African Water Facility
Facilité africaine de l'eau
Mobilising Resources for Water in Africa
Mobiliser des ressources pour l'eau en Afrique

REPUBLIC OF UGANDA

Feasibility Studies and Detailed Designs for Faecal Sludge Service Chain Management in Un-Sewered Urban Centers in Uganda

Appraisal Report

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ABBREVIATIONS

AfDB	-	African Development Bank
ADF	-	African Development Fund
BPM	-	Bank Procurement Method
BPS	-	Borrower Procurement System
CSP	-	Country Strategy Paper
CSI	-	Core Sector Indicator
DPs	-	Development Partners
EA	-	Executing Agency
ESMF	-	Environmental and Social Management Framework
ESMP	-	Environmental and Social Management Plan
FM	-	Financial Management
FSM	-	Faecal Sludge Management
GoU	-	Government of Uganda
ICB	-	International Competitive Bidding
JPF	-	Joint Partnership Fund
M&E	-	Monitoring & Evaluation
MoH	-	Ministry of Health
MWE	-	Ministry of Water and Environment
MoES	-	Ministry of Education and Sports
NCB	-	National Competitive Bidding
NDP	-	National Development Plan
NGO	-	Non-Governmental Organization
NWP	-	National Water Policy
O&M	-	Operation & Maintenance
PCR	-	Project Completion Report
PCT	-	Project Core Team
RBLF	-	Result Based Logical Framework
SDG	-	Sustainable Development Goals
SPS	-	Sector Programme Support
ToR	-	Terms of Reference
USD	-	United States Dollars
WB	-	World Bank
WSDF	-	Water and Sanitation Development Facility
WSP	-	Water and Sanitation Program
WESWG	-	Water and Environment Sector Working Group

CURRENCY

Local Currency	:	Ugandan Shilling (UGX)
1 Euro (EUR, €)	:	4,253.94 UGX (ADB Exchange Rate August 2018) 0.84 UA

LOGICAL FRAMEWORK ANALYSES

COUNTRY AND TITLE OF THE PROJECT: UGANDA – FEASIBILITY STUDIES AND DETAILED DESIGNS FOR INCLUSIVE FAECAL SLUDGE MANAGEMENT IN UN-SEWERED URBAN CENTERS.
PURPOSE OF THE PROJECT: TO CONTRIBUTE TO INCREASING ACCESS TO SUSTAINABLE AND INCLUSIVE FAECAL SLUDGE MANAGEMENT SERVICES FOR URBAN DWELLERS.

CHAIN OF RESULTS		PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS AND MITIGATION MEASURES
		Indicators	Baseline	Target		
IMPACT	**Impact** Contribute to improved quality of life through increased access to sustainable and hygienic sanitation for the urban poor.	1. Number of reported cases of acute diarrhea. 2. Reduced urban child mortality/1,000 births.	1. 1.4 million cases in 2017. 2. 101 in 2001.	1. <700,000 cases by 2035. 2. < 90 by 2030	1. MOH/WHO Reports; Local Clinic / Health Center Data. 2. Uganda Bureau of Statistics (UBOS). 3. JMP Data.	**Risk**: Lack of political support and Government continued interest in FSM. **Mitigation**: Government and all actors to ensure continuous dialogue and transparency.
OUTCOMES	1. Contribute towards increased access to sustainable and inclusive Faecal Sludge Management (FSM) services in un-sewered urban centres.	1.1 Percentage of households with likely access to improved and inclusive faecal sludge collection services. 1.2 Proportion of collected faecal sludge safely likely treated for reuse/disposal.	1.1 26% in 2018. 1.2 TBD.	1.1 65% by 2022. 1.2 90% by 2022.	1. Project Progress, Monitoring & Evaluation Reports. 2. JMP/UBOS Reports. 3. MWE/EPA Reports. 4. Town Council Reports. 5. Water and Environment Sector Performance Report. 6. Signed minutes of Joint Sector Review.	**Risk:** a) Community resistance to behavior change regarding improved FSM and hygienic sanitation practices. b) Inability to mobilize adequate resources for downstream investments. **Mitigation**: a) Community sensitization. Increased social marketing and media involvement in hygiene and sanitation related activities. b) Active participation of the Water and Environment Sector Working Group, and effective organization of donor round table conference.
	2. Contribute towards increased investments in FS management.	2.1 Percentage increase in FSM investments in unsewered urban centres.	2.1 0% in 2012.	2.1 70% by 2022.		

	CHAIN OF RESULTS	PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS AND MITIGATION MEASURES
		Indicators	Baseline (2015)	Target		
OUTPUTS	**Component 1: Feasibility Studies and Engineering Design** 1. Preparatory and feasibility studies, including socio economic, technical and institutional assessments undertaken. 2. Preliminary engineering designs and related financial analyses and ESIA Scoping completed. 3. Final engineering designs, tender documentation, ESIAs and plans completed.	1. No. of preparatory and feasibility study reports prepared and approved. 2. No. of approved FSM preliminary designs / scoping reports. 3. No. of approved FSM final designs/tender documents/ ESIAs/ management plans.	1. Nil. 2. Nil. 3. Nil.	1. 10 by 2022. 2. 10 / 10 by 2022. 3. 10/10/10/10 by 2022.	1. Project Progress Reports. 2. MWE Reports. 3. Water and Environment Sector Performance Report	**Risk**: a) Unavailability of land for selection and design of FSM infrastructure. b) Inadequate assessments and design of FSM Infrastructure and services. **Mitigation:** a) Government to commit to allocate land as in-kind contribution for the purpose. b) Field verification through community sampling and surveys, and rigorous eligibility and selection criteria with demonstrated competence in FSM design for acquisition of consultants.
	Component 2: Project Management 1. Project Core Team instituted 2. Detailed procurement and implementation plans approved and implemented; and project reports prepared and submitted. 3. Management capacity enhanced. 4. Validation workshop/ Investment Fora organized.	1.1 No. of Core Team staff assigned. 1.2 No. of Project Steering Committee (PSC) meetings. 2.1 Approved procurement and implementation plans. 2.2 No. of Project Reports. 3.1 No. of MWE/WSDF staff trained. 3.2 No. of manuals produced. 4.1 No. of validation workshops / Investment Fora organized / amount pledged/committed.	1.1 Nil. 1.2 Nil. 2.2 Draft plans. 2.3 Nil. 3.1 Nil 3.2 Nil. 4.1 Nil	1.1 6 staff by 2022. 1.2 6 by 2022. 2.1 Approved finalized plans. 2.2 1 Audit & 4 Progress Reports per year; 1 Completion & 1 Evaluation Reports 3.1 25 by 2022 3.2 2 by 2022. 4.1 4 / 2 / USD 80 million by 2022.	1. Minutes of PSC meetings. 2. Project Progress Reports. 3. Approved Plans. 4. Submitted Project Related Documents. 5. Signed minutes of Joint Sector Review	

MAIN ACTIVITIES	COMPONENTS DESCRIPTION/KEY ACTIVITIES	CONTRIBUTIONS
	Component 1 : Feasibility Studies and Engineering Design Phase 1: Preparatory and feasibility studies (socio economic, technical, financial and institutional assessments); identification and selection of options, preliminary engineering designs and costing, site identification and selection, etc. Phase 2: Field investigations, detailed engineering designs and costing, cost benefit analyses, preparation of facilities management plans. Phase 3: Specifications, tender documentation and manuals. **Component 2 : Project Management** Establishment of Project Management (PCT, PST, PSC); planning and procurement, technical and financial management, including project reporting and liaison with AWF; capacity building; organization of stakeholder validation workshops & Investment Fora.	**Total cost of the project**: **1,981,203** Euros **Financing Plan:** ▪ AWF Grant: **1,507,128** Euros (76%) ▪ Central Government: Euros **348,075** (18%) ▪ Municipalities: Euros **126,000** (6%)

EXECUTIVE SUMMARY

Background: The rationale for the project is the need to increase access to safe, sustainable and inclusive sanitation and hygiene, with improved management of faecal sludge for people living in deprived urban communities in Uganda. The project forms as integral part of Government efforts to improve access to sustainable sanitation in line with the National Development Plan (NDP II) and Implementation Strategy (2017-2020). It supports preparation of feasibility studies and detailed engineering designs for ten (10) out of the fifty (50) town clusters recommended by the 2014 World Bank funded sector studies intended to facilitate delivery and access to sustainable faecal sludge management infrastructure and services in Ugandan urban centres. The Project demonstrates Government commitment to improve the quality of life and living conditions of Ugandans, and provides opportunity for better regional and town level sanitation planning, and increased sector investments in partnership with private sector financiers and development partners.

Objectives: The overall objective of the project is to contribute to increasing access to safe, sustainable and inclusive sanitation services, with improved hygiene and faecal sludge management services for people living in deprived urban areas in Uganda. The specific objectives are to contribute to: (a) increasing access to safe, sustainable and inclusive on site sanitation; (b) increasing access to efficient and sustainable faecal sludge management infrastructure and services; (c) creating opportunities for increased sub sector investments.

Description: The project will be implemented under two components with AWF support.

Component 1*: *Feasibility studies and engineering design consists of activities to provide opportunity to contribute to increasing sustainable access to faecal sludge management infrastructure and services for people living in un-sewered urban centres in Uganda. It involves studies, including socio economic, technical, institutional and financial assessments, campaigns, baseline studies and technical assessments, site selection and investigations, engineering design of collection and treatment infrastructure and services, and development of (a) innovative strategies to promote and market FS reuse products, and (b) investment and implementation plans to facilitate future investments, among others. Adoption of a PPP model for O & M, along with staff training shall contribute towards sustainable delivery of services.

Component 2: Project management involves project and knowledge management activities.

The project's ***direct beneficiaries*** are the Town Councils, and Sector Ministries (5 MWE, and 20 WSDF and 10 Umbrella Organization regional staff). Following the realization of the downstream investments, the ***direct beneficiaries*** would be the (a) initial 1,017,400, and subsequently the 1,723,000 urban dwellers in small urban centres without adequate access to sustainable and inclusive sanitation, including faecal sludge management infrastructure and services. The study will contribute to the creation of about 300 new jobs likely to be created following the implementation of the downstream investment projects. Other indirect beneficiaries are Private Sector Operators, local NGOs and CBOs

Cost and financing: The AWF will co-finance the project along with the Recipient (Government of the Republic of Uganda through the Ministry of Water and Environment (MWE). AWF will contribute € 1,507,128 representing 76% of the total project cost of € 1,981,203. The Recipient will contribute the remaining €474,075. It is expected that the Project will commence in April 2019 and be implemented over a total duration of 30 months.

Recommendation: It is recommended that a Grant not exceeding €1,507,128 from the African Water Facility Special Fund be awarded to the Republic of Uganda for the implementation of the project as described in this appraisal report

1 CONTEXT

1.1 Project Origin

1.1.1 The project is the outcome of a proposal submitted by the Ministry of Water and Environment (MWE) to the African Water Facility (AWF) in May 2018, together with a funding request for project preparation. The project seeks to contribute towards Government's effort to improve access to sustainable faecal sludge management and to achieve the SDGs for sanitation in urban Uganda by 2030.

1.1.2 The Government of Uganda (GoU) has adopted the Uganda Vision 2040; and has committed to improving the socio-economic status of Ugandans through key interventions like improved delivery of water and sanitation services. While about 20% of Ugandans defecate in the open, almost 80% of the disease burden is sanitation related, which requires attention as access to safe sanitation is considered a human right.

1.1.3 Through recent Government effort to promote delivery of household and public sanitation facilities, coupled with behavioural change campaigns through information, education and communication, access to sanitation has increased to about 86% in urban areas. Over 90 percent of the sanitation facilities is on-site, and lack safe means of faecal sludge chain management (emptying, transportation, and disposal or re-use). The situation is exacerbated by the steady population growth because of the high urbanization rate (approximately 5.3%) which is attributable to the creation of new administrative units, and increasing rural – urban migration.

1.1.4 At the request of Government, the World Bank Water and Sanitation Program (WSP) supported a nationwide sector assessment in 2014, and identified fifty (50) potential clusters of small towns to be provided with shared FS treatment/disposal infrastructure to help improve FS service chain management across Uganda. The assessment also addressed issues related to upscaling and sustainability of related infrastructure and services. Of the number, eighteen (18) clusters in different regions have been provided with operational facilities. Additional facilities are planned for five (5) other clusters by the MWE. The remaining twenty seven (27) clusters require support to design and implement the needed FS infrastructure to consolidate Government effort to improve access to sustainable sanitation by 2030, in line with Government development aspirations and the SDGs.

1.1.5 The proposed Project seeks to support Government efforts to provide inclusive and sustainable access to faecal sludge management infrastructure and services, through preparation of feasibility studies and detailed engineering designs for future investments under the proposed Water Supply and Sanitation Program (Phase III). It is anticipated that the investments will contribute to improve public and environmental health, and the socio economic well-being of people living in small towns in Uganda.

1.2 Sector Priorities

1.2.1 The Government of Uganda's (GOU) Vision 2040 that seeks to "Transform Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years" builds on progress made in addressing the strategic bottlenecks that have constrained Uganda's socio-economic development since her independence. The bottlenecks include weak private sector, underdeveloped human resources, inadequate infrastructure, underdeveloped services sector, under-development of agriculture, and poor democracy among several others. Implementation of the Vision is inclusive, and involves actions by Government, private sector, civil society and individuals through short and medium-term National Development Plans (NDPs).

1.2.2 The second National Development Plan (NDP II, 2016/17 – 2019/20) fully recognizes the significance of improved water supply and sanitation in improving the quality of life of Ugandans, and therefore the Implementation Strategy for NDP II defines annualized outcomes and output targets based on strategic interventions to increase access to water supply and sanitation over the period. The strategic interventions for urban sanitation include: (a) enhance collaboration amongst the institutions responsible for sanitation activities (MoH, MoES, MWE, LGs); (b) strengthening of sanitation and hygiene regulatory and enforcement systems; (c) development of smart incentive schemes and intensification of sanitation marketing to increase household investments in sanitation; and (d) construction and operation of faecal sludge management treatment systems, with promotion of private sector sludge collection and disposal services. The NDP II targets that 33 faecal sludge treatment facilities should be constructed and operated by 2020.

1.2.3 The Government has created an enabling environment for improved access to sustainable sanitation through institutional reforms and related formulation of relevant policies, strategies, and standards to guide sector development. The reforms have led to the creation of the Urban Sanitation and Sewerage Division in the Ministry of Water and Environment (MWE) to guide and spearhead development of public onsite sanitation and faecal sludge treatment and disposal facilities, including promotion of behavioural change in small towns.

1.2.4 In line with the NDP and SDG targets for sustainable access to sanitation, the Government is mainly collaborating with Development Partners to increase sector investments in both onsite and offsite sanitation, particularly in small towns and rural growth centres. Recent efforts have included interventions in urban centres to improve onsite sanitation and faecal sludge management, in collaboration with World Bank, AfDB, KFW, BMGF and several NGOs.

1.3 Policy and Institutional Framework

1.3.1 A number of policies and strategies that include Water Act, Water Policy (currently under review to include sanitation), Public Health Act, Environment Policy, and Environmental Health Policy; and the Improved Health and Sanitation Strategies for Urban and Rural Areas governs the Water and Environment sector. The sector consists of two sub-sectors: the Water and Sanitation (WSS) subsector comprising water resources management, rural water supply and sanitation, urban water supply and sanitation, and water for production; and the Environment and Natural Resources (ENR) sub-sector that comprises environmental management, management of forests and trees, management of wetlands and aquatic resources, and weather and climate. The institutional framework consists of:

(a) The Ministry of Water and Environment with the Directorates for Water Development (DWD), Water Resources Management (DWRM) and Environmental Affairs (DEA);

(b) Local Governments (Districts and Town Councils), which are legally in charge of service delivery under the Decentralization Act;

(c) A number of de-concentrated support structures related to MWE, are at different stages of institutional establishment, including Technical Support Units (TSUs), Water Supply Development Facilities (WSDFs), Water Management Zones (WMZs), and Umbrella Organizations;

(d) Four semi-autonomous agencies: (i) National Water & Sewerage Corporation (NWSC) for urban water supply and sewerage; (ii) National Environment Management Authority (NEMA) for environment management; (iii) National Forestry Authority (NFA) for forestry management in Government's Central Forest Reserves; and (iv) the Uganda National Meteorological Authority (UNMA) for weather and climate services;

(e) NGOs/CBOs (coordinated through UWASNET and ENR-CSO Network) and Water User Committees/Associations;

(f) The private sector (water and sanitation infrastructure operators, contractors, consultants and suppliers of goods).

1.3.2 Activities undertaken in Sanitation and Water for Production (mainly focusing on agricultural and animal production) require close coordination with other line ministries including the Ministry of Health, Ministry of Education & Sports and the Ministry of Agriculture, Animal Industry & Fisheries. The Water and Environment Sector Working Group (WESWG) provides policy and technical guidance and has representatives from key sector institutions (GoU), Development Partners and NGOs). Specific roles and responsibilities of some key institutions, including the private sector are presented in Annex 5.

1.4 Problem Definition

1.4.1 Status of Sanitation Access and FS Management

1.4.1.1 Access to sanitation is currently estimated at 86% in urban areas (Water and Environment Sector Performance Report 2017). According to the National Service Delivery Survey (2015), over 90% of sanitation facilities is onsite and mainly comprise pit latrines (lined and unlined) in urban areas. Delivery of both household and public onsite sanitation facilities in small towns is dictated mainly by the cost of construction, reliability of water supply, and the lack of awareness regarding the health and economic benefits of access to adequate sanitation. Some of the existing onsite facilities are used for domestic solid waste disposal that affects the quality and characteristics of septage from the pits.

1.4.1.2 Majority of the facilities are not linked to any proper collection and treatment facilities, and in some cases are manually emptied and the contents disposed of in nearby open spaces either due to poor accesses or high cost of desludging, and therefore pose serious health and environmental risks, particularly to the urban poor, as faecal sludge management services (collection, transportation, treatment and re-use) in such urban communities are either non-existent or woefully inadequate. The situation is worsened by the high rate of urbanization (approximately 5.3%) without adequate provision of the needed supportive infrastructure and services thereby resulting in contamination of available water resources and the environment at large (Water and Environment Sector Performance Report, 2017).

1.4.1.3 Currently, faecal sludge collection and transportation services are provided by private operators who have formed an Association of Cesspit Emptier Operators, and reportedly have a vehicular fleet of 105 cesspit emptier trucks, having increased from 4 trucks over the last two decades. Most of the operators are predominantly based and operate in Kampala, where the demand for collection services is huge, and incentives are provided that are facilitated by the Kampala City Council Authority (KCCA) with the establishment of a call centre to help regulate service quality and charges, and continuous provision of training support to the Association's members. Where feasible, a limited number of operators provide desludging services to households with lined pits and septic tanks, and are expected to convey the collected material to far off distances for treatment and disposal.

1.4.1.4 Unfortunately, there are several instances where collected septage is indiscriminately disposed of in the nearby urban environment, despite attempt by the Town Councils to prevent the occurrence. This poses serious public health risks. The Operators are often reluctant to operate in the small towns due to (a) absence of sites for FS treatment and disposal; (b) long haulage distances and related costs; and (c) limited financial capabilities of households to pay for the services. Operators have also raised concerns of limited access to credit, and inability to obtain adequate spare parts at affordable prices, which impact adversely on their operations. Many are operating

highly depreciated trucks that require major repairs or replacement. An assessment of the existing situation to improve collection and transportation capacity in small towns is necessary.

1.4.2 Feacal Sludge Management Challenges

1.4.2.1 The key challenges confronting the sanitation sub sector in small towns are summarized as: (a) majority of households (86%) have access to pit latrines which are mostly unlined and also used for domestic solid waste disposal that affects the quality and characteristics of septage from the pits; (b) lack of adequate collection and treatment capacity, as over 80% of the fleet of trucks is based and operate in Kampala, and treatment and disposal infrastructure do not exist in most towns; (c) high service charges, as trucks are mobilized from Kampala and nearby larger towns to provide collection and transportation services; (d) inadequate regulation and enforcement, leading to indiscriminate disposal in swamps, quarries, gardens and water bodies with resultant public and environmental health risks; (e) responsibility for sanitation improvement is fragmented among institutions like the Ministry of Water and Environment, Ministry of Local Government, Ministry of Health, Ministry of Education, NEMA, National Water and Sewerage Corporation, and Local Councils; (f) need for adoption of integrated sanitation planning approach that takes into account solid waste management, and ensures equity in terms of donor assistance; and (g) inadequate private sector financing of needed investments.

1.4.2.2 The Ministry of Water and Environment has embarked on various initiatives to address the challenges that include assessments to group and prioritize several small towns into (fifty) 50 clusters to facilitate delivery of faecal sludge treatment infrastructure and collection services based on likely increased demand and reduced haulage distances. Of the number, less than 40% has been provided with facilities for treatment but without improved collection capacity. The Ministry is therefore directing its efforts towards improving the situation to ensure development of the remaining facilities together with sustainable arrangements for operation and maintenance, and provision of universal access to all small town dwellers by 2030.

1.4.2.3 In addition, the existing potential for reuse is not adequately explored to maximize the related economic benefits. Several initiatives on FS reuse exist, but are not coordinated to derive synergies and draw lessons to improve performance. Reuse benefits can contribute to part recovery of operation and maintenance costs, and creation of job opportunities to improve livelihoods, particularly for the urban poor. A systematic and coordinated assessment of FS reuse market potential, including identification of potential users, likely production quantities and related costs and revenue streams, together with development of strategies for promotion, marketing and sales provide opportunity for the potential to be explored to maximize related economic benefits.

1.4.2.4 To ensure sustainable delivery of infrastructure and services along the entire sanitation value chain (containment, collection, treatment and reuse), it is necessary that each link along the chain be developed, business opportunities identified, and appropriate business models elaborated. This is likely to attract private sector participation and financing to accelerate delivery along the chain, once the business models are demonstrable and can result in achieving some margin of profit. While upstream models for delivery of infrastructure and services for containment, collection and transportation are readily ascertainable, those for treatment and reuse require attention, particularly due to the limited tipping fees, (e.g. UGX 20,000 charged in Kampala) and the largely unexplored FS reuse economic benefits. It is desirable that an assessment and development of relevant business models that combine collection with treatment and reuse be undertaken to ensure sustainability of such chain links.

1.4.2.5 In line with political and strategic requirements, an integrated approach to regional level and town wide inclusive sanitation planning that allows sustainable access to household and public sanitation, including delivery of adequate faecal sludge management service, is desirable. With the recent increased awareness and the established need for support to meet the SDG targets for sustainable access to sanitation, Donors have been responding by refocusing development assistance to include interventions in sewage and faecal sludge (FS) management in different parts of the country.

1.4.2.6 The project therefore addresses the identified problem of limited access to sustainable sanitation, including inadequate provision of faecal sludge management infrastructure and services in small towns and growth centres, to contribute towards improved health and socio economic well-being of Ugandans.

1.5 Project Objective

1.5.1 The overall objective of the project is to increase access to sustainable and inclusive faecal sludge management services and provide opportunity for livelihoods improvement among the poor in small urban centres, thereby improving their health and quality of life. The specific objectives of the project include:

- To increase access to safe, sustainable and inclusive onsite household and public sanitation;
- To increase access to efficient and sustainable FS management infrastructure and services, including production of affordable FS reuse end products to maximize economic benefits;
- To identify business opportunities and increase sub sector investments.

1.5.2 The project adopts the guiding principles of city wide inclusive sanitation and the tenets of the Implementation Strategy for the NDP II (2016/17–2019/20) that include provision of incentives and sanitation promotion and marketing, institutional strengthening and coordination, pro poor approach, cost recovery, private sector participation, and sound social and environmental management practices at the household and community levels to provide feasibility studies and engineering designs for delivery of sustainable FSM infrastructure and services along the value chain on policy implementation in the WASH sector.

1.5.3 The project provides opportunities for lessons to be learnt regarding:

a) Public private sector partnership in the delivery, operation and maintenance of sustainable on-site sanitation, and FS collection and treatment infrastructure and services;
b) Cost recovery through user fees to fully finance operation and maintenance, and part of capital costs; and
c) Production and sale of FS reuse products.

Lessons learnt from implementation of the project can be applied to the design of future projects funded by the African Development Bank and other Development Partners.

1.6 Beneficiaries and Stakeholders

1.6.1 Beneficiaries

1.6.1.1 The project's ***direct beneficiaries*** include: (i) Relevant Sector Ministries including MWE, MoLG, and MoES, who will benefit from the capacity building and training; (ii) Private Sector Operators, local NGOs, Civil Society Organizations; and (iii) Town Councils and Development Partners who will also benefit from participation in the validation workshops and investment opportunities. Following the realization of the downstream investments, the ***direct beneficiaries*** would be the over one (1) million people living in un-sewered areas in urban centres, and without sustainable access to FSM infrastructure and services along the value chain (containment, collection, treatment and reuse). The urban poor people, who constitute over 60% of the entire urban population will benefit from provision of incentives and strategies to better promote and

deliver onsite sanitation infrastructure, and adequate de-sludging services to reduce effluent discharges and pollution of the immediate environment. In the medium to long term, up-scaling of the project is expected to benefit an additional 1,723,000 urban dwellers to contribute to the increase access to safe and sustainable urban sanitation from about 26% currently to over 65% across Uganda.

1.6.2 Stakeholders

1.6.2.1 The following key stakeholder interests have been incorporated in project design through a consultative process:

(i) MWE/WSDFs, as project proponents, spearheading the effort to establish shared and sustainable faecal sludge treatment and disposal infrastructure and services in small towns and rural growth centres based on previous studies supported by the WSP-World Bank, and in line with the NDP II Implementation Strategy and Targets for 2020;

(ii) Private Sector interests to support to improve delivery of onsite sanitation and their participation in the construction of facilities, and provision of FS collection and reuse related services to improve access to sustainable FSM;

(iii) Umbrella Organizations currently operate and maintain water supply infrastructure in small towns and rural growth centres. The Umbrella Organizations have expressed interest, and will enter into a Memorandum of Understanding (MOU) with the MWE, WSDFs, Town Councils to manage the FSM infrastructure and services; and

(iv) Town Councils requests submitted to Government for support to improve the current situation of poor access to sustainable faecal sludge chain management services in their respective towns.

1.6.2.2 The ***Project Target Area*** covers the un-sewered areas in forty four (44) small towns grouped into ten (10) clusters across the five (5) regions in the country without sustainable access to faecal sludge service chain management. The ten clusters have been prioritized based on population size and likely increased demand for FSM services, ease of accessibility and equitable regional distribution. The list of towns and their locations are presented in Annex 1.

1.7 Justification for AWF Intervention

1.7.1 The project fits within the revised AWF Operational Strategy (2017-2025) and mandate, with links to *two of the three AWF strategic pillars* as follows:

Preparation of Investment Projects and Programmes (Pillar 1) that will attract follow-on investments, and piloting innovative technologies and approaches that may lead to widespread adoption. The proposed project is conceived as a pipeline project that provides opportunity for downstream investments to improve the environmental quality and social acceptance of improved and inclusive FS management along the value chain in several urban communities in Uganda. Studies to improve on modalities for delivery of FSM related infrastructure and services, including tariff studies, arrangements for sustainable operation and maintenance of facilities, competitive pricing, and market potential of FS reuse contribute to ensure inclusive and sustainable access to FSM and attainment of the SDGs and Government sector targets for 2040.

Investment Promotion (Pillar III) to increase the number of public and private investment opportunities in the water and sanitation sector and to mobilize higher levels of financing for projects, particularly from the private sector. The feasibility studies and design will result in preparation of an investment plan that will service as basis for investment fora and resource mobilization to support sector investments in sustainable faecal sludge management. The project

is likely to identify business opportunities, and increase private sector investments in FS collection and reuse infrastructure and services.

1.7.2 The project addresses issues relating to inclusive access, cost recovery and sustainability along the value chain. This is ascertained by (a) the preparatory and feasibility studies that include socio economic, technical, financial and stakeholder analyses to identify the bottlenecks and to propose and develop appropriate interventions to overcome them; (b) effort to define interventions for each link along the FSM chain, from containment through collection, treatment and re use, ensuring that each link is inclusive and self-sustaining as much as possible; (c) the likely partnership arrangement between the Umbrella Organizations (operating under the WSDFs and MWE), the Town Councils and the private sector for operation and maintenance of FS infrastructure and related services; (d) opportunity to further strengthen the collaboration among sector institutions for delivery of sanitation infrastructure and services; and (e) studies to explore and maximize the economic benefits and market potential of FS re use end products.

1.7.3 The project adds value through (a) support to prepare a project pipeline for investments to improve FSM in accordance with the NDP II strategic objectives and targets; (b) integrated planning and design of FSM infrastructure and related services for small urban centres and rural growth centres to achieve optimized FS collection, treatment and disposal; (c) institutional strengthening of the WSDFs and Umbrella Organizations to play an effective role in better managing delivery of un-sewered sanitation services, in collaboration with relevant institutions like the MOH, MOES, MOE, MOA, etc., and (d) opportunity for increased access to inclusive and sustainable FSM chain management in Uganda.

1.7.4 The project will contribute to create a favourable environment and build donor confidence in Uganda and actors like the WSDFs and Umbrella Organizations to stimulate increased sector investments. AWF funding will enable the project objectives to be achieved, and will support activities to facilitate capacity building, and future investments in FSM along the value chain.

2 THE PROJECT

2.1 Impact

2.1.1 The long-term goal is to contribute to increasing access to sustainable and inclusive sanitation services for the urban poor, initially for about 1 million people, and subsequently, an additional 1.7 million people living in small urban centres in Uganda.

2.1.2 The expected impact is contribution to improved health and quality of life for the urban dweller living in unsewered areas across Uganda, through increased access to, and delivery of sustainable and inclusive faecal sludge management infrastructure and services.

2.2 Medium and Short Term Results

2.2.1 Medium Term Results and Outcomes

In the medium term, it is expected that the project will **contribute** to the following outcomes:

- **Outcome 1.** Increased access to sustainable and inclusive FSM services in un-sewered urban centres.
- **Outcome 2.** Increased and prioritized investments in FS management infrastructure and services.

It is the expectation that the Government of Uganda and the Municipalities, in collaborative partnership with Development Partners and the private sector shall mobilized funds for the investments.

2.2.2 Outputs

In the short term, it is expected that the project will contribute to the following outputs:

- Preparatory and Feasibility Studies and Preliminary Engineering Designs Prepared covering all the 10 clusters comprising 44 small towns.
- Field Engineering Investigations and Detailed Designs with ESIAs prepared for 10 town clusters.
- Tender Documentation, including Technical Specifications, Manuals and Cost Estimates prepared for 10 town clusters.
- Project core team constituted and functional
- Detailed procurement and implementation plans approved and implemented, and project reports prepared and submitted.
- Knowledge management achieved.

2.3 Project Components and Activities

2.3.1 The project will comprise two (2) main components: Component I - Feasibility Studies and Engineering Design; and Component II - Project Management as follows:

Phase 1

<u>Component 1</u>*: *Feasibility Studies and Engineering Design

2.3.2 Currently, environmental sanitation conditions in small urban communities leave a lot to be desired. Existing onsite sanitation facilities are not linked to any proper FS management infrastructure and services for sustainable collection, conveyance, treatment and reuse. The situation poses serious risks to public and environmental health, and results in pollution of nearby water bodies. The Government's Vision 2040 and the National Development Plan II (2016/17 – 2019/20) and related Implementation Strategies require development of the needed FSM infrastructure and services with a target of 33 out of a total of 50 clustered towns by the year 2020, to improve access to sustainable and inclusive sanitation in each beneficiary town within a cluster. Currently, facilities have already been provided for eighteen such clusters, and additional facilities are planned for another five clusters. To meet the NDP target for 2020, this component will finance Engineering Consultancy Services to prepare feasibility studies and engineering designs to meet the FSM requirements in ten (10) clustered towns. In addition, investment fora will be organized to mobilize funds for investment financing.

2.3.3 The Terms of Reference for the Consultancy Services shall comprise three phases as follows:

- **Phase 1 - Preparatory and Feasibility Studies and Preliminary Designs** that will cover community engagement, socio-economic surveys, and feasibility studies, including situational assessment, market demand and stakeholder analyses, FS quantification and valorisation, and preliminary design & costing for collection, transportation, treatment, reuse/disposal, business opportunities and site identification and selection, and validation workshops.
- **Phase 2 - Field Investigations/Surveys, Detailed Design and ESIA** comprising detailed field investigations, design and ESIAs. The following specific activities shall be undertaken: topographic and geotechnical surveys, detailed designs and preparation of operation & maintenance plan, environmental impact study, cost benefit analyses, and validation workshops and reporting.

- **Phase 3 - Preparation of Specifications, Tender Documentation, Manuals and Cost Estimates** that will cover preparation of the relevant specifications, tender documentation, manuals and cost estimates.

2.3.4 The Consultancy Services will require adoption and adaptation of data collection instruments prepared by WSP of the World Bank to collect data and carry out studies to ensure provision of town wide inclusive sanitation including arrangements for sustainable delivery of FSM in the selected small towns.

2.3.5 The related **activities** are:

Phase 1

2.3.5.1 ***Preparatory and Feasibility Studies***

1. *Community engagements* shall precede all other project activities in the target communities. The Consultant shall collaborate with the relevant WSDF and Town Council Environmental Health and Community Development Departments/Units to undertake this activity, ensuring adequate community entry and sensitization to facilitate subsequent surveys.
2. *Baseline studies (socio economic, Knowledge, Attitude & Practices (KAP), etc.)* will be carried out in all target communities to establish relevant baseline data for planning and design of project interventions along the value chain. Project achievements shall be assessed in relation to the baseline.
3. *Technical Assessments* of existing sanitation facilities will be carried out for the different links of the value chain as follows:

   (a) ***Containment and Collection*** shall assess the types, percentage share, typical storage capacities, and modalities for construction and financing, related capital, and operation and maintenance costs, etc., of available onsite sanitation facilities. In addition, description and assessment of the existing arrangements for faecal sludge/septage collection and transport, including available types, capacities, operation and maintenance, and ownership of collection vehicles and or equipment (Gulper/Manual Emptying, Cesspit Emptier/Vacu tug, etc.), service quality and charges, how households/beneficiaries request and pay for services, etc., will be necessary. Finally, the relevant studies and field assessments shall be carried out to enable adequate characterization and quantification of generated faecal sludge/septage; and estimation of the likely quantities to be collected per town cluster taking into account the types of onsite facilities, accessibility, development trends, etc.

   (b) ***Treatment and Disposal*** shall include identification and assessment/audit of feasible treatment and disposal technologies available in Uganda and elsewhere, taking into account septage characteristics, treatment efficiencies, investment and operation and maintenance costs, land space requirements, ease of operation, social acceptance, likely environmental impact, and reuse benefits, etc.

   (c) ***Reuse*** will consider assessment of the current practices for FS/waste reuse production, marketing and sales in Uganda and elsewhere, including production costs and related revenues, institutional arrangements, regulation and certification procedures, and financial viability/profitability, etc., based on review of available secondary data on reuse, and verification through surveys and FDGs; and to establish a data base on producers and users of FS/waste reuse end products. The assessment will also include quantification and valorisation of faecal sludge in each of the proposed clusters, with clear definition of the types and quantities of FS end products, identification of potential users of FS reuse products, and assessment of the market/demand potential, including likely revenues to be accrued versus production costs.

(d) ***An Integrated Assessment and Ranking*** of identified feasible options for faecal sludge collection, transport, treatment and reuse, taking into account the characteristics of septage, mode and costs (capital and O&M) of collection and transport, likely haulage distances based on identified and pre-selected disposal sites, applicable treatment technologies, market potential of reuse, etc. The assessment will also describe and consider the potential business opportunities for the different actors (private and public sector enterprises, NGOs, individuals, etc.) along the FSM value chain.

(e) ***Recommendations*** will be made to address identified challenges/barriers in order to improve: (a) access to onsite household and public sanitation; clearly articulating private and public sector roles, and defining actions to improve the delivery and financing mechanisms for onsite sanitation, including the types of technologies to be adopted, among others; (b) collection and transport capacity in each town and related cluster, clearly indicating the best options for services delivery; (c) treatment and disposal capacity based on recommended collection and transport systems; and (d) economic benefits of reuse, including strategies for promotion, marketing and sales, clearly establishing profitability or otherwise of reuse.

4. *Stakeholder Analyses* shall identify all relevant stakeholders, including public & private sector institutions, NGOs, households and individuals at the national, regional and local levels; their expected and actual roles and responsibilities for delivery of onsite sanitation, FS collection and transport, treatment and disposal including reuse. The analyses shall include prognosis for change.

5. *Site Identification and Selection* shall be carried out in collaboration with local authorities and in accordance with urban physical plans. A number of sites shall be identified, assessed and ranked and the most suitable recommended for prior selection, demarcation and subsequent acquisition for provision of treatment and disposal and/or transfer facilities in centrally located towns within each cluster to ensure reduced haulage distances.

2.3.5.2 ***Preliminary Engineering Design***

1. *Preliminary Engineering Designs and Costing* shall be prepared for FS collection, transport, treatment, reuse infrastructure, and services in the selected small towns and clusters. The designs shall be prepared for all selected towns and clusters, and shall be based on septage characteristics, projected development trends and rate of urbanization, and estimated design volumes (5-15 year lifespan) for the selected small towns and/or related clusters. The designs shall consider and evaluate combinations of the recommended best options as alternatives for collection through treatment and reuse, clearly establishing the business model in each case.

2. *Financial and economic analysis* shall be carried out to assess the financial and economic viability of each alternative, and to determine and recommend the best alternative.

3. *Management Arrangements* to ensure adequate operation and maintenance of all facilities shall be defined. These will cover on site facilities, collection and transport, as well as treatment and reuse facilities. In this regard, the respective roles of the Umbrella Organizations and Town Councils in managing collection and transport facilities will be paramount.

4. *First Stakeholder Validation* will ensure stakeholder review and acceptance of recommended alternatives for facilities along the value chain. Two regional level validation workshops shall be organized to present the outcomes of all studies and the preliminary designs. The MWE shall be responsible for organizing the workshops.

Phase 2

2.3.5.3 ***Site Investigations and Detailed Engineering Design***

1. *Site Investigations* shall include detailed topographic and geotechnical surveys to obtain technical and environmental data to enable adequate design. Data obtained shall also be used in assessing environmental impacts and related mitigating measures.
2. *Detailed Engineering Design* will involve preparation of process flow diagrams and detailed designs, including hydraulic, geotechnical, and structural computations for all components, as well as design of all electro mechanical units; preparation of detailed drawings to appropriate scales, indicating the facilities for site drainage, offices and vehicle/equipment parking and cleansing, perimeter fencing, etc. The general design layouts shall provide adequate road accesses to facilitate operation and maintenance, and performance monitoring; and shall indicate perimeter fencing and gate control facilities, and locations for temporary storage of solid waste screenings from the primary treatment processes.
3. *Management Arrangements* defined during the preliminary engineering stage shall be refined and finalized. A detailed description of the arrangements for managing the various components of the value chain shall be provided, together with development of specific promotion, marketing and sales strategies, and mechanisms for customer feedback and redress.
4. *Preparation of ESIA* shall include an assessment of the potential environmental impacts for the designed faecal sludge service chain management infrastructure and services, together with proposed mitigation measures. The ESIA Report and related Environment and Social Management Plan shall be prepared and submitted for approval by National Environment Management Authority, in accordance with NEMA guidelines. The Scoping Report and Terms of Reference shall be prepared and submitted for approval during the preliminary engineering design stage.
5. *Preparation of Facilities Management Plan* (FMP) shall include detailed operation and maintenance guidelines and cost estimates for facility operation and maintenance (O&M), and the management arrangements defined for the various components of the value chain. The FMP shall highlight the safety requirements for plant operation and staff; and shall specify health and safety measures to protect workers, visitors and surrounding residents during operation and maintenance of the facility. The plan will include specifications for regular medical check-ups for operational personnel; and for environmental monitoring, operation and maintenance, effluent quality, among others.
6. *Financial and Economic Analyses* shall be performed for the finally selected and designed alternative, based on final cost estimates and design life span of the various components.
7. *Second Stakeholder validation* shall ensure shall ensure further stakeholder review and acceptance of the final designs for approved facilities along the value chain. Similarly, two regional level validation workshops shall be organized to present the outcomes of the final designs and cost estimates.

Phase 3

2.3.5.4 ***Specifications, Tender Documentation and Investment Plans***

1. *Preparation of Specifications and Tender Documentation* will ensure compliance with open tender procedures and unit price contracts, and shall follow the formats prescribed by both the Public Procurement and Disposal Authority of Uganda and the African Development Bank. Specifications for workmanship, materials and equipment shall be provided to facilitate quality procurement of all goods, works and services. The tender documents shall include bills of quantities that are prepared based on CESSM. Final cost estimates shall be derived based on

priced bills of quantities and prevailing market unit prices, which will also form the basis for contract packaging and implementation scheduling.

2. *Preparation of Investment Plans* is necessary to facilitate mobilization of financial resources among development partners. The plans shall be prepared based on the planned implementation schedules, and shall indicate anticipated investments over a defined period.

<u>Component 2</u>*: *Project Management

2.3.4 Staff seconded from the Ministry of Water and Energy shall provide project management services. A project implementation unit shall be established to undertake all project related activities, supported by a technical team that will play a supervisory role and provide technical guidance and support to review the consultant's outputs. Government of Uganda will finance the related costs of activities under the component.

2.3.5 ***Capacity Enhancement:*** Existing institutions like the WSDFs and Umbrella Organizations need strengthening and to build capacity for design (WSDFs) and management (Umbrella Organizations and Town Councils) of FS collection and treatment infrastructure. Collaboration with the engineering design consultant's team will ensure transfer of technical know-how and development of skills to improve the design capacity, particularly of the WSDFs, and to better appreciate the O&M requirements and sustainable arrangement for effective management of treatment and collection infrastructure and services. Currently, engineering design and management capacities exist within the NWSC for sewerage infrastructure and services. NWSC is increasingly showing disinterest to manage FS facilities as they consider them not to be cost effective.

2.3.6 The related activities are:

1. *Institution of the Project Core Team (PCT)*involves identifying and assigning key MWE staff as project staff to strengthen the MWE's capacity for project management. The PCT will oversee the coordination, implementation, and progress and monitoring of the project. The MWE shall provide the needed logistics, including transport, office space, communication, etc.

2. *Establishment of a Project Supervisory Team (PST)* consisting of representatives from various technical departments shall provide technical support and guidance to the Project Implementation Unit, and shall participate in the periodic review of implementation progress during project implementation.

3. *Finalization and approval of plans and project reporting* will ensure that the existing draft implementation and procurement plans are reviewed and finalized by the PCT following the AWF's no objection. The plans shall be detailed and shall cover all relevant project activities till completion. The plans shall be revised once every year. In addition, all relevant project reports and documents shall be prepared and submitted in accordance with the AWF reporting requirements.

4. *On the Job Training of WSDFs and Umbrella Organizations* will strengthen and build capacity for design and management of FS collection and treatment infrastructure. WSDFs will work with the engineering design consultant's team to undertake field surveys and prepare engineering designs and related tender documents and drawings to improve their engineering design capacity. Similarly, the Umbrella Organizations and relevant Town Council staff will participate in the field investigations, and subsequently provided training in sustainable O&M and FS management.

5. *Technical Assistance Support in CWIS* may be necessary to facilitate preparation of inclusive FSM designs and tender documentation. That notwithstanding, the Consultant's team will be expected to have expertise in CWIS.

6. *Knowledge Management and MWE Staff Training* involves various activities like development and production of IEC materials, and launch and completion workshops to document and disseminate project experiences and outcomes; and development of staff training and design manuals, and on the job training of MWE staff to strengthen and build capacity for design, operation and maintenance of faecal sludge treatment infrastructure.

7. *Validation Workshops and Investment Fora:* Stakeholder validation workshops shall be organized by the project management team as described in Para 2.3.5.2 and 2.3.5.3 at the end of the preliminary and detailed design stages. Additionally, a maximum of two (2) Investment fora to mobilize resources for the downstream investments shall be organized on project completion.

2.4 Project Risks

2.4.1 The possible risks that may arise during project implementation and mitigation measures as presented in the log frame and incorporated in project design are analysed along with others in the following table:

Table 1: Risks and Mitigation Measures

Risk	Impact on project	Mitigation Measures
Lack of political support and Government disinterest in FSM leading to unsuccessful implementation and wider uptake.	Medium	Lobby, advocacy, dialogue and transparency among actors. Endorsement and active participation of the WESWG.
Inability to mobilize adequate resources for downstream investments. The Project's Logical Framework assumes the mobilization of resources to implement the downstream invest project.	High	Active participation of the Water and Sanitation Working Group, and effective organization of investment fora.
Delay in setting up effective and efficient regulatory policies and strategies may affect service delivery, as the regulatory department is still young.	Medium	MWE's Utility Regulation Department will be strengthened to achieve its mandate, including tariff setting and compliance monitoring of the Utilities that will manage the completed faecal sludge management infrastructure and services.
Community resistance to behavior change regarding improved access to onsite sanitation, faecal sludge chain management and hygiene.	High	Community sensitization. Increased social marketing and media involvement in hygiene and sanitation related activities.
Unavailability of land for selection and design of FSM infrastructure, and the required environmental approvals may delay timely completion of the project.	Medium	Actively seek available government owned land or plots and allocate for the purpose. The EA will commence land identification and acquisition before effectiveness, and will ensure timely approval of the ESMP.
Delay in project effectiveness due to delays in parliamentary and government approvals.	High	The EA will commence engagement with the Parliamentary Committee and Ministry of Finance during the appraisal process.
Inadequate design of FSM Infrastructure and services.	Medium	Rigorous eligibility and selection criteria with demonstrated competence in FSM infrastructure design for acquisition of consultancy services.
Limited potential for faecal sludge reuse.	Medium	Establishment of procedures for FS reuse quality certification, and increased marketing and promotion of FS reuse.

2.5 Costs and Financing Plan

2.5.1 The estimated total cost of the project (excluding taxes) is **€** 1 981 203, of which 24 % is in local currency equivalent. Total cost includes provision for 5% price escalation contingencies. A breakdown of the proposed financing plan by Project Component and Source of Financing is summarized in Table 2 with details shown in Annex 2. Table 2 below provides an overview of the estimated costs by category of expenditure.

2.5.2 The AWF will finance 76 % of the total project cost (estimated at **€ 1 507 128**), mainly for the provision of consultancy services for preparatory and feasibility studies, site investigations, preliminary and detailed engineering design and tender documentation, and plans. The MWE and Town Councils will finance the remainder amounting to **€ 474 075**, mainly as in kind contribution for land acquisition, support for community sensitization, project management and support staff salaries and operational expenses, office space, utilities, etc. All taxes related to the expenditures and activities of this project are the Government of Uganda's responsibility.

Table 2: Project Cost Estimates by Component and Sources of Financing (in '000 Euros)

Component	Total Cost	AWF	MWE/Town Councils
1. Feasibility Studies and Detailed Design	**1,355.4**	**1,355.4**	**-**
2. Project management	**531.5**	**80.0**	**451.5**
Total Base Cost	**1,886.9**	**1,435.4**	**451.5**
Price Contingency (5%)	**94.3**	**71.8**	**22.5**
Total Project Cost	**1,981.2**	**1,507.2**	**474.0**
Percentage	***100%***	***76.0%***	***24.0%***

Table 3: Project Cost by Category of Expenditure (in '000 Euros)

Category of Expenditure	Total Cost	AWF	MWE/Town Councils
		FC	LC
A. Services	1,355.4	1,355.4	-
B. Project Management	531.5	80.0	451.5
Total Base Cost	**1,886.9**	**1,435.4**	**451.5**
Contingency 5%	94.3	71.8	22.5
Total Project Cost	**1,981.2**	**1,507.2**	**474.0**
% Contributions		**76.0%**	**24.0%**

3 PROJECT IMPLEMENTATION

3.1 Grant Recipient and Executing Agency

3.1.1 The Ministry of Finance, Planning and Economic Development (MoFPED) of the Republic of Uganda, will be the Grant Recipient, whereas the Ministry of Water and Environment (MWE) will be the Executing Agency. The MWE is responsible for policy on water resources development and environmental management, together with delivery of large sanitation infrastructure and services, including faecal sludge treatment and disposal.

The MWE is composed of three (3) Directorates, namely:

- Directorate of Water Development (consisting of 3 Departments -Rural Water Supply and Sanitation, Urban Water Supply and Sewerage Services and Water for Production Departments),
- Directorate of Water Resources Management (consisting of 4 Departments - Water Resources Monitoring and Assessment, Water Resources Planning and Regulation, Water Quality Management, and the International Transboundary and Water Affairs Departments), and

- Directorate of Environmental Affairs (consisting of 3 Departments - Environmental Support Services, Forestry Sector Support, and Wetlands Management Departments).

3.1.2 At the regional level, the MWE operates through de-concentrated structures that include: the Water and Sanitation Development Facilities, Water Management Zones, Technical Support Units, Umbrella Organizations and Regional Water for Production Centres to achieve its mandate.

3.2 Implementation Arrangements

3.2.1 The MWE will manage the Grant funds. A **Project Core Team (PCT)** drawn from within MWE will be instituted to implement the project. The Project Core Team will comprise a Project Coordinator (PC) assisted by a multi-disciplinary team consisting of (a) Project Manager (b) WSDF Branch Managers (c) Finance/Accountant (d) M&E Specialist and (e) Gender Specialist assigned from various departments within the Ministry. The Core Team will be supported by MWE's in-house Procurement and Internal Audit Departments, and on the overall report to the Permanent Secretary MWE.

3.2.2 The PCT's will focus on project management and procurement. Specifically this will include: (i) project coordination among stakeholders; (ii) procurement of consulting services; (iii) processing payment requests; and (iv) preparation of project reports. The Project Coordinator (PC) shall co-ordinate all project related activities, including liaising with the various stakeholders and institutions. The Project Manager shall assist the PC in the day-to-day co-ordination of project activities, particularly regarding working with different Water Development and Sanitation Facilities. The PCT's organization and institutional linkages are presented in Annex 6, PCT structure in Annex 7 and the Terms of Reference presented in Annex 8.

3.2.3 A **Project Supervisory Team (PST)**- comprising senior staff from the various technical departments under MWE shall provide technical support and guidance to the Project Core Team, and shall participate in the periodic review of implementation progress. The PST is drawn from the Ministry of Water and Environment.

3.2.4 A **Project Steering Committee (PSC)** comprising seven members representing various stakeholders and relevant sector ministries shall be established to review project progress and provide general guidance and oversight of project execution. The PSC shall be chaired by the Permanent Secretary, and shall meet at least twice a year.

3.3 Performance Management Plan

3.3.1 A result based measurement plan will form the basis for tracking the performance of the project and managing results. AWF in collaboration with the PCT shall be responsible for tracking key indicators and targets from the logical framework. Table 4 below indicates the expected deliverables of the project within allocated timeframes.

Table 4: Global Performance Plan of the Project

DELIVERABLES	Time
Grant allocation notification	Mo
Establishment of the PCT and PSC	Mo + 1
Signature for the allocation of the Grant	Mo + 2
Satisfaction of pre-conditions	Mo + 3
Launching of the Project	Mo + 4
Recruitment of the consultant(s)	Mo + 6
Preparatory and feasibility studies and preliminary designs	Mo+16
Detailed site assessments and designs	Mo+22
Detailed specifications, tender documentation and investment planning	Mo + 24

Investment Fora	Mo + 24

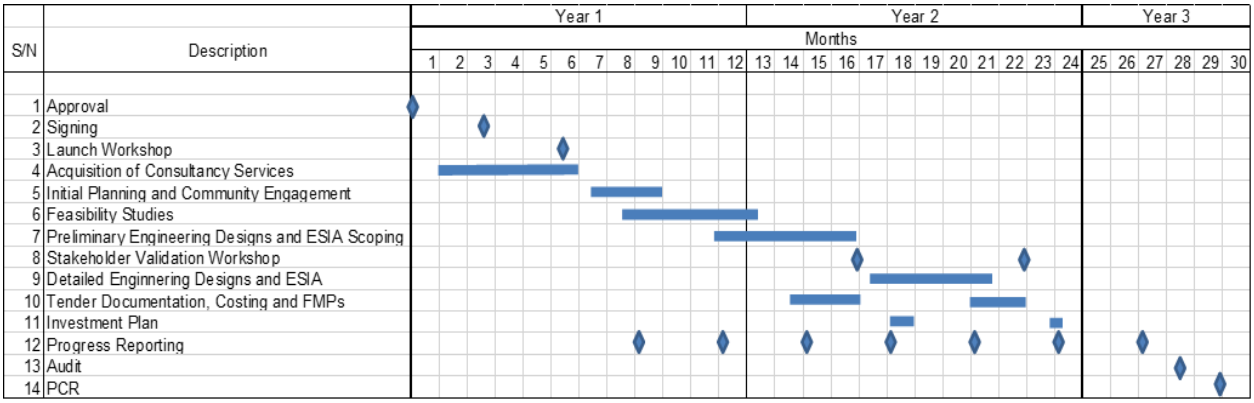
3.3.2 The main performance indicators of the studies and designs are specified in terms of reference presented in Annex 11.

3.4 Project Implementation Schedule

3.4.1 The project shall be executed over a period of 30 months from the date of Grant approval. The estimated project duration includes periods of submission of reports, observations, conducting workshops and finalization of reports. Signing of the Grant Agreement is planned for February 2019, which allows two months for Grant Effectiveness. It is anticipated that the consultancy services will last over 18 months. The summarized project implementation schedule is presented in Table 5. A detailed schedule is presented in Annex 3.

3.4.2 The Executing Agency will initiate advanced procurement actions in the recruitment of the Consulting Firm to fast track implementation of the project activities. This will allow project launching soon after the Grant is declared effective.

Table 5: Implementation Schedule Summary



3.5 Procurement Arrangements

3.5.1 The acquisition of consulting services financed by the Bank will be in accordance with the ***Procurement Policy for Bank Group Funded Operations dated October 2015*** as amended from time to time, using the relevant Bank Standard Bidding Documents, and the provisions stipulated in the Financing Agreement. The Procurement arrangements for the project are summarized in Table 6 below.

3.5.2 Executing Agency Procurement Capacity: The MWE has a fully staffed Procurement and Disposal Unit (PDU) headed by a Principal Procurement Officer. The PDU is responsible for procurement of good, works and services for the MWE with technical support from the directorates within the Ministry. The PDU has experience in managing procurement under Bank financed projects; and adopts a system for keeping procurement records with documented filing protocol or archiving policy. A Contracts Committee that approves all procurement activities is in place and is functional Procurement Department. Detailed procurement arrangements are presented in Annex 4.

3.5.3 ***Consultancy Services:*** The acquisition of consultancy services amounting to **€ 1,355,360** will be procured through shortlisting of consulting firms under QCBS using available Bank's Standard Request for Proposal document. Consultancy services under this method will include feasibility studies assessment and design of FS treatment facility and preparation of tender documentation. Advance contracting may be used for acquisition of consultancy services.

3.5.4 **Project Management:** Expenditures during project implementation including stakeholder workshops and investment fora at an aggregate cost of **€80,000**, office supplies, utilities, consumables, advertising expenses, internet service, communication, fuel, maintenance and insurance of vehicles, costs related to staff travel, etc., will be procured by the Government of Uganda (GoU).

3.5.5 The procurement arrangements for the various components, elements, and items, under the different expenditure categories financed by the grant are presented in Table 6 below. Large-value contracts, each group of similar transactions/contracts, the different PMPs, estimated costs, oversight requirements, and the timeframe as agreed between the Borrower and the Bank, are in the Procurement Plan (Section 5.8).

Table 6: Procurement Arrangements (expressed in million Euros)

		EU '000					
S/ N	**Project Categories**	**Borrower PMPS**			**Bank PMPS**		
		OCB	**LCB**	**Other**	**QCBS**	**Other**	**Total**
1.0	**Consulting Services**						
1.1	Feasibility Studies and Detailed Design				**1,355.360**		**1,355.360**
2.0	**Operating Costs**						
2.1	Program Management and Operational costs					**80.000**	**80.000**
3.0	**Contingency**						
3.1	Provide for 5% price contingency					**71.768**	**71.768**
	GRAND TOTAL						**1,507.128**

3.5.6 **Procurement Plan:** The AWF shall review the procurement arrangements proposed by the Recipient in the Procurement Plan for its conformity with the Procurement Policy. The Plan shall cover an initial period of at least 18 months, and shall be updated on an annual basis or as necessary always covering the next 18 months period of project implementation. AWF shall give prior approval to any proposed revisions to the Plan.

3.6 Disbursement Arrangements

3.6.1 The AWF support for consultancy services and the stakeholder workshops, estimated at **Euro 1,507,128** (including 5% contingencies), shall be disbursed through the Direct Payment Method upon verification and certification of invoices by the PCT, in accordance with the Bank's disbursement rules and procedures. All Grant proceeds shall be disbursed in Euros and all contracts should be denominated in Euros.

Table 7: Disbursement Schedule (Euro)

Item	Disbursement Method	Procurement Item	Amount	% of Total
1.	Direct Payment (Lots 1 & 2)	Consultancy	1,423,128	94.43%
2.	Direct Payment	Workshops	84,000	5.57%
3.	Total		1,507,128	100.0%

3.7 Financial Management Arrangements

3.7.1 The fiduciary responsibility for the grant shall rest with the Permanent Secretary, who is the Accounting officer of the MWE. The project will be implemented within the structures of the Executing Agency under the overall direction of the Commissioner for Urban Water and Sewerage

Services Department. The Project Supervisory Team (PST) and the Project Steering Committee (PSC) shall provide policy and technical guidance, including approval of project work plans and budgets.

3.7.2 The Project Core Team (PCT) shall carry out the financial management (FM) responsibilities under the project. The accountant, who shall be part of the PIT shall be carry out the day-to-day processing of project financial transactions and shall ensure compliance with the GoU financial regulations and procedures as well as the Bank Rules and Procedures. The accountant shall functionally report to the Assistant Commissioner Accounts and administratively report to the PIT Coordinator. The accountant shall maintain separate records and ledger accounts in respect of the project transactions using the Government's Integrated Financial Management System (IFMIS). All expenditures and related supporting documents shall be physically and properly archived, for supervision and auditing purposes. As part of the internal control mechanism, the MWE internal auditors shall include the project in their internal audit program and shall conduct regular audits of the project systems, processes and transactions.

3.7.3 The PCT shall ensure that financial reports for the Project are prepared on a quarterly basis and transmitted to the Bank, together with the progress reports, no later than forty five (45) days after the end of each quarter. The financial reports shall include a statement of sources and uses of funds, with the uses of funds analysed by activities/components and categories, comparing actual expenditure with budget and notes explaining significant variations in expenditures. In addition, the project financial statements (PFS) will be prepared at mid-term of implementation and after the closure of the Project. The PFS will be prepared in accordance with International Public Sector Accounting Standards (IPSAS) and shall include Statement of Financial position, Statement of receipts and Expenditures, Cash Flow Statement and notes to the accounts.

3.7.4 In line with Bank's financial reporting mandatory requirements and AWF audit arrangements, two financial audit and post procurement reviews (at mid-term and final audit) shall be carried out. AWF shall appoint an independent private audit firm to conduct the audits. The auditors shall be competitively recruited using AWF Rules and Procedures and based on the Bank's Standard Audit Terms of Reference. The costs of the audits will be borne by AWF. Monitoring, Evaluation and Reporting**.**

3.8 Monitoring, Evaluation and Reporting

3.8.1 A monitoring and evaluation plan for the Project will be developed and implemented by the PCT, based on the logical framework of the project. The plan will be prepared and submitted to the AWF after Grant approval. The LFA shall serve as the basis for a results based assessment of the outputs of the project during implementation and after completion. The plan will align with the existing M&E system developed by the MWE.

3.8.2 The Consultants will submit all deliverables to the Project Coordinator for technical review support by the PST.

3.8.3 AWF supervision and monitoring of project activities will be subject to PCT submission of quarterly reports to the AWF. This will help maintain regular contact with the Recipient, and will enable diligent review of implementation progress. AWF may consider at any time the need to undertake field supervision missions. The Recipient shall prepare by a project completion report (PCR), which shall include details on project activities and outputs, and a comprehensive expenditure report on the utilization of the Grant. Preparation of the PCR shall commence on achievement of 85% disbursement of Grant Funds. All documents shall be transmitted to the AWF

in soft and hard copies. The Recipient shall submit to the AWF the reports/documents noted in Table 8.

Table 8: AWF Reporting Requirements

Documents to be Submitted to the AWF	Reporting Schedule	AWF Action
1. Implementation and Procurement Plan	Within one month after Grant approval	Review and approval
2. Procurement Documents (various)	As noted in Procurement Plan	Review and "no objection"
3. Quarterly Progress and Financial Reports in AWF format (with report on expenditures)	Within three weeks of end of quarter	Review and comment
4. Annual Report including audited accounts	End of 1st quarter of following year	Review and comment
5. Project Completion Report in AWF format	Within 3 months after end of project.	Review and acceptance
6. Minutes of Project Management Meetings	Within 10 days of meeting	Review and comment
7. Minutes of other project related meetings/ Stakeholder Dialogue, etc.	Within 10 days of meeting	For information

4 PROJECT BENEFITS

4.1 Environmental Aspects

4.1.1 The project aims to create the conditions necessary to ensure the efficient, inclusive and sustainable management of faecal sludge along the value chain in urban centres and rural growth centres in Uganda. The activities proposed in the preparatory and feasibility studies require consideration of environmental aspects and impacts of climate change.

4.2 Climate Change

4.2.1 The geographical range of the project is widespread, with sites in different regions of Uganda. Many regions in Uganda are already affected by climate change impacts, with temperature rises and the frequency of extreme weather events such as heavy rains, drought, flooding and disease being significant.

4.2.2 A key interaction between climate change and sanitation is the risk posed by increased extreme rainfall that lead to damage to sanitation infrastructure. Given the high levels of vulnerability and low adaptive capacity, actions that improve sanitation delivery and contribute to reduce vulnerability are important for building climate resilience. Climate change aspects that should be taken into account across FSM include impacts of extreme weather and potential damage or overflows on containment; impact of flooding on accessibility, including routes, on emptying processes and transport, and site selection and potential for damage in terms of treatment options.

4.3 Gender

4.3.1 The project aims to create the conditions to increase the participation of women, youth and other vulnerable groups in the preparatory studies and consultative processes, and management of faecal sludge infrastructure and services along the value chain in small urban centres in Uganda.

4.3.2 The studies will propose concrete measures in the direction of enhancing the role of women in the sustainable management of infrastructure to be designed.

4.4 Social Equity

The project aims to create the conditions necessary to improve living conditions in the small urban centres, including:

- Permanent/sustainable access to improved onsite sanitation and sustainable FSM services;
- Improvement of living conditions, health and safety and the consequent reduction in the prevalence and spread of waterborne diseases;
- Strengthening social cohesion through outreach activities of the structures that will be responsible for managing the FSM infrastructure and services;
- The creation of jobs through the organization and better management of FS value chain.

4.5 Effectiveness and Efficiency

4.5.1 The use of an integrated and participatory planning approach to prepare the feasibility studies and engineering designs for inclusive and sustainable management of faecal sludge in Uganda will ensure efficiency in project implementation and management, and the effectiveness of the FSM investments in maximizing benefits. The likely institutional anchoring of management of FS infrastructure and services in Umbrella Organizations, and the opportunity for capacity building, learning, documentation and sharing of project related experiences will enhance the efficient delivery of FSM services.

4.5.2 The opportunity to hold stakeholder workshops to validate findings and project results (outputs and outcomes), particularly with the selection of acceptable options and designs, and endorsement of the investment plan ensures ownership of the downstream investment projects by all stakeholders and donors. The project is fully in line with Ugandan Government Vision 2040, the NDP II and relevant sector policies and strategies. The project activities will apply an effective approach to provide sustainable and inclusive access to FSM services.

4.6 Financial Sustainability

4.6.1 The financial sustainability of the planned interventions will be ensured by the appropriate financial and economic assessment of the various options for inclusive and sustainable FSM. The project activities relating to awareness raising, clustering of small towns to ensure adequate generation quantities of FS for collection and transport, and charging and payment of affordable cost covering user fees for sustainable operation and maintenance of the facilities will contribute to enhance financial sustainability.

4.6.2 The MWE will actively engage with donors at the beginning and at all stages of the implementation of the project, and will coordinate the organization of the Investment Fora at the end of the project.

4.7 Overall Sustainability

4.7.1 The mobilization and participation of partners for the financing of technical and financial issues arising from the implementation of the project is one of the major pillars for the sustainability of project achievements.

4.7.2 The arrangement for on the job training of relevant staff in design, operation and maintenance of infrastructure will ensure long-term availability of skilled labour. MWE's signing of Memoranda of Understanding for FSM services with Umbrella Organizations and Town Councils, improved spatial and investment planning, and MWE's partnership arrangement with private sector entities, development partners and NGOs will contribute to the sustainable delivery of faecal sludge management services in Uganda.

5 LEGAL INSTRUMENT

5.1 The financing instrument to be used for this project is a grant, which will be governed by a Protocol of Agreement between the Republic of Uganda (the "Recipient") and the African Development Bank (the "Bank") as Administrator of the African Water Facility Special Fund.

5.2 Conditions Associated with Bank's Intervention

5.2.1 **Entry into force of the Protocol of Agreement**: The Protocol of Agreement will enter into force on the date of its signature by the Recipient and the Bank.

5.2.2 **Conditions Precedent to First Disbursement of the Grant**: The obligation of the Bank to make the first disbursement of the grant shall be conditional upon (i) entry into force of the Protocol of Agreement, (ii) nomination acceptable to the AWF of the Project Manager, and (iii) constitution of a Project Core Team within the MWE.

5.2.3 **Other Conditions**: The Recipient shall, in form and substance satisfactory to the Bank, fulfil the following conditions: (i) the establishment of a Project Steering Committee whose composition will be in line with section 3.2.4.

6 COMPLIANCE WITH POLICIES

This project complies with all applicable Bank policies as well as the AWF and Operational Procedures.

7 CONCLUSION AND RECOMMENDATION

7.1 Conclusion

7.1.1 The project offers an opportunity for increased access to improved sanitation and faecal sludge management in deprived urban settlements with financial contribution from the African Water Facility. The approach adopted is in line with AWF Operational Strategy and supports preparation of project pipeline for strategic investments in FSM along the value chain, and is replicable in other urban centres in Uganda and other African countries.

7.1.2 Given the clear logical framework and justifiable objectives, outputs and activities, and with adequate and sustainable implementation arrangements, there appear to be no outstanding issues that may adversely affect successful project implementation.

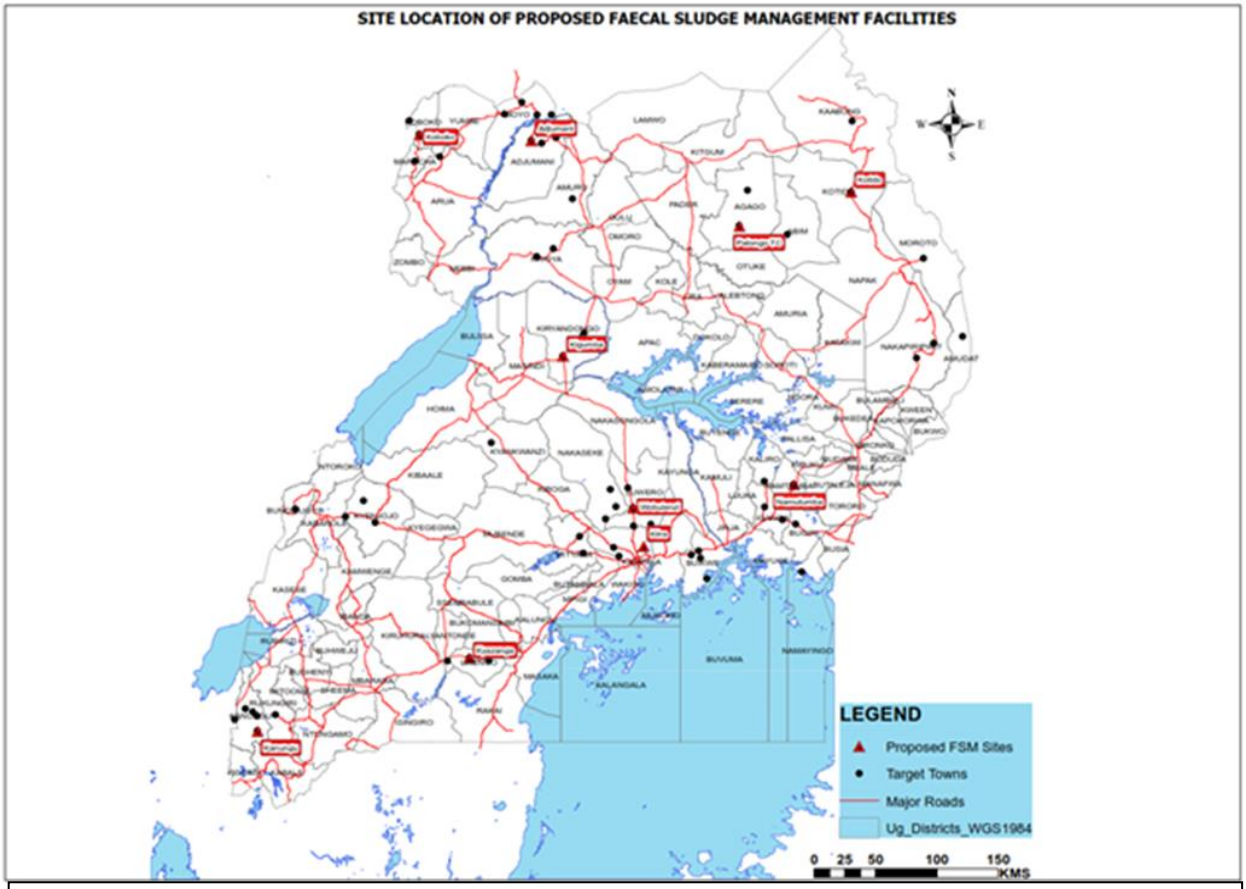
7.1.3 The total project cost is € 1,981,203 of which the AWF is requested to fund € 1,507,128 constituting about 76 % of the project cost. The remainder is funded through in kind contribution by the Recipient and project beneficiaries.

7.2 Recommendation

It is recommended that a Grant not exceeding € 1,507,128 from the African Water Facility Special Fund be awarded to the Republic of Uganda for the implementation of the project as described in this appraisal report.

ANNEXES

ANNEX 1: MAP OF UGANDA SHOWING PROJECT COMMUNITIES



Disclaimer
This map was provided by the African Development Bank exclusively for the use of the readers of the report to which it is attached. The names used and the borders shown do not imply on the part of the Bank and its members any judgment concerning the legal status of a territory nor any approval or acceptance of these borders.

TABLE A1: LIST OF SELECTED TOWN CLUSTERS

Region	Preferred Site Location	Selected Towns Per Cluster	Population Per Cluster (UBOS, 2014)	Projected Population (Growth Rate 3% (UBOS))	
				2018	2028
South west	Kanungu	Kanungu, Kihiihi, Katete, Kambuga, Butogota	51,851	58,359	78,429
	Kyazanga	Kyazanga, Kinoni, Mbirizi Lyantonde	29,471	33,170	44,578
North	Koboko	Koboko, Kaluba`-Keri, Ovujo, Omugo	73,249	82,442	110,796
	Patongo	Kalongo TC, Pader, Patongo TC	66,404	74,738	100,442
	Adjumani	Adjumani, Pakele, Dzaipi	36,610	41,205	55,376
Central	Kigumba	Kigumba, Bweyale, Kiryandongo, Katulikire	21,920	24,671	33,156
	Wobulenzi	Wobulenzi,Luwero,Bombo, Semuto, Zirobwe, Busiika, Bamunanika, Kiwoko	96,131	108,196	145,407
	Kiira	Kiira, Kasangatti, Namugongo, seeta, Kyaliwajala	437,821	492,771	662,244
East	Namutumba	Namutumba, Kaliro, Bugiri, Idudi, Namungalwe	78,473	50,943	68,463
	Kotido	Kotido, Moroto, Abim	45,262	50,943	68,463
		Total	**937,192**	**1,017,438**	**1,367,364**
		Percentage of National Population (%)		**2.3**	**3.1**

ANNEX 2: DETAILED PROJECT COSTS

(Amounts in Euro)

Description	Unit	Quantity	Unit Cost	Total Cost	AWF Cost	MWE Cost	Other
Component 1: Feasibility Studies and Design							
Key Staff							
Project Manager/Team Leader	Man mnth	24	12,000	288,000	288,000		
Design Engineer	Man mnth	20	10,000	200,000	200,000		
Sociologist/Gender Expert	Man mnth	12	8,000	96,000	96,000		
Environmental Specialist	Man mnth	8	8,000	64,000	64,000		
Geodetic Engineer/Surveyor	Man mnth	6	8,000	48,000	48,000		
Institutional Development Expert	Man mnth	6	8,000	48,000	48,000		
Quantity Surveyor	Man mnth	6	8,000	48,000	48,000		
Non Key Staff							
Economist/ Financial Analyst	Man mnth	4	5,000	20,000	20,000		
Other Professionals (Process, Structural, Electro mech., etc.)	Man mnth	10	8,000	80,000	80,000		
Technicians	Man mnth	20	3,000	60,000	60,000		
Data Entry Clerks	Man day	120	50	6,000	6,000		
Field Enumerators	Man day	200	50	10,000	10,000		
Sub Total				**968,000**	**968,000**		
Reimbursables							
International flights	trip	4	1,000	4,000	4,000		
Miscellaneous travel expenses	trip	4	100	400	400		
Per Diem (International Staff)	day	198	110	21,780	21,780		
Per Diem (Local Staff)	day	567.6	50	28,380	28,380		
Local Transportation Costs	month	24	2,500	60,000	60,000		
Office rent / Office furnishing / Clerical asst.	month	24	850	20,400	20,400		
Communication	month	24	100	2,400	2,400		

Description	Unit	Quantity	Unit Cost	Total Cost	AWF Cost	MWE Cost	Other
Drafting, reproduction of reports	LS	1	5,000	5,000	5,000		
Engineering Equipment	LS	1	10,000	10,000	10,000		
Use of computers, software	LS	1	10,000	10,000	10,000		
Socio-economic surveys (Provisional Sum)	LS/Cluster	10	5,000	50,000	50,000		
Faecal sludge characterization - laboratory tests	LS/Cluster	10	4,000	40,000	40,000		
Geotechnical surveys (Provisional Sum)	LS/Cluster	10	5,000	50,000	50,000		
Geodetic Surveys	LS	1	25,000	25,000	25,000		
ESIAs	LS	10	4,000	40,000	40,000		
Training of counterpart staff (Provisional Sum)	LS	1	20,000	20,000	20,000		
Sub Total				**387,360**	**387,360**		
Component 2: Project Management							
Project Supervision/Community Engagement Support							
Per Diem for PCT Staff	Day	1,500	50	75,000		75,000	
Fuel & Lubricants	LS	1	25,000	25,000		25,000	
Office Equipment & IT Support							
Computers/Printers	No.	5	2,500	12,500		12,500	
Internet services/communication	Month	24	1,000	24,000		24,000	
Stationery & office consumables	LS	1	25,000	25,000		25,000	
Transport		1	50,000	50,000		50,000	
Office Space/Furniture, etc.	Month	24	2,500	60,000		60,000	
Stakeholder workshops/Investment Fora	Number	6	13,333	80,000	80,000		
Staff Costs	Month	18	2,500	45,000		45,000	
Land Acquisition	LS	1	120,000	120,000			120,000
Sub Total				**531,500**	**80,000**	**331,500**	**120,000**
Total Project Base Cost				**1,886,860**	**1,435,360**	**331,500**	**120,000**
Add 5% Price Contingency				**94,343**	**71,768**	**16,575**	**6,000**
Total Project Cost				**1,981,203.0**	**1,507,128.0**	**348,075.0**	**126,000.0**

ANNEX 3: PROJECT IMPLEMENTATION SCHEDULE

The Project shall be implemented over a duration of 30 months according to the following time schedule:

S/N	Description	Year 1												Year 2												Year 3					
		Months																													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	**Approval**	◆																													
2	**Signing**			◆																											
3	**Launch Workshop**						◆																								
4	**Acquisition of Consultancy Services**		▬	▬	▬	▬	▬																								
5	**Initial Planning and Community Engagement**							▬	▬	▬																					
6	**Feasibility Studies**								▬	▬	▬	▬	▬	▬																	
	Socio Economic								▬	▬	▬																				
	Technical									▬	▬	▬																			
	Institutional/Financial										▬	▬	▬																		
	Site Identification, Screening and Selection										▬	▬	▬	▬																	
7	**Preliminary Engineering Designs and ESIA Scoping**											▬	▬	▬	▬	▬	▬														
	Preliminary Engineering Designs											▬	▬	▬	▬	▬															
	Definition of Management Options													▬	▬	▬															
	Financial and Economic Analyses														▬	▬															
	ESIA Scoping														▬	▬															
8	**Stakeholder Validation Workshop**																◆						◆								
9	**Detailed Engineering Designs and ESIA**																	▬	▬	▬	▬	▬									
	Site Investigations																	▬	▬												
	Detailed Engineering Designs																		▬	▬	▬	▬									
	Management Options																				▬	▬									
	ESIAs																		▬	▬	▬	▬									
	Financial and Economic Analyses																					▬	▬								
10	**Tender Documentation, Costing and FMPs**															▬	▬					▬	▬								
	Specifications															▬						▬									
	Tender Documentation and Costing															▬	▬					▬	▬								
	FMPs																					▬	▬								
11	**Investment Plan**																		▬						▬						
12	**Progress Reporting**								◆			◆				◆			◆			◆			◆			◆			
13	**Audit**																												◆		
14	**PCR**																													◆	

ANNEX 4: PROCUREMENT ARRANGEMENTS

1. Executing Agency's Capacity

Executing Agency Procurement Capacity: The MWE has a fully staffed Procurement and Disposal Unit (PDU) headed by a Principal Procurement Officer. The PDU is responsible for procurement of good, works and services for the MWE with technical support from the directorates within the Ministry. The PDU has experience in managing procurement under Bank financed projects; and adopts a system for keeping procurement records with documented filing protocol or archiving policy. A Contracts Committee that approves all procurement activities is in place and is functional Procurement Department.

2. Procurement of Goods, Works and Consultancy Services

2.1 The acquisition of consulting services financed by the Bank will be in accordance with the ***Procurement Policy for Bank Group Funded Operations dated October 2015 as*** amended from time to time, using the relevant Bank Standard Bidding Documents and the provisions stipulated in the Financing Agreement. The Procurement arrangements for the project are summarized in Table 1 below.

2.1.1 ***Consultancy Services:*** The acquisition of consultancy services amounting to **€ 1,355,360** will be procured through shortlisting of consulting firms under QCBS using available Bank's Standard Request for Proposal document. Consultancy services under this method will include feasibility studies assessment and design of FS treatment facility and preparation of tender documentation. Advance contracting may be used for acquisition of consultancy services.

2.1.2 **Project Management:** Expenditures during project implementation including stakeholder workshop and investment fora at an aggregate cost of **€ 80,000**, office supplies, utilities, consumables, advertising expenses, internet service, communication, fuel, maintenance and insurance of vehicles, costs related to staff travel, etc., will be procured by the Government of Uganda (GoU).

3. Procurement Arrangements

3.1.1 The procurement arrangements for the various components, elements, and items, under the different expenditure categories financed by the loan are in Table 5 below. Large-value contracts, each group of similar transactions/contracts, the different PMPs, estimated costs, oversight requirements, and the timeframe as agreed between the Borrower and the Bank, are in the Procurement Plan

Table 1: Procurement Arrangements (expressed in million Euros)

		EU '000					
S/N	**Project Categories**	**Borrower PMPS**			**Bank PMPS**		
		OCB	**LCB**	**Other**	**QCBS**	**Other**	**Total**
1.0	**Consulting Services**						
1.1	Feasibility Studies and Detailed Design				**1,355,360**		**1,355,360[1,355,360]**
2.0	**Operating Costs**						

2.1	Program Management, Operational costs and Workshop			396,500			**396,500[80,000]**
2.2	Land Acquisition			120,000			**120,000**[0,000]
3.0	**Contingency**						
3.1	Provide for 5% price contingency			22,575		71,768	**94,343[71,768]**
	GRAND TOTAL			**539,075**	**1,355,360**	**71,768**	**1,966,203[1,507,128]**

Figures in brackets are amounts financed by AWF

4. Advertising

4.1 General Procurement Notice

The text of a General Procurement Notice (GPN) will be agreed with the EA and it will be issued for publication in UNDB online and in the Bank's Internet Website, upon approval of the Financing Proposal.

5. Procurement Plan

AWF shall review the procurement arrangements proposed by the Recipient in the Procurement Plan for its conformity with the Grant Agreement and its Rules. The Plan shall cover an initial period of at least 18 months, and shall be updated on an annual basis or as necessary always covering the next 18 months period of project implementation. AWF shall give prior approval to any proposed revisions to the Plan.

Tentative Procurement Plan- CONSULTANTS				
1	***General***			
	Country/ Organization:	**Uganda/Ministry of Water and Environment**		
	Program Name:	**Strategic Towns Water Supply and Sanitation Project**		
	Program SAP Identification #:	X		
	Loan Number:	X		
	Executing Agency:	**Ministry of Water and Environment**		
	Approval Date of Procurement Plan:	X		
	Date of General Procurement Notice:	X		
	Period Covered by these Proc. Plans:	**Jan 2019 to June 2020**		
2	***Consulting Services: Prior/Post review Threshold***			
	Selection Method	**Prior review Threshold (UA)**	**Post review Threshold (UA)**	**Frequency of Review**
	1. QCBS	All	-	All prior review
	2. LCS	All	-	All prior review
	3. Individual	All	-	All prior review
3	***Consulting Services: Selection Method and Time Schedule for 5 Years***			

	Description	Selection Method	Lump sum or Time-Based	Estimated Amount in EU (000)	Prior/ Post Review	EOI Publication Date	Contract Start Date
3.1	Feasibility Studies and Detailed Design	QCBS	TB	1,355.36	Prior	Feb 2019	Aug 2019
	Total Cost			**1,355.36**			

6. Bank's Oversight of Borrower's Procurement

6.1 Oversight under BPS: Under BPS, procurement oversight will be carried out according to national procurement laws and regulations. National oversight institutions comprising the Public Procurement and Disposal of Public Assets Authority (PPDA) and Office of the Auditor General (OAG) will conduct their own audits as per national laws and regulations. Independent auditors will also carry out monitoring of transactions or groups of similar transactions under the project, where necessary, relying on the national audit reports as input to their independent reviews. The Borrower shall, based on these, compile and submit annual audit reports to the Bank.

6.2 Oversight under BPM: Procurement undertaken through Bank shall be subject to prior review.

ANNEX 5: POLICY AND INSTITUTIONAL FRAMEWORK

1. Introduction

The Water and Environment sector is governed by a number of policies and strategies that include: Water Act, Water Policy (currently under review to include sanitation), Public Health Act, Environment Policy, and Environmental Health Policy; and the Improved Health and Sanitation Strategies for Urban and Rural Areas. The sector consists of two sub-sectors: the Water and Sanitation (WSS) subsector comprising water resources management, rural water supply and sanitation, urban water supply and sanitation, and water for production; and the Environment and Natural Resources (ENR) sub-sector that comprises environmental management, management of forests and trees, management of wetlands and aquatic resources, and weather and climate. The institutional framework consists of:

(a) The Ministry of Water and Environment with the Directorates for Water Development (DWD), Water Resources Management (DWRM) and Environmental Affairs (DEA);

(b) Local Governments (Districts and Town Councils), which are legally in charge of service delivery under the Decentralization Act;

(c) A number of de-concentrated support structures related to MWE, are at different stages of institutional establishment, including Technical Support Units (TSUs), Water Supply Development Facilities (WSDFs), Water Management Zones (WMZs), and Umbrella Organizations;

(d) Four semi-autonomous agencies: (i) National Water & Sewerage Corporation (NWSC) for urban water supply and sewerage; (ii) National Environment Management Authority (NEMA) for environment management; (iii) National Forestry Authority (NFA) for forestry management in Government's Central Forest Reserves; and (iv) the Uganda National Meteorological Authority (UNMA) for weather and climate services;

(e) NGOs/CBOs (coordinated through UWASNET and ENR-CSO Network) and Water User Committees/Associations;

(f) The private sector (water and sanitation infrastructure operators, contractors, consultants and suppliers of goods).

2. Activities Undertaken by Sanitation and Water Sector Institutions

Activities undertaken in Sanitation and Water for Production (mainly focusing on agricultural and animal production) require close coordination with other line ministries including the Ministry of Health, Ministry of Education & Sports and the Ministry of Agriculture, Animal Industry & Fisheries. The Water and Environment Sector Working Group (WESWG) provides policy and technical guidance and has representatives from key sector institutions (GoU), Development Partners and NGOs). Specific roles and responsibilities of some key institutions include:

a) Ministry of Water and Environment: Responsible for sector policy and standards, managing and regulating water resources, and related development and management priorities. The Ministry is also responsible for overall sector monitoring and evaluation to track performance, and effectiveness of development programmes;

b) *Ministry of Health:* Responsible for hygiene and sanitation promotion for households, and acts through the Environmental Health Division of the Ministry. The Ministry coordinates with Ministry of Education for development of sanitation related infrastructure and software activities in schools, and Ministry of Water and Environment for development of public sanitation infrastructure in small towns and rural growth centres;

c) *Ministry of Education and Sports:* Responsible for delivery of school sanitation facilities and hygiene education together with promotion of handwashing in primary schools.

d) *Ministry of Gender, Labour and Social Development:* Responsible for gender responsive policy development, and community development and mobilization.

e) *Ministry of Finance, Planning and Economic Development:* Responsible for resource mobilization and sector allocation, coordination of development partner resources, and financial reporting, and compliance monitoring and reporting on sector and national development objectives.

f) *Water and Environment Policy Committees:* The Water Policy Committee (established under the Water Act Cap 152, and Water Resources Regulations (1998) promotes national level inter-ministerial and inter sectoral coordination of water resources development and management, and also coordinates preparation of water quality standards. The Environment Policy Committee (established under the National Environment Act Cap 153) provides policy guidance and oversight to NEMA, and ensures integration of environmental considerations into sector policies, plans and programmes of the various ministries.

g) *National Environment Management Authority:* Responsible for ensuring protection of the environment through enforcement of environmental management laws and regulations at the national and local levels, in collaboration with sector Ministries.

h) *National Water and Sewerage Corporation:* Responsible for water supply and sewerage services delivery in large urban towns, small towns and rural growth centres with population over 5,000 people.

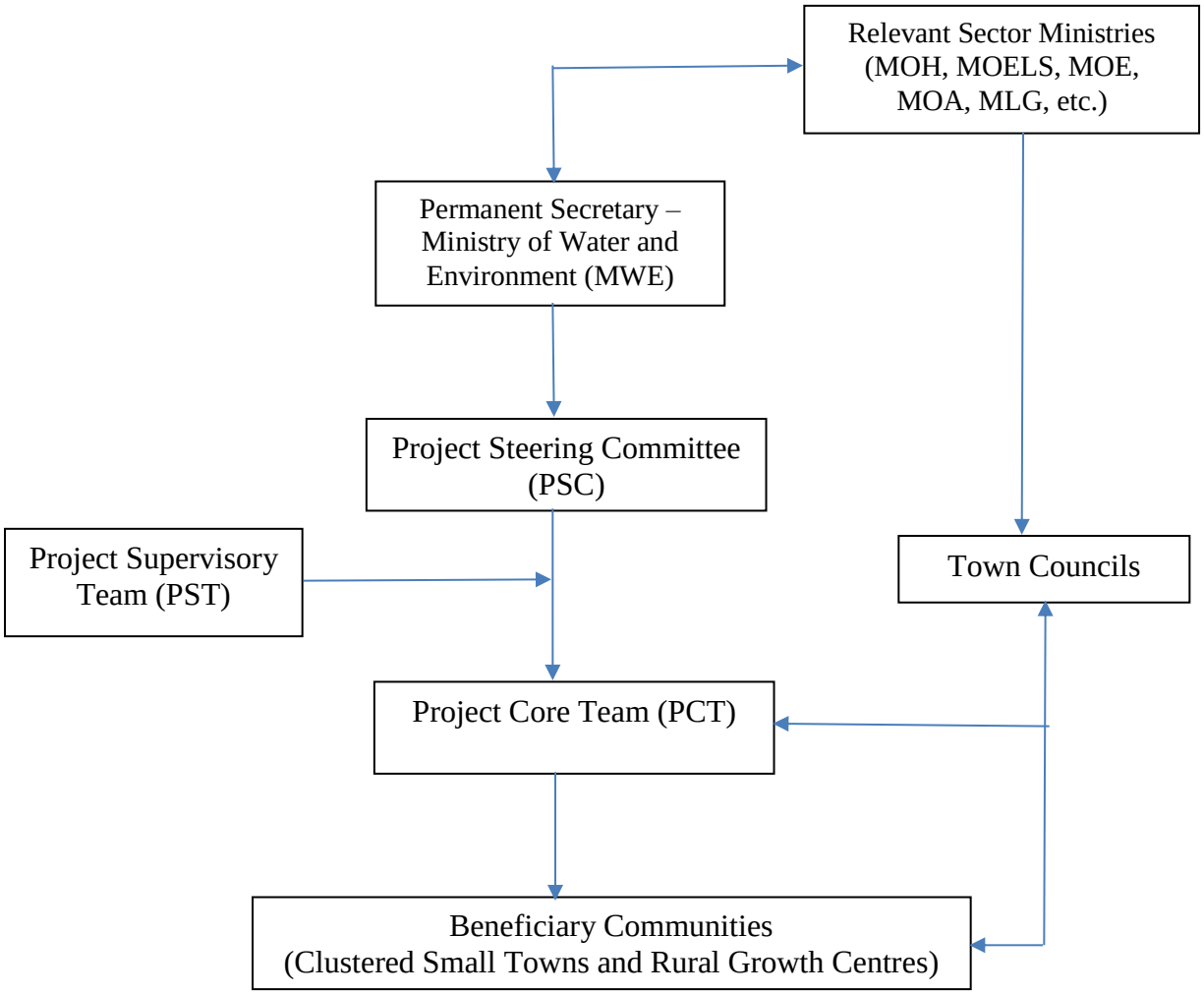
i) *Town Councils:* Responsible for delivery of municipal solid waste management and on site sanitation services in collaboration with relevant ministries and agencies.

j) *Private Sector (PS) Operators:* Organized as an Association of Cesspit Emptier Operators, the private sector operators are mainly responsible for provision of Feacal Sludge (FS) collection and transportation services through contracting and franchising arrangements. Members of the Association own and operate highly depreciated trucks that require major repairs or replacement. They mainly operate in Kampala, where demand for FSM services is huge, and the Kampala City Council Authority (KCCA) facilitates incentives for collection services. KCCA has set up a Call Centre to regulate service quality and charges, and also provides periodic training to the Association's members. Operators are often reluctant to operate in the up-country small towns due to (a) absence of sites for FS treatment and disposal; (b) long haulage distances and related costs; and (c) limited capacity of households to pay for the services. Operators have limited access to credit and affordable spare parts, which impacts adversely on their operations.

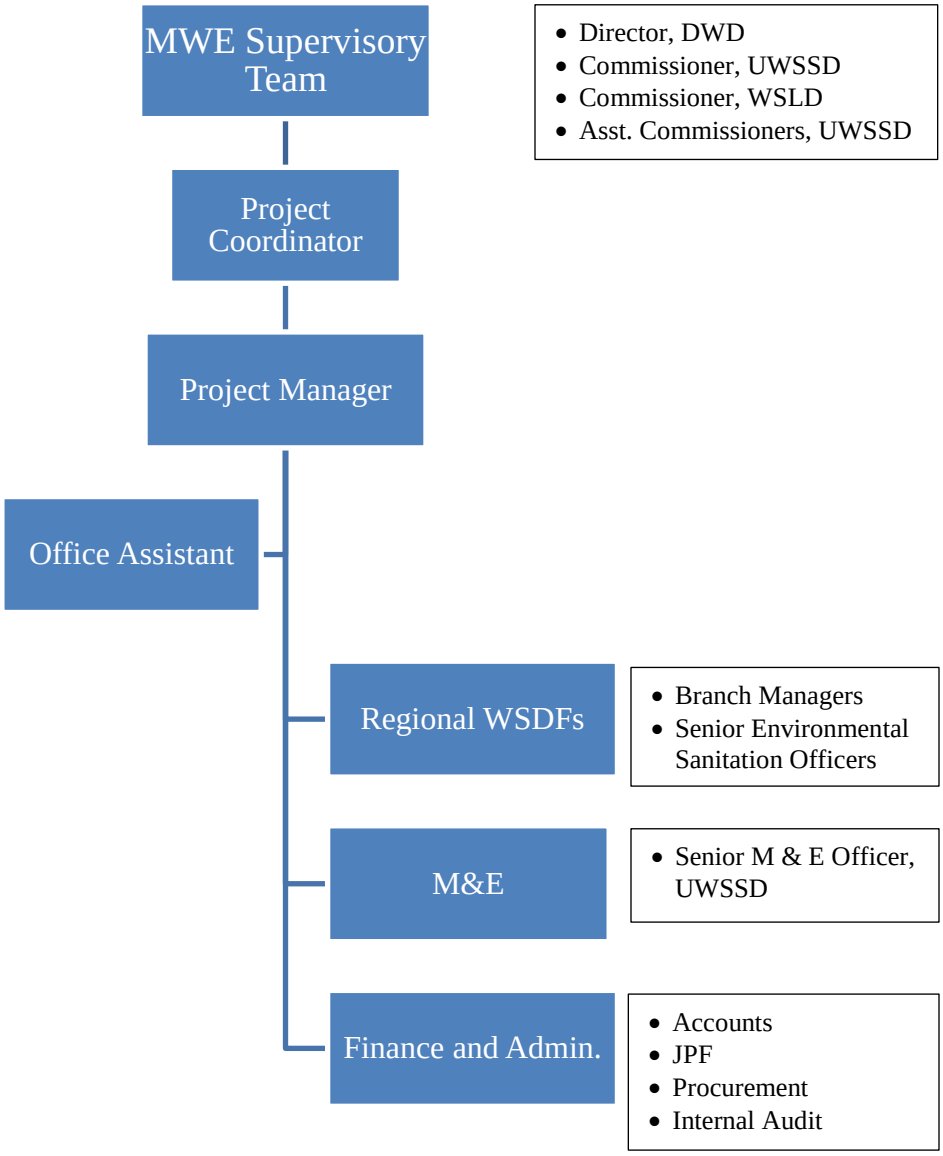
k) *Other Private Sector Entities:* Consultants, Contractors and Suppliers provide various services to develop, operate and maintain relevant sanitation infrastructure and services.

The project offers an opportunity to further examine and implement appropriate technologies for faecal sludge chain management, including institutional arrangements for sustainable operation and maintenance, and enhanced faecal sludge reuse to contribute to cost recovery.

ANNEX 6: PROJECT ORGANIZATION AND INSTITUTIONAL LINKAGES



ANNEX 7: PROJECT CORE TEAM



ANNEX 8: PROJECT CORE TEAM 'S TERMS OF REFERENCE

1. **The Project Coordinator –** Will be based in the MWE, and He/she will be at least a Principal Engineer with at least a master's degree in a civil engineering or any related field, and a minimum of 10 years' professional experience in municipal engineering, and with demonstrable experience in the planning, design and construction of water and sanitation infrastructure. He/She will be responsible for coordinating the following activities:
   - Participate in project launching and acquisition process for the Main Consulting Firm(s).
   - Provide an oversight role on the management and implementation of all project-related activities, and prepare work and procurement plans for the project period.
   - Provide monthly reports to the MWE and AWF on administrative, financial, accounting, contracting, implementation and monitoring issues, and ensure liaison with the AWF.
   - Organize meetings of the Project Supervisory Team to discuss project progress and outputs, following the existing inter-institutional coordination mechanisms.
   - Organize monthly meetings of the Project Management Team to review progress and resolve implementation bottlenecks.
   - Coordinate and monitor Consultants' performance, and facilitate capacity-building activities.
   - Organize investment fora to present the project results for funding consideration.

2. The **Project Manager** - Will be based in MWE. He/she will be a Senior Professional appointed by the MWE with good experience in the delivery of water supply and sanitation infrastructure and services, and in project management. The Project Manager will:
   - Assist the Project Coordinator in the day-to-day management of the project implementation activities.
   - Ensure close collaboration with the project consultants' team.
   - Prepare and submit to the Project Coordinator, all monthly and quarterly progress reports, and other project related documentation.
   - Liaise with MWE, Councils, Central Government and other local stakeholders on meetings/workshops required by the project consultants.
   - Assist in needs identification and development of options for project intervention.
   - Ensure that senior staff of the MWE and MOF are fully involved and informed of project progress. It is important to note that the success of the project will depend greatly on the ownership and involvement of staff from the Councils and Umbrella Organizations.

3. **Finance and Administration Officer** will be seconded staff from the MWE. He/she will:
   - Keep track of and register all financial transactions related to the implementation of the project in accordance with project financial management requirements.
   - Ensure that an externally appointed and independent auditor audits accounts yearly.
   - Prepare monthly and quarterly financial statements and reports and submit to the Project Coordinator as inputs for progress reporting; and provide general administration support.

- Provide support to build the capacity of the Umbrella Organizations and WSDFs in financial management and project accounting.

4. Monitoring and Evaluation Officer will be seconded staff from the MWE. He/she will:

- Develop and maintain an M & E database for the project.
- Lead development of and oversee the review of project level Monitoring & Evaluation (M&E) plan and associated work plans for each component/activity as reflected in the results framework;
- Serve as focal point for providing M &E inputs on Implementation Progress Reports (IPRs); and prepare and submit M&E inputs as per the results framework to the Project Coordinator as inputs for progress reporting.
- Ensure quality control of M&E outputs (e.g., surveys, etc.) by contributing substantively to the design and field testing of field survey data capture and monitoring methodology; and review, supervise the design and implementation of the surveys, participatory data collection protocols, data verification techniques, and other technical evaluation and analytical tasks under the project.

ANNEX 9: CLIMATE CHANGE

1.1 The geographical range of the project is widespread, with sites in different regions of Uganda. Many regions in Uganda are already affected by climate change impacts, with temperature rises and the frequency of extreme weather events such as heavy rains, drought, flooding and disease being significant. Uganda has a tropical climate, and can be broken into two sub-regions based upon monthly rainfall seasonality: Northern Uganda with a boreal summer rainfall season (April-October) and a mean rainfall of approximately 1100 mm and a mean daily average temperature of 24°C; Southern Uganda with a bi-modal rainfall pattern (March-May and November December), receiving a mean annual rainfall of 1300 mm and a mean daily average temperature of 22°C. A third area, the extremely southern part of the Lake Victoria Basin with an austral summer (November-April), receives approximately 1000 mm mean annual rainfall and a mean daily average temperature of 22°C.

1.2 Uganda has a high level of vulnerability to climate change, ranking 166 out of 181 countries on the ND-GAIN Vulnerability Index, with access to improved sanitation facilities and project change in the transmission season of vector-borne diseases being key health indicators, along with access to reliable drinking water. Uganda has prepared a National Climate Change Policy and Strategy (2015) that includes the action *"Make provisions for a safe water chain and sanitation facilities to limit outbreaks of waterborne diseases, and implement strong public awareness programmes to promote better hygiene."* A similar statement of intent can be found in Uganda's Nationally Determined Contributions. A National Adaptation Plan for Uganda that would provide a more sectoral approach for sanitation activities is under preparation.

1.3 Evidence of increased temperatures can be found in both Northern and Southern Uganda between 1979-2015, with the former increasing by 0.44°C and the latter 0.48°C. In the same period, no trends were detected in terms of total rainfall in the northern region, but there was a reduction in the number of heavy rain events and an increase in the number of rainy days. In Southern Uganda the total rainfall was trending upwards, with more heavy rainfall events, but no change in the number of rainy days.

1.4 In terms of future projections, average temperatures in both Northern and Southern Uganda are expected to rise by +1.5 – +2.5°C by 2050 and +3-+5°C by 2100. In both sub-regions, total annual rainfall is projected to increase by up to 40% by 2100, with change being more evident after the 2040's in Northern Uganda, and after the 2060's in southern Uganda. The number of extreme rain days are also projected to rise in both sub-regions, with increased flooding a key challenge.

1.5 The projected increase in the number of extreme rain days over the next few decades is an issue in the context of designing and delivering sanitation projects. A key interaction between climate change and sanitation is the risk posed by increase extreme rainfall that leading to damage to sanitation infrastructure or sewerage overflows, from poorly implemented or poorly maintained sanitation infrastructure, into streets, drains, and waterways that can increase health risk from diseases such as cholera. This, when coupled with high levels of vulnerability and low adaptive capacity, means that actions around improving sanitation that can help reduce vulnerability are important for building climate resilience.

1.6 Climate change aspects that should be taken into account across FSM include impacts of extreme weather and potential damage or overflows on containment; impact of flooding on accessibility, including routes, on emptying processes and transport, and site selection and potential for damage in terms of treatment options.

ANNEX 10: GUIDELINES ON AWF COMMUNICATION AND VISIBILITY

1. Background

1.1 Communication and branding are very important to the AWF. Indeed, the AWF considers communication as a strategic function firmly linked to its business strategies and objectives. Regular communication with stakeholders helps strengthen the credibility of FEF and ensuring their confidence and esteem, which in turn help to strengthen and protect the reputation of the AWF. Communication is also an activity related to access to information. The AWF is a multilateral fund that is accountable to a board of directors who expects FEF complies with the highest standards of accountability and transparency. Thus, the AWF has committed to make every effort to communicate, share and report to its stakeholders and the general public all the information that will be useful and relevant. This commitment requires effective and regular communication on achievements, progress and results of the AWF using all available means, in a timely manner. All these are part of good business conduct AWF, and are essential to attract and retain donors, and maintain its "social license" of operation.

1.2 The branding is to ensure that the public knows the existence of the AWF and can distinguish it from other funds or organizations in the field of water. Branding is the use of a recognizable visual marker, logo, which embodies the AWF and carries his identity. The brand recognition is achieved over time, through activities designed to increase brand visibility, for repeated use and exposure logo at strategic locations and times. The AWF logo is used as a seal or a signature to indicate the financial support of AWF or a special collaboration.

1.3 The AWF has prepared guidelines on communication and visibility to the attention of partners, AfDB Regional Offices and grantees to help FEF more effectively achieve its goals of communication and visibility, as provided in the long-term communication strategy of the AWF in 2006 voted by its Board of Directors in 2006.

2. General Conditions

2.1 Before embarking on any process for the preparation of communication activities on the project funded by AWF, it is strongly recommended to contact the communications officer to the secretariat of the AWF, taking also informed the project manager of the AWF.

2.2 As a minimum, and to the extent possible, the logo of the AWF is to be applied to all communication documents regarding the project funded by the AWF. The proper use of the logo must be discussed with the head of communications of the AWF.

2.3 The AWF should be mentioned orally as a donor of the project it funds at public events in which the project is involved, and should also be mentioned as a donor in all PowerPoint presentations on projects funded by the AWF, using the name and logo of the AWF appropriately.

2.4 The logo should be obtained on request from the head of communications of the AWF.

2.5 The relevant documents and publications of the project must contain the logo of the AWF, and this sentence on the cover page: "This project / program / study is funded (e) by the African Water Facility."

2.6 Implementing agencies and implementation must always have a link to the AWF website on the page of their website on the project / activity funded by the AWF. The website is: www.africanwaterfacility.org .

3. Validation Process

The management of the AWF is responsible for the final validation of any communication product of the AWF.

4. Press Releases Media and Advisory

A press release of the AWF is broadcast at launch (approval or signature) and completion of the project.

4.1 Press releases AWF should always include a quote from the Coordinator of the AWF, which must also be validated.

4.2 The AWF appreciates and encourages any initiative to produce joint press releases with its partners (between the start and end of the project).

4.3 Where the gift recipient wants to produce a press release, it is necessary to coordinate this activity with the head of communications of the AWF in order to receive a quote from the Coordinator of the AWF, as appropriate, and obtain approval.

4.4 The AWF should be included in the title and / or the first paragraph of the press release, if any.

4.5 The press release should include the logo of the AWF, in addition to mention that funding was provided by the AWF and the amount of such financing.

4.6 If a press conference is planned, the press release should include the name of a high-level representative of the AWF will be present at the press conference, if appropriate.

4.7 All press releases must bear the name and contact information for the communications of the AWF and the head of communications / media relations of the gift recipient.

4.8 The text description of the AWF ("About AWF") must be added to the text, including the address of the AWF website. Please contact responsible for communications AWF to get the latest version, if needed.

4.9 The MEF is responsible for the final validation of all press releases following an editorial process involving publishers.

4.10 The above rules also apply to media advisories

5. Press Conferences

5.1 The press conference to launch the projects funded by the AWF to be organized in cooperation with the AWF, as far as possible.

5.2 The invitations should bear the logo of the AWF.

5.3 The AWF logo must appear conspicuously with any banner or poster used during the conference.

5.4 Press kits should include a press release with the logo of the AWF.

5.5 If possible, a banner AWF must be available and implemented to serve as a backdrop for meetings television and photography.

6. Press Visits

Journalists are invited to visit the project funded by the AWF, accompanied by representatives of the AWF or focal point FEF housed within the authority / government of the gift recipient.

7. Visits by Representatives of Governments, Donors of AWF

7.1 The project visits by government officials and AWF donors are encouraged. These should be prepared in coordination with the AWF and focal points of the AWF host government. This may also include meetings with local beneficiaries.

7.2 These visits may also include the participation of government representatives and donors AWF in roundtables and other events.

8. Cards, Brochures and Newsletters

8.1 All relevant pamphlets and brochures of the project / program financed by the AWF should incorporate the basic elements of the visual identity of the AWF, i.e. the logo of the AWF with or without its slogan.

8.2 Leaflets and brochures produced by the gift recipient must also incorporate a definition of the AWF, or descriptive text, see section "Press releases and media advisories."

8.3 The cover page of all documents relating to the project financed by the AWF must clearly identify the activity as part of an activity funded by the AWF.

8.4 Copies of publications including electronic copies should be made available to the AWF.

9. Electronic Communication

Any electronic communication disseminating information on projects funded by the AWF, including websites, newsletters and social media must include a link to the website of the AWF.

10. Safety

The executing agency must produce billboards, posters or banners to promote their activities funded by the AWF or related to the AWF at exhibitions and other events, which will be placed at strategic locations visible to all.

11. Vehicles, Supplies and Equipment

11.1 The AWF generally requires that vehicles, supplies and equipment financed by the AWF are clearly identified, and visibly carry the logo of the AWF and the phrase "Provided with the support of the

African Water Facility" in English, French or Portuguese, or any official language of the country or institution, if applicable.

11.2 This condition can be the subject of negotiations between AWF and the gift recipient since some supplies and equipment may be exempted.

11.3 The gift recipient must provide proof of compliance with this rule (emailing digital photos is recommended).

12. Photographs and Audio-visual Productions

12.1 High-resolution professional digital photographs (300 dpi) project funded by AWF must be provided to the AWF throughout the different phases of the project to document the progress of actions and events related to the project, which will be used in print or electronic publications.

12.2 All photos must be submitted with a complete legend, and the information needed to assign ownership.

12.3 The AWF will be permitted to use or reproduce photos submitted to it without payment of royalties.

12.4 Whenever required, audio-visual materials must acknowledge the support of the AWF, highlighting the AWF logo at the beginning and / or end of the movie / documentary.

12.5 Copies of the film (s) / document (s) must be provided to the AWF.

13. Commemorative Plates or Safety

13.1 If relevant, the gift recipient must place a permanent plaque or other type of commemorative signs in the most visible part of the building, infrastructure or near the project site has been funded by AWF, next to the name the implementing agency and / or the name of the project visible to visitors.

13.2 If necessary, the plate or signalling may contain the following sentence: "This [Infrastructure's name] was funded by the African Water Facility" next to the logo of the AWF.

14. Promotional Items

14.1 Before taking any decision on the production of these items, it is necessary to consult the Communications Officer of the AWF.

14.2 Promotional items bearing the logo of the AWF can be distributed in support of communication activities for the project financed by the AWF. It may be T-shirts, caps, pens, notebooks, USB sticks, etc.

ANNEX 11: CONSULTANCY SERVICES TERMS OF REFERENCE

THE REPUBLIC OF UGANDA

MINISTRY OF WATER AND ENVIRONMENT

TERMS OF REFERENCE

FOR

CONSULTANCY SERVICES FOR FEASIBILITY STUDIES AND DETAILED DESIGN OF FAECAL SLUDGE SERVICE CHAIN MANAGEMENT IN SELECTED UN-SEWERED URBAN CENTERS IN UGANDA

October 2018

1. INTRODUCTION

1.1 Background

1.1.1 The Government of Uganda (GoU) has adopted the Uganda Vision 2040; and has committed to improve the socio-economic status of Ugandans through key interventions like improved delivery of water and sanitation services. Recent Government efforts to promote delivery of household and public sanitation facilities, coupled with behaviour change campaigns has resulted in increased access to sanitation (about 86%) in urban areas. Over 90 percent of the existing sanitation facilities are on-site, and lack safe means of faecal sludge chain management (emptying, transportation, and disposal or re-use). The situation is exacerbated by the steady population growth due to increasing rate of urbanization (approximately 5.3%).

1.1.6 A nationwide sector assessment supported by World Bank Water and Sanitation Program (WSP) in 2014, identified fifty (50) potential clusters of small towns to be provided with shared FS treatment/disposal infrastructure to help improve FS service chain management across Uganda. To date, less than 40% of the number of clustered towns has been provided with the needed treatment facilities but without improved collection capacity. The Ministry is therefore directing its efforts towards improving the situation by providing additional treatment facilities and improving collection capacity to ensure universal access to all small towns' dwellers by 2030, in line with Government development aspirations and the SDGs.

1.1.7 In addition, the existing potential for reuse is not adequately explored to maximize the related economic benefits. Several initiatives on FS reuse exist, but are not coordinated to derive synergies and draw lessons to improve performance. Reuse benefits can contribute to part recovery of operation and maintenance costs, and creation of job opportunities to improve livelihoods, particularly for the urban poor. A systematic and coordinated assessment of FS reuse market potential, together with development of strategies for promotion, marketing and sales would provide the opportunity to maximize related economic benefits.

1.1.8 To ensure sustainable delivery of infrastructure and services along the entire sanitation value chain (containment, collection, treatment and reuse), it is necessary that each link along the chain be developed based on appropriate business models, supported by relevant and effective regulation and institutions. Given a supportive environment, and based on experience in Kampala, this is likely to attract private sector participation and financing to accelerate delivery along the chain, once the business models are demonstrable and can result in achieving some margin of profit.

1.1.5 At the request of the Government of Uganda, the African Water Facility intends to provide funding support for consultancy services to undertake stakeholder consultations and prepare feasibility studies, detailed designs and investment plans for faecal sludge management in un-sewered urban centres in Uganda. The results of the studies and designs will inform stakeholders and development partners on the investments required, and will help mobilize resources to finance related infrastructure and services. The Ministry of Water and Environment therefore seeks to engage the services of a consulting firm to conduct the relevant studies and detailed designs for faecal sludge service chain management in ten (10) selected urban clusters.

1.2 Assignment Objectives

1.2.1 The overall objective of the assignment is to conduct feasibility studies and prepare detailed designs for sustainable delivery and access to inclusive sanitation and faecal sludge chain management services that will contribute to improved public and environmental health, productivity and living conditions of selected un-sewered urban centers in Uganda.

1.2.2 The specific objectives of the consultancy assignment are:

i) To conduct feasibility studies and prepare detailed designs for provision of sustainable access to faecal sludge management infrastructure and services in ten (10) selected un-sewered urban clusters in Uganda.

ii) To provide a basis for the mobilization of adequate resources for future investments.

2. AREA AND SCOPE OF THE ASSIGNMENT

2.1 Project Area

2.1.1 Through the WSDFs, the Ministry of Water and Environment provides support to meet water and sanitation infrastructure requirements in the various regions of Uganda – Central, North, Southwestern and Eastern Regions. As earlier mentioned, the Water and Sanitation Program/World Bank assessment identified several clusters of towns across the various regions, as a basis for the implementation of regional fecal sludge management services. Ten (10) town clusters without any such services have been identified for further studies and subsequent implementation support under the assignment as shown in Table 1.

Table 1: Town Clusters

Region	Preferred Site location (clusters)	Towns to be served	Population in Town cluster as in UBOS 2014	Projected population for 2028
South west	Kanungu	Kanungu, Kihiihi, Katete, Kambuga, Butogota	51,851	78,429
	Kyazanga	Kyazanga, Kinoni, Mbirizi Lyantonde	29,471	44,578
North	Koboko	Koboko, Kaluba`-Keri, Ovujo, Omugo	73,249	110,796
	Patongo	Kalongo TC, Pader, Patongo TC	66,404	100,442
	Adjumani	Adjumani, Pakele, Dzaipi	36,610	55,376
Central	Kigumba	Kigumba, Bweyale, Kiryandongo, Katulikire	21,920	33,156
	Wobulenzi	Wobulenzi,Luwero,Bombo, Semuto, Zirobwe, Busiika, Bamunanika, Kiwoko	96,131	145,407
	Kiira	Kiira, Kasangatti, Namugongo, seeta, Kyaliwajala	437,821	662,244
East	Namutumba	Namutumba, Kaliro, Bugiri, Idudi, Namungalwe	78,473	68,463
	Kotido	Kotido, Moroto, Abim	45,262	68,463
		Total	**937192**	**1,367,364**

2.2 Scope of the Assignment

The scope of services includes undertaking baseline studies, feasibility studies, service delivery models and engineering designs for faecal sludge chain management infrastructure and services, together with investment plans and recommendations for operation and maintenance, and overall management. This shall be done with comprehensive stakeholder consultation to ensure that it will be feasible for each of them to take on their allotted roles. Investments shall be prioritized for Government support. The consultancy services shall be awarded in two contracts covering two lots as follows:

- **Lot 1**: Covering Central and South Western Uganda: Kigumba, Wobulenzi, Kiira, Kanungu, and Kyazanga.
- **Lot 2**: Covering Northern and Eastern Uganda: Koboko, Patongo, Adjumani, Namutumba, Kotido.

2.2.1 Baseline and Feasibility Studies

Situation Assessment

a) Assessment of the existing environmental sanitation (solid waste, sanitation, wastewater, drainage, etc.) situation and identification of the key issues and barriers to sustainable access along the value chain. This requires the collection of secondary data, and the preparation and administration of suitable questionnaires to capture primary data through socio-economic household surveys, Key Informant Interviews (KIIs) and Focus Group Discussions (FDGs). The sample data capture questionnaire provided in the referenced documents in Appendix 1 can be adapted to suit the particular situation in each cluster. Using the data collected, Faecal Waste Flow Diagrams (SFDs) should be prepared for the sanitation and wastewater service chains of the target population in each cluster.

b) Stakeholder identification and analysis to clearly present defined stakeholder roles and responsibilities versus actual practices and performance, in order to identify institutional, regulatory and budgetary weaknesses and areas requiring attention. The consultants will review, adapt and apply a 'City Service Delivery Assessment' (CSDA) tool for collecting, presenting and discussing the institutional situation for FSM services.

c) Identification and analyses of the market potential and business opportunities along the FSM value chain from containment through treatment and reuse to inform investment interests and decisions.

d) Stakeholder engagement: Based on b) and c) above: the draft SFD will be presented together with potential investment opportunities to the main stakeholders to inform a debate on the current situation. Likewise, the CSDA is a useful tool to guide a discussion of the shortcomings, and therefore the priorities, for improving the institutional, regulatory, and budgetary and revenue position to support future operation and maintenance.

e) A review of existing sanitation policies/strategies/framework including institution mapping and the current roles and responsibilities.

FS Containment and Collection

f) Starting from the overall picture presented by the SFD, identify the population number and proportion using different onsite sanitation technologies, their typical characteristics, O&M requirements and practices, capital and O&M costs.

g) Description and assessment of the existing arrangements for constructing household onsite sanitation facilities, including the mechanisms for financing and the roles of key players (public & private sector, NGOs, financial institutions, etc.). Clearly identify key barriers/challenges.

h) Description and assessment of the existing arrangements for faecal sludge and septage collection and transport, including available types and capacities of collection vehicles/equipment (Manual Emptying, Gulpers and improved manual emptying, Cesspit Emptier/VacuTug, etc.), service quality and charges, how households/beneficiaries request and pay for services, the roles of key players (public & private sector), existence or otherwise of collectors' associations, acquisition, ownership and management of collection vehicles and equipment, availability of spare parts and maintenance culture, among others. Clearly identify all key barriers/challenges.

i) Sampling and laboratory testing for faecal sludge/septage characterization, and estimation of the likely volumes to be collected based current and projected demand for pit and septic tank emptying services considering accessibility to pits, equipment to empty pits, etc.

j) Integrated assessment and ranking of feasible options for faecal sludge collection and transport, taking into account the characteristics of septage, costs (capital and O&M) of collection and transport vehicles/equipment, likely haulage distances, and anticipated technology for treatment and reuse/disposal. The assessment will also describe and consider the potential business opportunities for the different actors (private and public sector enterprises, NGOs, individuals, etc.) along the FSM value chain

k) Make recommendations in discussion with stakeholders on how to address identified challenges/barriers to improving:

   i. access to onsite household and public sanitation, clearly articulating potential private and public sector roles, and defining actions to improve the delivery and financing mechanisms for onsite sanitation, including proposed types of technologies;

   ii. collection and transport capacity in each town and related cluster, indicating at least two options for services delivery that include generic vehicle/equipment type, ownership and service delivery arrangements, and possible provision of fixed or mobile transfer stations, as necessary for each town and cluster;

   iii. demand for onsite household and public sanitation, in areas where such demand is deemed low.

Treatment and Disposal

l) Identification and assessment/audit of feasible FS treatment and disposal technologies available in Uganda and elsewhere, taking into account faecal sludge and septage characteristics, treatment efficiencies, investment and operation and maintenance costs, land space requirements, ease of operation, social acceptance, likely environmental impact, reuse benefits, etc.

m) Recommend and rank the applicable technologies, and select the two most suitable for each cluster, with specific consideration of the operation and maintenance requirements and recurrent running costs.

FS Reuse

n) Assessment of the current practices for FS/waste reuse production, marketing and sales in Uganda, neighboring countries and elsewhere, including production costs and related revenues, institutional arrangements, regulation and certification procedures for quality production and safe use, and financial viability/profitability. The assessment shall be based on review of available secondary data on FS reuse, and field verification through surveys and FGDs, and shall clearly identify relevant stakeholders, their roles and responsibilities, and establish a data base on possible producers and users of FS/waste reuse end products.

o) Quantification and valorisation of faecal sludge in each of the proposed clusters, with clear definition of the types and quantities of FS end products, identification of potential users of FS reuse products, and assessment of the market/demand potential, including likely revenues to be accrued versus capital investment needed and production costs.

p) Recommendation of strategies for promotion, marketing and sales, clearly establishing profitability or otherwise of reuse within the Ugandan small towns' context.

2.2.2 Treatment Site Identification and Selection

The Consultant shall in collaboration with local authorities and in accordance with urban physical plans or otherwise identify, assess suitability and recommend suitable land space (sites) for prior selection, demarcation and subsequent acquisition for purposes of providing

faecal sludge treatment and disposal and transfer facilities, etc., as may be required. A number of sites shall be identified, assessed and ranked and the most suitable recommended for selection in centrally located towns within each cluster to ensure reduced haulage distances. Haulage is the largest cost to operators and distances should ideally be kept to under 10km or 30 mins travel time from emptying sites.

a) The selection of transfer, treatment and disposal sites should include the examination of trade-offs between different levels of sophistication and cost and the extent of clustering. For instance, is it more viable to have vacuum trucks and a centralized treatment system shared between towns, or cheaper, lower-capacity equipment in each town with simpler, localized disposal arrangements.

2.2.3 Preliminary Engineering Designs

a) Following discussion and agreement with all the relevant stakeholders, preliminary engineering designs shall be prepared for FS collection, transport, treatment and reuse infrastructure and services in the selected small towns and clusters. The designs shall be prepared for all selected towns and clusters, and shall be based on septage characteristics, projected development trends and rate of urbanization, and estimated design volumes (15-25 year lifespan) for the selected small towns and/or related clusters. The designs shall consider and evaluate combinations of the recommended best options as alternatives for collection through treatment and reuse, clearly establishing the business model in each case. Each alternative shall define:

   - The type, capacity and number of collection vehicles and equipment, and their expected haulage distances;
   - Definition of collection zones and routing of collection vehicles and equipment taking into consideration the types of available onsite sanitation technologies, characteristics and accessibility of the different neighbourhoods;
   - Definition of treatment and reuse infrastructure and catchment areas/zones of influence;
   - Plan and arrangement for transfer, if needed, and type, capacity and location of related transfer facilities;
   - Capital, operation and maintenance costs, ownership and management arrangements, and feasible tariffs and arrangements for cost recovery, among others.

b) Financial and economic analysis shall be carried out to assess the financial and economic viability of each alternative. A cost-benefit analysis shall be carried out and the net present value (NPV) and Financial Internal Rate of Return (FIRR) estimated to determine the financial attractiveness of each alternative. An economic analysis shall also be carried out to determine the best economic alternative. The Economic Rate of Return (EIRR) shall be estimated for each alternative and a comprehensive risk analysis, including sensitivity analysis carried out.

c) The Consultant shall then recommend the most feasible type of faecal sludge service chain management system, including collection and transport, treatment and reuse/disposal, taking into consideration the related life-cycle costs for investment, operation and maintenance.

2.2.4 Detailed Engineering Designs and Specifications

a) The consultant shall conduct detailed engineering surveys and produce detailed designs for the preferred and agreed upon faecal sludge service chain management infrastructure and services.
b) Confirmation of septage characteristics and design volumes; and preparation of detailed hydraulic narrative engineering designs, technical specifications, bills of quantities, drawings and engineering cost estimates including tender documentation. The tender dossiers shall be prepared to comply with open tender procedures and unit price contracts, and shall follow the

formats prescribed by both the Public Procurement and Disposal Authority of Uganda and the African Development Bank. In particular, the consultant shall perform the following for design of the treatment infrastructure, among others:

- Undertake required surveys and site investigations;
- Establish the volumes and characteristics of faecal sludge, taking into account the source, type and strength of material;
- Provide process flow diagrams and detailed engineering designs, including hydraulic, geotechnical, and structural computations for all components, as well as specification of any electro-mechanical components;
- Ensure general design layouts provide adequate road access and turning space for the types of vehicles expected to use the facility;
- Design discharge points to allow for hygienic discharge from the types of vehicles expected to use the facility;
- Ensure general design layouts allow for routine inspection and preventive maintenance of facilities. The layout shall also indicate sampling points to facilitate performance monitoring and compliance;
- Prepare detailed engineering drawings to appropriate scales for all facility components;
- Incorporate all environmental and social safeguard considerations in the detailed design.
- Design perimeter fencing and gate control facilities to secure the site, and adequately manage all incoming trucks and other vehicles during operations;
- Design adequate facilities for site drainage, offices and vehicle/equipment parking and cleansing;
- Provide for handling and temporary storage of solid waste screenings from the primary treatment processes.

c) Detailed description of the arrangements for managing the various components of the chain shall be provided.

d) Development of specific promotion, marketing and sales strategies, including demonstration sites for application of reuse products, and mechanisms for customer feedback and redress.

2.2.5 Environmental and Social Impact Assessment (ESIA)

The consultant shall conduct ESIA to assess potential environmental impacts for the designed faecal sludge service chain management infrastructure and services, and propose mitigation measures. The consultant shall be responsible for preparation of the Scoping Report and Terms of Reference, and Final Report for the ESIA for submission and approval by National Environment Management Authority, in consultation with relevant stakeholders, and in accordance with NEMA guidelines. The Scoping Report and Terms of Reference shall be prepared and submitted for approval during the preliminary engineering design stage. Key expected outputs from the ESIA include but not limited to:

a) Scoping Report;
b) Situational Analysis;
c) Proposed Mitigation Measures;
d) ESIA Report; and
e) Environment and Social Management Plan.

2.2.6 Faecal Sludge Service Chain Management Arrangements

The consultant shall recommend the most appropriate arrangement for sustainable management of the FS infrastructure and services following the situational and stakeholder analyses, to accomplish

the desired goals and objectives of the effort to improve faecal sludge service chain management. The consultant is expected to review management related problems encountered in faecal sludge service chain management within each of the clustered towns. The key management functions to be considered include: planning, organizing, staffing, directing and monitoring. The management arrangement shall address the following, among others:

a) Institutional set-up and recommendations for effective management of infrastructure and services focusing on establishing private sector services or public-private partnerships;
b) Proposed tariffs to meet operation and maintenance requirements, and to achieve O&M cost recovery;
c) Regulation and enforcement to ensure technical, environmental and social compliance regarding operation and patronage of the infrastructure and services.

2.2.6.1 Indicative Plan for Operation and Maintenance

The Consultant shall identify and specify all key activities required for the smooth operation of all infrastructure and services to ensure efficiency, effectiveness and sustainability. In particular, operational requirements, including planning and control, health and safety, performance monitoring, security, customer complaint and feedback mechanisms, etc., shall be detailed out as necessary.

In addition, maintenance regimes that include all activities required to sustain infrastructure in a serviceable/ working condition, will be defined. This will include provision of adequate skills, tools, and spare parts for routine and periodic maintenance. The consultant will ensure preventive, corrective & crisis maintenance, and how they apply to faecal sludge service chain management. The consultant shall prepare a Facility Management Plan (FMP) that includes detailed operation and maintenance guidelines and cost estimates for facility operation and maintenance (O&M). The FMP shall highlight the safety requirements for plant operation and staff. The FMP shall specify health and safety measures to protect workers, visitors and surrounding residents during operation and maintenance of the facility. This will include specifications for regular medical check-ups for operational personnel; and for environmental monitoring, including operation and maintenance, traffic control, resident complaints, noise, odor, vectors, dust/air/gaseous emissions, treatment efficiencies, effluent quality, etc.

2.2.8 Contract Packaging and Implementation

The consultant shall recommend appropriate contract packages (Lots), and shall prepare an implementation schedule to facilitate procurement of the infrastructure and technical assistance for the development of service providers, community engagement and institutional and regulatory support. The implementation schedule shall cover a period of 5 years.

2.2.9 Staff Training

The consultant shall collaborate, and work with key staff of the Ministry of Energy, Water and Environment (MWE); particularly staff of the respective WSDFs and Umbrella Organizations for the different clusters strengthen their capacity to manage inclusive sanitation services. On line training or local courses may be recommended.

It is expected that preliminary designs shall be prepared for all clusters. Thereafter, detailed designs shall be prepared for at least four (4) clusters. The MWE trained staff shall prepare the remaining detailed design with support from the consultant. The consultant shall have overall responsibility for detailed design.

The consultant shall collaborate with MWE to prepare and submit appropriate manuals for FSM design and staff training to facilitate sector capacity building efforts.

3. EXPECTED OUTPUTS AND REPORTING

3.1 Expected Outputs

The Consultant is expected to prepare for the Client's approval, the following reports on each cluster/scheme:

Inception Report: The Consultant shall submit an inception report clearly detailing how the study will be carried out and the progress as by the submission date. The inception report shall show the methodologies to be employed by the Consultant, assumptions and an updated overall work plan for timely completion of the assignment. During this stage, the Consultant shall be expected to gather as much information as possible. The report shall contain, but not limited to:

- Data gathered and examined, and preliminary findings from field studies/assessment and suggestions, where relevant, for modification of the scope of the assignment;
- An outline of proposed concepts and standards to be applied with necessary justifications; and materials and logistics requirements, and ways of obtaining them;
- Arrangements for coordination and collaboration with relevant stakeholders;
- Detailed work program for completing the assignment per the agreed scope of services.

Feasibility and Preliminary Design Report: The Consultant shall prepare the feasibility study and preliminary engineering design report for each cluster, covering the following, among others:

- Situational assessments, including outcomes of stakeholder consultations and analyses, socio-economic surveys, technical assessments and gender analyses;
- Site identification and selection;
- Septage characteristics and estimated collection quantities;
- Elaboration of arrangements and layout options for chain management infrastructure and services;
- Preliminary engineering designs, including performance characteristics, drawings and specifications of the various system components based on selected alternatives;
- Preliminary capital and O&M cost estimates based on lifecycle approach;
- Financial and economic analyses of selected and designed alternatives;
- Recommendations for detailed design, based on consideration of alternatives and stakeholder consultations;
- Plan for phased implementation;
- Technical assistance and training requirements and draft ToRs;
- Draft scoping and Terms of Reference for ESIA.

The Consultant shall present the draft assessment and preliminary design reports draft to the Client and Stakeholders two (2) weeks after submission of the relevant reports. The Client shall compile and submit comments on the draft report to the Consultant within a period of two weeks after the Consultant's presentation to enable finalization of the reports.

Detailed Designs and Tender Documents: Upon review and agreement on the design options, the consultant shall proceed to provide detailed design and arrangements for faecal sludge service chain management in the identified cluster towns. These shall include, among others:

- Engineering studies, including topographical and geotechnical investigations;
- Detailed design of all structures, including the basis for determining the dimensions and structural and hydraulic characteristics, etc.;

- Detailed design of all electro-mechanical installations;
- Drawings, including layouts, sections, schematics, etc., of all system components to appropriate scales and acceptable standards as working drawings;
- Tender documents, including bills of quantities (based on CESSM) and specifications for workmanship, materials and equipment to facilitate quality construction;
- Cost estimates, based on priced bills of quantities using prevailing market unit prices;
- Contract packaging and proposed implementation schedule;
- Indication of any equipment needed for the works, but to be supplied by others;
- The detailed design of collection and transport vehicles and equipment to be provided.
- Final economic and financial analyses for the selected designed alternative.

Environment and Social Impact Assessment Report (ESIA): The consultant shall prepare the draft and final ESIA report in accordance with NEMA guidelines based on the detailed designs, after the Client's review. The ESIA report shall include plans for mitigation, enhancement, monitoring, institutional and capacity building measures to be taken during implementation and operation of the selected schemes.

Indicative Plan for Operation and Maintenance: The consultant shall prepare and submit a facilities management plan that incorporates the different management options considered, and the selected most feasible option for faecal sludge service chain management of treatment infrastructure and collection services in each cluster. The plan shall provide for the daily operation and routine maintenance, performance monitoring, modalities for tariff setting, customer complaint and redress mechanisms, among others. A performance monitoring tool, designed with a user friendly interface in an appropriate software application, shall be provided. The tool shall be accompanied by an outline of its development process and assumptions, and a training manual to support its future use and update.

Investment Plan, Training and Design Manuals: The consultant shall prepare and submit an investment plan to facilitate resourcemobilization. The plan shall provide information on annual financial outlays over a defined investment period. In addition, the consultant shall prepare and submit manuals for FSM infrastructure and services design, and for training to facilitate capacity enhancement of sector personnel and institutions.

3.2 Reporting and Timetable

The following is the estimated reporting schedule for the services for each consultancy assignment:

Table 2: Indicative Reporting Timetable

Output	**Period**
Inception Report	1 month from inception
Feasibility and Preliminary Design Reports	8 months from inception
Detailed Designs and Tender Documents	11 months from inception
Environment and Social Impact Assessment Reports	11 months from inception
Indicative Plan for Operation and Maintenance	11.5 months from inception
Investment Plan, Design and Training Manuals	12 months from inception
Presentations for Investment Fora	12 months from inception

All reports shall first be submitted in draft version, and subsequently finalized after obtaining review comments from the Client and stakeholders. This will be accomplished within 14 days after the stakeholder presentations. The indicated timeline is inclusive of the review period. The entire assignment is expected to be executed over a period of **12 calendar months**.

4. KEY STAFF COMPETENCIES

For the purpose of the assignment, the Consultants will mobilize a coherent, dynamic and organized professional team. All personnel shall be appropriately qualified and should possess sufficient professional experience. The Consultant shall provide a schedule showing the planned man-months to accomplish the assignment. Table 3 provides indicative time in-puts.

a) **Project Manager/Team Leader**: He / She will be the Consultants' representative (and should be empowered to take decisions on behalf of the Consultants) and will coordinate the Services. He/She will be available during the implementation of activities when key decisions are expected to be taken or issues to be resolved. The Team Leader should have a basic degree in the field of Civil/ Water/ Environmental/ Sanitation Engineering with a minimum 15 years of professional experience, 5 of which shall be in similar position. Significant experience in hydraulics, sanitation and environmental infrastructure implementation of projects in urban areas in developing countries shall be required.

b) **Sanitary/Design Engineer**: The Engineer should have a basic degree in Civil/ Water/ Environmental/ Sanitation Engineering with a minimum 6 years of professional experience, of which at least 3 years shall be working on faecal sludge management. Significant experience in hydraulics, sanitation infrastructure implementation of projects in urban areas in developing countries with training component shall be an added advantage. The Design Engineer shall be a registered civil engineer in Uganda or a registered civil engineer with a recognized engineering society. At least 3 years' specific Fecal Sludge Management experience is required but more is an advantage.

c) **Environmental/Sanitation Expert**: He/ She shall have a minimum of a degree in Environment, Agriculture, Water and Sanitation. Advanced training in Environmental and Social Impact Assessment, Project Assessments, Climate Change, Monitoring and Evaluation, Research and or any other related discipline will be an added advantage. The consultant must have a minimum of 10 years' work experience in relevant fields. He/ She must have adequate experience in conducting a comprehensive Environmental and Social impact assessment and analysis, as well as being able to identify in advance the shortcomings which might hinder the smooth implementation of the projects and the best ways to mitigate the problems. The consultant must be registered with NEMA to undertake ESIA studies in Uganda.

d) **Geodetic Surveyor**: He/ She shall have at least BSc. Surveying and 7 years of experience in water supply/sewerage/sanitation infrastructure survey, 5 years of which must be in a similar position. He/ She must have demonstrated design survey experience in water supply and sanitation infrastructure, topographic survey, mapping, map digitization, block mapping and implementation of similar projects in small towns. He /She must be able to use Total Station with relevant software for data transmission and management. He/ She must be computer literate and proficient in at least Excel and Auto Land Map (GIS capability) or other relevant survey applications.

e) **Quantity Surveyor**: a minimum of a master's degree with at least 7 years relevant post qualification experience OR Bachelor's degree with at least 10 years post qualification experience in quantities estimation, preparation of bills of quantities and tender documents for similar assignments.

f) **Financial/Economic Analyst:** He/She shall have at least a bachelor's degree, with post graduate qualification in a related field. He/ She must have demonstrated experience in financial and economic analyses of development projects, and shall have a minimum of 10 years' experience in a relevant field, and 5 years in a similar position.

g) **Institutional Development Expert**: He/ She shall have at least a bachelor's degree, with post graduate qualification in a related field. He/ She must have demonstrated experience in institutional review and design in the public sector, setting up of management structures. The consultant experience shall be minimum of 10 years' experience in a relevant field and 5 years in a similar position.

h) **Sociologist/Gender Expert:** He/ She shall have a minimum of a degree in social sciences, sociology, Social Work and Social Administration. Advanced training in Social Economic Assessment, Project Assessments, Monitoring and Evaluation, Research, Gender Analysis and or any other related discipline will be an added advantage. The consultant must have a minimum of six (6) years' work experience in relevant fields and adequate experience in conducting a comprehensive Social economic assessment and analysis, as well as being able to identify in advance the shortcomings, which might hinder the smooth implementation of the projects and the best ways to mitigate the problems.

The Consultant may propose a mix of personnel, with the above qualifications and any others as they deem necessary to effectively accomplish the assignment. A gender balance in the team will be considered an advantage. These may include expertise in process/chemical, structural, electro mechanical, environmental and safeguards, and geo-technical engineering, where necessary. The proposed additional position (s), required input (s) and corresponding CVs, each with a minimum of 5 years' experience shall be provided.

It is expected that the Project Manager, Design Engineer, Sociologist and Environmental Specialist have undertaken relevant training, and possess basic qualification and demonstrable skills in City Wide Inclusive Sanitation (CWIS).

Table 3: Time input estimate for key staff (for each Lot of the assignment)

Key Expert	**Estimate time in-put (Person-months)**
Project Manager/Team Leader	12
Design Engineer	10
Sociologist/Gender Expert	6
Environmental Specialist	4
Geodetic Surveyor	3
Quantity Surveyor	3
Institutional Development Expert	3
Financial Analyst	2
Total	**43**

5. ROLES AND RESPONSIBILITIES

5.1 Expectations from the Consultant

The Consultants will provide or hire all the equipment, material and services required for the purpose of the assignment. The Consultant shall be expected to have a fully equipped office in Uganda, with adequate transport, IT and other required equipment to accomplish the task.

5.2 Services to be provided by the Client

The Client will make available all relevant information and documents pertaining to the assignment that is available within the Ministry of Water and Environment, at the request of the Consultant. The Client will also introduce the Consultant to pertinent stakeholders (e.g. Line

Ministry, Organizations, Institutions, and Districts) in the Client's area of jurisdiction to create a cordial working relationship across the board during execution of the assignment.

6. REMUNERATION AND PAYMENT

6.1 Fees

Consultancy fees shall be all inclusive, and shall be paid as lump sum as per the payment schedule set out in 6.2 below. All payments shall be subject to prevailing tax regulations of the Government of Uganda. Generally, consultancy services are VAT exempt, but attract 6% WHT for Nationals and 15% WHT for Expatriates.

6.2 Payment Schedule

The consultant shall be paid the agreed contract amount according to the following schedule:

- 25% on submission and approval of the inception report
- 30% on submission and approval of feasibility design reports.
- 25% on submission and approval of detailed design reports and tender documents.
- 10% on submission and approval of O&M and management options report.
- 10% on submission and approval of Environmental Social Impact Assessment report.

7. CONTACT

The consultancy will be coordinated through the Ministry of Water and Environment Head Office in Luzira where an in-house focal person shall be designated for the assignment. The Focal Person can be contacted in office during official working hours. Additional information may also be obtained from:

The Project Coordinator,
Principal Engineer/Urban Water and Sewerage Services
Ministry of Water and Environment,
P. O. Box 20026, Kampala, Uganda
Tel: +256-414-450-495
Email: felix.twinomucunguzi@mwe.go.ug