC. A total of 2,000 consumer connections are found in Bugembe, most of them metered, of which 1,700 are operational and 360 disconnected. The low-income settlements are supplied through a limited number of private connections and a fair number of public standpipes. The direct household connections appear sometimes to be unaffordable to the poorer residents.

3.2.5 Storage

Provisional storage tanks were installed by NWSC at the Gombolola site. Two PVC tanks of 26 m³ each were installed. Meanwhile one has collapsed. NWSC is planning to replace this with a more durable storage of 200 m³ masonry tank.



Storage tanks at Gombolola

3.2.6 *Booster station*

Booster pumps have been installed at ‘JICA’ MoW workshop with a combined capacity of 31m³/hr. The system does not function very well as the complaints from residents in the higher elevated parts of Bugembe are numerous, about lack of supply for days on end. There is no stand-by generator.

3.3 **Tariffs and Metering**

The current cost of water supply connection is UGX 59,000 (1 USD ≈ UGX 1,650), for a ½” connection, UGX 118,000/- for a ¾” and UGX 218,000/- for a 1” water meter. (all including VAT). These rates are prohibitive to many who can otherwise afford to pay water bills but not the connection cost. The number of new connections made last year was 250 which will most likely increase this year. Water supply is charged basing on meter readings; 100% of the consumers are metered. The estimated percentage of faulty meters in the system is 3%. The tariff structure amongst different users is as indicated below:

- | | |
|----------------------------|------------------------------|
| • Industry and agriculture | UGX 1,187 per m ³ |
| • Domestic | UGX 693 per m ³ |
| • Institutional | UGX 854 per m ³ |

A step tariff applies only to commercial consumers. Setting of the tariff structure is a responsibility of the Ugandan Government in consultation with NWSC. The percentage of consumers defaulting on payment is estimated at 35%.

3.4 **Governance Structure**

The water utility run by NWSC enjoys a fair level of autonomy from the city and has a good cadre of professional well qualified managers, though fewer trained staff at the lower levels. The town also has water and sanitation byelaws under the administration of NWSC and the Directorate of Water Development (DWD). To safeguard the catchment, measures like acquisition of permits are being implemented. Monitoring of water quality and water levels is done by both NWSC and DWD.

3.5 **Other Potential Water Sources**

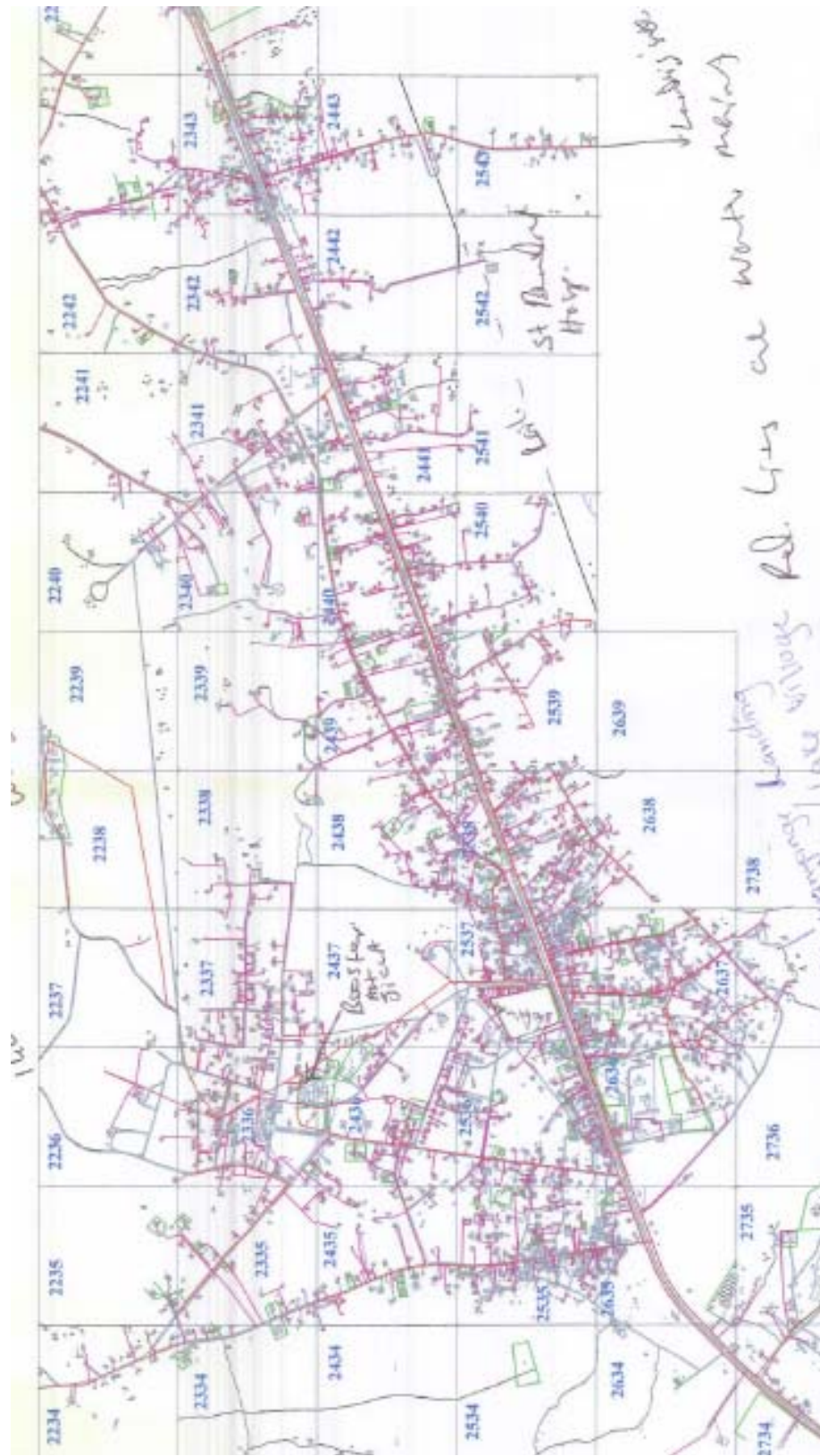
In addition to the piped water system which currently serves the core area of the town only, there are: -

- a) 7 Boreholes drilled by RUWASA.
- b) Shallow wells constructed by water AID
- c) 1 protected spring by Rotary club.

Several other attempts have been made to drill for groundwater in Bugembe. Unfortunately, the prospect for groundwater development is very low in this area, as the hydrogeological conditions in this area are very limited, due to the nature of the rocks underlying the town and its surroundings.

3.6 **Water Quality**

Water samples are taken on a regular basis and tested chemically and bacteriologically. According to the bi-annual study carried out, the piped water supplied in the town meets the World Health Organisation standards. Other sources, such as the shallow wells and boreholes should be considered unsafe for drinking; it needs to be treated, i.e. should be boiled or purified with chlorine.



Water distribution network in Bugembe

3.7 Problems with the Water Supply for Bugembe

Problems related to the water distribution system in Bugembe Town include frequent pipe bursts especially in the tertiary mains, vandalism, low water pressure in hilly areas, illegal connections and at times supply interruptions due to power failure. Therefore there is need to regulate pressure and have adequate storage of water, as well as spare parts or materials. Due to topographical limitations (hilly terrain), some of the well-developed areas have not yet got mains extension. Some areas need booster pumps if they are to receive water at a good pressure.

The following was noted:

- Inadequate supply to the higher elevated parts of town
- Inadequate water pumping capacity at booster station;
- Inadequate water storage capacity.
- Water production is not metered (bulk);
- Distribution pressures are low.
- Distribution network is limited; not sufficient public water kiosks;
- Very few metered connections (customers), revenue collection extremely low;
- The cost of a new connection is UGX 30,000. It is suspected that a fairly high percentage of the consumers need to be sensitised and offered a built-in gradual payment for the connection over a period of say 12 months.



*Public
standpipe at
market*

3.8 Water Supply in Low Income Areas

The current level of service coverage in the low-income areas for piped water supply seems to be fairly adequate. However, when analysing the data in more detail it turns out provision is still lacking. The people in informal settlements depend mostly on public standpipes. Some households have individual connections, but in quite a few cases these were found to be disconnected, because residents simply cannot afford to pay the monthly bill.

It seems that income levels are so low that it is far better to promote community water standpipes where people can pay on fixed rate for every container bought.

Summary of Challenges Facing the Sector Works and Technical Services and Strategies for Redress (from Bugembe TC 3-year Development Plan)		
Sub-section	Challenges	Strategies
Works	<ul style="list-style-type: none"> • Lack of technical staff (Available staff on voluntary terms of employment) • Total lack of equipments (surveying) to facilitate technical services. • Lack of infrastructure e.g. workshop and drawing office. • Lack of physical plan for the council. • Inadequate funds • Lack of capable local companies to undertake technical projects • Fast physical development of the Town council. • Request for compensation for project undertakings that infringe of people's land • People deliberately cut pipes to get free water • People not used to pay water bills • With the introduction of piped water there is need to design a drainage system 	<ul style="list-style-type: none"> • Recruit substantive engineer for the council and hire technical personnel and services at the district • Perform to expectations to secure and have grants sources (LGD II, PAF, SFG, water grant e.t.c) from the centre increased • Exploit locally existing construction materials • Budget, prepare and put in place a physical plan for Bugembe Town council • To meter all connections • To advocate for improvement in billing and revenue collection. • To ensure all defaulters are disconnected • Extension of service to areas of high population density • Improvement in reliability and a regularity of water supply. • Encouraging new yard and house connections

4 SEWERAGE AND SANITATION

4.1 Available Sanitation

Bugembe does not have water borne sewerage. Sanitation in the town is predominantly pit latrines, septic tanks (no exhauster service in the town) and a public toilet recently constructed near the market. Use of septic tanks is limited to a few well-to-do people, such as, hotel owners, business community, and a few individuals who can afford their construction. A number of people have also constructed ventilated improved pit (VIP) latrines.

4.2 Sanitation in Low-Income Areas

The majority of the population in Bugembe are low-income earners living in rented plots where the only available sanitation facilities are pit latrines. A large section of this population has latrines provided by landlords who rarely maintain or replace them in time, mainly due to low levels of rent charged to tenants. Most of these latrines have been constructed with mud walls or using light gauge (GD 30) corrugated galvanised iron sheet walls that rapidly get corroded due to high levels of urea. The latrines are generally unclean squat areas and shallow pits, without a proper platform, that tend to fill up quickly in large yards, and hence pose a serious health hazards, as many were filled and unsightly. They do not provide the necessary privacy to users, particularly the women. This situation has forced several of the children who spent most of their day in the estates using nearby bushes for their sanitation needs.

The current level of sanitation service coverage in the low-income areas for access to adequate sanitation facilities is less than 20%. The only mode of sanitation is on-site sanitation in form of pit latrines. The latrines are generally located within a reasonable distance from the dwellings but are shared in most cases by 6 to 10 – and even more than 10 – households.

4.3 Environmental hazards of poor sanitation

Environmental problems related to poor sanitation and wastewater disposal in the Bugembe Town includes blocked drains, groundwater pollution, slaughterhouse liquid waste draining into a drain pond near the market.

5 SOLID WASTE AND DRAINAGE

5.1 Solid Waste

Bugembe Town Council is responsible for management of solid waste in the Town, but does not have the means to do so. The majority of households (90%) dispose their household waste by dumping it in the backyard of the compound, dumping it in the street, or burning it in the open. There is a large amount of solid waste accumulation in the settlements and along the roads. Sometimes facilities are hired for solid waste collection, but that is evidently inadequate. If collected, the solid waste is usually dumped at the disposal site of Jinja Municipality.



*Uncollected
solid waste next
to the market*

Considerable amount of garbage is generated in the market places and shopping areas. However, the amount of garbage produced daily far outstrips the collection and disposal capacity of the town council. Most of the garbage is strewn all over the town and can also be seen in garbage mounds that spring up in undesignated areas.

There is a lack of proper organisation and community involvement in the collection of garbage. The failure of proper management of solid waste may be attributed to the following factors:

- Negative attitude of the people at the point of generation of the solid waste;
- Inadequate systems of garbage collection and management;
- Improper and inadequate enforcement of the regulations relating to solid waste;
- Lack of enabling environment and motivation for segregation and recycling of garbage.

5.2 Urban Drainage

The town as a whole lacks proper drainage except along the main Jinja-Iganga highway. Provision of drainage is generally linked to the road network in the town, and is therefore lacking in those areas where official roads have not been constructed. Virtually all drains are earthen and not designed or maintained. Even in areas with

constructed road drains, some of these have been buried under soils/silt and solid waste matter (garbage) after long periods of lack of maintenance and uncontrolled surface run-off. This was noted to result in heavy soil erosion leading to the destruction of land surfaces, foot paths and buildings as well as exposure of pipes and other services. Some of the areas are fairly flat, which result in water pools during the rains, and thus becoming breeding areas for mosquitoes and other types of disease vectors.



This used to be a road...

6 URBAN PHYSICAL PLANNING

6.1 Earlier Attempts at Physical Planning

The first Physical Plan was developed in the 1960 and is of course entirely outdated. A renewed attempt to prepare a Physical Development Plan for Bugembe was initiated in 2006, but was suspended due to lack of funds to continue the exercise.

A Physical Plan needs to be based on a well-articulated concept for the growth and development of Bugembe town. Secondly, the Plan should not only deal with land use matters, but also incorporate other important factors facing the town such as environmental and socio-economic issues. Thirdly, the plan needs to take into account the issue of land ownership in the town. The demarcation of all lands, especially those, which are privately owned, is a precondition for any successful physical planning exercise.

6.2 Need for Physical Planning

Discussing key development issues facing the town of Bugembe, it emerges that the town has been under-privileged in resources allocation by the Government just like many other smaller towns. The land issue can be singled out as the main impediment for proper development and management of the town. Most of the land is privately owned and compulsory acquisition of land for urban expansion and uses is strongly opposed by land-owners. This suggests the need for immediate review of the land policy and land tenure systems in Uganda especially as it pertains to areas under jurisdiction of urban authorities.

6.3 Way Forward

The urban planning exercise should begin with the production of issue and thematic maps, a complete profile of the town covering socio-economic (mainly from the UIS survey), environmental, ecological, and structural characteristics, organization of a Stakeholder meeting for the town of Bugembe to develop a shared future vision for the town, and translation of the shared future vision into a spatial form. This will entail formulation of Conceptual Plans and Final plans for the future of the town. Training and capacity building for all of the above tasks will be provided, as well as operational facilities (computers, other hardware and software) for efficient operation of the Planning Office.

7 ORPHANS AND OTHER VULNERABLE GROUPS

7.1 The Impact of the HIV/AIDS epidemic in Bugembe

While at National levels there is remarkable success in terms of reduced prevalence of HIV/AIDS, Bugembe Town council like in most of the other developing semi-rural towns the problem is still at significant levels (Information Bank, Bugembe Town Council Health Centre (IV)). Poverty, rapidly increasing urbanisation associated with rapidly changing lifestyles and few programs targeting high risk and vulnerable populations in urban areas are some of the reasons for the persistently high prevalence in urban setting.

The disease has resulted into adverse health and socio-economic outcomes and challenges. HIV/AIDS has had far reaching impact on our society and economy in the council which include among others:

- a) Large and ever growing number of orphans that have overwhelmed the traditional social support systems leading to a big number of street children and school dropouts.
- b) Withdrawal of children from school, especially the girl child to care for the sick
- c) Rise in poverty levels attributed to the death of household heads
- d) Cost on treatment and funerals exceeds the annual income of the family
- e) Rise in child-, female- and elderly-headed families.

7.2 Interventions by the Council

Considering that the fight against HIV/AIDS requires a multi-sectoral collaboration involving all stakeholders. Bugembe Town council for one and in collaboration with other partners has started on the following interventions:

- a) Community Action on Aids through the Community-led HIV/AIDS Initiative; both policy and local population have been sensitized on the dangers of HIV/AIDS scourge and at certain levels, orphans as a result of loss of parents to the scourge, are being facilitated in terms of school fees and scholastic materials
- b) Preparation of HIV/AIDS Service Directory; upon realising the value of information in the fight against the scourge, the council has come up with an HIV/AIDS Service Directory as a guide to both community and other partners in the fight against the disease. This has been possible with technical support Bugembe health centre IV),

7.3 Challenges

- a) Coordination is still a problem in spite of having an agreed upon coordination mechanism.
- b) Lack of data for proper planning. There is need to improve on data management including collection, storage, analysis and use. This will require equipping the coordination office with computers and its accessories.
- c) Increasing numbers of Aids orphans
- d) Resource mobilisation to support HIV programs. Much as enormous resources have been poured into this country to fight HIV/AIDS, the urban areas where HIV/AIDS prevalence rates are higher have not been adequately supported by the Central Government and donors.
- e) Poverty
- f) Complacency and persistent risky sexual behaviour

7.4 Strategies to Address HIV/AIDS

In view of the above challenges, the council's strategies in the mid term will be:

- a) Allocation of funds to available prevention, mitigation and measures and build capacity of the infected and affected members of the community
- b) Strengthening and improving coordination of HIV/AIDS activities in the council
- c) Development of an action plan for orphans and other vulnerable children.
- d) Carrying out a baseline survey and establishing a data bank on HIV/AIDS infected and affected members of the community and updating the data bank of HIV/AIDS service providers and organisations in the council.

7.5 HIV/AIDS Orphans

The AIDS pandemic has been serious in particular in the Lake Victoria basin than in most other parts of East Africa and Bugembe is also seriously affected. The high historical prevalence rates in Uganda are commonly attributed to a mix of factors, including the fact that the AIDS pandemic peaked there relatively early; also the fact that the major overland transport route from Kenya to Uganda and beyond, passes right through Bugembe; the mobility associated with fishing, etc. In Uganda, although the prevalence rate has gone down in recent years, there are still over 1.5 million people (5.4%) living with HIV/AIDS and more than 800,000 children have been orphaned.

HIV/AIDS orphans are one of the most vulnerable groups in the area. They face numerous hardships resulting from poverty, insufficient food, low nutritional standards, poor housing and lack of access to basic services, such as water and sanitation. To compound these problems, they often live on the periphery of the towns where the institutions which cater to their needs, such as schools and health centres have no access to the town infrastructure and therefore lack basic amenities such as water and toilet facilities.

7.6 The Impact of HIV/AIDS on Land Rights

With respect to widows

There is a pervasive sense of women's powerlessness in the face of profound gender discrimination. For examples women who are barely able to act in their own interests to prevent threats to their land rights. Even very elementary measures, such as consulting local authorities or educating themselves as to how the land office works, seem beyond their capacity. Widows appear isolated and dependent for information from men whom they do not even trust. Due to their place in society as well as lack of social capital, generally widows are unable to address land problems and claim their rightful inheritance.

With respect to orphans

In homes where all adults have died and children are being taken care of by other relatives, everything that belonged to that family will be taken by whoever is now taking care of the children. In most cases the children are left with the grandparents or with uncles. It is clear that to some extent land grabbing from widows and orphans and possibly from AIDS widows and AIDS orphans in particular, has become an accepted practice, even in the absence of specific examples from their own experience or observation.

7.7 Existing Facilities in Bugembe for Orphans

There are several poorly equipped public and private institutions in Bugembe which are struggling to cater to the needs of orphans in terms of providing services and support such as food, clothing, education and health care. However, lack of access to sanitation and water supply poses severe constraints to these institutions and limits their capacity to provide a habitable and hygienic environment for the orphans and other vulnerable persons, who are so dependent on them for their basic needs. There are several community groups such as women and youth groups

The number of orphans and other vulnerable children has increased in the recent years and it is estimated that there are currently over 500 orphans in Bugembe. The majority of these are found in the low-income areas; this situation is attributed to the following factors:

- Increased poverty level among families affected and infected by HIV/Aids
- Increased dependency i.e. increased number of household members due to influx of orphans left by relatives into families.
- Collapse of the traditional support system for orphans and other vulnerable children, i.e. there is no longer sharing of orphans among relatives
- Food insecurity among families affected and infected by HIV/Aids due to poor weather conditions and low soil productivity.
- Poor health and living conditions due to lack of clean water proper sanitation and hygiene.

Following in-depth discussions with the local leaders in Bugembe, and with health centres, the following needs can be identified:

1. Provide technical and financial supports to establish, maintain and manage rain water harvesting tanks to orphanages, schools and health centres;
2. Provide technical and financial support to establish a micro credit /revolving fund to women groups supporting orphans to replicate the practice at household level.

The focus of the project will be on the institutions, comprising mainly schools, health care centres and orphanages which are working to cater to the basic needs of the orphans and other vulnerable persons.

7.8 Recommendations for follow-up actions

- Mobilize support for and establish linkages with on-going programme work.
- Prepare a project proposal and small scale agreement of cooperation with a locally established NGO to support selected orphan institutions in constructing rain water harvesting schemes.

8 TRAINING AND CAPACITY BUILDING

8.1 General Observations

Training in water and sanitation sector is very important for the sustainability of the infrastructure that is going to be put in place. There is need to build capacity in aspects like planning, feasibility studies, construction, drainage design, inspection and monitoring, repair and refurbishment of water and sanitation facilities. By bringing together knowledge on these areas provides expertise across all phases of a water and sanitation facilities namely - surveys, planning, design, construction and management. In addition to technical issues, other areas like ethical and ecological issues are important. The capacity building requirements for the town were identified as follows:

Policy makers: Strategic planning, reform advocacy and policy formulation to suite the target groups, environmental issues, institutional issues and water resources management

Technical staff: The local technical staff of NWSC are well qualified but need more training as far as operation and maintenance of the water distribution system are concerned.

Community members: There is need to create awareness and sensitisation on proper use of water and sanitation facilities, health and hygienic aspects. It was noted that there is high level of consumer wastage at some water points and in consumer premises (piped water). It was reported that consumers who are not metered at present have little incentive to reduce wastage on their properties.

On the other hand, in areas where there is no piped water, there is need to train members of the community in the operation and maintenance of the water supply and sanitation facilities.

Promotion of functional literacy for all the people is also central in helping communities achieve sustainable development. This should also help in creating environmentally friendly modes of production in communities. Regarding the training and capacity building component, there has been an extended design process for LVWATSAN throughout the past 12 months, to address the training needs in an effective manner and to ensure that the training and capacity-building interventions are properly anchored in local institutions.

8.2 Fast-track Capacity Building Programme

In the meantime a *Fast-track Capacity Building Programme* for water utilities has been ongoing in four (4) towns: Kisii and Homa Bay in Kenya and Bukoba and Muleba in Tanzania. In the other towns, including Bugembe, training will commence shortly. The overall objective of the fast track capacity building programme for utilities is to support the financial and operational sustainability of the capital investments being provided under the LVWATSAN Initiative. The issue of sustainable revenue generation was identified as a priority in this regard. The fast-track capacity-building has also laid the groundwork for a long term programme of capacity building in utility management and other areas. Over 120 staff of the utility companies have been trained and assistance is being provided to the utility companies in improving their operational systems, including billing and revenue collection, water demand management, customer care and mapping.

This same programme will shortly be initiated in Bugembe for the local branch of the water supply company.

8.3 Capacity Building for the Local Government and Communities

Training and capacity building is a cross-cutting activity and will be applied to all LVWATSAN activities proposed in this report to ensure sustainable operation.

- A very comprehensive capacity building programme has been developed which will be operational in all 10 towns in the three countries. This is implemented in cooperation with 4 international partners, each having a particular expertise.
- The Cooperation Agreements with the 4 partners will be signed very soon;
- Under this programme a comprehensive *Assessment of Capacity Building Needs* in Bugembe will be carried out later this year.
- Meanwhile identification of local partners who will participate and actually implement the training is also taking place.
- Other pro-poor initiatives to stimulate Local Economic Development (e.g. through Micro-Credit schemes) will also be initiated.

9 IMPLEMENTATION STRATEGY

9.1 Implementation strategy

The options proposed aim to use low-cost and high impact strategies. The contact holder will be the UN-HABITAT. The administration of the contract would be done jointly by UN-HABITAT, DWD (of MWE), NWSC and the Bugembe Town Council as the key implementing partners. The Programme Implementation Unit would be imbedded within the Town Council to ensure sustainability of technical, social and economic interventions.

Three levels of project management will be put in place designed to foster the spirit of joint decision-making: (i) at the National level; (ii) at the Town level; and (iii) at the stakeholder or Community level. In order to ensure sustainability of investments installed, LVWATSAN will also support a comprehensive capacity building programme cutting across all the interventions.

9.2 Multi-Stakeholders Forum (MSF) or people's parliament

This is the most important project oversight organ in the town. It plays a central role in expressing the needs of the town and guiding the decision making process in terms of the priorities of the town. The MSF will consist of:

- Civil leadership within the town
- Business community Chamber of Commerce and Industry
- NGOs active in water and environmental sanitation related activities (those contracted under the programme will not have voting powers in the MSF);
- CBOs active in areas likely to impact on water and sanitation
- Representatives of organised development groups
- Educational and other key institutions

9.3 Project Implementation Unit (PIU) at the town level

A Project Implementation Unit (PIU) will be established ahead of the start of implementation. It will consist of the technical officers of the agencies who will directly be involved in the implementation of the proposed water and environmental sanitation related interventions. The PIU will include at least the following officers:

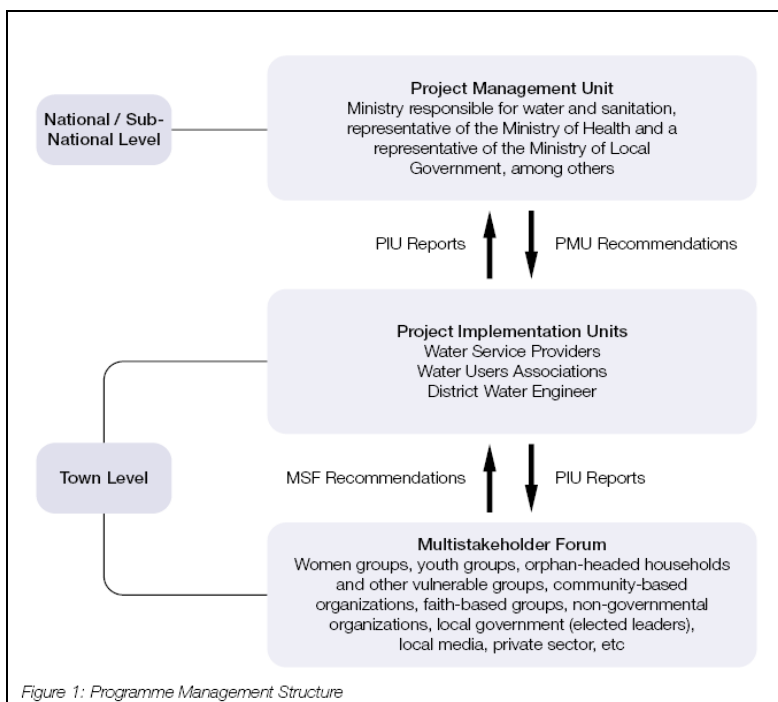
- The Town Clerk (usually the Chair)
- The Areal Manager of the Water Service Provider (Secretary)
- Chairman of the Multi-Stakeholder Forum (MSF)
- Municipal or Town Engineer
- The LVWATSAN (UN-Habitat) Clerk of Works
- GOU District Environment Officer (DEO)
- Public Health Officer (PHO)
- Physical Planning Officer (PPO)
- Environmental Officer (NEMA)

9.4 Project Management Unit (PMU) at National level

The Directorate of Water Development, in Kampala, is the statutory institution mandated with the development and management of assets related to water and sewerage services. It will therefore be the principle contracting party for all works

related to the project. A Project Management Unit (PMU) is already established and fully functional in Kampala since the earlier phase of the programme for the ongoing development in Kyotera and Masaka-Nyendo towns. This will consist of the following officers among others:

- Director Urban Water Development (Chair)
- Chief Technical Services Manager (TSM) of NWSC (Secretary)
- UN-HABITAT/LVWATSAN, National Chief Technical Adviser (Uganda)
- Water Resources Management Authority, Regional Manager
- Town Clerks of the three towns (Kyotera, Masaka, Bugembe)
- Managing Directors of the three companies (Kyotera WSP, Masaka WSP, and Bugembe WSP)



9.5 Overall approach to implementation

Project implementation will be divided into immediate and long term interventions. The immediate interventions will aim to restore existing infrastructure to at least the original design capacity, using existing specifications. At this stage, the project will intervene in areas that do not require designs. On the other hand, the long term activities will be based on:

- feasibility studies and designs to be prepared;
- wide consultations with stakeholders; and
- preparation of an updated physical plan of the town.

The works will be broken down into small, yet complete packages as follows:

- water services infrastructure that only requires facilitation by the government offices, to be implemented through tenders issued to commercial companies;
- sanitation and sewerage infrastructure requiring only government facilitation, to be implemented through tenders issued to commercial companies;
- water and sanitation infrastructure that is linked to community capacity building and wider local level consultations to be facilitated by the MSF, to be

implemented through cooperation agreements with non-governmental organisations;

- solid waste management, micro-credit and other activities to be implemented by CBOs facilitated or contracted through cooperation agreements signed with the Town Council and overseen by the MSF.

9.6 MSF established in Bugembe

The MSF for Bugembe was constituted on 28 August 2008. The attendance during the elections was very good (51 persons representing various interest groups with a good gender balance). At the end of the meeting the Chairperson and the Vice were selected through voting as follows:

- = Mr. Isabirye, Alex – Chair
- = Mr. Kirigwa Senyonga, Hakim – Vice Chair

Three thematic groups within the MSF will also be formed and chairpersons elected. The MSF committee has already started with a lot of enthusiasm and are ready to carry out their roles and responsibilities with regards to the LVWATSAN Programme. Currently they have embarked on working out the priorities for the Cooperation Agreement with UN-Habitat and will be reviewing the proposed interventions as set out in this report.

A list with MSF members and participants of the meetings held is given on next page. It shows the participants represent very well the different segments of the Bugembe community.



National CTA for LVWATSAN addresses the MSF meeting

9.7 Issues Raised during the MSF Meeting

The following questions were addressed by the MSF meeting during the working group sessions:

- (i) What are the problems associated with access to safe drinking water, basic sanitation, solid waste management and drainage in your community/town?
 - Limited water resources
 - Pipelines not adequate
 - Poor drainage system
 - Poor maintenance of the system
 - No protection of the water resources
 - Poor urban planning
 - Too much solid waste dumping everywhere in town

- Access roads are lacking and in very bad state
 - Security of access to water kiosks at night, no lights
 - Drug abuse in town
 - Big problem with Orphans and orphanages
- (ii) What actions (both physical infrastructure and capacity building) do you consider to address the above problems?
- Construct public toilets in high density areas
 - Provision of garbage pits
 - Construction of access roads with drainage
 - Provision of public stand pipes
 - Construction of concrete drains
 - Construction of sewerage system
 - Provision of booster tank for water supply
 - Public awareness on use of dust bins and dump sites
 - Public awareness on recycling of solid waste
 - Public awareness on behaviour change on hygiene and waste
 - Create opportunities for improvement of household income
 - Sensitise children on many issues of public health
- (iii) How best can the Lake Victoria Region Water and Sanitation Initiative (LVWATSAN) serve the needs of women and men from poor neighbourhoods of the town?
- Need to sensitise population on these issues
 - Teach relevant knowledge
 - Enable them to relate to future programme activities
 - Need good public sanitation
 - Need to empower communities with skills for income generation
 - Identify markets for products of women's groups
 - Small-scale industries to be initiated
 - Development of entrepreneurship, training
 - Work with CBO's for the development of the youth (e.g. HIV/AIDS)
- (iv) What can you and/or your group contribute to solving the problems associated with access to safe drinking water, basic sanitation, solid waste management and drainage in your community/town?
- = Water
 - Avail information on boiling of water
 - Report leakages
 - Promote water tariff reductions
 - Advocate awareness on safe water
 - = Sanitation
 - Create bye-laws for sanitation
 - Sensitise people on poor sanitation
 - Encourage sanitation competition
 - = Solid waste
 - One common point for dumping
 - Advocate burning of inorganic waste
 - Advocate separation and recycling
 - = Drainage
 - Maintain roads and drains

- Encourage discipline on dumping and cleanliness
- Bye-laws for the same

Participants – Multi-Stakeholder Forum Workshop – Bugembe (28 August 2008)

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7	Isabiriye Alex	Nakanyonyi P/S, Chair MSF	0712865056
8	Mulidho James	Member MSF	0777556521
9	Kigwana Jean	Member MSF	0712873004
10	Mrs Teddy Muwimba	Housewife Wanyama West	0782914046
11	Mukanza Stella	Councillor BTC	0774725247
12	Matege James	Deputy Speaker BTC	0782884398
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20	Isiko Kawanguzi	District C'llor Katande East	0772387120
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10 SUMMARY OF FINDINGS AND PROBLEMS TO BE ADDRESSED

The water facility provisions in Bugembe are reasonable adequate, managed quite efficient and seem economically viable. However, several interventions are needed to increase the effectiveness and sustainability of the system by improving the supply in particular to residents of the informal settlements. Many of the residential areas have no or poor sanitation, while the middle to higher income areas, residents lack sufficient water for domestic use. Solid waste is spread over large sections of the town while the surface drainage needs drastic improvements. No Physical Planning is available, nor strategies for catchment protection. These findings are summarised as follows:

10.1 Three Years Rolling Development Plan for Bugembe TC

A good basic framework for planning of further development activities has been provided by the Bugembe Town Council with its publication (August 2008) of the 3-Years Rolling Development Plan.

10.2 Water supply

- The water utility ran by NWSC enjoys a fair level of autonomy from the city and has a good cadre of professional well qualified managers. There are, however, less trained staff at the lower levels.
- The town has water and sanitation bylaws under the administration of NWSC and the Directorate of Water Development (DWD). The authorities responsible for provision of services (NWSC and/ or Water User Groups) in an area enforce these bylaws with the assistance of the Town council.
- The estimated practical capacity of the plant is 34,000m³/day, the present average production is about 15,000 m³/day implying a capacity utilization of about 45%. There is therefore, plenty of capacity for expansion of the supply.
- The raw water abstracted from the Lake undergoes treatment through filtration and chlorination processes. The intake and treatment works are located 4 km from the town.
- The current cost of water supply connection of UGX 150,000 is prohibitive to many who can otherwise afford to pay water bills but not the connection cost. The number of new connections made last year water was 300 and is expected to increase this year.
- Water supply is charged by installation of meters and 100% of the consumers are metered. The estimated percentage of faulty meters in the system is 3%.
- The tariff structure amongst different users is fairly manageable by all though the estimated percentage of 35% of consumers defaulting on payment is quite high. A step tariff applies to only commercial consumers and setting of the tariff structure is a responsibility of the cabinet in consultation with NWSC.
- The original reticulation system was installed in 1958 and the latest upgrade and rehabilitation works carried out in 2002 with funding from IDA with the aim of expanding the service area but some areas are still not yet connected due lack of funds to rehabilitate and extend the transmission and distribution network.
- Problems related to the water distribution system include frequent pipe bursts especially in the tertiary mains, vandalism, low water pressure in hilly areas, illegal connections and at times power failure.

- Due to topographical limitations (hilly terrain), some of the well-developed residential areas have not yet got mains extension and others experience low water pressure. Some areas need additional booster pump capacity to receive water at a good pressure.
- Most of the low-income communities depend on public standpipes for water supply while others who cannot afford paying for water at the standpipes resort to other sources, the safety of which is questionable.
- Unaccounted for water in the Jinja service area was reported to be fairly high (30% ?). It was not possible to establish the specific unaccountable for water in Bugembe town itself.
- Operational expenditures are covered by the corporation using internally generated revenue.
- The governance structure for water and sanitation in the town seems to be well organized with clear lines of responsibility but is handicapped by lack of funds.

10.3 Sanitation

- Bugembe town has no sewerage system in place; 95% of sanitation is provided by on-site pit latrines. Most of these cannot be considered improved sanitation because many are just open pits without a slab. In the majority of cases these are shared between a large number of households.
- There is insufficient space in the densely settled part of the unplanned housing area for individual households to construct latrines.
- In the urban environment pit latrines can easily contaminate groundwater.
- In the unplanned settlements, there are already pay-per-use simple pit latrines and communal facilities may therefore prove acceptable to residents.

10.4 Solid Waste Management

- Bugembe Municipal Council is responsible for management of solid waste in the Town. However, there is no organised regular collection of garbage.
- From the IUS survey it becomes clear that the majority of households (90%) dispose their household waste by dumping it in the backyard of their compound, dumping it in the street, or burning it in the open.
- There is a large amount of solid waste accumulation visible in particular in the low-income settlements and along the roads.
- Poor systems of garbage collection and disposal, result into perpetual presence of vermin and pests especially in the overcrowded low-income areas. The garbage remains uncollected for a long time and there is no sanitary landfill close to Bugembe.
- Burning of the waste provides a solution but also creates a problem as many people complain of bad smoke and smell.

10.5 Drainage

- The municipal council is responsible for management and maintenance of the drains in town.
- A recurrent problem with drainage channels is blockage with solid waste and soil.
- In the low-income areas the lack of drainage leads to ponding.
- In the upper part of Bugembe the topography is quite hilly, leading to severe erosion of roads and drains;

- The network of drains is mainly earthen and tends to overgrow with grass, filled with garbage and is often blocked.
- Most of low-income settlements are located in the lower areas closer to the Lake shore and are poorly drained.
- The market area has no drainage and no pavement. The whole area becomes very muddy and flooded during rains.

10.6 Urban Physical Planning

- There is no physical development plan for Bugembe, which has led to unplanned settlements that are difficult to service. The available block map is very old and cannot be used for development of physical plan.
- However, some parts of the town in the hilly areas have planned settlements and a plan can be developed without difficulty. The housing has been established on demarcated plots.
- There is need to develop an up-to-date base map to be used in the development of a physical plan for the town before such areas are encroached on by unplanned settlements.
- Lack of a physical development plan for Bugembe has led to the development of very crowded unplanned settlements, which have made provision of water and sanitation services difficult.
- No facilities are available at the planning office.

10.7 Capacity Building

- No overall training and capacity building programme is in place.
- The managers and policy makers in the municipality associated with water and sanitation have limited capacity in the area of strategic planning, operation and maintenance, and management as far as water and sanitation issues are concerned.
- The level of professionalism of managers and senior staff of NWSC was excellent. However, there is need to train some of the lower level technical staff in utility mapping and monitoring of the water and sanitation facilities, as well as operation and maintenance scheduling
- Where public sanitation facilities are installed (public standpipes), members of the communities participate in their management through committees or associations. They are assisted by both NWSC and the municipal authorities in overseeing the private operators who operate and maintain the facilities.

10.8 Advocacy and Awareness Raising

- No overall policy for water, sanitation and health issues is in place.
- Health and hygiene programme needs to be developed

10.9 Urban Catchment Management

- No Urban catchment management strategy is in place to enable protection of the resources.

10.10 Gender Mainstreaming and Support to Vulnerable Groups

- Apart from a few initiatives by community groups, women groups, and individuals, no coherent strategy is (yet) in place in Bugembe.

11 PROPOSED INTERVENTIONS

11.1 Water Supply:

The proposed *Immediate Interventions* aim to:

- Expand the existing distribution system, with the installation of 6 kms distribution mains and 10 kms secondary distribution lines;
- Construct 10 additional public standpipes;
- Promote additional household metered connections;
- Provide schools' water (and sanitation) services for 10 primary schools and 4 secondary schools
- Provide additional storage capacity with the construction of a 200 m³ ground tank at Gombolala site.
- Provide additional booster pump capacity
- Minimise the levels of unaccounted for water by eliminating flat rate payments and reducing leakages and improving the management of the water system.
- Capacity building of water service provider management staff through training and provision of tools, equipment, computers and transport facilities to enhance efficiency and sustainability.

Under the *Long-term Interventions* further detailed designs studies are required to investigate future water development options, in line with the town's Physical Plan. Further significant expansion of the rising main, storage capacity and distribution network in town should be anticipated and budgeted for.

11.2 Sanitation and Sewerage:

Under the *Immediate Interventions* it is proposed:

- Development of a sanitation strategy for Bugembe;
- Carry out a feasibility study for sewerage network in town and treatment works;
- Upgrading of the existing public toilets in Bugembe town;
- Construction of new public toilets in town, preferably through privatisation and suitable lighting and security in the vicinity of the toilets;
- Provision of an efficient exhauster service;
- Develop and implement School Water and Sanitation Programme, through health and hygiene education;
- Construct water and sanitation facilities at primary and secondary schools;
- Promotion of community-based groups for the construction of school latrines and low cost yard and household latrines (sanplat).
- Promote local manufacturing of sanplat units by local entrepreneurs or self-help groups;
- Promote sanplat installation at household level on a large scale through services of a local NGO; (with micro-credit financing)

Under the *Long-term Interventions*

- Further develop engineering design of sewerage options for the town.
- Identify potential sources of funding and submit requests for loans.

11.3 Solid waste:

- Development of a sustainable solid waste management strategy, which

incorporates community participation.

- Procurement of solid waste collection equipment (tippers, tractors, etc)
- Provide 50 No. tipping bins in congested areas, specially designed refuse transfer stations, lightweight, truck-mounted self-tipping truck and tools to enhance collection and transportation efficiency.
- Construct solid waste transfer stations
- Identify solid waste dump site and assist in landscaping to provide sufficient storage
- Provide an adequate solution for the solid and liquid waste generated at the slaughterhouse in Bugembe. Construction of septic tank at the site.

11.4 Drainage:

- Development of an adequate drainage plan, in line with the overall Physical Plan;
- Construction of drains along main roads and tracks;
- Paving of market area and construction of drains.

11.5 Physical Planning

- Production of maps and layout plans of physical infrastructure including water supply network and drainage.
- Formulation /Updating of the Physical Plan and technical co-ordination of all services within the Municipality i.e. roads, drainage, physical planning, excavations should be worked out.
- Engage a land surveyor who will undertake a demarcation of all lands in the town, and produce a map of all properties and their plot boundaries.
- Provide technical assistance in the overlaying of the above maps and plans for the purpose of producing an up-to-date base map of the town showing the existing situation.
- Based on the above, the urban planning exercise will produce issue- and thematic maps, a complete profile of the town covering socio-economic (mainly from the UIS survey), environmental, ecological, and structural characteristics, develop – together with the stakeholders – a shared future vision for the town. This will entail formulation of Conceptual Plans and Final plans for the future of the town.
- Provide training and capacity building for all of the above tasks;
- Provide office facilities (computers, other hardware and software) for efficient operation of the Planning Office.

11.6 Orphans and other Vulnerable Groups

Special attention will be given to meet the needs of these vulnerable groups by:

- Mobilizing support for and establish linkages with on-going programme work.
- Preparing a project proposal and small scale agreement of cooperation with a locally established NGO to support selected orphan institutions in constructing rain water harvesting schemes.

11.7 Advocacy and Awareness Raising

- Formation of community organizations to manage water and sanitation services in informal settlements
- Support to local groups with information and education materials for dissemination and education of the public on water utility management as well as environmental sanitation.

- Community Development of an Urban Catchment Management Strategy
- Mobilization to sensitize the people on health and hygiene campaigns, in particular in schools.
- Recruitment and training of community trainers in the peri-urban and informal settlements.

11.8 Urban Catchment Management

Adequate facilities need to be put in place to enable management of the urban environment in regards to the safe and healthy livelihood of the population. The following measures have to be undertaken:

- Development of an integrated Urban Catchment Management Strategy;
- Design of a monitoring network
- Enabling legislation at Local Government level (bye-laws)
- Awareness campaigns
- Office facilities, including database, and software
- Training and capacity building

11.9 Capacity Building

Training and capacity building is a cross-cutting activity and should be applied to all activities proposed above, to ensure sustainable operation.

- A very comprehensive capacity building programme has been developed which will be operational in all 10 towns in the three countries. This is implemented in cooperation with 4 international partners, each having a particular expertise.
- The Cooperation Agreements with the 4 partners will be signed very soon;
- Under this programme a comprehensive *Assessment of Capacity Building Needs* in Bugembe will be carried out later this year.
- Meanwhile identification of local partners who will participate and actually implement the training is also taking place.
- A Fast-track Programme aiming to improve the performance of the Water Service Provider, carried out in collaboration with the National Water and Sewerage Corporation of Uganda is about to commence work in Bugembe with the SIBO Company.
- Other pro-poor initiatives to stimulate Local Economic Development (e.g. through Micro-Credit schemes) will also be initiated.

11.10 Gender Mainstreaming and Support to Vulnerable Groups

Also gender mainstreaming is a cross-cutting activity which aims at ensuring a well-balanced representation of men and women in the various organisations dealing with implementation of LVWATSAN. A strategy has been developed and implementation will be starting soon.

11.11 Monitoring and Evaluation

The Urban Inequity Survey carried out earlier, provides a solid base of information. In order to monitor progress, the Monitoring Branch of UN-Habitat will repeat the survey at regular intervals to measure the rate of MDG achievements, with respect to water and sanitation.

12 PROPOSED IMMEDIATE and LONG-TERM INTERVENTIONS in BUGEMBE

No	Area of focus	Intervention	Prior-ity	Cost (ST)	Cost (LT)	Respon-sible.	Remarks
1	ADVOCACY, COMMUNICATION AND AWARENESS CREATION						
		Prepare promotional material	ST	5,000		JO/UN	
		Public awareness campaigns (radio, TV, press)	ST	8,000		JO/UN	
		School health & hygiene education campaigns,	LT		5,000	JO/UN	
		Identify communication focal points in town	ST			MSF	
2	CAPACITY BUILDING						
		CA with 4 international partners	ST			UN	August 08
		Assessment of CB needs in Bugembe	ST			IHE	
		Identification of local partners	ST			UN	
		Fast-track programme for local office (NWSC)	ST	20,000		NWSC	Starting Oct 08
		Pro-poor initiatives e.g. Micro-Credit	LT		25,000	UN	
3	GENDER, VULNERABLE GROUPS						
		Gender equity assessment	ST			UN/GWA	
		RWH programmes (NGO) + sanitation	ST	90,000		UN	
		Development of promotional materials	ST	5,000		UN	
4	URBAN PHYSICAL PLANNING						
		Planning needs assessment	ST	5,000		UN/JM	Sep 08?
		Prepare Physical Plan (draft)	ST	20,000		UN/JM	
		Stakeholder consultations	ST	2,000		UN/JM	
		Set up physical planning unit in town	LT		15,000	UN/JM	
		Operationalise Physical Plan	LT		5,000	UN/JM	
		Training for planning staff	LT		10,000	UN	
5	MONITORING AND EVALUATION						
		Prepare report on results UIS Bugembe	ST	5,000		UN/OO	In progress
		Maps, GIS system, data base, etc	LT		10,000	UN/OO	
		Presentation of results in Bugembe	ST	2,000		UN/OO	
		Monitoring of MDGs	LT		20,000	UN/OO	
6	PROGRAMME ORGANISATION						
		Initiate MSF and PIU	ST			MSF	MSF done
		Develop CA with Town Council	ST	50,000		UN/TC	
7	URBAN CATCHMENT MANAGEMENT						
		Development UCM strategy for Bugembe	ST	10,000			
		Monitoring equipment, (incl. testing eq.)	LT		15,000	UN	
		Design monitoring network	LT		10,000	UN	
		Legislation and awareness campaigns	LT		5,000	TC/PIU	
		Office facilities + hardware (catchment office)	LT		20,000	TC	

No	Area of focus	Intervention	Priority	Cost (ST)	Cost (LT)	Responsible.	Remarks
8	SOLID & LIQUID WASTE MANAGEMENT						
	Solid waste	Develop design plan for waste disposal site	ST	8,000		UN/HK	
		Procurement of 2 No. SWM (tractors & trailers)	ST	30,000			
		Transfer stations (under CA with TC)	LT		20,000		
		Develop business plan for sustainable SWM	LT		15,000		
		Support local initiatives (recycling, composting)	ST	20,000			
	Liquid waste	Vacutug emptier	LT		10,000	JM	
		Septic tank at slaughterhouse	ST	15,000			
9	WATER AND SANITATION INTERVENTIONS						
1	Storage tanks Bugembe	Masonry ground tank: (200 m ³)	ST	110,000		UN/CWM	
2	Booster station	Install additional booster capacity	ST	30,000			
3	Water distribution network	Design of distribution network	ST	10,000			
		Expansion distribution network (phase I) 10km	ST	90,000			
		Expansion of network (phase II) 20 kms	LT		175,000		
4	Distribution Mains	Additional uPVC 110mm dia, 6 kms	LT		340,000		
5	Metering (consumers)	Replacement of faulty consumer meters, and new meter installations (500 Nos).	LT		20,000		
6	Reducing NRW (leakages, WDM)	Installation of bulk and zonal water meters	LT		20,000		
		10No. Pressure regulating valves	LT		7,000		
		Hydraulic modelling of distribution network	LT		10,000		
7	Water kiosks	10 No. Public water kiosks	ST	10,000			
		20 Nos. mini shop/water kiosks (micro-credit).	LT		10,000		
		Facilitation costs UN-Habitat	LT		10,000		
10	SANITATION						
1	Sanitation Strategy	Develop sanitation strategy for Bugembe	ST	5,000			
2	School water and sanitation programme	Construction of watsan facilities (10 schools)	ST	50,000		NGO	
		Construction of RWH facilities at 6 schools	LT		60,000		
3	Sanitation, public	Construction of public sanitation facilities at market, bus station, etc (6 nos.)	LT		60,000		
4	Household sanitation (SanPlats)	Support local groups manufacturing of Sanplats	LT		50,000		
		Household sanitation programme (500 hh)	LT		300,000		With NGO
5	Sewerage	Feasibility study for Sewerage system	LT		30,000		
11	DRAINAGE						
	Drainage	Drains, 5 kms @ \$10 per m	LT		50,000		
		Paving of market area	LT		30,000		
12	ENVIRONMENT						
	EIA	Environmental Impact Assessment	ST	10,000			
Total Bugembe (US \$)					610,000	1,357,000	

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ANNEX 1

Field Visits / Observations