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Language: English
Original: English
Distribution: Limited

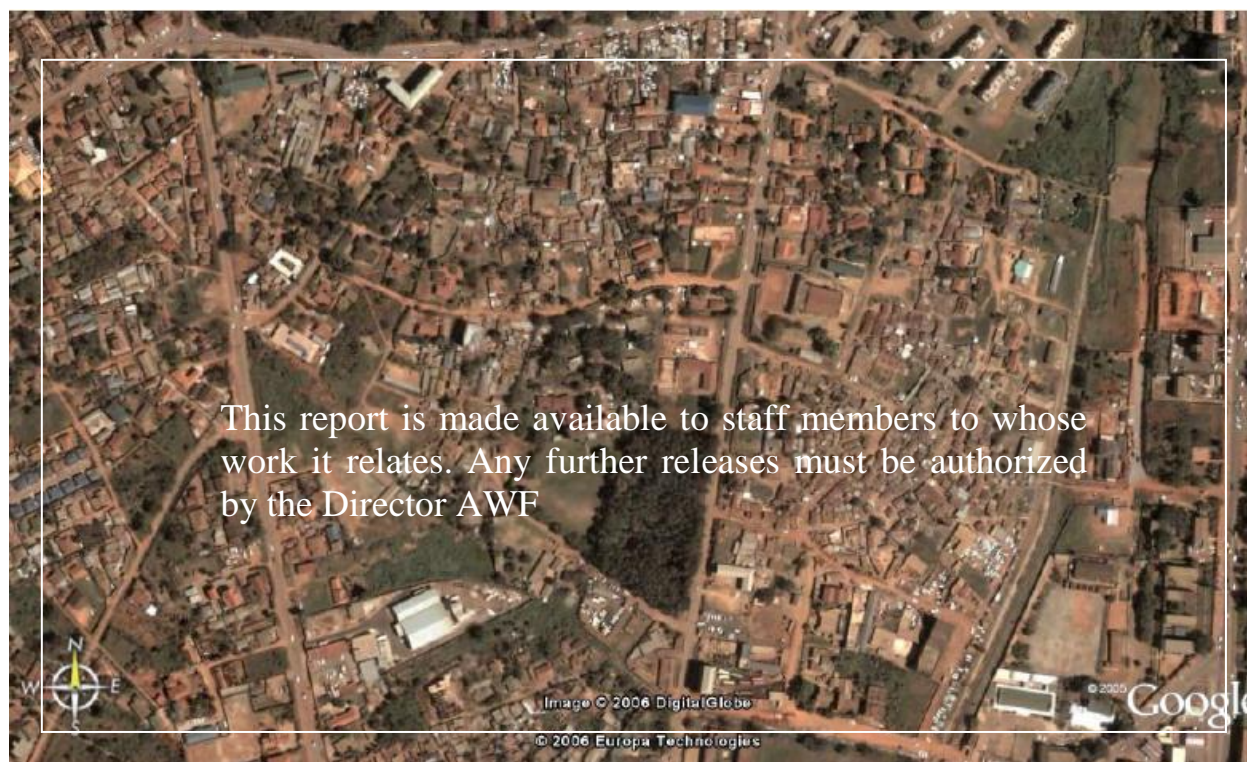


African Water Facility
Facilité africaine de l'eau



**Implementation of an Integrated Project of Water
Supply and Sanitation Services for the Urban Poor in
Kagugube Parish, Central Division - Kampala
UGANDA**

APPRAISAL REPORT



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LIST OF ACRONYMS

ADB	African Development Bank
AWF	African Water Facility
CBO	Community Based Organisation
CMD	Community Management Department
DLP	Defects Liability Period
EIA	Environmental Impact Assessment
EU	European Union
GoU	Government of Uganda
IEC	Information, Education and Communication
KCC	Kampala City Council
KUSP	Kampala Urban Sanitation Project
MDGs	Millennium Development Goals
MoFPED	Ministry of Finance, Planning and Economic Development
MoWE	Ministry of Water and Environment
NGO	Non-Government Organisation
PEAP	Poverty Eradication Action Plan
NWSC	National Water and Sewerage Corporation
P&CD	Planning and Capital Development
PSP	Public Stand Posts
PPSP	Pre-paid Public Stand Pipe
ToR	Terms of Reference
UPPU	Urban Pro-Poor Unit
WATSAN	Water and Sanitation
WSS	Water Supply and Sanitation

DEFINITIONS AND GLOSSARY OF TERMS

Defining Improved Sanitation and Hygiene (ISH)

In Uganda's context ISH encompasses the promotion of skills and practices that enable individuals, families and communities to have a clean and healthy environment. The concept focuses on proper disposal (management)¹ of human excreta and keeping drinking water safe to the point of use and adopting high levels of personal, domestic, public and food hygiene. It also reflects on ensuring safe management of solid and liquid wastes including health care and protecting households against vectors and rodents, especially those of public health importance.

EcoSan: Ecological Sanitation, a range of sanitation technologies where the nutrients in human excreta are sanitized and safely reused as biological fertilizer. A brief introduction to one of the EcoSan technologies - the dehydration toilet is attached.

¹ The type of systems to be adapted for the safe management of excreta will reflect a combination of 'demand' factors prevailing in the locality along an options ladder where upward movement is related to increased cost but increased safety.

LOGICAL FRAMEWORK

HIERARCHY of OBJECTIVES,	EXPECTED RESULTS	REACH (BENEFICIARIES)	PERFORMANCE INDICATORS, SOURCE, PERIODICITY	INDICATIVE TARGETS and TIMEFRAME	RISKS > MITIGATION STRATEGIES
GOAL: Improve social, economic, health and living conditions for the urban poor.	IMPACT Improved and sustainable access to water and sanitation in informal settlements.	Urban Poor population	Indicators: 1. Reduction in distance and time spent to safe water and improved sanitation points 2. Improved quality of life (reduction in preventable water related diseases i.e. diarrhea, increased economic activity, higher school enrolment, gender empowerment) Source: National Reports and Statistics from Ministry of Health, hospitals, health centres. Periodicity: Annual	1. By year 2008 2. 60% reduction in water and sanitation related diseases 3. Distance to water point ≤200 m 4. Distance to sanitation point ≤30 m.	1. Failure to mobilise sufficient funds for investment for other informal settlements> sharing experiences and lessons learnt and seek funding from more than one development partner. 2. Lack of political commitment to support pro-poor development projects > Sensitization and awareness campaigns.
OBJECTIVES Establishment of sustainable water supply, sanitation and hygiene promotion services tailored to the needs of the urban poor and implemented in the pilot area of Kagugube parish in Central Division	OUTCOMES 1. 100% of the residents of Kagugube access water within 200m 2. 100% of the residents access a sanitation facility within 30 m 3. 80% of the residents of Kagugube are adequately trained in hygiene and sanitation. 4. NWSC, KCC and communities have increased capacity to manage and operate the water and sanitation facilities in a cooperative and coordinated manner. 5. NWSC benefits from investment of utilities to informal settlements. 6. Lessons learnt from pilot project implementation and post-construction management of the system.	1. Institutions in service provision (NWSC, KCC, NGOs, CBOs) 2. Residents of Kagugube - women and children. 3. Donors and financing agencies.	Indicators 1. 100% of the population with access to safe water points (≤200 m) and sanitation (≤30m). 2. 80% of the population have basic knowledge and practices of good hygiene and sanitation. 3. Effective implementation of pro-poor development projects. 4. Effective and efficient management of water and sanitation systems in informal settlements. 5. Application of lessons learnt on wider scale of service provision in informal settlements Source 1. Interviews/community assessments/surveys. 2. Monitoring reports. 3. Statistics from Ministry of Health. 4. Project statistics & reports. Periodicity • 6 months – 1 year	By end of Project 1. 100% of the population with access to safe water points (≤200 m) and sanitation (≤30m). 2. 80% of the population with basic knowledge, and practices good hygiene and sanitation. 3. % increase in revenue and investment in informal settlements. 4. All utility service providers in informal settlements having coordinated activities. 5. Existence of a functional O&M framework for sanitation services in the area	3. Lack of capacity and coordination in institutions > strengthen role of the UPPU. 4. Failure to prioritise water in national strategies > strengthen political commitment through advocacy and sensitization. 5. Inadequate collaboration between NWSC and KCC
ACTIVITIES 1. Infrastructure Development	OUTPUTS 1. Increased length of pipelines.	1. Residents of Kagugube 2. NWSC	Indicators 1. Length of pipelines extended	By end of Project 1. about 9 km of pipeline laid	

<ul style="list-style-type: none"> Extension of water distribution and tertiary mains to the informal settlement of Kagugube. Installation of appropriate sanitation facilities. 	<p>2. Sanitation facilities constructed.</p>	<p>3. Private sector. 4. Local Councils 5. NGOs, CBOs</p>	<p>2. Number of water points constructed 3. Number of sanitation facilities installed. Source 1. Monitoring reports from UPPU. 2. Reports from water committees. 3. Final Report. 4. Project statistics and reports Periodicity Monthly progress reports during project implementation.</p>	<p>2. 25 pre pay kiosks and 100 yard taps 3. At least 500 No. of household sanitation facilities at least 250 of which will be ecological toilets and 2 communal ablution facilities constructed.</p>	
<p>2. Hygiene and Sanitation IEC System</p> <ul style="list-style-type: none"> Conduction of educational programs in the communities. Support to the NGOs and CBOs involved in hygiene and sanitation campaigns. 	<p>OUTPUTS</p> <ol style="list-style-type: none"> Urban poor have a higher level of knowledge of good hygiene and sanitation. Improved attitude and positive change in hygiene and sanitation culture. Increased practise of good hygiene and sanitation. 		<p>Indicators</p> <ol style="list-style-type: none"> Higher level of understanding of hygiene related issues. Improvement in sanitation-related cultural practices of the urban poor. <p>Source</p> <ol style="list-style-type: none"> Interviews/community assessments/surveys. Monitoring reports. Statistics from Ministry of Health Reports from water committees. Project statistics and reports <p>Periodicity</p> <ol style="list-style-type: none"> Monthly progress reports during project implementation. Every 6 months. 	<p>By end of Project</p> <ol style="list-style-type: none"> Higher knowledge levels in the communities. Better sanitation practices. 	
<p>3. Institutional and Community Development</p> <ul style="list-style-type: none"> Strengthening of institutional management capacity for more effective operation of services to the urban poor. Community mobilization and training in sustainable use to water and sanitation facilities. 	<p>OUTPUTS</p> <ul style="list-style-type: none"> Operative organisational structure of the UPPU. Operational mechanisms in place that are tailored to the needs of the urban poor (demand driven approach). Increased communal responsibility towards water and sanitation systems. 		<p>Indicators</p> <ol style="list-style-type: none"> Degree of effectiveness in implementation of projects to informal settlements. Degree of efficiency of management and operation of water services. Degree of participation of the community in operation and maintenance of water and sanitation facilities. <p>Source</p> <ol style="list-style-type: none"> Interviews/community assessments/surveys. Monitoring reports. Reports from water committees. Project statistics and reports <p>Periodicity</p> <ol style="list-style-type: none"> Monthly progress reports during project implementation. Every 6 months. 	<p>By end of Project</p> <ol style="list-style-type: none"> Assessment of status of project implementation every 6 months. Assessment of operation of the project area every month after the system is in operation. Assessment of community participation. O&M framework for sanitation functional and facilitated by both KCC and NWSC 	
<p>4. Monitoring and</p>	<p>OUTPUTS</p> <ol style="list-style-type: none"> Regular M&E 		<p>Indicators</p> <ol style="list-style-type: none"> Improved data collection 	<ol style="list-style-type: none"> M&E mechanism 	

<p>Evaluation</p> <p>1. Development of M&E mechanisms in the UPPU.</p> <p>2. Development of M&E criteria</p>	<p>reporting mechanisms in operation.</p>		<p>and analysis structure.</p> <p>2. Regular and improved monitoring activities.</p> <p>3. Lessons learnt in project implementation are applied to new projects.</p> <p>Source</p> <p>1. Monitoring reports.</p> <p>2. Project reports.</p> <p>Periodicity</p> <p>1. Monthly progress reports during project implementation.</p> <p>2. Regular reporting every 6 months.</p>	<p>approved and operational by Dec 2007.</p> <p>2. Assessment of project area and monitoring of performance indicators completed after every 6 months.</p> <p>3. UPPU regularly producing monitoring reports every 6 months.</p>	
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0 EXECUTIVE SUMMARY

0.0.1 National Water and Sewerage Cooperation (NWSC) seeks funding from AWF for the establishment of sustainable water supply and sanitation services tailored to the needs of the urban poor in the low-income community of Kagugube Parish, an informal settlement in Central Division of Kampala City. The Parish is mainly a residential area with small-scale businesses and it has 4 informal settlement areas: Kivulu 1&2, Kagugube and Kitamanyangamba.

0.0.2 Kagugube's layout is an unplanned congested area with a mixture of temporary and permanent structures. Its population is about 13,750 residents. An estimated 80% of these do not have access to or do not use tap water. The situation concerning access to safe sanitation is even worse.

0.0.3 This project will pilot and address the following issues: (i) Establish sanitation services tailored to the needs of the urban poor in the low-income community, with a special focus on excreta management at both household and communal levels. Ecological Sanitation, a concept where the nutrients in human excreta are sanitized and safely reused as biological fertilizer will be promoted. (ii) Strengthen of the Urban Pro-Poor Unit (UPPU) charged with developing pro-poor infrastructure and operational mechanisms, as introduced under the ongoing Kisenyi and Ndeeba NWSC urban poor project. (iii) Ensure access to water for the urban poor at the official NWSC tariff – by installing and piloting pre-paid stand pipes (PPSPs). (vi) Design the water supply network and replace “spaghetti lines” (in Kivulu area) which are of doubtful construction and material quality, leaking and leading to water losses and water quality deterioration. (v) Target the altered water supply demand pattern in Kagugube and Kitamanyangamba areas (newly constructed hostels) and the resulting effluent from septic tanks.

0.0.4 The project activities will be implemented in three phases namely the study (detailed design and tender documentation) phase, the construction phase and the post construction phase. Details are elaborated in the consultancy ToR attached to this appraisal.

The Study Phase

Consisting of *software aspects* that include:

- i) community mobilization and sensitization for participation in the project including identification of sanitation facilities to be constructed (and locations) and involvement and commitment of landlords,
 - ii) improving management and operational mechanisms for water supply through a tailored and focused approach of service delivery to the urban poor,
 - iii) community mobilization for hygiene education,
 - iv) increasing institutional and management capacity through sensitization of staff, and preparation of a Private Sector engagement framework
- and a *hardware component* involving the detailed designs and cost estimates of both the water supply and sanitation components of the project as well as the preparation of tender documents and prequalification of potential contractors.

The Construction Phase

- i) Laying water distribution mains and reticulation network

- ii) Installation of two² Communal Ablution Facilities and support for construction of at least 500 (exact numbers- at least 50% ecosan toilets to be determined during the design study) household on-site sanitation facilities. Mobilization and facilitation of the private sector/civil society to ensure efficient management and operation support for the sanitation facilities;
- iii) Continuation of the software activities started during the study phase and strengthening of the UPPU.

0.0.5 Based on a comprehensive assessment and a field appraisal of the funding request for “Implementation of the Integrated Programme of Water Supply and Sanitation Services for the Urban Poor in Kagugube Parish“ in terms of relevance, effectiveness and sustainability, as well as the recipients capacity and credibility, a Grant is recommended. The **€865,575** from AWF for the 2 years project will improve the water supply and sanitation infrastructure and install off-site operation for the on-site sanitation as a pilot outcome. Ecological sanitation option will be piloted and will account for at least 50% of the household sanitation facilities constructed. The per capita cost of this intervention is approximately 60 Euro. The Government of Uganda will pay all taxes incurred on the project while NWSC will meet all costs related to its staff during project implementation and guarantee O&M for all components after completion of the project. The lessons learnt from the implementation of this pilot project, will be used for scaling up the provision of improved water supply and sanitation services to the urban poor in Kampala and other major towns in Uganda.

² Exact number to be determined during the design study

1 BACKGROUND

1.1 Origin of the Project

1.1.1 Kampala, the capital city of Uganda, is estimated to have a resident population of about 1.4 million people. This number is believed to double during the day due to the influx of the labour force that works within the city but reside in the neighbouring districts of Wakiso, Mpigi and Mukono. Different sources also report that between 40 and 70% of the resident population lives in the over 20³ informal and un-served settlements scattered within the city⁴.

1.1.2 NWSC is responsible for providing piped water and transportation of sewage and its treatment in the City. Kampala City Council is responsible for protecting the springs and ensuring adequate sanitation.

1.1.3 In Kampala, access⁵ to safe water is at 70%⁶, but for the informal settlements, this figure is believed to be a dismal 17%. The main reasons for this are the absence of water distribution networks in these areas, or if present, the high costs charged by yard-tap owners and kiosk operators. Thus, the slum-dwellers resort to alternative and unsafe sources of water, which include springs (both protected and unprotected) and shallow wells. Recent studies by Kampala City Council (KCC) show that: (i) the number of households using alternative sources is significant; and (ii) more than 90% of the water samples from these alternative⁷ sources are contaminated by E-Coli bacteria (from nearby latrines, leaking sewers and solid waste that carries significant faecal matter), putting the users at risk of disease. Cholera epidemics are common, and the most recent outbreak in Kampala was during November 2006.

Table 1.1 shows the water sources used, and the noticeably high percentage of people using alternative sources, in the five political Divisions of the City.

Table 1.1 Distribution of households according sources of water used

Division	Source of Water						%age using more than 1 external source
	%age using source				Total		
	Tap	Protected Spring	Un-protected Spring	Other	No.	%	
Kawempe	53	35	9	3	270	100	47
Makindye	79	20	0	0.4	225	100	58
Nakawa	67	17	4	12	135	100	53
Rubaga	51	43	5	2	315	100	34
Central	52	48	0	0	90	100	73

Source: Kampala City Council, Public Health Department; *No. refers to number of households surveyed*

1.1.4 The sanitation situation in these areas is appalling. Land-tenure system and inappropriate technologies have led to the construction of very poor latrines (or no

³ E.g.: Kisenyi, Kivulu, Bwaise, Katwe-Kinyoro, Mulago, Kibuli, Naguru Godown, Soweto, Kitintale, Kalerwe, Kamwokya-Kifumbira, Nakulabye-Kiwuunya, Ndeeba, Natete, Katanga, Namuwongo-Kikube Mutwe, and Wabigalo

⁴ These informal settlements are characterised by: (i) housing congestion with poor ventilation; (ii) insecure land tenure and absentee landlords; (iii) regular flooding due to occupation of low-lying swampy areas; (iv) poor drainage and sanitation conditions; (v) poor or no roads leading to limited accessibility; (vi) outbreaks of water-borne diseases - notably dysentery and cholera; and (vii) insecure employment status of most residents.

⁵ Coverage/access defined as people with piped water supplies within a distance of less than 200m (for urban areas)

⁶ Source: 2006 Water and Sanitation Sector Performance Report

⁷ Other than NWSC tap water

latrines at all). These have contaminated the alternative water sources and, no doubt, led to the disease epidemics in common in these areas.

1.1.5 Extension of clean safe water and good sanitation to un-served areas is a key priority in Uganda's drive to improve the quality of life and alleviate poverty (see section 1.2). In this regard, NWSC as a key participant in the water sector has targeted expansion of water supply services to the peri-urban and urban poor parts of its designated Service Areas. Between 2002 and 2003, NWSC (with the support of Water and Sanitation Programme - World Bank) commissioned a study to identify sustainable management options for mitigating challenges and improving WATSAN services in Kampala's informal settlements. This study involved local councilors, Government officials, NGO's, water user communities, women and local residents.

1.1.6 The study showed that apart from increasing the distribution network and sanitation coverage, effective service delivery required an integrated approach that also takes due consideration of the socio-economic environment within which services are to be rendered. Specific recommendations included the formation of a Community Management Department within NWSC that would be responsible for participatory service delivery for the urban poor and that would ensure collaboration with other stakeholders including KCC, NGOs and the community (for sanitation and hygiene IEC and for implementation), and a connection subsidy.

A feasibility study that followed in 2004 highlighted priority areas in terms of WATSAN requirements. The priority list of the 10 highest-ranking parishes is shown in Table 1.2.

Table 1.2 Priority List of Informal Settlements in terms of WATSAN Requirements

Division	Parish	Ranking	Division	Parish	Ranking
Central	Kisenyi II	1	Nakawa	Mbuya I	6
Rubaga	Ndeeba	2	Rubaga	Nateete	7
Central	Kagugube	3	Kawempe	Kanyanya	8
Rubaga	Kasubi	4	Kawempe	Kyebando	9
Makindye	Katwe I	5	Central	Bukesa	10

1.1.7 Following completion of the feasibility study, NWSC, using internally generated funds, laid reticulation mains in the informal settlement of Kamwokya-Kifumbira. In May 2006, under funding from the German government, NWSC embarked on a project to extend water and sanitation to the parishes of Ndeeba, Kisenyi.

1.1.8 In order to increase coverage to the rural poor, NWSC now seeks funding for expanding the water supply and sanitation network to reach the low-income community of Kagugube Parish in Central Division of Kampala City. The increase in water demand due to extension of the network will be met through supply from the new Gaba III water works being constructed to increase water supply to Kampala city.

1.2 Sectoral Priorities

1.2.1 Development in Uganda is guided by the national Poverty Eradication Action Plan (PEAP), which constitutes Uganda's Poverty Reduction Strategy. WATSAN and IWRM are recognized as key in attaining three of the five pillars namely: Pillar 2 (Enhancing production, competitiveness and incomes), Pillar 3 (Security, conflict resolution and disaster management) and Pillar 5 (Human Development).

1.2.2 The national goal for Urban Water Supply and Sanitation (UWSS) is: “To achieve sustainable safe water supply and sanitation facilities, based on management responsibility and ownership by the users, within easy reach of 100% of the urban population with effective use and functionality of the facilities” by 2015. The national coverage target for water in urban areas is a piped water point with 200m providing a minimum of 20 litres per capita per day. For sanitation every household should have access to a sanitation facility, which at the minimum “contains”/seals the faecal matter to protect humans against health problems and provide privacy. There should be access to and use of hand-washing facilities.

1.2.3 The Water and Sanitation Sector has also prepared a draft pro-poor strategy that aims at enabling government to fulfill its goals for service delivery. The strategy addresses WATSAN service delivery for the urban poor. Urban sanitation is especially recognized as a key challenge that is constrained by many factors including institutional fragmentation, choice of appropriate technologies, O&M concerns, and large investments requirements. The options elaborated for management of water supplies in informal settlements include, a) formation of a community management unit (now called the Urban Pro Poor Unit) in NWSC to focus on policy and operational requirements for improvement of service delivery to the urban poor, b) introduction of prepay systems that are in line with the incomes of the urban poor and make it possible for them to access water at NWSC rates as opposed to the rates set by vendors , c) enhancing IEC for sanitation and hygiene education, and d) strengthening the collaboration among institutions that are responsible for, or are involved in water and sanitation services delivery for the urban poor. In order to accelerate growth of consumer connections and enable the poor to have their own yard taps a policy to subsidise new connections was introduced.

1.2.4 The national standard for urban water supply is access to a piped water point within 200 m., and consumption of at least 20 l.p.c.d. Undertaking 4 of the 2006 Annual Joint Sector review recommends revision of the sector performance measurement framework, the criteria and the way it defines, establishes, validates and harmonizes information regarding access to and use of safe water and sanitation in Uganda. For sanitation, every household should have access to a sanitation facility, which at the minimum “contains”/seals the faecal matter to protect humans against health problems and provides privacy. There should also be access to and use of hand washing facilities. These recommendations were elaborated in project preparation studies and form an integral part of the project.

1.3 Problem Definition

1.3.1 The project aims at providing improved WATSAN services to Kagugube Parish, an informal settlement, with a population of 13,750 residents in about 2320⁸ households. An estimated 80% of these do not have access to or do not use tap water due to distance to a standpipe, or costs that are hiked by yard tap owners. The Parish is mainly a residential area with small-scale businesses and has 4 informal areas: Industrial Area, Kivulu 1&2, Kagugube and Kitamanyangamba. The layout is mainly unplanned with a mixture of temporary and permanent structures. Kagugube and Kitamanyangamba are continuously infiltrated by upcoming permanent structures mostly in the form of hostels that house students from the nearby Makerere University.

⁸ 2002 Census data

These new developments have inevitably led to an increased and altered demand pattern that NWSC seeks to be address.

1.3.2 In 2004, the number of water connections⁹ in Kagugube Parish was as follows: yard taps – 130, commercial accounts – 29, and institutional accounts – 14. Many of the yard taps were connected using very long service pipes that led to many “spaghetti lines” of doubtful construction and materials quality, potentially leading to system losses and water quality deterioration. NWSC seeks to rectify this situation through a distribution system in-filling process.

1.3.3 The proliferation of “yard taps” that sell water has led to the poor buying water at a high price of Ush 50-100 per 20 liter jerry can (compared to the NWSC rate of about Ush 13). NWSC wishes to pilot the pre-pay metered system to regulate the price of water to the consumer (the system will be akin to the pre-pay phone service where the cost of a unit is the same irrespective of where you buy the card. This way, the poor will be able to pay for water at the NWSC rate).

1.3.4 Sanitation is a major challenge in the study area. Most people do not have access to the sewerage network (only a small portion of Kivulu area is sewered). Except for the commercial premises and a few well-to-do residents who use septic tanks¹⁰, most dwellers use onsite sanitation in the form of filthy and mostly inaccessible and unemptiable pit latrines. Many tenants report that they do not have access to any facility and that their landlords and the city-authorities do not mind. The project will seek to reverse this situation.

1.3.5 Sustainable impact requires a conducive institutional framework. The project will strengthen the Urban Pro-Poor Unit (UPPU) charged with developing pro-poor infrastructure and operational mechanisms; and introduced under the ongoing Kisenyi and Ndeeba NWSC urban poor project.

1.4 Beneficiaries and Stakeholders

1.4.1 The residents of Kagugube Parish will be the direct beneficiaries of the project. They will be involved right from the design phase up to operation.

1.4.2 NWSC is an indirect beneficiary in terms of institutional and capacity building. NWSC revenues are also expected to increase because of the new connections.

1.4.3 The Kampala City Council, responsible for storm water drainage, solid waste management through the City Engineer’s department, and public health and on-site sanitation through the health department will be an active beneficiary and will collaborate throughout the project with respect to designs, approvals, private sector participation, IEC and enforcement. NGOs and CBOs who have been filling in the utility services gap will be actively involved in IEC and in monitoring and evaluation.

⁹ NB: the number of suppressed accounts and average water sales (m³/month) will be assessed during the design study, after the NWSC operational boundaries (as opposed to slum boundaries) are demarcated

¹⁰ The proliferation of hostels that accommodate large numbers of students and the use of septic tanks with soak pits inevitably leads to large-scale contamination of the ground and ground water resources used by the downstream poor communities. It is becoming increasingly important to manage the effluent of the septic tanks instead of simply soaking it away. Laws need to be enforced - also on this big businesses.

1.4.4 All the sector Ministries (MFPED, MWE, MOLG, MOH, MOES, MGLSD, MAAIF), development partners, and civil society, who are members of the Water and Sanitation Sector Working Group (WSSWG), which is chaired by the Permanent Secretary of MWLE will be consulted for advises on GOU policy and actively involved in providing the necessary support for recommended institutional changes and implementation approaches based on lessons learnt.

2 THE PROJECT

2.1 Impacts

2.1.1 Improved quality of life Access of safe water and sanitation will improve the quality of life of the residents through reduction in morbidity and mortality resulting from WATSAN related diseases, increase in economic activity as a result of good health and availability of utility services, higher school enrolment of children as a result of reduction in diseases, as well as gender empowerment as a result of the community mobilization efforts.

2.1.2 Improved health and sanitary conditions. The majority of greater Kampala's residents (over 90%) live outside of the NWSC sewerage areas and rely on on-site sanitation. In most areas, on-site sanitation is likely to remain the most appropriate sanitation solution for many for the foreseeable future as sewers and sewage treatment will not be affordable. Furthermore, due to the nature of the terrain in the informal settlements (water logged), the sanitation is of poor quality (either poor construction or inappropriate technologies and designs), and has resulted in pollution of the ground waters¹¹, which are an alternative source of water for many. This project will improve the sanitary conditions by filling both the water and sanitation gap, and will ultimately improve health conditions through reduced incidences of WATSAN related diseases. In particular EcoSan will be piloted in this areas of highest population density..

2.1.3 Institutionalized pro-poor services delivery mechanisms. The project will strengthen the NWSC pro-poor institutional and policy framework, as well as the collaborative mechanisms with KCC, the communities and the private sector. This will lead to new, synergetic and institutionalized ways of doing business which can be scaled-up.

2.1.4 Protection of water quality in Murchison Bay and increased revenue for NWSC. In the more densely populated poorer urban and peri-urban parts of the city, provision of public and household on-site sanitation is never institutionally supported in terms of operation and maintenance. This has resulted into high pollution levels which eventually end up in the Murchison Bay of Lake Victoria, the intake source for Kampala City's drinking water. This project will contribute to achieving NWSC's long-term strategy of improving water quality in the Murchison Bay, through the improved management of on-site sanitation, thereby ultimately reducing treatment costs for NWSC.

2.1.5 The project is also going to increase the consumer base of NWSC and ultimately the revenue collections from water bills.

¹¹ As mentioned earlier, septic tanks for commercial premises are potential contaminants of ground water, as are the poorly maintained sewers.

2.2 Outcomes

2.2.1 Improved water supply, sanitation and hygiene conditions in the project area. The planned investments as well as community mobilization and education will ensure that the water and sanitation facilities are provided, operated and maintained effectively. The installation of pre-paid public stand pipes (PPSPs) and yard taps will ensure access to affordable and safe water supply for all residents of the Parish; reducing the time spent and distance traveled in fetching water of low quality.

2.2.2 Construction of communal ablution facilities, as well as subsidies and professional advice for improved household sanitation facilities will lead to improved quality of life and a healthier environment for the community.

2.2.3 Improved hygiene and sanitation education. The residents of Kagugube will benefit from health education aimed at increasing awareness and practice of safe hygiene and sanitation.

2.2.4 Institutions and communities have increased capacity to manage and operate the water and sanitation facilities in a cooperative and coordinated manner. As a follow up to the progress from the ongoing Ndeeba/Kisenyi project (designs have been completed and construction is yet to start), this pilot project will serve to bring together all institutions operating in informal settlements. The improved inter-institutional (KCC, NWSC, NGOs and community) coordination will ensure that all stakeholders are working towards common goals and improve the project implementation process.

2.2.5 NWSC and KCC will benefit from the lessons learnt from this pilot project implementation and post-construction management of the system, and apply them to other urban poor areas.

2.3 Outputs

2.3.1 Improved water supply and sanitation facilities. The community mobilization and education will ensure that the water and sanitation facilities are maintained and operated effectively.

2.3.2 Improved access to safe water. Installation of Pre-Paid Public Stand Pipes (PPSPs) and yard taps will improve access to water supply; reducing the time and money spent and distance traveled in fetching water of low quality.

2.3.3 Improved hygiene and sanitation. Installation of at least 2 communal ablution centres and subsidized appropriate on-site sanitation facilities improving environmental health and protecting water resources.

2.3.4 Increased and effective capacity of institutions in pro-poor service delivery. The project will test and strengthen the organizational structure of the UPPU and will streamline the operational mechanisms in place that are tailored to the needs of the urban poor (demand driven approach). The project will also ensure increased communal responsibility towards water and sanitation systems through sensitization of communities.

2.3.5 The project will also involve the communities, KCC, the private sector and the absent landlords to ensure that services are delivered in a sustainable way.

2.4 Activities

2.4.1 The project will be implemented in three phases namely the study (socio economic baseline survey and community needs assessment, detailed design and tender documentation) phase, the construction phase and the post construction phase. Details are elaborated in the consultancy ToR attached to this appraisal.

2.4.2 The Study Phase will consist of both software and hardware aspects. The software aspects will include community mobilization and sensitization for participation in the project, identification of sanitation facilities to be constructed (and locations), involvement and commitment of landlords, strengthening institutional collaborations including initiating of the private sector participation arrangements, analysis of the financial flows and strengthening of the UPPU. Some specific details include:

i) ***Improving management and operational mechanisms for water supply through a tailored and focused approach of service delivery to the urban poor*** The project proposes to develop a tailor-made mechanism that focuses on the needs of the urban poor. The residents of the informal settlements engage in activities that generate income by the day, and face constraints when faced with monthly bills. The project will determine mechanisms of matching the billing regime with the income patterns of the settlements, in order to reduce the levels of defaulting. The project will also develop new connection mechanisms that are demand driven in order to encourage connection to the system.

ii) ***Community mobilization for hygiene education***

An IEC strategy is in place highlighting the communication mechanisms for dissemination of knowledge to the residents of the informal settlements. This strategy will be used for mobilizing the communities and for their education on hygiene and sanitation. The purpose of this component of the project is to sensitize residents of the benefits associated with safe water and good sanitation, to promote proper use of the facilities and to change the attitudes and practices of the residents in order to meet the objectives of the project.

iii) ***Increasing institutional and management capacity through sensitization of staff***

Due to the unique nature of this project, staff of NWSC shall be sensitized and their capacity to deliver sustainable pro-poor services increased. This will also include enhancement of the collaboration with KCC, and other key stakeholders that has been initiated under the Ndeeba/Kisenyi urban poor project.

iv) ***Private Sector engagement framework***

The study phase will include the design and recommendation of a framework for the involvement of the private sector in the off-site management of the so called on-site sanitation facilities in the area (and perhaps in similar areas) as well as capacity building support to Small Scale Service Providers.

v) ***Detailed designs***

Detailed designs of both the water supply and sanitation components of the project as well as the preparation of tender documents and prequalification of potential contractors.

2.4.3 The Construction Phase includes:

i) *Laying water distribution mains and reticulation network*

Access to water will be improved by secondary and distribution mains. A reticulation network will be used to deliver services for house connections, yard taps and PPSPs.

ii) *Installation of 2 No. Communal Ablution Facilities and support for construction of household on-site sanitation facilities*

Communal facilities: the project will support the construction of two¹² communal ablution facilities consisting of toilets for men and women, bathing places for men and women as well as a laundry/washing place. The project will identify and support implementation of a pragmatic and sustainable management arrangement for the facilities.

Household facilities: the project will also create awareness and demand for appropriate sanitation facilities (including ecological approaches) for households through sanitation marketing and IEC. Thereafter, support will be provided through training (professional advise) and subsidies for the households that will opt for improved facilities. This will be done in close collaboration with KCC, landlords and the local leadership during the study and design phase of the project.

Mobilization and facilitation of the private sector/civil society will be done to ensure efficient management and operation support for the sanitation facilities;

iii) *Community mobilization for hygiene education*

Activities started during the study phase will be enhanced and continued during this phase.

iv) *Increasing institutional and management capacity through sensitization of staff*

Activities identified during the study phase, will be continued - with a particular focus on strengthening the UPPU, the collaborative framework and on monitoring and evaluation of the project.

2.4.4 Post-Construction Phase - Lessons will be compiled to inform future activities in Kagugube and in other parishes as part of the scaling up. On-call support will also be offered to the UPPU. This will also include the Defects Liability Period as discussed in the attached ToR.

2.5 Risks and Mitigation

i) *Failure to mobilize sufficient funds for investment*

Given the large number of informal settlements to be served, through sharing of findings and regular consultations with the Government and its development partners additional funds will be mobilized for the other informal settlements.

ii) *Lack of political commitment to support pro-poor development projects*

Campaigns have been used before in projects implemented by NWSC and have proved successful in mobilizing support. The project design includes sensitization and awareness campaigns targeted for all levels of stakeholders and beneficiaries.

¹² Exact number to be determined during the design study

iii) *Lack of capacity and coordination in institutions*

One of the project components is to strengthen institutional capacity through capacity building and sensitization. A team that focuses on provision of pro-poor services has been created in NWSC and will be charged with improving coordination between institutions and stakeholders, developing tailored M&E mechanisms for monitoring achievements among other duties.

iv) *Failure to prioritize water in national strategies*

Political commitment will be strengthened through advocacy and sensitization campaigns. The Management and Board of Directors of NWSC will play a big role in raising awareness on the water and sanitation requirements of the people living in informal settlements.

v) *Infrastructure upgradings in informal settlements can cause raising rents*

During the study phase of the project the team will have to look into and consider this factor. Including all stake holders the problem will be discussed and mitigation measures included,

2.6 Cost and Financing plan

2.6.1 A final breakdown of the project budget will be prepared as part of the design consultancy. However, indicative figures are presented in the “detailed budget” attached in the Annex.

2.6.2 The funds from AWF (Euro 800,000) will cover water supply and sanitation infrastructure improvement, the cost for the study/consultants, and a minimal subsidy to the private sector to implement the proposed sanitation management framework.

2.6.3 NWSC will meet all costs related to its staff (Euro 65,575) that will be part of the project design and implementation, including the UPPU, KCC, and NGOs that will be involved will also meet their staff costs..

3 IMPLEMENTATION

3.1 Recipient

3.1.1 The recipient of the grant is the National Water and Sewerage Corporation (NWSC) - a government-owned parastatal organisation and will be the executing agency for the project in close collaboration with Kampala City Council (KCC). By law, the NWSC is the authority in charge of water supply and the sewage collection and treatment in major urban centres in Uganda. NWSC is also mandated to monitor and control the discharge of industrial and commercial wastes connected to sewer system(s). It is also responsible for the treatment of septage originating from septic tanks.

3.1.2 AWF’s field mission established NWSC’s vast experience in the design, implementation and management of water and sanitation programmes. The Corporation has a strong human resource base consisting of personnel with expertise in engineering, social sciences, GIS, information management, finance and administration among many disciplines. The project managers in the Planning and Capital Development Department have implemented development programmes over the past 10 years. The project portfolio managed by NWSC lies well above 40 million Euros. Table 3.1 shows selected projects implemented by NWSC in the last 5 years.

Table 3.1 Selected projects that have been implemented by NWSC in the last 5 years

Name of Project	Project Results	Project Cost	Development Partner
Identification of Management Options for Management of Water Supply and Sanitation Services in informal settlements – KAMPALA (Started in 2001 - Aug 2002)	i) Guidelines for service delivery developed. ii) Concept for Infrastructure development in informal settlements now in place iii) Policy recommendations made- the notable one offering “free’ materials for connections to consumers within 50 m, now in place.	US \$50,000	Water and Sanitation Program WB-Nairobi.
Master plan update for expansion of Water Supply for Greater Kampala for year 2002-2022 (2002 - 2003)	i) Master plan now in place ii) Feasibility report for subcomponents now in place iii) The 1000 km distribution network will now be reconfigured in 8 hydraulic sub-systems.	0.6 million Euros	KfW
Sanitation Strategy and Master plan for Kampala. For the year 2003-33 KAMPALA UGANDA (2003 - 2004)	i) Expansion scenarios for an integrated sanitation system for the horizon of 30 years developed. ii) Kampala city has been zoned into areas that shall be served with on-site systems and those t be served with conventional sewerage system.	0.9 million Euros	KfW
Studies for the Reform of the Urban Water and Sanitation sub-sector	i) Private Sector Involvement now accepted as management mechanism to improve efficiency – Over 10 water supply schemes now run by private operators. ii) Management by contracts now institutionalized.	1.2 million US \$	IDA-World Bank
Gaba III Water Supply Project – KAMPALA UGANDA (Oct. 2004 – Sept. 2006)	i) Increase Water production for Kampala by 80,000 m ³ /day. With this production added, there will be sufficient water for Kampala until the year 2015.	13.8 million Euros	KfW GoU/NWSC
Refurbishment of Ggaba I Water Treatment Plant – KAMPALA UGANDA	The 80 year old plant refurbished with funds from EEC. Production capacity increased from 13,000 m ³ /day The treatment process re-configured, now all parameters of treated water complying with WHO and Uganda National standards for drinking water.	6.6 million Euros	European Union.
Kabale Water Supply and Sanitation – KABALE UGANDA	A new water treatment plant constructed, capacity 3600 m ³ /day; New distribution lines, 70 km now in place Sewerage system now in Place with a network of 25 Km and 21,300 m ³ in Sewage Treatment Ponds.	12 Million Euros	European Union.

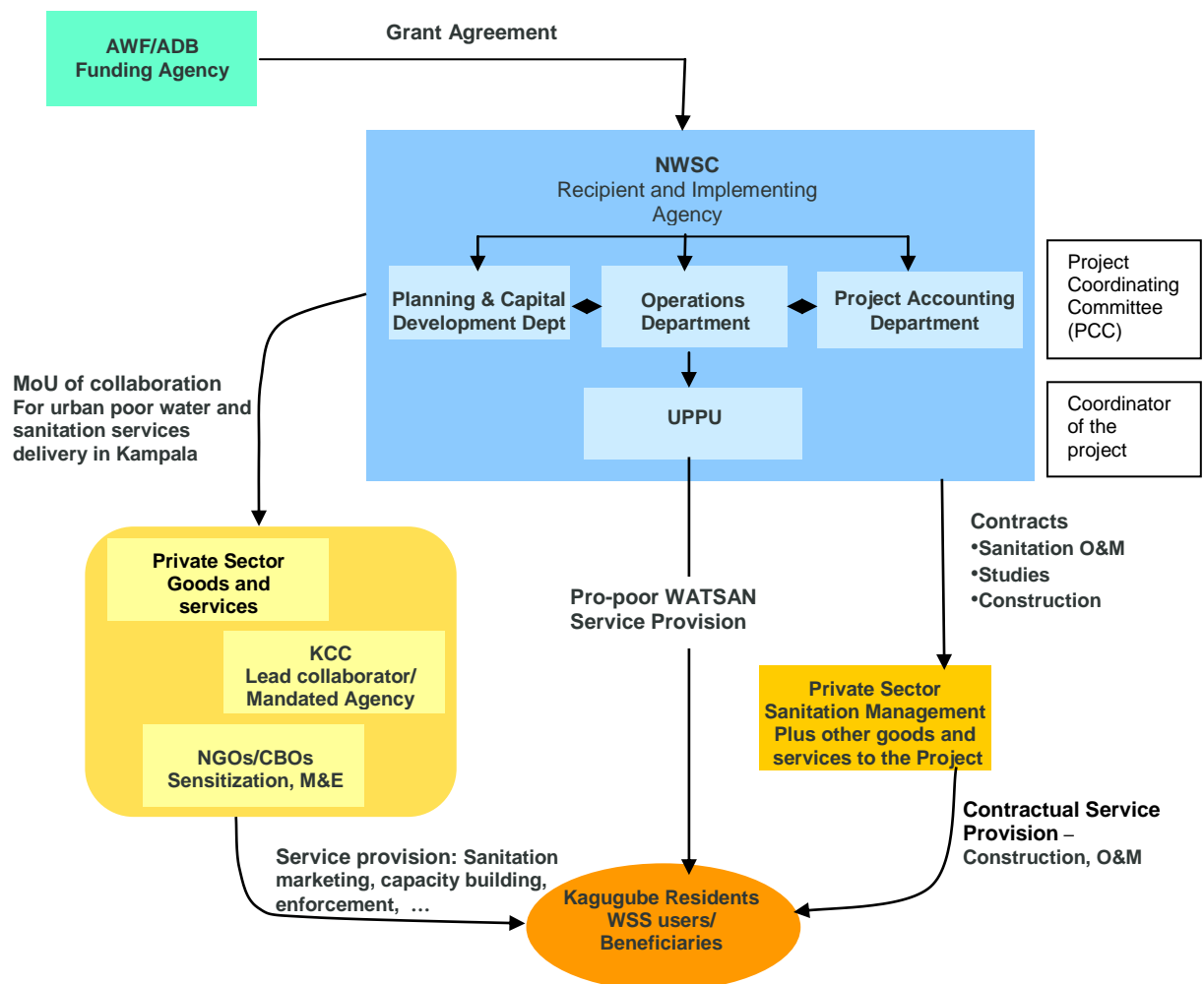
3.2 Implementation Arrangement and Capacity

3.2.1 The proposed implementation arrangement for the project is shown in the diagram that follows. However, this is subject to revision during the study phase of this project.

3.2.2 The NWSC will be the grant recipient and implementing agency of the project. NWSC will implement the project in close collaboration with KCC as the responsible agent for non piped sanitation in Kampala, NWSC will establish a Project Coordinating Committee (PCC) comprising of the head of planning and capital development department, the operation department and key staff member from the health department of KCC. The NWSC will also assign the head of UPPU as coordinator to be in charge of the project. Staff that are part of the core unit of UPPU will be seconded to the consultant for on-the-job training.

3.2.3 NWSC and KCC, are the mandated institutions for WATSAN in Kampala. KCC is charged with planning and implementation of infrastructure apart from piped water supply, sewerage and sewerage treatment which is a mandate of NWSC. The project through NWSC will provide reports to the Water Sector Working Group which will provide overall policy guidance.

3.2.4 **NWSC** - The Planning and Capital Development Department of NWSC is responsible for implementation of capital development projects in water supply and sewerage services. However, due to the unique nature of provision of services to the informal settlement, a unit within the department is being formed. This unit, the Urban Pro-Poor Unit (UPPU) will be solely responsible for all efforts towards supply of water and sanitation in the informal settlements. This involves inter alia coordination between institutions for improved pro-poor planning and management of utility services, extension of water supply mains to the settlements and reformation of operational mechanisms to ensure sustainable management of the systems including the management of on-site sanitation.



3.2.5 **Kampala City Council** is, besides other local government duties, responsible for the non- waterborne sanitation. In the framework of the present programme, KCC is in charge of all aspects of the non- waterborne (mostly on- site) sanitation in Kampala, mainly pit latrines and their servicing/emptying, and has implemented projects many projects. KCC has also collaborated with NWSC, e.g., under the Kampala Urban Sanitation Project and the Kampala Sanitation Master Plan. It will be involved to support the implementation of the project as part of the ongoing collaborative framework between the two institutions.

3.3 Performance Plan

Result	Critical Measurable Indicators	Targets	Time
Outcomes			
Improved health and sanitation conditions	<ul style="list-style-type: none"> Access to safe water and sanitation Improved quality of life (less water related diseases, increased economic activity, higher school enrolment, gender empowerment) 	<ul style="list-style-type: none"> 100% residents have access to safe water and sanitation (distance, time). 60% reduction in water and sanitation related diseases. 	End of project
Improved health education status	Population with basic knowledge, positive attitude and good practice of hygiene and sanitation	50% increase in population with basic knowledge, positive attitude and good practice of hygiene and sanitation	Every 6 months
Increased institutional and community capacity for provision and O&M of WATSAN services	<ul style="list-style-type: none"> Functional UPPU collaborating with KCC and private sector Sanitation management framework in place and functioning 	<ul style="list-style-type: none"> UPPU operational in Project area MoU in place or reviewed to meet planned collaborative arrangement 	Start of construction phase
		<ul style="list-style-type: none"> Contract with private sector in place and running 	End of construction
Immediate Outputs			
Improved WATSAN facilities	<ul style="list-style-type: none"> No. of yard taps and PPSPs installed No. of sanitation facilities constructed 	<ul style="list-style-type: none"> 100 No. yard taps installed by end of Year 1 25 No. of PPSPs installed by end of project 250 No. of sanitation facilities installed by end of 18 months; an additional 250 by end of year 2 (at 50% of household facilities will be ecosan toilets) 	Every 6 months after start of construction
Improved access to WATSAN facilities	<ul style="list-style-type: none"> Distance to water and sanitation facility 	<ul style="list-style-type: none"> Maximum distance to a piped water point of 200m 100% HH have access to sanitation facility within 30 m by end of year 2 	Every 6 months after start of construction
Improved management of water and sanitation systems	<ul style="list-style-type: none"> Increased no. of new connections Efficiency of billing, revenue collection Functional sanitation support system (excreta management – collection, transport and treatment/disposal) 	<ul style="list-style-type: none"> 100% billing efficiency and at least 95% collection efficiency 98% increase in revenue collection At least one private operator/CBO in place and managing sanitation facilities 	Monthly after commissioning

3.4 Implementation Schedule

This is arranged into two parts: the implementation activities as well as the consultancy activities (design and supervision) as shown below:

Implementation Activity	Year 1												Year 2											
	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Quarter 1			Quarter 2			Quarter 3			Quarter 4		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Laying water distribution mains and reticulation network																								
Improving management and operational mechanisms for water supply and sanitation																								
Installation of 2 No. Communal ablution facilities and support for household sanitation																								
Community mobilization, health																								

	Year 1												Year 2											
	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Quarter 1			Quarter 2			Quarter 3			Quarter 4		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
education and awareness through IEC																								
Increasing institutional and management capacity																								
Study/Consultancy Services																								
Procurement of Consultant																								
Preliminary Design																								
Detailed Design and Tender Documents																								
Procurement of Contractor																								
Construction Supervision																								
Post Construction																								

* dotted shaded cells indicate non-full time activities

3.5 Procurement and Execution

3.5.1 Procurement activities of the Project will be carried out by the NWSC following the Ugandan standard public procurement procedures. All processes will follow selection procedures as provided for and in accordance with PPDA (Public Procurement and Disposal Act, 2003 of the Ministry of Finance, Planning and Economic Development (MoFPED) and AWF/ADB guidelines. NWSC has sufficient experience in procurement of goods and services and will manage all procurement.. Goods, works and services for the various components of the Project will be procured using the modalities summarised in Table 3.1 below.

Table - Summary procurement thresholds

Category	NCB	Shortlist	Other
Civil Works	Between UA 0.10 million and UA 1.00 million		Simplified bidding or Direct shopping: < UA 0.10 million
Goods	Between UA 0.10 million and UA .50 million		Simplified bidding or Direct shopping: < UA 0.10 million
Consulting Services		> 40,000 UA	Limited selection, Simplified bidding or Direct selection: < UA 40,000
Miscellaneous			Limited selection, Simplified bidding or Direct selection

3.5.2 **Procurement of Works and Consulting Services** - Competitive Bidding among short-listed - non objected - consultant firms will be applied. Special emphasis will be given to the sanitation part of the project - engineering designs, construction supervision as well as the design of the operation and management part for the “on-site” sanitation. The latter is crucial, and needs special expertise and experience while the preparation of water supply engineering designs and construction supervision is a standard task. The firm will therefore be required to show competence and expertise in the soft and hardware aspects of sanitation with a focus on on-site sanitation including EcoSan principles (design, operation, management, IEC, etc).The terms of reference, as

attached, cover all aspects of design, works supervision and the accompanying measures required for implementation of the project. The consultancy bids will be evaluated by NWSC and the report will be sent to AWF. Upon the no objection to the consultancy tender evaluation report, the best evaluated firm will negotiate the contract with NWSC, basis of which, the consultancy contract will be signed.

3.5.3 During the engineering design process, NWSC will pre-qualify interested construction firms to bid for the works contract. The construction bids will be evaluated by the Consultant and a report submitted to NWSC and AWF. Upon the no objection to the construction tender evaluation report, the best evaluated firm will negotiate contract with NWSC, basis of which, the construction contract will be signed.

3.5.4 Contractors for Civil Works - The works contract will involve physical implementation of civil works and supply of goods for the extension of the water distribution network and for the sanitation facilities. Different hardware elements will be procured including pipes and fittings, construction materials, etc.

The planned procurement components and its timetable are shown in tables 3.1 & 3.2

Table 3.1 Method of Procurement

Component	Est. Amount € '000	Duration	Method of Procurement
Consultants for preparation of detailed designs and supervision of construction - high emphasis will be put on the "on-site" sanitation part of the project.	120	24 months (part time)	Short-listing
Civil works for on-site sanitation facilities (Works and Supply of Goods)	347	12 months	National Competitive Bidding
Civil works for extension of water supply (Works and Supply of Goods).	273	5 months	National Competitive Bidding

Table 3.2 Procurement Timetable (also indicating duration of each procurement function)

	Year 1												Year 2		
	Quarter 1			Quarter 2			Quarter 3			Quarter 4			Quarter 1		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Procurement of Consultant	■														
Hygiene and sanitation baseline survey Preliminary infrastructure Design			■	■	■										
Elaboration of mobilization and training approaches Including pre-testing Detailed design and tender documents						■	■	■	■						
Procurement of IEC materials Procurement of Contractor										■	■	■	■	■	■

3.5.5 For the AWF funded project, the Resources and Logistics for Execution of the Project are available at NWSC. The Project offices will be located in the Planning and Capital Development Department of NWSC. This is the department that is charged with implementing capital development projects. The Project office is fully equipped with office equipment e.g. computers, laptops, printers, fax machine etc. The office is also equipped with vehicles, and has logistical support of all the other departments of NWSC.

3.5.6 NWSC has an in-house procurement department that is charged with handling procurements for the Corporation. The Procurement department is fully equipped with 10 staff with qualifications in procurement, supply and logistics and have experience in procurement of bulk materials, goods, works and services. For execution of this project, the staff of the Procurement Department will work together with the project office for procurement of the goods, works and services. NWSC will meet all their staff costs.

3.5.7 Kampala City Council, as the organization mandated with on site sanitation, will contribute towards implementation of the respective components of the program. KCC and NWSC have a long-standing working arrangement of this nature. A Memorandum of Understanding to this effect is being revised to ensure focus on services delivery for the urban poor.

3.6 Disbursement Arrangements and Expenditure Schedule

3.6.1 The total amount for the project is 865,575 Euro of which the AWF grant is totalling to 800.000 Euro as shown in the table 3.3 below. NWSC will be responsible for the administration of grant proceeds, ensuring that they are effectively and efficiently used for the purposes contemplated and agreed upon as stipulated in the grant agreement.

3.6.2 To ensure quick disbursement of funds to approved activities, NWSC will open and maintain a Special Account (SA) in foreign currency and one Local Currency Account (LCA), both at a commercial Bank acceptable to the ADB/AWF. The SA will be used to deposit the grant resources. Thereafter, funds will be withdrawn from the SA and deposited in the LCA to process payments in respect of local costs. The operation of the accounts will be the sole responsibility of NWSC.

3.6.3 The opening of the SA and the LCA will be a condition precedent to first disbursement. The AWF/ADB will replenish the SA after NWSC has provided sufficient and acceptable justifications for the use of at least 50% of the previous deposit. Disbursements of funds will be made on revolving method basis whereby funds will be deposited in the special account, which will be replenished periodically based on the reports on previous expenditures and work plan for the following semester.

3.6.4 The disbursement will be on a semi-annual basis and will be transferred on the basis of requests for deposits into the special account from the Recipients including statement of expenditures of previously disbursed funds and updated work schedules.

Table 3.3: Semi-annual cost estimates and disbursement of AWF Funding

ACTIVITIES	1 st half 2007	2 nd half 2007	1 st half 2008	2 nd half 2008	Total EURO
1. Consultancy for the IEC and sanitation support design and implementation; infrastructure design, tendering, supervision of construction and ongoing support for management	48,000	24,000	24,000	24,000	120,000
2. Civil works for supply of on-site sanitation facilities	0	50,000	192,500	60,000	302,500
3. Civil works for extension of water supply network	0	150,000	80,000	42,350	272,350

4. Subsidy for the implementation of the sanitation management framework	0	20,000	25,000	0	45,000
5. Misc. and unforeseen	10,000	20,150	15,000	15,000	60,150
TOTAL	58,000	264,150	336,000	141,350	800,000
<i>Percent distribution</i>	<i>7%</i>	<i>33%</i>	<i>42%</i>	<i>18%</i>	

3.7 Accounting and Audit Arrangements

3.7.1 The Grant Agreement will include the specific accounting arrangements and requirements for the recipient to open a Special Account with a local Bank acceptable to AWF/ADB from which all eligible payments will be made.

3.7.2 The Project Accounts office of NWSC will handle all the accounts for the project. This office is equipped with experienced personnel who are responsible for the financial management of all the capital development projects handled by NWSC. NWSC has handled over 15 projects in the last 5 years. Quarterly accounting reports will be sent to AWF summarizing the receipt, use, management and disposition of all contributions.

3.7.3 The Internal Audit Department of NWSC will perform its functions of assessing financial and operational processes of the project. NWSC utilizes both internal and external auditors to check its procedures and systems. The Internal Audit department has capacity of over 20 auditors who will work closely with the project office. NWSC regularly performs technical and financial audits, carried out by a team comprised of an engineer, an auditor and a security officer, and will apply this system to the AWF funded project. All project documents will be made available for the appointed AWF external auditor.

3.7.4 In the interest of fast tracking the implementation of the Project actions, the AWF will recruit and retain an auditor to perform ex post evaluation or supporting documents review and audit the project. The Facility will require that a statement of expenditure and supporting documents review be performed and certified by the independent auditor at predetermined intervals to ensure that fund have been utilized in line with the Grant Agreement. The costs of such audit shall be charged to AWF and are not involved in the Grant.

3.8 Monitoring, Evaluation and Reporting Arrangements

3.8.1 The Planning and Capital Development Department, together with the Urban Pro-Poor Unit (UPPU) of NWSC will be responsible for project implementation. The UPPU will also be responsible for day to day monitoring and the evaluation of the project. The lessons learnt from this pilot project shall be well documented by the UPPU to be shared with the project partners (KCC, NGOs, AWF etc). It shall be used and applied during similar projects in the remaining informal settlements in Kampala.

3.8.2 The project implementation team shall hold monthly meetings to review work progress. Quarterly and annual work plans and reports shall be presented to NWSC and to AWF. During construction, weekly site meetings will be held with the contractor and consultants. Monthly site meetings will also be held to which AWF will be invited. The contractor will submit progress data to the consultant who will prepare monthly

progress reports for discussion in site meetings. A full list of the required reports and their schedule is shown in section 9 of the ToR (Annex).

3.8.3 AWF’s own monitoring and project supervision will be closely linked to the project activities. It will include regular correspondence with the Recipient, and review of the Recipient’s Progress Reports. AWF will check if the outputs of the funded project have been delivered with the required quality and are in line with the Agreement’s budget and schedule. AWF will consider at any time to ask assistance from the ADB-Field Office in Kampala and the undertaking of field supervision missions.

3.8.4 The objectives, actions, and expected outcomes and outputs of the AWF financed project, are summarized in the attached LFA matrix. The log frame matrix will serve as an important monitoring tool to track and evaluate progress of the interventions. Monitoring indicators will be tracked on a regular basis both at project as well as at construction sites and at the community levels. Preliminary targets have included for some of the indicators and will be updated and targets set for all indicators on completion of the baseline survey.

4 PROJECT BENEFITS

4.1 Effectiveness and Efficiency

4.1.1 Due to the unique nature of service delivery to urban poor, this project has been designed as a pilot project in the informal settlement of Kagugube Parish in Kampala.

4.1.2 The expected results are:

- i) Improved access to safe water and sanitation (including improved support mechanisms for sustainable sanitation services delivery to the urban poor);
- ii) Increase in good hygiene and sanitation knowledge and practice in the informal settlements;
- iii) Improved institutional capacity in management of pro-poor services;
- iv) Increased revenue from water and sanitation investments; and
- v) Lessons that can be replicated during up-scaling of service delivery to the urban poor

4.1.3 The effectiveness of the AWF involvement in this project is related to achieving these results and expected outcomes, as highlighted in the LFA Matrix.

4.1.4 The project efficiency aspects have been elaborated in the table below.

Table 4.1 Assessment of project efficiency

Efficiency Factor	Assessment
i) Quality of project preparation	As far as the quality of the project preparation is concerned, the NWSC Project Document provided a thorough design basis and the sanitation component has been further improved by AWF using a consultant specialized in sanitation issues from Uganda.
(ii) Procurement efficiency	NWSC is experienced in procurement of goods and services and will keep the same standards for

	efficient procurement under the AWF grant.
(iii) Competitiveness of costs for acquired goods and services	A competitive bidding process will contribute to and assure sound pricing.
(iv) Efficiency of project management and implementation by the Recipient	NWSC has over the last years managed many sizeable projects and is considered capable of managing the AWF Agreement. NWSC provides consultancy support to water utility companies in other parts of Africa i.e. Kenya, Tanzania, Zambia and Ghana.
(v) Quality and cost efficiency including compliance with cost estimates and budgets	The budget for the Project is based on long-term experience from NWSC for similar projects suggesting that there is high likelihood of keeping the budgets.
(vi) Efficiency of implementation monitoring co-operation between AWF, the Recipient and the other players.	AWF has had consultations with NWSC during the appraisal to establish a basis for monitoring of the project implementation. The planned monthly meetings and regular reports from the UPPU will depict level of monitoring cooperation.

4.1.5 In conclusion, the above assessment suggests that the project will be implemented with the adequate efficiency.

4.2 Sustainability

4.2.1 In order to ensure sustainability of the project, institutional capacity in management of pro-poor services will be enhanced. The unique nature of this project will necessitate an equally unique approach in project management and service operation.

4.2.2 Financial sustainability: The immediate benefits in terms of cheaper access to the services provided - both water supply and sanitation services will encourage the residents of Kagugube to use and pay for the services rendered. The medium term benefits e.g. money saved through reduction in diseases etc., will also serve as an incentive for sustainability of the systems.

4.2.3 Sustainable Operations and Maintenance: It is envisaged that some initial/one-off subsidy might be required to enable the private sector to establish themselves and offer sanitation services in Kagugube. The communities will be expected to make some minimal contributions towards the operation and management of their sanitation facilities. The financial model developed during the project implementation will give the required amounts for sustainability. Additionally NWSC, as per its policy, will finance all operation and maintenance shortcomings of its installations.

4.2.4 Institutional sustainability: Successful implementation of the project will demonstrate the positive outcome that can be achieved when strategic alliances between agencies sharing similar goals are formed. The UPPU of NWSC will be the lead unit in the management and operations of pro-poor project efforts, and will be responsible for coordinating institutions related to water and sanitation service delivery. In the long-

term, more similar partnerships will be designed resulting in better coordination of interventions and more economic resource utilization.

4.2.5 Social- and Environmental sustainability: The need for a detailed EIA, complete with mitigation measures, (and its execution if necessary) will be assessed by the consultant during the study and design phase. However, it is clear that the environmental sanitation component of the project will substantially improve the environment and the risk of excreta-related diseases. This will ultimately improve the social environment in the project area.

4.2.6 The established private sector support framework will ensure delivery of quality sanitation services. Cesspool-emptying services will be provided through private providers who already own the equipment and work for profit. The participation of beneficiaries, including the minimal user/house hold charge guarantee local ownership of the project outcomes.

4.2.7 The lessons learnt from the pilot project shall be documented by the UPPU and applied during similar projects in the remaining informal settlements in Kampala.

4.2.8 Gender sustainability - During the design period of the project, the special needs of women and children will be specifically considered through consultations, as specified in the ToR. (Annex)

5 RATIONALE FOR AWF SUPPORT

5.1 The project is to assist National Water and Sewerage Cooperation in the establishment of sustainable water supply and sanitation services tailored to the needs of the urban poor in the low-income community of Kagugube Parish as recommended in the previous studies. The lessons learnt from the implementation of this pilot project, will be used for scaling up the provision of improved water supply and sanitation services to the urban poor in Kampala and other major towns in Uganda. The Integrated project for Water Supply and Sanitation Services for the Urban Poor in Kampala City is a strategic project for urban sanitation seeking to provide environmentally safe and affordable options for majority of people and has an important advocacy effect not only for Uganda but for the whole of Africa.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

6.1.1 Water and Sanitation services to the urban poor are a big challenge towards meeting the MDGs. This Project is an important and well justified initiative to pilot, at an economical scale, high technical-standard on-site dry sanitation and its commercial off-site operations. Sewers will not be affordable in the near future for most of the people in the world and given the environmental problems sewers brought to the forerunners, this technology might not even be desirable. The project includes the improvement and accessibility of low-cost (at NWSC tariffs) water supply to the urban poor of Kagugube Parish in Kampala City as well as innovative environmentally safe and affordable sanitation systems - EcoSan.

6.1.2 According to AWF's Operational Programme for 2005-09 support to piloting new approaches in water supply and sanitation including its innovative operations and management is identified as one of the priority areas. Assessments of the eligibility of the Recipient and the project is found to be in accordance with the criteria laid down in AWF's Operational Procedures and Guidelines and the anticipated efficiency, effectiveness and sustainability of the project are found acceptable.

6.2 Recommendations

6.2.1 Based upon a critical assessment of the relevance, effectiveness, and sustainability of the Project, as well as the credibility and capacity of the Recipient, it is recommended that the Bank approves the application from National Water and Sewerage Cooperation (NWSC) for "Implementation of an Integrated Programme of Water Supply and Sanitation Services for the Urban Poor in Kagugube Parish, Central Division - Kampala" for funding. Lessons learnt will be used in for leveraging more funds for WSS for the urban poor and up-scaling to other slum areas.

6.2.2 An AWF grant of 800.000 Euro, man power contributions from NWSC and KCC, as well as an in kind contribution of the benefiting slum dwellers will be well invested.

6.2.3 Following this appraisal, a draft Grant Agreement between the NWSC and AWF will be prepared as a basis for approval and signing. The conditions for the effectiveness of the Grant Agreement after signing will be the establishment of a Special Account at a local bank agreeable to AWF.

ANNEXES

Maps: Country/Location and Project Area

Map of Uganda, showing the project city, Kampala – and Lake Victoria



IMPLEMENTATION OF AN INTEGRATED PROJECT OF WATER SUPPLY AND SANITATION SERVICES FOR THE URBAN POOR IN KAMPALA CITY VIZ KAGUGUBE PARISH, CENTRAL DIVISION

Terms of Reference for Consultancy Services

1.0 INTRODUCTION

1.1 The National Water and Sewerage Corporation (NWSC), with financial support from WSP – Nairobi, embarked on a study to develop a concept and strategy for provision of water supply and sanitation services for the urban poor living in informal settlements. The study, which was completed in 2004, provides a framework for implementation of WATSAN services in a sustainable manner. Due to financial constraints, NWSC adopted a systematic stepwise program approach to improving services in these settlements. This programmatic approach involved ranking all the slum settlements in Kampala based on such factors as water stress, incidence of water borne diseases, per capita investment needs etc. Over twenty slums were identified for immediate intervention. The stepwise approach aims at increasing access of water supply to 100% in the highest priority slum before moving down the list of slums. Financial support for the first four slums has been committed by the German Government. The initial four areas are to act as pilots from which lessons learnt are to be up scaled to cover all the informal settlements in Kampala.

1.2 NWSC, with financial support from AWF, is now implementing an important initiative to address the water and sanitation needs of the urban poor population in the informal settlement of Kagugube parish, Central Division, Kampala City. The villages of interest in this project are Kivulu (1&2), Industrial Area, Kagugube and Kitamanyangamba.

1.3 The target population of the project area is in the range of 13,000 - 15,000. However, the proliferation of hostels for university students in this parish could even double these numbers. The activities to be implemented include: support to the urban pro-poor unit in NWSC (UPPU) to coordinate the programme; mains extensions to cover the entire project area (approximately 9 kms of pipelines ranging in diameter from 75 to 150 mm); installation water service facilities (household, yard taps and pre-pay metered public water points); and construction of household and communal sanitation facilities using innovative technical options (including ecological approaches). The method of integrating infrastructure installations with institutional support mechanisms that will ensure that services once installed are sustainable.

2.0 BACKGROUND

2.1 Challenges Associated with serving the urban poor in Kampala.

2.1.1 NWSC has faced a number of challenges in satisfying consumer demands for the urban poor population. The challenges include, but are not limited to, the following.

- Service coverage in terms of water supply is currently estimated at 65% in the 17 towns operated by NWSC. Most of the un-served people are predominantly the urban poor who live in informal settlements. Average coverage in those specific locations is as low as 17%.
- Many of these settlements are unplanned, lack basic facilities and poor infrastructure and are commonly found in the low lying areas, the wetlands which according to the NEMA statute, human habitation is not expected in those areas. The high water table in those areas has had an impact on type of sanitation facilities that can cope with those conditions
- A significant number of public stand-posts have been tried in the past to serve the urban poor. These public stand posts used to be operated by private operators who in many instances would capture revenue from water sales from those outlets for their personal use, leading to disconnection for non-payment. Besides non-remittance of funds to NWSC, and owing to lack of sound regulatory framework, operators would take advantage of the

market forces and would add any mark up price that would result in the cost of water at those outlets being several times higher than the official tariff.

- In the past, a consumer was expected to meet the full cost of installation of the service connections estimated at an average of Euros 250. This policy tended to discourage those that could afford to pay for their consumption through private connections like private yard taps but are unable to raise the amount required for installation at once.
- Land tenure in these settlements are such that the owners of the structures on land do not own the land where structures are located and due to insecurity of tenure, the “landlords” are not interested in any long term investments such as providing WATSAN services. This was not helped by the low enforcement capacity of KCC officials.
- The policy of NWSC with regard to affordability for the poor is such that the poor are expected to pay the lowest tariff band of about 13/= for a 20-litre jerry can. The practice however was that the poor have been paying at rate of up to 8 times the official tariff. The policy of the low tariff regime meant for the poor has in effect benefited middlemen (stand post operators, and yard-tap owners)
- Poor hygiene practices in the poor communities due to lack of access is a common phenomenon. Studies have shown that the population in such areas depends on 8 litres per capita per day. This is inadequate for basic hygiene like bathing, cooking, washing, etc.
- Because of low service coverage from NWSC central system, the population continues to depend on water from the springs as the main source of supply. Laboratory tests have shown that most of the springs are contaminated. The aesthetic appearance of near zero turbidity of spring water creates a false impression that the water is simply too clean.
- Some entrepreneurs have tried to bridge the gap by providing their own connections with service pipes traversing over 100 meters of length with attendant problems related to inferior materials and poor workmanship. This has led to proliferation of “spaghetti lines”, system losses and potential contamination of the water.

2.2 Interventions to improve Water Supply and Sanitation Services (WATSAN) in Urban Poor Settlements in Kampala

2.2.1 Between 2000 and 2003, NWSC commissioned two major studies aimed at evolving sustainable management options to mitigate the challenges and improve WATSAN services in the informal settlements. It was clear from the onset that the solution for effective service delivery was not simply increasing the distribution network coverage but required an integrated approach that takes due consideration of the socio economic environment within which services are rendered. As an initial step, baseline conditions were established and verified. These are summarized as follows:-

2.2.2 Socio-economic Aspects

- Poverty is a common denominator in all the informal settlements surveyed. The population in the settlements mainly comprises the urban poor who strive to eke out a living in the urban wider economy. This population represents enclaves with the highest population densities in the city.
- Residents are mainly engaged in petty trading and casual manual work. The survey found that almost 40% of males and 49% of females were engaged in small-scale informal activities and businesses that earn them less than one United States dollar per day, each, on average.
- Incomes range from US\$ 10,000 to 285, 000 per month that is earned on a day-to-day basis. According to official statistics, about 35% of residents survive on less than one United States dollar per day.
- This situation has serious implications on ability and willingness to pay for urban utility services in informal settlements and hence the significance of unimproved alternative water source options.

2.2.3 Willingness-to-Pay and Affordability

- Household Surveys indicated that the majority of residents (96% of consumers in informal settlements) are willing to pay the current NWSC domestic water tariff of USh 13/- per 20 litres of water. However, this tariff only applies when consumers directly access the services from NWSC.
- Most respondents could not afford the initial cost of installation of a private water connection of an estimated Euros 250. Moreover, the income characteristics, tenure considerations and NWSC billing procedures preclude such possibilities in informal settlements. Many however confirmed that they are able to meet their regular bills if access is subsidized. The solution seemed to lie in subsidizing access rather than consumption. As part of project design, materials and installation of “social connections” will be absorbed as part of the project cost.
- The dominant service level was the public kiosk from which small quantities are purchased several times a day per family. But the water price at kiosks is 5-8 times the NWSC domestic tariff. Hence due to inability by most households to afford the quantities needed for normal daily functioning from public kiosks, supplementary sources especially springs receive significant usage. In fact some residents resort to these sources for all their domestic water needs.
- Many residents detested the NWSC method of sending one bill per month. These people earn daily and prefer to spend in the same pattern. The study observed that the current billing is suitable for salary earners in formal employment and unsuitable for the slum population. The study recommended a more flexible payment regimes of paying a number of times in a month.

2.2.4 Water Services

- In 2004, it was estimated that about 500,000 residents lived in informal settlements of which only about 75,000 or 17% have access to piped water services. The NWSC water mains are not available in most parts of Kampala’s informal settlements (about 60% of inhabited area). This limits the extent to which new kiosks or private connections can be installed, hence the need for infrastructure infilling component.
- Consequently many households (over 33%) have been using springs as their source of water supply. Surveys however confirmed that up to 99% of the springs in Kampala are polluted/contaminated due to their proximity to pit latrines. Low awareness of the public health risk associated with consuming bacteriologically unsafe water is such that some respondents even argued that water from springs was aesthetically superior to tap water to which chemicals are added is a point of concern.
- The average water consumption was found to be 8 litres per capita per day, which falls far below the recommended 50 litres of water per person per day as WHO guidelines.
- The average daily income of a kiosk operator was calculated as Ush 1600/- (note that KUSP data for 2005 showed incomes of between Ush 2000- 7000 per day) which is not adequate to support the needs of an average low-income family. This is one of the factors that is thought to result in some operators’ failure to remit collections to NWSC compelling discontinuation of services by the corporation, a solution of which is essential for the sustenance of WATSAN services.
- At a policy level, materials for new connections have been subsidized and new connection fees dropped from Ush 137,000 to Ush 50,000. The policy is intended to accelerate the growth consumer connections in the urban poor settlements to enable them obtain their private yard taps in order to have water supply conveniently and at the official tariff. This was done after recognizing the initial amount required to access the service (Euros \$ 250) had effectively locked a significant number of residents off supply. As mentioned earlier, this new policy is now effective – although it is yet to be evaluated.

2.2.5 Sanitation Services

- The disposal of human excreta constitutes one of the critical aspects of environmental health in the city. NWSC coverage of sewerage services reaches only 6.4% of the city's population.
- Sanitation is a big challenge in these areas. Most residents are tenants, and so they do not own the properties. On the other hand, landlords (mostly not resident in these areas – or so-called “absentee landlords”) tend to focus on residential units (usually single rooms) and leave minimal or no space for sanitation facilities. Those who construct sanitation facilities put up very poor units that are shared by many households.
- A significant proportion (12%) of households does not have access to a private pit latrine. About 78% of residents own some form of pit latrine. Commercial pay-per-visit facilities accounts for 26% of sanitation demand in informal settlements.
- However in many cases, the pit latrines are of the traditional type that is non-emptiable. This implies that new pits must be developed whenever the old ones fill up. But due to space limitations this is not feasible. Hence in way of coping, the pits are unplugged during rainy seasons and the sludge allowed to flow into storm water drains.
- Pit emptying services are available on the open market and cost upwards of US\$ 60,000/-¹³ per trip. But even where this could be afforded, road accessibility is so poor that providers avoid most neighbourhoods.
- Options for improving excreta management include; ensuring adequate facilities in building construction, piloting new technologies, including ecosan approaches, that reduce dependency on expensive de-sludging of pits and enforcing sanitation rules and regulations.

2.2.6 Institutional Framework

- There are two key institutions engaged in water supply and sanitation services in informal settlements. These include NWSC, which is responsible for piped water services, and KCC protects springs in peri-urban areas. Similarly there are a number of NGOs and donors that are actively involved in provision of WATSAN services in Kampala.
- However, there is (to-date) neither structural linkage nor coordination among these institutions resulting in fragmented actions with regard to investments, decision-making and inadequate support for operation and maintenance of WATSAN services. In 2003, a short term attempt was made to harmonise strategies and actions of both institutions but for a specific period and project. A memorandum of understanding to the effect was entered into between NWSC and KCC for purposes of implementing and meeting the objectives of specific a French funded project, KUSP (Kampala Urban Sanitation Project). There is need to put in place a long-term strategy of harmonise actions of both institutions on a more permanent basis. This has started under the Ndeeba/Kisenyi project and should be strengthened further under this project.
- NWSC is in the process of introducing an Urban Pro-Poor Unit (UUPU) to formulate and steer pro-poor policies. This Unit is charged with over-seeing NWSC operations in informal settlements and coordinating all efforts by stakeholders in service provision in these areas. The mandate of the UPPU covers the aspects below:
 - i) Strengthen institutional linkage between NWSC and KCC to encourage better coordination of activities in informal settlements. KCC should appoint counterpart officers preferably at division level to closely liaise with the UPPU in implementation of pro-poor projects.
 - ii) Reform operational routines in NWSC from supply-driven to a pro-poor, demand-oriented, customer friendly approach.
 - iii) Create awareness and change staff attitudes and encourage recognition of the urban poor as a strategic market not an inconvenience.

¹³ KCC says it charges UgShs 40,000 per trip using any of its 5 KUSP cesspool emptiers

- iv) Reverse the current approach whereby the market seeks out the provider and implement pro-active arrangement for improving services to the urban poor. Organize and initiate community contact for participatory activities in the project and establish demand and location for social connections and promote social marketing of WATSAN services.
- The regulatory mandate empowers NWSC to provide water on a quasi-commercial basis with no clear pro-poor options foreseen, to the extent that the institutional presence of NWSC is not felt in the informal settlements. The life style of most residents' in those settlements evolves around obtaining everything they need for their livelihood within the specific locations. A significant population earn a living within the locations and see no need of going anywhere else. In the past NWSC probably being a monopoly operated in a mode where the "market seeks out for the provider" than the "provider seeking out for the market". The communities want all services within easy reach. The consultant shall be expected to train staff that shall be involved in WATSAN activities, in social marketing concepts and supervise the process of enhancing the integration of the concept as a culture in the UPPU.
- The previous commercial arrangements were such that NWSC demands full payments before making a new connection. This was found to be in the range of Euros 250, which is unaffordable to most households¹⁴. Furthermore, the billing arrangements whereby services are provided on basis of monthly bills are inappropriate in informal settlements where incomes are earned and used on a day-by-day basis.
- A critical issue constraining toilet construction is the terrain. Most informal settlements are located in low land marshy areas where the water table was high. This means easy filling of toilets, which implies heavy costs on landlords. It is this factor that partly influences the latter to ignore the construction of toilets.

3.0 PROGRAMME GOALS AND OBJECTIVES

3.1 The goal of the programme is to support NWSC and enable it to achieve the water and sanitation related Millennium Development Goals (MDGs) and, generally to contribute to equitable and sustainable social, economic and environmental development for the benefit of the people residing in the informal settlements of Kampala City.

3.2 The key objectives include:

- Support NWSC to create capacity for pro-poor planning and management of utility services
- Implement water and sanitation investments in the informal settlements of Kampala to ensure that access are significantly enhanced.
- Build institutional and human resource capabilities at community level for the sustainability of improved water and sanitation services

4.0 SCOPE OF SERVICES

Two levels of interventions are foreseen: at the policy, institutional and stakeholder mobilization level (Software aspects) and at the physical installation level (Hardware aspects).

4.1 Software Issues

4.1.1 Sector Policy Issues

A national strategy was developed at sector level from which policies on affordable basic water for the urban poor will be derived. The strategic framework will be instrumental in assisting the NWSC and other sector organisations to identify the policy and regulatory constraints to their

¹⁴ NWSC currently subsidizes this connection fee to Ush 59,000 for a ½ inch connection

ability to deliver services to low-income and informal urban communities. The Consultant will complement ongoing work by NWSC (under the Kisenyi/Ndeeba pilot project) to identify required policy and regulatory modifications.

4.1.2 Pre-pay Technology

The feasibility studies recommended promotion of pre-pay technology¹⁵ especially at public stand posts and other selected connections. The Consultant shall assess the operation/maintenance and functioning of the prepay meters planned to be in operation during 2007 in the Ndeeba/Kisenyi Project area and advise on any measures required for improvement/replacement etc. The specifications of the system shall be incorporated in the tender documents. The consultant shall further advise on appropriate reforms in commercial policy as necessary considering the fact that it is a new concept that is being introduced.

4.1.3 Pro-poor Governance

NWSC is currently introducing institutional mechanisms for community management operations. A special Urban Pro-Poor Unit (UPPU) is being set up to formulate and initiate a pro-poor strategy and to oversee the implementation of the necessary policy reforms. The Consultant will assist NWSC to:

- establish institutional capacity and support mechanisms, which specifically focus on services for the urban poor. In this respect the Consultant will assist NWSC to strengthen the UPPU.
- train squads from Kampala Water and the private sector to specifically handle service delivery in informal settlements. These squads would initially mobilize and raise awareness of communities and assist with the implementation effort. Later they would work with water kiosk operators to collect revenues and deal with any administrative, technical or customer-related matters arising, as well as for sanitation facilities operation and maintenance.

4.1.4 The Urban Pro-Poor Unit (UPPU)

- NWSC shall nominate and second staff that are part of the core unit of the UPPU to the consultant. The Consultant shall provide a satellite office within the project area that shall operate as a one-stop centre for the WATSAN services. The cost of providing/renting the offices and servicing them shall be treated as a reimbursable expense under the contract. The offices shall be located within Kagugube Parish.
- Furthermore, the Consultant shall assist NWSC to create strategic alliances and learn how to work with other service providers like NGOs and small scale service providers in order to reduce operational overheads of enhanced service delivery in informal settlements.
- On completion of the post-construction activities, the Consultant will recommend to NWSC management appropriate changes in the operational structure of the UPPU in order to improve its performance.

4.1.5 Implementation of IEC Strategy

- Implementation of the IEC strategy, developed during earlier studies and revised for the Kisenyi/Ndeeba Pilot project, will be done as a post-construction activity and for a period of not more than six months. The Consultant will train the UPPU staff and NWSC's collaborators on the implementation of the IEC strategy. City-wide implementation of the IEC Strategy will be driven within the framework of the UPPU in NWSC and with collaboration from existing institutional mechanism.
- The Consultant will also ensure that initial steps are taken such that NWSC IEC strategy for hygiene and health education is institutionalized within the framework of the UPPU.

¹⁵ Prepay technology once properly designed and maintained would save consumers from paying high rates hitherto been charged by the kiosk attendant. The prepay method of settling bills offers convenient and flexible payment arrangements that is suitable for dwellers in informal settlements who do not want monthly bills. This system has been used by other utility operators, e.g., in South Africa, and has been found socially acceptable.

4.1.6 Financial Cash Flow Projections

The Consultant will generate revenue streams by applying the tariff against the projected daily consumption in order to assess the extent to which the scheme will be able to cover its operational costs from tariff revenues. This will provide an indication of the scope and scale of subsidies, if at all and how such subsidies could best be applied before the scheme attains full cost recovery status.

4.1.7 Sanitation Design

General Issues

Although sanitation is put under software, it is recognised that this is one area where total integration of hardware and software expertise will be key.

- To ensure proper operation and maintenance as well as the management of sludge, the Consultant will promote private sector involvement and facilitation especially in the management of the facilities, and ensure that both KCC and NWSC create the enabling environment for proper operations.
- The Consultant will also propose and oversee testing of modalities for sustainably meeting the costs of operations for both communal and household facilities. This will call for involvement of the landlords and residents of the Parish.
- The Sanitation Master plan recommended guidelines aimed at improving sanitation facilitation in the city including charging of a Sanitation Levy on water bills to support urban poor residents gain access to safe domestic sanitary facilities. In order to utilize these guidelines, an implementation framework needs to be elaborated. The Consultant will propose incentives for encouraging compliance with the sanitation levy and suggest mechanisms for piloting the policy framework in the project area.

Specific Considerations

- The Consultant shall review available documents and experiences in other relevant countries and towns, including experiences in Kampala's projects undertaken by NWSC, KCC and NGOs. They will collect (or generate, where necessary) data for Kagugube Parish. Information to be gathered will include (but not be limited to):
 - i) prevailing sanitation technologies and practice (number of users, gender issues, payment, ownership, coverage and hindrances, attitudes of the residents, management including costs and cleaning) in the area with a specific focus on the urban poor households/communities
 - ii) sludge management practices for the different technologies (how, where, costs, knowledge levels, frequency of emptying and by who, etc – from the community point of view);
 - iii) sludge management from the service provider's point of view: access, costs, frequency, disposal points and treatment, constraints, support – policies, subsidies, etc
 - iv) soil permeability, ground water levels, rock level, potential contribution of the study area to the pollution in Nakivubo channel and need for protection of ground- and surface water resources
- Based on the data collected, the Consultant shall:
 - i) Identify preferred types of sanitation facilities (especially promoting "Ecosan"-types, gender disaggregated - on-plot, connected to the house, indoor)
 - ii) Make preliminary cost estimates of each type of identified sanitation technology facility for the area of intervention. Compare costs to conventional treatment systems for Kampala and recommend the most suitable option or combination of options for Kagugube taking into consideration factors such as exiting infrastructure, availability of space and total installation costs, lifetime costs, (costs

- of the initial investments and the anticipated O&M costs) ease of operation, treatment efficiencies and cost recovery
- iii) Using sanitation marketing and IEC tools, market appropriate approaches for both sanitation and hygiene improvement: show and explain to the communities (gender disaggregated) the various possible options including “Ecosan”-types, as well as the pros and cons – capex and O&M costs, maintenance, sustainability, hygiene, land requirement, etc)
 - iv) Estimate the amount of the different materials (sludge, urine, wet, semi-dried or dried faeces) produced and to be transported
 - v) Make preliminary cost estimates for off-site management (including transportation) and disposal (NWSC, private sector, private sewage company, farmers ...) for the different types of sanitation facilities
 - vi) Make recommendations for the subsidy modalities and levels for household sanitation, if this is appropriate
 - vii) Identify roughly those areas of the city where, if the same sanitation system is put in place, collection and disposal gets more economically viable
 - viii) Carry out a financial analysis of the proposed option and advise on the economy of scale, and provide advice to the private sector, NWSC and KCC
 - ix) Design the appropriate technologies to be used in Kagugube for both the household and the communal ablution centres. The ablution centres should be complete with washing and bathing facilities and toilets that are gender separated. The detailed design, number, and locations of the facilities will be discussed with the local authorities and users’ representatives during preparation of the detailed design report.
 - x) Design and recommend a framework for the involvement of the private sector in the management of the sanitation facilities in the area (and perhaps in similar areas)
 - xi) Prepare guidelines for the operation of the sanitation facilities

4.2 Infrastructure Facilities Design and Implementation (Hardware)

Two discrete programmes will need to be implemented for water supply.

- a general programme for distribution mains intensification in the Parish of Kagugube in Central Division.
- a targeted programme of social connections at consumer level.

Similarly, for sanitation, designs will be made for communal and for household facilities.

4.2.1 Water Supply Design, Water Demand Validations

On the basis of the population (to be verified by the consultant, for the selected boundaries on the project area – to be agreed with NWSC, Kampala Water), the Consultant will make future water demand forecasts, incorporating the service levels that would have been deduced from the socio-economic surveys. The land use patterns will assist the Consultant to calculate the spatial water demand scenario within the project area and subsequently, the configuration of the future water distribution network.

4.2.2 Transmission Main

Applying the survey data to be collected as part of this project phase together with the daily water demand figures in NWSC (Feasibility Report for Urban Poor Project 2003) the Consultant will perform a dedicated network analysis and determine the diameters of the pipe network including the transmission line needed to supply water to the project area over a 20-year design horizon. The pipeline shall be sized to meet peak flow demand, or with consideration given to localized storage, whichever is cheaper. It is essential to capture possible changes in land use in the project area so as system dimensioning takes cognizance of this possibility to avoid the need of having to reinforce the mains at the early stages after commissioning.

The recommended project shall be based on a least cost and optimised design.

4.2.3 Distribution Network

The distribution network will be configured on the basis of present and future land use patterns together with the water demand and topography of the project area. The pipelines will be sized to handle peak flow as shall be determined in the demand calculations and in accordance with the design criteria. Due to cost implications, the water distribution pipeline material will most likely be unplasticized polyvinyl chloride pipes (μ PvC) and HDPE for consumer connections.

Construction of the distribution network shall be within heavily built-up areas in the City. Invariably, compensation requirements could be significant. The consultant therefore will be expected to assemble a team to evaluate compensation requirements and recommend to the employer on amounts to be paid out to the individual property owners. In so doing the consultant will be expected to liaise closely with the office of the Chief Government Valuer to harmonize/ratify the recommended amounts payable.

Efforts should however be made to avoid the need for compensation, as much as possible.

4.2.4 Pre-pay Metered Public Kiosks and Consumer Connections (Yard Taps)

The Consultant will design public water points as simple lockable assemblies, to be constructed as part of the overall scheme. Their locations will be determined through a participatory process that will involve the local councils, interested pre-pay system vendors and the consumers themselves. With respect to individual private connections, residents will be mobilized in the design phase and registered during the construction at which time they would pay the nominal connection fee and also meet minimal eligibility requirements as shall be determined during stakeholder consultations. Each consumer who qualifies will be connected to the system during construction. The community will have to be vigilant to ensure that the pre-pay kiosks are not vandalized.

4.2.5 Construction of Communal Ablution Centres and Support for Household Sanitation Facilities

It is planned that two (2) communal ablution centres will be constructed at locations to be decided during the design phase of the project as discussed under 4.1.7.

In addition, the project will support the construction of household units for those who express demand and meet the subsidy requirements as will be identified under 4.1.7. It is proposed that innovative sanitation technologies with emphasis on “ecological options” of the urine diversion type are considered and supported for construction in Kagugube Parish. The support will include, but not be limited to construction of demonstration household units, training of masons, users and the private sector, supervision, monitoring and evaluation mechanisms, and guidance for the implementation of the sludge management framework, possibly with the support of the private sector.

4.2.6 Implementation of Physical Infrastructure Component

The consultant shall provide a full range of services in two stages.

Stage 1: Design and Tender Documentation

Stage 1 (a): Collection and review of the preliminary designs for the project area that were prepared by the consultants, GkW in association with Aqua Consult and from the Kampala Sanitation Master Plan (KSMP, 2004). The consultant will be expected to revalidate that data used and ensure adequacy. Upon review, the consultant shall prepare a detailed design report. The detailed design report will have to be approved by the client before the consultant can proceed with preparation of the tender documents. The consultant shall assess the need of a

separate Environmental Impact Assessment (EIA) report considering that there are similar programs being implemented within especially component 2 of the Kampala Water and Sanitation Program; Urban Poor Project. Concurrent with preparation of the detailed design report, the consultant shall prepare pre-qualification dossiers for contractor, evaluate expressions of interest and recommend not less than 5-6 construction firms for short listing for the works contract.

Stage 1 (b): Upon approval of the final designs and tender documents the consultant shall proceed to issue the tenders to short listed firms. The tender procedure shall be based on the procedures approved by NWSC in agreement with AWF; evaluate the tenders and make clear recommendations for the selection of the contractor. The evaluation report will be prepared in accordance with the format as shall be agreed with NWSC and upon acceptance shall prepare the draft construction contract.; and after award of the construction contract by NWSC in agreement with AWF, the contractor shall prepare a construction contract.

Stage 2: Construction Supervision

Stage 2 (a): The consultant shall arrange for the commencement of the contracts and subsequently supervise the construction contract as “Engineer”.

Stage 2 (b): Assistance to the final handover of the completed works and monitoring of the administration, operation and maintenance procedures including defining plans and activities for regular environmental audit and monitoring during the first three months of operation of the works as well superintendence during a 12 – month defects liability period after substantial completion.

Stage 2 activities shall consist *inter alia*

- i) Preparation of commencement instructions
- ii) Supervision of Construction as the “Engineer”, providing technical guidance of implementation of construction, keeping site records on progress, manpower, weather, equipment available on site and preparation of progress reports viz Monthly reports, quarterly reports, draft and final completion reports.
- iii) Checking and approving as-built drawings, operations and maintenance manuals, quality of materials for permanent works for compliance with technical specifications, supervise testing, inspection and commissioning of completed works..
- iv) Providing superintendence during a 12 -months’ defects liability period after substantial completion.

5.0 ORGANIZATION OF THE STUDY

5.1 NWSC, for purposes of this assignment, will nominate a member of her staff as Project Manager for the Consultancy assignment. It will be the Consultant's duty to maintain close contact with the Project Manager on all aspects of work. As a matter of principle all formal communications relating to the work will be directed to the attention of the Project Manager.

5.2 In order to enhance the local technical skill and experience co-operation it is recommended to integrate local consultancy / local expertise into the project execution.

5.3 It is expected that the Consultant carries out the work as far as possible in Uganda in order to integrate the personnel of the NWSC as much as possible into the day-to day-work and to transfer a maximum of know-how. The Consultant shall include detailed proposals on this aspect in the technical offer.

5.4 The Consultant is invited to elaborate, in his technical offer, on the envisaged logistical set-up and deployment of appropriate skills for the execution of the study.

5.5 To familiarize with the services to be provided under this invitation, a visit to the project sites before presentation of the Proposal is strongly recommended. However, it should

be understood, that any cost incurred in this regard will not be reimbursed to the Consultant.

- 5.6 All the services of the Consultant described in the following shall be performed in close co-operation with the PEA in Kampala and, as far as relevant, with their local representatives. It has been attempted to outline the Consultant's tasks during execution of his services as detailed as possible. However, the Consultant shall bear in mind that the list of tasks and activities can by no means be considered as the complete and comprehensive description of the Consultant's duties. It is rather the Consultant's responsibility to critically verify the scope of services indicated and to extend, reduce or amend it wherever he deems necessary according to his own professional judgment and the knowledge he will acquire during preparation of this proposal. It is understood therefore that the Consultant performs all work as necessary to fulfill the objectives of the Project.

6 DURATION OF THE CONSULTANCY

- 6.1 The duration of the consultancy services is expected to take an overall period of 24 months. The period can be roughly distributed as follows:-

- Inception and preliminary design – first three months
- Detailed design report and tender documents – months four to seven .
- Prequalification of contractors and tendering phase for construction - five months
- Construction supervision - six months
- Post construction activities - six months.
- Soft ware activities can be spread over the period as appropriate.
- Defects Liability Period (DLP) will be for a period of twelve months including the post construction activities.

- 6.2 It is the responsibility of the Consultant however to establish a detailed work program within the above time estimates. The estimated person-month input should be provided in accordance with his professional judgment and knowledge of the local conditions and needs.

7.0 SOURCE OF FUNDING

This consultancy assignment will be financed by the African Water Facility of the African Development Bank. The cost for consultancy services shall be priced in Euros.

8.0 PROJECT IMPLEMENTATION SCHEDULE

- 8.1 In order for the pre-qualification process of prospective contractors not to impact on the overall completion period for this assignment, it should be proactive to prepare pre-qualification dossiers for contractors at an early stage of the assignment since the scope of services to be offered are known. It is recommended that the pre-qualification process be done concurrently with preparation of tender documents for the works. The consultant is however encouraged to assess the appropriateness of the suggested milestones and comment upon realistic expectations especially with regard to the allocated time frames for the activities and propose his own assessment and work plan as part of his proposal.

9.0 REPORTING REQUIREMENTS

- 9.1 The Consultants will be required to produce and submit the following principal reports and documents, in addition to the routine construction supervision reporting requirements, in the quantities and timing indicated.

	Timing in Months from Starting Date	No. of Copies to	
		AfDB	NWSC
Inception Report	1.5	2	4
Pre-qualification dossier	1.5	2	5
Evaluation report of Exp of Int.	2	2	4
Preliminary Design Report	5	2	5
Pro-poor management proposals	5	2	5
Final Design Report	9	2	8
EIA Report (If necessary)	5	2	8
Draft Tender Documents	7	2	5
Tender Documents (6 sets)	9	2	8

Construction Tender

Evaluation Report	13	2	8
Contract Documents	14	2	6
Construction Progress Reports *	15	2	2
Draft Project Completion Report **	23	2	4
Final Project Completion Report***	24	2	6

* At monthly intervals after award of contract and issuance of instructions to the Contractor to commence works.

** Two months after substantial completion of the Project.

*** Not later than 1 month after receiving Client's comments on the Draft.

9.1 The Inception Report shall summarize the Consultant's initial findings, the first assessment of available data, past reports and the site conditions in the service area; in addition, it shall contain:

- An outline of the methodology that the Consultant proposes to use in accomplishing the required Scope of Works outlined in the Terms of Reference.
- A detailed program for physical data collection and field surveys; and
- An outline of work expected to be accomplished during the subsequent reporting period.

9.2 The Pre-qualification Dossier shall set out a criteria for qualification based on firms Technical Capacity, financial resources, manpower, equipment as necessary for accomplishing the task.

9.3 The Preliminary Design Report shall provide a summary of the Consultants ultimate design complete with design criteria, engineering calculations, and technical and economic justification. It shall inter alia contain:

- Description of the technical proposals, including outline of the Design Criteria
- The technical, economic and financial justification for choice of options to be implemented
- Design calculations and
- Time frame and cost estimates for the proposed construction works.
- Proposed management options for the physical facilities, including sanitation

9.4 The Final Design Report shall incorporate amendments agreed by AWF and NWSC, and shall be submitted within one month of receipt of these comments. The Consultant will also submit an EIA update in form of a summary of all mitigation and control measures against undesirable environmental and social impacts, which may arise from this project.

9.5 Tender and Contract Documents shall be prepared in accordance with the latest version of acceptable international conditions of contracting appropriate for the value of the contract. Tenders shall be issued to the short listed firms. The Consultants will therefore assist NWSC in preparation of tender notices, invitations and construction contract documents. The

Tender Documents will incorporate AWF and NWSC comments and observations following review of the Draft Tender Documents by the two organizations.

9.6 Tender Evaluation Report: the Consultants will evaluate the tenders received and summarize the findings in a tender evaluation report prepared in accordance with a format approved by NWSC. This report will contain *inter alia*, details of arithmetic checks and corrected tender sums, comprehensive assessment of compliance with all criteria, an assessment of each Tenderer's capabilities and a recommendation on the award of the contract. The consultants will seek any clarifications he requires from Tenderer's provided such communications are copied to the NWSC.

9.7 "As-Built Drawings" At the end of the Contract, the Consultant shall check and approve "as built" drawings prepared by the Contractor showing completed work, including changes in layout of pipe work and the location of new valves and other fittings.

9.8 Computer Programs The Consultant shall provide an inventory and brief descriptions of all computer programs developed and used under this assignment and pass them over to NWSC. Soft versions of all reports and analyses including the network model shall be submitted to NWSC.

9.9 The Draft Project Completion Report will be submitted one month after substantial completion of the Project, and the Final Project Completion Report will be submitted not later than 30 days after the Consultants have received written comments from NWSC and AWF. The report shall summarize the issues encountered during the implementation of the Project, the costs, resources deployed, assessment of Contractor's performance, claims and any pertinent technical issues that may have a bearing on the performance of the completed scheme. In addition to reporting on the construction contract, the consultant will provide a separate chapter on soft ware issues as elaborated in the TOR.

10.0 DATA, SERVICES AND FACILITIES TO BE PROVIDED BY NWSC

10.1 To the extent possible, NWSC will provide free of charge all existing information, data, reports and maps as far as available and will assist the Consultant in obtaining other relevant information and materials from governmental institutions and state authorities as far as possible. The Client will in particular provide all the reports previously prepared with respect to the Kampala Urban Poor Programme. Particularly, the Gaba III Conceptual Framework Study report, the Feasibility Report for the Kampala Urban Poor Programme' Kampala Water Business Plan and The Study for Identification of Management Options for improvement of Water and Sanitation Services to the urban poor in the Informal Settlements of Kampala and the Sanitation Master plan for Kampala.

10.2 However, it is the duty of the Consultant to check availability, quality and suitability of this information. The information, data, reports etc. as mentioned above will be available for the Consultant's unlimited use during execution of the proposed services. Due provision shall be made by the consultant in his proposal in case he has to procure additional maps, aerial photographs, meteorological, geological data, etc. necessary to carry out the services.

10.3 In general the NWSC will facilitate the consultant to obtain staff permits, authorizations and licenses required for performance of the Consultant's services in Uganda. He will also assist the Consultant in customs clearance of all equipment, materials and personal effects to be imported (and re-exported upon completion of his assignment) for the purpose of the study.

10.4 Counterpart staff shall be agreed with the Consultants.

11.0 SERVICES AND FACILITIES TO BE PROVIDED BY THE CONSULTANT

11.1 The Consultant will be responsible for the provision of the following facilities, to be reimbursed through the contract.

- a) Suitable space office necessary for the Consultants team engaged on the assignment.
- b) Office furniture and equipment including one desktop computer complete with printer and auxiliary power units, modern plan reproduction machinery, all to be purchased by the Consultants through the Contract as a reimbursable expenditure.
- c) Office supplies, as required for the period of the Services.
- d) Long-term accommodation for the Consultants staff while in Kampala and hotel accommodation in Kampala for short-term experts.
- e) Subsistence (or per diem) payments for official travel for the Consultants staff while in Uganda outside the duty station of Kampala.
- f) Secretarial and Administrative Support Staff
- g) International and local telephone services for official communication only
- h) Laboratory services for soils and materials investigations
- i) Transportation within Uganda as shall be required for stage 1 (a) and (b) activities. The cost of providing transport for stage 1 activities should be included as a reimbursable expense. Transport for the supervision component however will be provided for as part of the facilities to be provided by the contractor to the Engineer through the construction contract. These facilities and services (for contract supervision) should therefore not be included in the Consultants costs for the supervision stage

12.0 RESOURCE DEMAND

The Consultant should therefore identify the team necessary to carry out the assignment and should describe clearly the functions of each team member. Because of the importance of implementing an innovative and sustainable sanitation component for this project, the Consultant is required to show competence and expertise in the soft and hardware aspects of sanitation with a focus on on-site sanitation including EcoSan principles (design, operation, management, IEC, etc).

A staff organogram for the project should be included as part of the submissions. It is anticipated that the Consultant's staff will include:

- Water Supply Engineer who is an experienced Civil/design Engineer with minimum ten years in project management (12 mm) and will double up as construction supervision expert.
- Sociologist / Community Development Expert with human resources management capabilities and working knowledge of pro-poor governance issues (12 mm) . S/he will support the UPPU to implement the IEC strategy
- A public health specialist with a good understanding of different technological options for sanitation for the urban poor, including ecological options (12 mm)
- A Utilities Management Specialist (12 mm)

The consultant is free however, to propose additional expertise that he deems necessary to accomplish the assignment.

Detailed Budget

A detailed budget will be prepared during the study/design phase of the project. Presented here are the indicative costs.

Table 2.1 Indicative Costs for the Proposed Project

Description	Material	Quantity	Unit Rate Euro	Estimated Amount Euro
<i>Water Supply</i>				
ND 80	HDPE	3500	14.3	50,050
ND 100	HDPE	3500	19.8	69,300
ND 150	PVC	1000	30	30,000
ND 250	PVC	1000	78	78,000
Pre-pay metered kiosks	Units	25	800	20,000
Yard taps	Units	100	250	25,000
Sub Total A - Water Supply				272,350
<i>Sanitation (Targeting about 1 unit per household and assuming a coverage gap for 86% of the 2320 HH or 500 units - details to be determined during study phase)</i>				
HH onsite units subsidy -EcoSan type	Units	250	560	140,000
HH onsite units subsidy -Other	Units	250	450	112,500
Communal systems (onsite)	Units	2	25000	50,000
One-off PSP funding/subsidy		1	45000	45,000
Sub Total B - Sanitation				347,500
<i>Design and Supervision Consultancy</i>				
	about 20% of A+B			120,000
<i>Contingency</i>				
	about 10%			60,150
<i>Contribution by NWSC</i>				
	about 7%			65,575
Grand Total				865,575
Total AWF GRANT				800,000

Pictures of Kivulu 1 and 2, Kagugube Parish

A public pay toilet-
UGX 100/= per visit



A flush toilet system
For the market



Disused?



Do these count?



Faeces, garbage and
filth, everywhere!!!



Pictures of Kitamanyangamba and Kagugube, Kagugube Parish



A woman collects water from this protected spring while a young girl eases herself a few meters upstream, next to a garbage heap



Latrines nearly always locked, except for a very few dirty ones – where do children ease themselves from?



In which class shall we be when the hostels take over our houses?

