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

Project Appraisal Report

Innovative Sanitation Value Chain for the Un-sewered Urban Poor in Kisumu, Kenya

June, 2014

African Water Facility | Facilité africaine de l'eau
African Development Bank | Banque africaine de développement
BP 323 - 1002 Tunis Belvédère – Tunisie
Tel: + 216 71 102 197 Fax: + 216 71 348 670
Email : africanwaterfacility@afdb.org
www.africanwaterfacility.org

Table of Contents

List of Abbreviations and Acronyms

ACP-EU	-	African, Caribbean, Pacific – European Union (Development Programme)
ADB	-	African Development Bank
AWF	-	African Water Facility
CBE	-	Community-based Enterprise
CBO	-	Community-based Organisation
FS, FSM	-	Faecal Sludge, FS Management
FTE	-	Full Time Equivalent (of persons employed)
GIZ	-	Deutsche Gesellschaft für Internationale Zusammenarbeit
GoK	-	Goverment of Kenya
HDSR	-	Hoogheemraadschap de Stichtse Rijnlanden
IMF	-	International Monetary Fund
KAP	-	Knowledge, Attitude and Practice
KIWASCO	-	Kisumu Water and Sewerage Company Limited
KES, Kshs	-	Kenyan Shillings
LVSWSB	-	Lake Victory South Water Services Board
MDG	-	Millennium Development Goal
MWF	-	Micro Water Facility
MCK	-	Municipal Council of Kisumu
MoWI	-	Ministry of Water and Irrigation
NEMA	-	National Environment Management Authority
PRSP	-	Poverty Reduction Strategy Paper
PSC	-	Project Steering Committee
t/a	-	metric ton(s) per year
VEI	-	Vitens Evides International
WSP	-	Water Service Provider
WSTF	-	Water Services Trust Fund
WTG	-	Water Thematic Group
WOP	-	Water Operators Partnership
WWTP	-	Waste Water Treatment Plant

Currency

Local Currency	:	Kenyan Shilling (KES)
1 Euro (EUR, €)	:	111 KES (ADB exchange rate July 2013) 0.87 UA

Results Based Logical Framework Analysis

Country and project name: Kenya, Innovative sanitation value chain for the un-sewered urban poor in Kisumu.
Purpose of the project: Contribute to increased access to improved sanitation for the urban poor, through adoption of a viable sanitation value chain.

	RESULTS CHAIN	PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS/MITIGATION MEASURES
		Indicator (including CSI)	Baseline	Targets		
IMPACT	**Impact** Improved health, dignity, environmental and economic conditions for the urban poor	1. Number of deaths caused by water borne diseases among children under-5 2. Proportion of population living below 1US$ per day 3. Per capita CO_2 emissions (metric tons)	1. 33/1000 (200 2. 19.5% (2005) 3. 0.3 (2008)	1. 13/1000 (2015 MDG target) 2. 15% (2020) 3. 0.25 (2020)	Kenya Health statistics World Health Organisation www.afro.who.int AfDB Statistics Database World Bank: World	**Risk:** a) Slow uptake of sanitation concept by the population or Kenyan WSPs b) Poor private sector interest because of low profitability **Mitigation:** a) Increased awareness campaign and capacity building, and support by (inter)national partners b) Government incentives for biogas sales; optimised sharing of profit in the value
OUTCOMES	**Outcome 1** Improved access to hygienic and safe household sanitation services for the urban poor in Kisumu	1.1. Value chain - storage, collection, transportation, treatment and re-use – operational 1.2. Number of Manyatta poor households with no access to safe sanitation services 1.3. Robust service delivery capacity built	1.1. N/A 1.2. 10,400 in 2013 1.3. N/A	1.1. Each of the 5 chain components is operational, and all are connected (2017) 1.2. 2,400 by 2018 1.3. 1 operational Micro Credit Facility for urban poor sanitation, by 2017	Project progress report Kenyan MajiData Treatment facilities operational performance reports	**Risk:** a) Lack of active involvement of partners b) Limited institutional capacity of key actors c) Final products (biogas, fertiliser) are not sold, and the business case not viable **Mitigation:** a) Awareness campaign, marketing, campaigning micro-credit, extra appeal on community leaders b) Capacity strengthening of key actors. Certification, marketing, demonstration pilots, extra funding by Trust Fund, expertise and support by (inter)national partners
	Outcome 2 Improved FS management (treatment and safe re-use) in Kisumu	2.1. Quantity of FS collected per month 2.2. (Proportion of collected) FS treated and processed into re- usable products	2.1. N/A 2.2. N/A	2.1. 50 tons/month (2018) 2.2. 100% (2018)		

	Component 1: Improved hygiene awareness and access to household sanitation services					
OUTPUTS	1.1. Manyatta residents are reached by hygiene & sanitation promotion	1.1.1. Number of schools and demonstration toilets 1.1.2 Number of campaigns targeting informal settlements	N/A	1.1.1. 4 schools, including 20 demonstration toilets by 2017 1.1.2 6 campaigns (2 per year) reaching 80% of residents, at least 50% of whom are women, by 2017	Baseline, mid-term and final assessment project reports	**Risk:** Poor community participation and response **Mitigation:** a) Increased community mobilisations b) Incentives to enhance sanitation product uptake
OUTPUTS	1.2 Household facilities installed and used 1.3 Micro-credit facility for promoting access to sanitation services functional	1.2.1. Number of local artisans trained; demonstration units built 1.2.2. Number of new safe household toilets built 1.2.3. Number of rehabilitated household pit latrines 1.3.1. Number of local banks offering Micro-credit for sanitation facilities 1.3.2. Number of sanitation credit applications approved, % of which are for women	1.2.1. N/A 1.2.2. N/A 1.2.3. N/A 1.3.1. N/A 1.3.2. N/A	1.2.1. 5 artisans trained (2015) 10 artisans trained (2016) 100 demonstration toilets 1.2.2. 750 by 2016 1500 by 2017 1.2.3. 300 latrines by 2016 500 latrines by 2017 1.3.1. At least 2 local banks by 2014 1.3.2. 500 approved (2015) 1250 approved (2016) 2000 approved (2017), at least 55% are for women	Project progress reports. New toilet sales reports. Pit latrine rehabilitation reports Micro-credit Fund annual report	**Risk:** a) Inability of beneficiaries to afford infrastructure b) Competing existing technologies c) Inadequate enforcement by local authorities **Mitigation:** a) Incentives for purchase b) Guarantees of project technical and management support c) Government participation & law enforcement
	Component 2: Established faecal sludge (FS) Collection and Transport Services					

	2.1 FS Collection services established. 2.2 FS and urine transport operational	2.1.1. Number of Transfer Stations established 2.1.2. Number of trained service providers 2.1.3. Number of contracts/jobs created, % of which for women. 2.2.1. Number of vehicles & handcarts operational. 2.2.2. Number of FS collectors association	2.1.1. N/A 2.1.2. N/A 2.1.3. N/A 2.2.1. N/A 2.2.2. 0 in 2014	2.1.1. 3 by 2017 2.1.2. 10 CBEs trained by 2017 2.1.3. 12 contracts and 28 jobs, at least 40% for women, by 2017 2.2.1. 1 exhauster, 1 urine tanker, 10 tri-cycles & 10 handcarts by 2016 2.2.2. 1 FS collectors Association by 2016	2.1. Project progress and Training reports 2.2.1. Procurement reports and contracts 2.2.2. FS Collectors Association manual	**Risk:** Non-compliance with NEMA regulations, and low interest for collection by CBOs and private company **Mitigation:** Training/awareness on NEMA regulations, licensing for collection and transportation; and provision of incentives
	Component 3: Improved Faecal Sludge (FS) Treatment and Safe Re-use					
	3.1. Faecal sludge treatment plant designed, constructed and operational	3.1.1. Number of FS/urine processing units operational 3.1.2. Number of Private Operator(s) trained 3.1.3. Number of contracts created, % of which are for women	3.1.1. 0 in 2013 3.1.2. 0 in 2013 3.1.3. 0 in 2013	3.1.1. 2 Urine Tanks – 2000 m^3 each; 1 Composting unit - 450 t/a; 1 Anaerobic Digester Unit, by 2016 3.1.2. 5 Operators by 2016 3.1.3. 5 Contracts with at least 25% of the jobs occupied by women by 2016	3.1.1. Design report, bid specifications, commissioning report 3.1.2. Training reports 3.1.3. Project progress reports	**Risk:** Project delays due late availability of partners co-financing of purchase and installation of anaerobic digester unit **Mitigation:** Anaerobic digestion does not commence until the final year of the project, providing adequate time for availability of funds from partners
	3.2. FS end products (bio-fertiliser, biogas and energy) produced, marketed and sold	3.2.1. Quantity of biogas, bio-fertiliser and energy sold 3.2.2. Number of demonstration farms 3.2.3. FS User Association established 3.2.4. Number of contracts /jobs created, % of which are for women	3.2.1. Biogas: 0 m^3/a, Energy: 0 kWh/a, Fertiliser: 0 t/a by 2013 3.2.2. 0 in 2013 3.2.3. 0 in 2013 3.2.4. 0 in 2013	3.2.1. Biogas: 200,000 m^3/a; Energy: 400,000 kWh/a; Bio-fertiliser: 400 t/a by 2017 3.2.2. 3 by 2017 3.2.3. 1 by 2017 3.2.4. 2 contracts/10 jobs, > 55% for women (2017)	3.2.1. Signed Agreements/Minutes with Ministry of Energy; and with Ministry of Agriculture 3.2.2. Project progress reports 3.2.3. FS User Association Manual 3.2.4. Progress report	

OUTPUTS	**Component 4: Project and Knowledge Management**					
	4.1 Project Inception 4.2. Project coordinated and managed	4.1. Collaborating partners mobilised and project launched 4.2. Project steering committee (PSC), project directorate (PDT) and management (PMT) teams scheduled meetings	N/A	4.1. Project launch workshop realised 4.2. 1 PSC, 1 PDT and 1 PMT established and meet as agreed	4.1. List of names of members of PSC, PDT 4.2. Minutes of meetings	**<u>Risk:</u>** Delayed procurement process **<u>Mitigation</u>**: A detailed procurement plan has been developed to support the process PSC meetings are scheduled to guide the project
	4.3. Procurement realised 4.4. Monitoring, evaluation and reporting realised	4.3. Goods, Works, and Services procured 4.4. Project Progress Reports; Evaluation, PCR and Audit Reports	N/A	4.3. All project goods, services and works procured 4.4. All project reports prepared and submitted	4.3. Procurement documents and contracts 4.4. Project progress reports	
	4.5. Financial sustainability demonstrated and documented	4.5. MSc. Research and documentation of best practices incl. financial viability of value chain - storage, collection, transport, treatment and re-use	N/A	4.5. MSc. Thesis submitted; Best practices documented, financial analysis prepared.	2 MSc. Thesis reports. Best practices reports	**<u>Risk:</u>** a) Inadequate funding for up-scaling and dissemination b) Poor private sector interest because of moderate business case **<u>Mitigation:</u>** a) Adequate planning and funding Government incentives for biogas sales, stronger (incentive based) division of profit in the value chain, developing public / private investment schemes
	4.6. Up-scaling	4.6.1. Number of settlements up-scaled to 4.6.2. Number of additional collection centres provided	N/A	4.6.1. 1 settlement, 2016 2 settlements, 2017 4.6.2. 2 centres by 2017	Project progress reports. Mid-term and final evaluation reports	
	4.7. Dissemination	4.7.1. Number of cities / WSPs informed 4.7.2. Nr. publications/year 4.7.3. Nr. workshops/year	N/A	4.7.1. 20 cities / 50 WSPs 4.7.2. 2 publications/year; 4.7.3. 2 workshops/year; by 2017	List of attendees Project progress report	

C	COMPONENTS	INPUTS

Component 1: Improved Hygiene Awareness and Access to Household Sanitation Services – Hygiene awareness campaign in schools and communities, baseline studies, Sanitation marketing and micro-credit promotion, Demonstration and installation of household toilets	**Component 1 : € 182 290** AWF Contribution € 64 478 KIWASCO/Partners/Community Contribution € 117 812
Component 2: Established Faecal Sludge (FS) Collection and Transport Services – Selection and training of local artisans, CBE and private collection operators, Purchase of sanitation vehicles and equipment, etc.	**Component 2 : € 884 750** AWF Contribution € 413 920 KIWASCO/Partners/Community Contribution € 470 830
Component 3: Improved Faecal Sludge Treatment and Safe Re-use – Design and construction of faecal sludge treatment and processing facilities, Training and contracting of treatment facilities operator, Establishment of demonstration farms and FS User Association, re-use marketing and sales, etc.	**Component 3 : € 703 650** AWF Contribution € 440 620 KIWASCO/Partners/Community Contribution € 263 030
Component 4: Project and Knowledge Management – Establishment of Steering Committee and management teams, Project implementation including procurement and reporting, Documentation of best practices, up-scaling and dissemination of results, etc.	**Component 4 : € 278 650** AWF Contribution € 227 424 KIWASCO/Partners/Community Contribution € 51 226
	Contingency (5%, rounded) € 102 660 **Total Project Cost € 2 152 000** AWF Contribution € 1 204 000 KIWASCO/Partners/Community Contribution € 948 000

EXECUTIVE SUMMARY

Background: The rationale for the project is to address the current deficiencies in the delivery of sound sanitation services to the urban poor in Kisumu and other informal settlements in Kenya, and to learn lessons for improved knowledge management that positively impacts on the lives of informal settlers. The project will demonstrate the delivery of innovative and affordable services along the sanitation value chain from collection through treatment and re-use with derived economic benefits.

Objectives: The project will contribute to increased access to safe sanitation for the urban poor, through adoption of a viable sanitation value chain. The project will introduce and demonstrate viable sanitation service delivery for un-sewered urban poor living in Manyatta and other informal settlements of Kisumu. Specifically, the project will (i) increase hygiene awareness and sanitation coverage in Manyatta; (ii) establish a (private) company for faecal sludge and urine collection and transport; (iii) demonstrate the potential for valorisation and marketing of faecal sludge and urine for energy and fertiliser production; (iv) upscale project outcomes to all informal settlements of Kisumu; and (v) disseminate to 20 other cities and 50 water service providers (WSPs) in Kenya.

Description: The project will be implemented in four components with AWF support. *Component 1: Improved hygiene awareness and access to household sanitation services* includes hygiene campaigns in schools and among residents, Knowledge, Attitude and Practice (KAP) Surveys to assess uptake, and promotional activities in support of improved hygienic practices. A functional micro-credit facility for rehabilitation/purchase of toilets will lead to improved access and sanitation facilities.

Component 2: Established Faecal Sludge (FS) Collection and Transport Services covers improved access and sanitation facilities, the establishment of FS transfer stations, a collectors association and support to private waste collection companies for franchised delivery of services.

Component 3: Improved Faecal Sludge Treatment and Safe Re-use establishes a treatment unit for human excreta treatment for biogas and electricity production; processing facilities for compost / FS fertiliser production; privatised operation and maintenance of installations; demonstration farms and outsourced marketing and sale of end products.

Component 4: Project and knowledge management relates to project implementation and management activities; documentation of successes and activities that up scale the adopted and workable approaches to the other informal settlements in Kisumu, and disseminate results to other Kenyan cities, WSPs and beyond.

Beneficiaries: The initial direct beneficiaries are 48,000 (out of the total 60,000 urban poor inhabitants living in Manyatta), with a total subsequent reach of

240,000 urban poor living in Kisumu. Specifically, the project will increase safe sanitation coverage in Manyatta from a little over 10% to over 77% by 2017. The project will create 64 new jobs, of which more than 50% will be for women.

Cost and financing: AWF will co-finance the project with the Recipient (KIWASCO) and their Collaborating Partners[1]. AWF funds will contribute € 1 204 000 representing 56% of the total project cost of € 2 152 000. The Recipient and Collaborating Partners will contribute the remainder amounting to € 948 000. The Project duration is 36 months.

Recommendation: It is recommended that an AWF Grant not exceeding € 1 204 000 be extended to KIWASCO for the implementation of the project described in this report.

[1] Vitens Evides International (VEI) represents two Dutch water companies that jointly supply 7.6 million consumers. Through VEI they support water companies in Ethiopia, Kenya, Malawi, Mozambique, and others. Hoogheemraadschap de Stichtse Rijnlanden (HDSR) is a regional water authority in the Netherlands responsible for surface water management and treatment of wastewater for 750,000 inhabitants.

1. BACKGROUND

1.1 Origin of the Project

1.1.1 The project is the outcome of a proposal submitted by Kisumu Water and Sewerage Company Limited (KIWASCO) to the African Water Facility (AWF) in February 2012, following KIWASCO's response to a Call for Concept Notes launched by the AWF in September 2011. The project forms an integral part of a pro-poor water and sanitation programme (2012 – 2015) being developed through a Water Operators Partnership (WOP) arrangement and supported by two Dutch water sector partners (VEI and HDSR). The programme is being developed under the auspices of the Water Thematic Group (WTG) comprising KIWASCO, Municipal Council of Kisumu, Lake Victoria South Water Services Board (LVSWSB), local NGOs and CBOs, and International Development Partners.

1.1.2 The project takes into account the results of a study published by the Water Thematic Group (WTG) in 2010 that involved extensive local consultations in Manyatta informal settlement (60,000 people). The study showed that (a) sanitation coverage is below 55%; (b) most residents have little knowledge of the relation between sanitation, hygiene and health, resulting in a relatively low willingness for behavioural change; (c) investments in sanitation have been limited over the years; (d) toilets are mostly shared pit latrines that are unhygienic thereby posing health and violence related risks to users; and (d) there is no incentive for improving sanitation services, among others.

1.2 Sectorial Priorities

1.2.1 The Government of the Republic of Kenya (GOK) adopted the Water Act in 2002 as a reform measure to address the problem of institutional fragmentation by clearly separating the roles and responsibilities of all relevant sector institutions. The Government also recognises that provision of safe water supply and sanitation is cross-cutting and therefore impacts on the effort towards achievement of socio-economic well-being of Kenyans. Thus, the Government of Kenya's Vision 2030 and the associated 4 year (2008 – 2012) Medium Term Plan (MTP) fully support this recognition and also provide for increased investments to improve access to safe water and sanitation in both rural and urban areas.

1.2.2 Vision 2030 and the MTP further advocate the need for strong policy and effective environmental management to address environmental issues due to positive economic growth and rapid urbanisation. In particular, Vision 2030 and the MTP provide the framework for increased investments in the informal and urban poor settlements in Kenya to improve access to safe water supply and sanitation and to adopt safe waste disposal measures to ensure a clean, healthy and secure environment.

1.2.3 The Kenya Poverty Reduction Strategy Paper (PRSP) emphasises structural reforms that encourage among others, the introduction of Private Sector Participation (PSP) in services delivery. As a result of the marginal increase in coverage (2% per year) for urban sanitation, the PRSP also emphasises the need to improve the living conditions of millions of the urban poor that lack access to basic water and sanitation.

1.2.4 The National Water Services Strategy of the Ministry of Water and Irrigation, the Pro-Poor Implementation Plan for Water Supply and Sanitation (MoWI 2007), and the Implementation Plan for Sanitation (MoWI 2009) specify 2015 strategic goals for water and sanitation as:

a) Increase urban basic sanitation access from 55% to 77.5%; and
b) Achieve operation & maintenance cost recovery for water & sanitation services.

1.3 Problem Definition

1.3.1 On average, sanitation coverage in low income urban areas in Kenya is below 50%. Progress towards coverage increase is hampered by various factors paramount among which are the lack of sector investments and financial incentives, low awareness and the ever-increasing urban population densities, particularly in the informal settlements. Over the years, municipal authorities have been overwhelmed by the situation with the result that the urban poor have limited access to improved sanitation and are confronted with water and sanitation related diseases that impact on productivity.

1.3.2. An analysis of the national energy shows heavy dependency on wood fuel and other biomass that account for 68% of the total energy consumption (petroleum 22%, electricity 9%, others account for 1%). Electricity access in Kenya is low despite the government's ambitious target to increase electricity connectivity from the current 15% to at least 65% by the year 2022.[2] It costs approximately Ksh 35,000 (EUR 318.18) to connect to the national grid and about 0.1145 EUR equivalent per kWh of electricity service. These are relatively high costs that pose a major obstacle to the expansion of electricity connections to low-income households and small businesses, which can therefore benefit from decentralised or alternative sources of energy sources such as bio-energy.

1.3.3 Kisumu, the third largest city in Kenya with 520,000 people, is located in Western Kenya on the shores of Lake Victoria and covers a total area of 417

[2] The German-Dutch-Norwegian Partnership - Energising development (EnDev) - Upscaling Proposal 2012

km^2 of which more than 71% is land and the rest is water. Over 300,000 people out of the total population live in three crowded informal settlements. Access to basic water and sanitation services in these areas is low despite the many interventions by private actors and NGOs to meet needs. Manyatta (A + B area), one of the informal settlements has about 11,600 households (60,000 people). About 90% of them use unimproved and shared pit latrines that are poorly maintained and in unsatisfactory hygienic conditions. The latrines overflow during the rainy season to pollute the shallow groundwater that is used for drinking and household purposes. Cholera and other water-borne diseases are common amongst the population. Approximately 80% of the outpatient hospital attendance in Kenya is due to preventable diseases, of which 50% is related to poor water supply, sanitation and hygiene[3].

1.3.4 In an attempt to adequately address the situation in Kisumu, the WTG has initiated a participatory consultative process with relevant stakeholders to establish a Water Operators' Partnership (WOP) that seeks to improve KIWASCO's operations and to develop a pro-poor water and sanitation programme for the period 2012-2015 with support from two Dutch partners. The programme focuses on increased public private partnership, increased sector investments with improved environmental health conditions for the urban poor in line with Vision 2030.

1.3.5 This project forms an integral part of the WOP programme and aims to contribute to meet the identified sector challenges by demonstrating a financially viable sanitation value chain (capturing, storage, transport, treatment and disposal/re-use) in Manyatta, one of the several informal settlements in Kisumu. Subsequently, the project will be up-scaled to other informal settlements in Kisumu, and lessons learnt will be shared with other cities in Kenya and elsewhere.

1.4 Objectives of the Project

1.4.1 The overall objective of the project is to "Contribute to increased access to improved sanitation for the urban poor, through adoption of a viable sanitation value chain" for the un-sewered poor in Manyatta (48,000 people) and other informal settlements (240,000 people) of Kisumu through public private partnership arrangements.

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

a) private sector involvement in the delivery of improved sanitation services to the urban poor;

[3] IMF PRSP VISION 2030 FIRST MEDIUM TERM PLAN 2008 – 2012

b) micro-credit financing to improve sanitation access; and
c) demonstrated production and sale of useful sanitation end-products, such as biogas and fertiliser.

1.5 Beneficiaries and Stakeholders

1.5.1 The ***direct beneficiaries*** of the project will initially be the 48,000 (out of the total 60,000) residents in the poor areas in Manyatta where the project will support direct delivery of services, private sector entities including locally trained artisans, conservancy labourers, and farmers who will benefit from the production, sale and use of the end products from the improved sanitation services. Up-scaling of the project in the medium to long term is expected to benefit the remaining 12,000 people living in Manyatta and eventually these improved sanitation services will be extended to an additional 240,000 poor people living in other informal settlements in Kisumu, other urban areas in Kenya and beyond.

1.5.2 The project's ***indirect beneficiaries*** include: (i) KIWASCO and the Municipal Council of Kisumu; (ii) collaborating partners including LVSWSB, local NGOs; and (iii) sector ministries including Ministry of Water and Irrigation, Energy and Education, among others. The following table shows how some beneficiaries relate to the project.

Table 1: Beneficiaries relation to project

Target groups / relation to KIWASCO	*Needs and constraints*	*Incorporation of views*	*Participatory process*
Residents of Manyatta and other informal areas. *KIWASCO customers*	Poor hygiene, lack of afford-able sanitation	Residents' wishes included in the design of toilets / pit latrines. Financing rehabilitation / new toilets	Through NGOs (Sana, Umande Trust), direct consultation, and schools
KIWASCO and Municipal Council of Kisumu (MCK)	Management capacity and finance	Demonstrated approach for commercially viable sanitation chain	Implementers, initiators of the project
Unemployed residents, *Future employers of KIWASCO's partners*	Jobs, income	Establishment of private company and processing unit	Labourers, entrepreneurs
Local Farmers *Future end customers*	Organic nutrients	Farming soil is short of nutrients due to agriculture and horticulture.	Inclusion in early marketing.

1.5.3 The following key stakeholder interests have been incorporated in the project design through a consultative process:
(i) Farmers, as potential customers of treated 'FS-fertiliser'. This is based on recent studies that show that local agriculture is in dire need of organic soil

conditioning, and that FS-fertilisers are appropriate sources of nutrients with good value for money;
(ii) Ministry of Water & Irrigation, interested in increased sanitation coverage and the likely positive outcomes and opportunities for up-scaling;
(iii) Ministry of Energy, interested in alternative sources of energy including biogas and electricity generation from biogas.

1.5.4 The ***Project Target Area*** covers Manyatta (A and B), two of the informal settlements in Kisumu. The areas for up-scaling are the other informal settlements of Kisumu. These include Anderson, Bandari, Kaloleni and 20 others. Project outcomes will be disseminated in at least 20 other towns and cities in Kenya with un-sewered informal settlements.

1.6 Justification for AWF involvement

1.6.1 The project adopts an *innovative approach* towards realising the sanitation value chain through provision of incentives for different private sector entities to invest in or leverage parts of the chain. The project is relevant to the objective of the AWF grant because it promotes the wider application of tested sanitation approaches that include innovative financing (micro-credit financing to increase access) and commercialisation of collection and final processing of FS and urine into reusable and sellable products.

1.6.2 The project fits within the AWF mandate and strongly links to *all three AWF pillars* as follows:
Bankable projects for investments - Small strategic investment projects (Window 2), through adoption of innovative and sustainable financing mechanism for delivery of household sanitation facilities; strategic investments to improve collection, treatment and re-use of treated faecal sludge and urine;
Enhancing water governance, through promotion of pro-poor approaches to improve access; establishment of a framework for increased public private partnership; capacity building and raising of public awareness on WASH related environmental issues; and improved performance of service providers, among others;
Promote knowledge management, through contribution to peer learning and dissemination of information on best practices among sub-Saharan African countries.

1.6.3 The project addresses issues relating to cost recovery and sustainability along the value chain through (a) marketing and sale of household toilets, (b) primary collection of faecal sludge and urine by trained community based enterprises (CBEs) for a fee, (c) contracted secondary collection and transportation services by a private operator, (d) pit latrine emptying services by a private operator with payment of tipping fees at the treatment site for truck discharges, (e) faecal sludge treatment and processing, and (f) marketing and sale of biogas energy and FS fertiliser. Savings accruing from the energy and FS fertiliser sales may be used to cross subsidise the operation and maintenance of the FS treatment and processing facilities. In the medium to long-term, additional revenue will be realised through water tariff increases to support delivery of sanitation services.

1.6.4 The project adds value by (a) aligning to the 2015 strategic objectives of the National Water Services Strategy and the Pro-Poor Implementation Plan for Water Supply and Sanitation of the Ministry of Water and Irrigation that seek to increase urban sanitation access to over 77% by 2015, with at least operation and maintenance cost recovery; (b) better municipal level planning and implementation of on-site sanitation in a coordinated and integrated manner; (c) institutional strengthening of KIWASCO to better manage delivery of un-sewered sanitation, in collaboration with relevant institutions like the MOA, MOE, CBEs, Private Companies, NGOs, etc.; and (d) providing opportunity for knowledge sharing regarding adoption of pro poor approaches, FS collection, treatment and re-use, among others.

1.6.5 In addition, the arrangement for co-financing by KIWASCO, beneficiaries and others ensures collaborative partnership among the implementing institutions and stakeholders. AWF funding will enable the project objectives to be achieved, and will mainly support activities for capacity building, up-scaling, knowledge management, project management, and major investments in collection, treatment and re-use along the sanitation value chain. The collaborating partners will mainly finance school sanitation campaigns and other investments in storage, treatment and technical assistance. The up-scaling and knowledge dissemination component of the project is almost equally funded by the AWF and the collaborating partners.

2. THE PROJECT

2.1 Impacts

2.1.1 The goal of the project is universal access to improved sanitation services in Kenya, especially un-sewered urban poor in informal settlements.

2.1.2 The expected impact will be improved health, dignity, environmental quality and economic conditions for the urban poor in Kenya, due to improved sanitation.

2.2 Outcomes

The medium term outcomes expected from the project are twofold:

<u>Outcome 1</u>: Improved access to hygiene and safe household sanitation services for the urban poor in Kisumu.

<u>Outcome 2</u>: Improved faecal sludge (FS) management in Kisumu, including treatment and safe re-use.

2.3 Components and Outputs

The outputs corresponding to the above mentioned outcomes define the project components. The outputs are presented as follows:

<u>Outcome 1</u>: Improved access to hygiene and safe household sanitation services for the urban poor in Kisumu.

Manyatta residents are reached by hygiene and improved sanitation services promotion campaigns.

Household sanitation facilities are installed and used.

Collection and transport services for FS established and operational.

<u>Outcome 2</u>: Improved Faecal Sludge management (treatment and safe re-use) in Kisumu

FS Treatment plant designed, constructed and operational.

Bio-fertiliser, biogas and energy produced from FS treatment plant, marketed and sold.

2.4 Components, Outputs and Activities

As mentioned above, the project components have been defined based on the expected outputs. The outputs and corresponding specific activities under each component are described below.

<u>Component 1</u>: Improved Hygiene Awareness and Access to Household Sanitation Services

Output 1.1: Manyatta residents (48,000 people) are reached by hygiene and sanitation promotion.

a) *Carry out school campaigns to promote hygiene, including construction of sanitation and hand washing facilities in four (4) selected schools; and strengthen school-based health clubs.* As part of demonstrating improved toilets, twenty (20) toilets fitted with hand washing facilities will be constructed in the 4 schools. The target group is school children with the vision that they will grow with good hygiene practices and influence their peers and parents.

b) *Carry out hygiene awareness campaigns among residents in informal settlements. Provide hand washing promotional material (posters, flyers) and* *information on available financial incentives for purchase of improved toilets.* The campaign will build on the work carried out by the network of local NGOs and CBOs. Campaigning will take place through local shops, radio commercials, targeting KIWASCO customers.

c) *Carry out sanitation marketing and micro-credit fund promotion.* This will involve active campaigning through local shops and by outreach workers with information on micro-credit fund for purchase of toilets. The aim is to promote different options of locally available toilets, and improved latrines (with capture) and to promote purchase of these toilets through the micro-credit fund to be established. The campaign will run alongside and be linked to the awareness campaign. The campaign will build on the results of an assessment of the appropriateness of toilet systems. Manyatta home owners and residents will be targeted.

d) *Monitor behavioural change.* Awareness creation and behavioural change will be monitored through baseline, mid-term and final surveys. Knowledge, Attitude and Practice Surveys (WHO, 2008) will be adopted to monitor uptake and behavioural changes during the project. Residents of Manyatta will be targeted.

Output 1.2: Household facilities installed and used:

1500 new toilets installed based on WSTF / GIZ recommendations.

500 existing pit latrines rehabilitated and improved to better hygienic standards.

a) *Feasibility study, to identify possible toilet and latrine options; end users' willingness to borrow and pay-back monies to the micro-credit fund which* will involve at least 200 interviews. The outcome will lead to the preparation of standard designs with costing for new and rehabilitated toilets. Additionally, it will inform potential financial institutions on the decision to set up a micro-credit facility.

b) *Selection and training of Local Artisans.* About ten small-scale contractors (local artisans) will be selected from the Manyatta community and trained to construct the new toilets/latrines, and to rehabilitate and improve existing latrines in Manyatta and other informal settlements, based on the selected options following the feasibility study mentioned under activity a) above.

c) *Construction of 100 demonstration toilets.* The objective is to support the sanitation training under activity b) above, prepare activity d) below as well as marketing and micro-credit fund promotion (activity 1.3) and showcase to the various toilet types that are eligible for financing under the Micro-credit Fund. Construction works will be supervised by SANA (a local NGO and an existing partner of KIWASCO under the WOPs programme) and VEI.

d) *Purchase and/or construction of 1500 new and 500 upgraded household toilets. The toilets will be sold to residents of Manyatta and other informal settlements (partially through micro-credit financing), either through existing local retailers* *or newly established dedicated companies. Women will be selected and trained to sell the toilets / latrines.*

Output 1.3: Micro-credit facility for promoting access to sanitation services established

a) *Selection and definition of household toilet options for financing.* A final list of facilities will be prepared that consider the GIZ-WSTF recommendations for on-site sanitation facilities. The various options will be based on models available in the African market and details of cost will be presented to the micro-financing institutions. Women will be prominently involved to define which toilets are most convenient for their situation.
b) *Preparation and signing of contracts with selected micro-credit institutions*. Advantage will be taken of KIWASCO's involvement with K-Rep Bank in a new settlement development project in which connections are financed through micro-financing. Other banks include Equity Bank and Family Bank that are both active in providing micro-credit in the water and sanitation sector. Based on a positive outcome, local banks/cooperatives will be engaged with to set up a Micro-Credit Fund for Kisumu residents to purchase a new toilet/latrine or rehabilitate an existing one. Pit latrine owners currently pay 5,000 – 8,000 Kshs (50 to 80 €) per year for emptying. To reduce the risk of low patronage of the Micro-Credit Fund, mainly due to the bankability requirements, strategies that include early engagement with financiers, linkages with existing similar micro-credit programmes, and application of a discount shall be adopted. Such arrangements will be informed by the results of the feasibility study and supported through the KIWASCI pro-poor unit which is currently addressing water connections for urban the poor.
c) *Approvals of sanitation credit applications.* At least 2000 approvals will be processed to purchase of 1500 new toilet/latrines and for rehabilitating 500 existing ones. Mainly women will promote the micro credit facility and at least 55% of approvals will involve women.

<u>Component 2</u>: Established faecal sludge collection and transport services

Output 2.1: Faecal sludge collection services established.

a. *Purchase of Collection Containers and Construction of three Transfer Stations*. KIWASCO will be supported to procure 5000 collection drums for manual collection of faecal sludge and urine at household level, and to establish three (3) collection centres for temporary storage of FS and urine in Manyatta. Each collection centre will have two urine collection tanks (24 m^3 each) with a roof and concrete floor, and a small office for the collection centre manager.
b. *Establishment of primary collection of FS and Urine*. A primary collection system will be established using registered Community Based Enterprises

(CBEs). In total, at least ten (10) enterprises will be selected, trained and resourced to provide FS/urine collection services under a Franchise Agreement. This is foreseen in two phases to adjust to build up of demand. Primary collection equipment will include simple handcarts that can collect up to 10 containers per trip. It is envisaged that each CBE will collect up to 40 containers a day. Project funds shall be used to finance their operations during the first two years. Subsequently, appropriate service charges based on cost covering tariffs determined and agreed with KIWASCO shall be instituted.

c. CBEs shall pay a surcharge to KIWASCO from the third year of operation.

Output 2.2: Faecal Sludge and Urine transport operational

a. *Outsourcing of Secondary collection and transport of FS and Urine.* Kiwasco will outsource the secondary collection and transport of FS/urine from three (3) transfer stations to two (2) competitively contracted dedicated transport companies that will also be responsible for managing these collection centres. Handcarts and tri-cycles, complemented with hired trucks, shall be provided for FS collection. In addition, a tanker shall be provided for urine collection. Project funds shall be used to finance the cost of secondary collection during the first two years. Thereafter, it is envisaged that revenues accruing from payment of the primary collection surcharges and re-use sales would be used to cross subsidise the operations. This approach will enable beneficiaries to be progressively introduced to payment of user charges for sanitation services. Payment to the company will be output-based (i.e. based on amount of FS and urine collected) as will be detailed in a signed contract.

b. *Purchase of new equipment for latrine emptying*. A new exhauster will be purchased for emptying existing latrines that contain a mixture of faecal sludge and bathroom waste water to reduce the prevailing unhygienic practice of manual emptying.

c. *Training of CBEs and Secondary Collection Operator* shall be carried out by KIWASCO and the collaborating partners to ensure adequate provision of services by all operators. Training shall include operation and maintenance, record keeping, basic accounting and finance, conflict resolution, etc.

d. *Establishment of FS Collector's Association.* To facilitate better organisation of FS collection services in Kisumu, an association of FS Collectors shall be established. All FS collectors shall be encouraged to register with the association that will serve as the vehicle for communication and engagement with sector institutions like KIWASCO and the MCK. It is envisaged that the association shall meet once every quarter.

<u>Component 3</u>: Improved FS Treatment and Safe Re-use

This component provides treatment and processing facilities for faecal sludge and urine, with production of re-useable end products at the Kisat sewage treatment site. The related outputs and corresponding activities are presented as follows:

Output 3.1: FS Treatment Plant designed, constructed and operational

a. *Detailed design of treatment plant.* A FS treatment plant with capacity for 60,000 people shall be provided at KIWASCO's current wastewater treatment site at Kisat. Detailed design of all treatment units (composting, sludge drying, digester, etc.) will be carried out taking into account the expected volumes and characteristics, including hygienic quality of the collected FS and urine. A consultancy contract shall be awarded for the design and construction supervision of the treatment plant.
b. *Construction of Sludge Drying / Composting Unit.* Sludge drying and composting units with capacity of 450 t/a will be constructed at the Kisat site to cater for the initial volumes of collected FS. A digester will be added as sludge volumes increase.
c. *Construction of an anaerobic digester.* A digester shall be constructed to produce biogas and electricity in the third year of the project, when sufficient FS volumes are collected (planned for end 2016 – FS volume of 600 t/a).
d. *Construction of Urine Tanks.* Two urine-holding tanks will be constructed for minimum retention time of 6 months to ensure safe agricultural use.
e. *Capacity Building through Training of dedicated Treatment Plant Operator, KIWASCO and MCK technical staff* shall be carried out to ensure adequate operational performance.
f. *Quality Monitoring* of effluent and end products shall be carried out using an appropriate quality monitoring institution, and in accordance with standard national guidelines and regulatory requirements. All results shall be properly analysed and documented as evidence of performance monitoring.

Output 3.2: FS end-products (fertiliser and electricity) produced, marketed and sold

The initial and main focus will be agricultural use of 400 tons of compost per year. The business case for biogas will be refined during the later parts of the project. The biogas can be converted to 400 MWh/a of electricity, either for Kiwasco's own consumption, large industrial consumers or for domestic use through connection to the grid.

a. *Demonstration of FS fertiliser*. Three surrounding individual farms will establish and manage demonstration plots over a period of one year to demonstrate the fertilising value of FS and urine products for cash crops (sugar cane, cotton). This will provide knowledge and lessons to the agricultural sector on the added value of the FS and urine as soil conditioners and nutrients.

b. *Dialogue with the relevant public institutions*. Continuous dialogue with the Ministry of Agriculture and other relevant authorities will be carried out regarding certification of the final fertiliser products and overall project outcomes.
c. *Marketing and Sale of end-products.* A marketing and sale strategy will be developed for each end product. The project management team will ensure implementation of the strategy to achieve the desired results. It is expected that marketing and sales will be outsourced to a private company in a PPP contract agreement. The project will ensure certification of the safety of all end products by the relevant Kenyan Authority.
d. *Establishment of FS User Association* shall ensure that small and large scale farmers and horticulturists have a common voice and purpose to address issues relating to the quality and use of the FS fertiliser. The association shall be registered with and obtain technical support from the Ministry of Agriculture. It is expected that the association shall meet at least twice a year and the majority of members will be women.

***Component 4*: Project and Knowledge Management**

Output 4.1: Project Inception

Project Launch and Mobilisation. Following project signing and effectiveness, KIWASCO shall organise a project launch workshop to which all stakeholders shall be invited. Presentations and clarification on project objectives and desired impact, implementation arrangements, knowledge management, etc., shall be made. In addition, the collaborating partners shall be made to confirm their participation and expected roles in the project, and to nominate staff responsible for communication and all other project related matters. KIWASCO shall lead the process of project launch and mobilisation.

Output 4.2: Project Coordination and Management

Establishment of Management Teams: Letters will be sent to identified and relevant sector institutions inviting them to nominate individuals to serve on the Project Steering Committee (PSC). KIWASCO will be responsible for appointing members to serve on the Project Directorate and Project Technical and Management Teams.

Output 4.3: Procurement

Implementation of Procurement and Work Plan will be in line with Section 3.4.

Output 4.4: Monitoring, Evaluation and Reporting

a. *Project monitoring and evaluation* shall be carried out as scheduled in the work plan and described in sections 3.2 and 3.3.
b. *Preparation of reports* as defined in Section 3.7.

Output 4.5: Financial sustainability of all steps in chain demonstrated and documented

a. *Analyses of financial sustainability of value chain.* Based on the project implementation experiences, an analysis of the financial sustainability of each link (storage, collection, transportation, treatment and re-use) in the value chain will be assessed and documented. This will include acceptable tariffs to ensure cost recovery and margin of profit for operators, per capita costs for the various technologies adopted in each link, options for cross subsidy, among others.
b. *Documentation of Best Practices*. The best project practices will be distilled and documented and made available for dissemination. Documentation will include capturing of the relevant project processes and related outcomes, e.g., modalities for setting up and effectively managing a sanitation Micro-credit Fund, role of community leadership in community mobilisation and effective participation in sanitation programmes, use of community based enterprises in the delivery of sanitation services, demand and sale of FS fertiliser and bio gas energy, among others.
c. It is envisaged that two Masters students from local universities will be competitively selected in this project to support the documentation and capturing of processes and lessons learnt. Through the elaboration of two theses, the further replication and dissemination shall also be supported.

Output 4.6: Project approach up scaled to other informal settlements in Kisumu

Undertake up-scaling of project approach and process of collection and transport. This will be carried out in two other informal settlements and will require establishment of additional collection points and provision of additional collection vehicles and equipment that will be financed partly from revenues generated from the project and partly from KIWASCO's own resources. AWF will finance part of the construction cost of the temporary storage tanks to be provided.

Output 4.7: Results disseminated to other Kenyan cities and beyond

a. *7.1 Dissemination of project approach to other WSPs and Municipalities.* This will be carried out through the Water Services Providers´ Association (WASPA) in which 64 Kenyan WSPs are represented. The WSPs and municipalities / county governments will be invited to participate in seminars and exposures. VEI will also disseminate the result to current WOPs in Nakuru and Mombasa. The participating partner NGOs will disseminate the results through their networks.
b. *7.2 Dissemination of project approach to other stakeholders.* This will be carried out through presentations at international conferences, including conferences organised by the AWF.

2.5 Risk Management

2.5.1 A number of risks that may hamper successful implementation and therefore achievement of the desired objectives and outcomes are presented in the log frame. Key among them are analysed as follows:

2.5.2 *Manyatta residents are reluctant to actively engage in campaign for increased hygiene awareness, improvement of household sanitation facilities, and are unwilling to (co-) invest through the micro-credit fund:* To mitigate this risk, about a third of the budget for increased awareness has been earmarked for school campaigns to increase awareness among children. Methodologies for effective promotion and marketing of household toilets among the community will be employed along with adequate communication strategies for promoting patronage of the micro-credit and ensuring effective communication with community leaders. The project will also take advantage of the existing synergies with the WSTF. An intensive campaign will mark the beginning of the project, which will be re-launched at least annually.

2.5.3 As pit latrine owners currently pay up to 8,000 Kshs (60 Euros) per year for emptying, the project will provide household toilets at a discounted price (10%); and will provide financial support for both primary and secondary collection of faecal sludge/urine in the first two years of implementation as incentive for increased patronage. The support will be phased out in the second year.

2.5.4 Prevailing cultural habits and sanitation practices e.g., the use of water for ablution and anal cleansing instead of expensive toilet paper might impact FS quality and downstream processing and FS digestion activities along the value chain. The awareness campaign will emphasise observance of personal hygiene and the proper use and maintenance of improved sanitation facilities.

2.5.5 *Insufficient institutional capacity in KIWASCO and Municipality to manage and monitor implementation of the Sanitation Value Chain during and after project implementation:* Adequate institutional capacity will be required to manage and monitor project implementation. This will be achieved through the early involvement and partnership with relevant local and international institutions. Technical capacity building will be provided by VEI and HDSR and Cordaid through the ACP-EU Water Facility under the current Water Operator Partnership (WOP) arrangement.

2.5.6 *End-products (biogas, fertiliser) are not acceptable and not purchased for use:* This risk may be attributed to the existing cultural beliefs and norms that relate to personal hygiene and sanitation. The project will ensure certification of the safety of all end products by the relevant Kenyan authorities along with adoption of intensive marketing approach for the end products.

2.5.7 *<u>Innovative business model not viable thereby requiring continuous donor intervention and support:</u>* This innovative business model stands the risk of not being viable, and may require continuous support. This risk is mitigated by the ability of the project to offer incentives and demonstrate its overall financial viability as an expected project output. The arrangement to finance major capital costs through AWF and other international partners, and support towards operation and maintenance in the first two years of implementation assures reduced financial risk to the private operators to be engaged in the public private partnership agreements. In addition, the project makes use of the exiting WSTF to provide part funding of the up-scaling and dissemination component of the project; and engages international expertise to provide technical assistance through the available international collaborating partners (VEI, HDSR, Cordaid) during and after project implementation. These partners will be collaborating with local NGOs (SANA, Umande Trust) and CBEs thus strengthening local community structures to ensure sustainability of the interventions beyond the project period.

2.6 Costs and Financing Plan

2.6.1 The estimated total cost of the project is € 2 152 000. Total costs include provision for 3.5% physical and 1.5% price escalation contingencies, and exclude taxes. A breakdown of the proposed financing plan by project Component and Source of Financing is summarised in Table 2 with details shown in Annex 2. Categories of expenditure are shown in Table 6 together with the disbursement tranches.

2.6.2 The AWF will finance 56% of the total project costs (estimated at **€ 1 204 000**), mainly for the provision of infrastructure and related consultancy services for design and supervision, and part of the support for operation and maintenance along the sanitation value chain, knowledge and project management. KIWASCO and collaborating partners will finance the remainder amounting to (€ 948 000), mainly for provision of new toilets and treatment facilities, rehabilitation of existing pit latrines, hygiene and sanitation promotion and project up-scaling. An overview of the per capita investment costs for various sanitation infrastructure is provided in Table 9 showing effectiveness and efficiency aspects of the project.

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

Component	*Total Cost*	*AWF*	*KIWASCO, Partners, other*
1. Improved Hygiene Awareness and Household Sanitation Services	182.29	64.48	117.81

2. Established faecal sludge / urine collection and transport services	884.75	413.92	470.83
3. Improved Faecal Sludge (FS) Treatment and Re-use	703.65	440.62	263.03
4. Project and Knowledge Management	278.65	227.42	51.23
Total Base Cost	**2,049.34**	**1,146.44**	**902.90**
Contingencies (5%, physical, price, rounded)	102.66	57.56	45.10
Total Project Cost	**2,152.0**	**1,204.0**	**948.0**
Percentage	100%	56%	44%

2.4.8 AWF funds will be used to finance up to about 60% of the total cost of installing the FS treatment and processing facilities. Co-funding by 'Partners for Water', a Dutch export fund amounting to EUR 250,000 will finance more than 63% of the cost of the anaerobic digester. All assets (fixed and moveable) will be owned and managed by KIWASCO. In the first two years of project implementation, operation & maintenance costs will be covered partly by the AWF and partly by KIWASCO. Thereafter, after demonstrated success, the costs shall be covered by the anticipated income from sale of fertilisers and biogas/electricity and user fees for the primary collection services. A private company will be awarded a contract to manage the FS treatment and re-use operations. Depreciation and maintenance costs will be covered by the contract agreement.

3. PROJECT IMPLEMENTATION

3.1 Recipient

3.1.1 KIWASCO will be the Grant Recipient and Executing Agency. KIWASCO was established in 2001 as a parastatal limited liability company under the Companies Act. It draws its mandate from the Water Act 2002 that grants its eligibility to mobilise and manage resources for providing water supply and sanitation services. KIWASCO employs some 130 permanent and 110 temporary staff, and provides services to about 65,000 people. The Company is owned by the municipality and governed by a board consisting of 10 members that represent the municipality and civil society, including representatives of industry, consumers, women's organisations, hotels and Lake Victoria South Water Board (LVSWB). KIWASCO has a license contract with LVWSB and pays annual licensing fees. The company has its own offices with adequate logistics (including computers and ICT support).

3.1.2 KIWASCO has recently established a dedicated Pro-Poor Focal Unit (PPFU) that is tasked to provide improved water and sanitation services for the urban poor through delegated management contracts with private operators, and is therefore familiar with implementation of pro-poor projects. Collaborating Partnership with Vitens Evides International (VEI) and Hoogheemraadschap de StichtseRijnlanden (HDSR) provide technical support (up to Dec 2015) through financing by the ACP-EU Water Facility.

3.1.3 KIWASCO and the Municipal Council of Kisumu (MCK) have concluded a Memorandum of Understanding mandating KIWASCO to provide sanitation related services in un-sewered informal settlements in Kisumu. The MCK is directly responsible for hygiene promotion and solid waste management services. KIWASCO observes sound financial and accounting procedures, and annual auditing of company accounts is performed by an External Auditor in compliance with statutory requirements.

3.2 Project Organisation /Implementation Arrangements

3.2.1 The planned organisational arrangements for implementing the project are presented in Table 3 and Annex 4. A Project Directorate (PD) consisting of the Managing Director of KIWASCO and authorised representatives of the collaborating partners (KIWASCO, VEI, SANA, Umande Trust, Cordaid Urban Matters) will be primarily responsible for proper project implementation and will approve all progress and financial reports. The Managing Director of KIWASCO will head the Directorate and will have overall responsibility for project implementation and communication with the African Water Facility. Memoranda of Understanding shall be concluded between KIWASCO and all collaborating partners regarding their respective roles and contributions.

3.2.2 A Project Management Team (PMT) consisting of a full time Project Manager from KIWASCO PPFU, and assisted by a part-time Project Advisor from VEI will be responsible for the daily management of project activities, including financial and progress reporting. The PMT will receive Short Term Expert inputs from HDSR. The PMT shall report to the PD. Activity Teams comprising Partner staff will implement the planned activities under each project output. *The PMT can draw upon resources within KIWASCO for administrative and office support.* A Project Assistant, a Secretary (logistics) and part-time Financial Administrator will provide services to support the PM and Activity Teams. The organisational set up will ensure good project implementation and knowledge management.

3.2.3 A Project Steering Committee (PSC) comprising representatives of key sector ministries (Ministry of Health, Ministry of Water & Irrigation, Ministry of Agriculture, Ministry of Energy, NEMA), local stakeholders (MCK, community representative, farmer representative) and three authorised representatives of the collaborating partners shall be established. The PSC shall be chaired by the Chief Executing Officer of the Lake Victoria South Water Services Board and will provide strategic direction to the project.

3.2.4 Project monitoring shall include supervision missions and progress reporting by the project management team. A mid-term and end of project evaluation shall be carried out to assess the extent to which project objectives have been met in relation to the expected impact.

Table 3: Implementation Arrangements

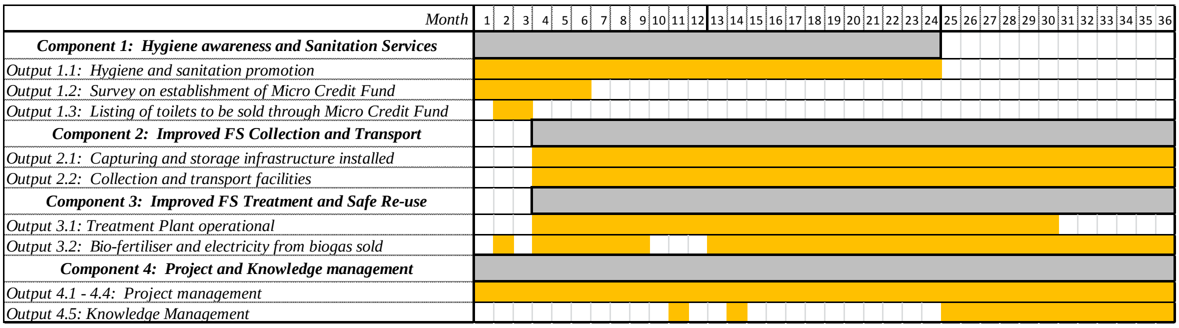
<table>
<tr><th>Role</th><th>Organisation</th><th>Project Responsibility</th></tr>
<tr><td>Recipient/Executing Agency</td><td>KIWASCO</td><td>Receives and administers funds, overall project management and coordination, procurement of goods, services and works.</td></tr>
<tr><td>Strategic Partners</td><td>Vitens Evides International (VEI)</td><td>Provide a project advisor to support project management and execution. Concept development and monitoring, assistance with up-scaling, documentation and dissemination to other informal settlements.</td></tr>
<tr><td rowspan="5">Implementing Partners</td><td>Umande Trust</td><td>Part involvement in awareness creation, promotes hygiene, upgrading facilities, trains artisans, ensures integration/synergies with existing sanitation approaches, supports recruitment of private contractors for FS collection, and arranges micro-credit finance.</td></tr>
<tr><td>SANA</td><td>Organises collection centres, upgrades and arranges financing for FS collection companies, certifies sanitation facilities.</td></tr>
<tr><td>Cordaid/WTG</td><td>Part organisation and coordination of hygiene awareness at household level, provides information and links up with other ongoing environmental sanitation related interventions e.g., solid waste, urban agriculture to maximise project impacts.</td></tr>
<tr><td>HDSR</td><td>Project management support, technical advisory services on bio digestion and re-usable products, knowledge sharing.</td></tr>
<tr><td>Micro Water Facility</td><td>Spearheads establishment of micro-credit facility through local banks (e.g. K-Rep, Equity or Family Bank), supports SME lending to the private contractors.</td></tr>
<tr><td>Development Partners</td><td>ACP-EU Water Facility, WOP</td><td>Co-financing, technical assistance.</td></tr>
<tr><td rowspan="4">National Government</td><td>MoWI - Ministry of Water and Irrigation</td><td rowspan="3">Policy, strategy formulation and planning.</td></tr>
<tr><td>MoA - Ministry of Agriculture</td></tr>
<tr><td>MoE – Ministry of Energy</td></tr>
<tr><td>NEMA</td><td>Environmental standards, regulation and quality monitoring.</td></tr>
<tr><td>Local Government</td><td>Municipal Council of Kisumu (MCK)</td><td>Significant role in field awareness creation, up-scaling to other Kisumu informal settlements, and oversight of KIWASCO sanitation related activities.</td></tr>
</table>

Private Sector	Local companies (SMEs), private individuals	Support sanitation services delivery along value chain.
Community	CBOs, school children, home owners and individuals	Participation in project activities along value chain.
End users	Small scale farmers	Participate in testing and use of organic fertiliser, price fixing, etc.

3.3 Implementation Schedule

3.3.1 The Project will be implemented for a total duration of 36 months. The summarised project implementation schedule is presented in Table 4. A detailed schedule is presented in Annex 3.

Table 4: Implementation Schedule Summary



3.4 Procurement Arrangements

3.4.1 Procurement of goods, works and consultancy services financed by AWF shall be in accordance with the Bank's ***Rules and Procedures for Procurement of Goods and Works,*** and ***Rules and Procedures for the Use of Consultants*** or as modified by the AWF Operational Procedures, and based on the relevant Bank Standard Bidding Documents. The Procurement arrangements for the project are summarised in Table 5 below.

The draft procurement plan shall be revised and implemented according to schedule and shall follow AfDB rules. The overall project work plan shall cover the whole project duration and be followed to ensure timely completion of the project. Annual updates will be required in case of deviations.

3.4.2 ***Consultancy Services:*** Consulting Services for Mid-term and final review (€ 14,000) will be procured using Least Cost Selection. LCS is recommended because these assignments are standard or routine in nature and well-established practices and standards exist. All other services related to sanitation marketing and micro-credit fund promotion, monitoring of behavioural change and survey on end user's, listing of toilets, supervision of purchase and/or construction of toilets, training of local artisans, supervision of collection drums and construction of 3 collection points, supervision and up-scaling of collection and transport of faecal sludge and urine and design of processing units, farm demonstration, consultation with the Ministry of Agriculture and other authorities, selection and training of operators, establishment of association, marketing for sales of final products, project management, knowledge management, documentation of best practices and disseminating the project approach worth € 226,540, will be procured using other appropriate procurement methods such as Quality Based Selection (QBS), Fixed Budget Selection (FBS), Least Cost Selection (LCS), Selection Based on Consultant's Qualifications (CQS), Single Source Selection (SSS) or use of Individual Consultants. This is because the services entail many small assignments of a standard or routine nature with requirements spread over time for which QCBS may not be the most economic and efficient procurement method. In this regard, the KIWASCO will submit to the Bank updated procurement plans for approval, indicating schedules and budgets for these activities, including procurement methods, within two months of the start of each fiscal year.

3.4.3 ***Goods:*** Purchase of promotional materials, household toilets, training materials, tools, collection drums, tanker, exhauster estimated at € 222,000 shall be procured under shopping procedures because the requirements are small and suppliers for these are readily available.

Table 5: Procurement Arrangements (in Euros)

Description	AWF	Non-AWF Funded	Total
Goods			
Purchase of promotional materials, household toilets, training materials, tools, collection drums, tanker, exhauster	€ 222,000	€ 37,000	€ 259,000
Non-Consulting Services			
Transport for hygiene awareness campaign, sanitation marketing and micro-credit fund promotion, collection and transport of faecal sludge and urine and training operators	€ 54 150	€ 51 100	€ 105 250
Works			
Construction of demonstration toilets and rehabilitation of pit latrines	€ 4 000	€ 68 000	€ 72 000
Purchase and install new toilets	€ 32 100	€ 385 900	€ 418 000
Purchase of collection drums and construction of 3 collection points	€ 73 500	-	€ 73 500
Sludge drying bed, composting system	€ 75 000	-	€ 75 000
Anaerobic digester	€ 145 000	€ 250 000	€ 395 000
Urine holding tanks	€ 140 000	-	€ 140 000
Urine holding tanks for Farm demonstration	€ 15 000	-	€ 15 000
Up scaling works	€ 13 750	€ 13 750	€ 27 500

Consultancy services			
Mid-term and final review	€ 14 000	-	€ 14 000
Hygiene awareness in schools and informal settlements	-	€ 32 540	€ 32 540
Sanitation marketing and micro-credit fund promotion, monitoring of behavioural change and survey on end users	€ 39 564	€ 1 386	€ 40 950
Listing of toilets, supervision of purchase and / or construction of toilets, training of local artisans, design of processing units, supervision of demonstration works for toilets, drums and construction of 3 collection points, supervision and up-scaling of collection and transport of faecal sludge and urine and design of processing units	€ 102 448	€ 27 702	€ 130 150
Farm demonstration, consultation with the Ministry of Agric. and other authorities, select and train operators, establish association, marketing for sales of final products	€ 14 856	€ 8 044	€ 22 900
Miscellaneous			
Project management	€ 149 590	€ 13 860	€ 163 450
Knowledge management, documentation of best practices and disseminating the project approach	€ 51 484	€ 13 616	€ 65 100
Sub-Total	**€ 1 146 442**	**€ 902 898**	**€ 2 049 340**
5% Contingency, rounded	€ 57 558	€ 45 102	€ 102 660
Total	**€ 1 204 000**	**€ 948 000**	**€ 2 152 000**

3.4.4 ***Works:*** Procurement of civil works for construction of anaerobic digester (€ 395,000) shall be undertaken under National Competitive Bidding (NCB) procedures. NCB is recommended because the nature and scope of works may not attract international contractors. Moreover, an adequate number of local contractors are available in the country to ensure good competition. Procurement of works for demonstration toilets and rehabilitation of pit latrines (€ 72,000), purchase of collection drums and construction of 3 collection points (€ 73,500), sludge drying bed, composting system (€ 75,000), urine holding tanks (€ 155,000) will be done using shopping. Purchase and install new toilets (€ 418,000) and up-scaling works (€ 27,500) will be procured under national rules and procedures. In this regard, KIWASCO will submit to the Bank updated procurement plans for approval, indicating schedules and budgets for these activities, including procurement methods, within two months of the start of each fiscal year. The national procurement procedures and regulations have been reviewed and found to be acceptable for implementation of these activities.

3.4.5 ***Non-Consulting Services***: Procurement of transportation services for various activities including hygiene awareness campaign, sanitation marketing and micro-credit fund promotion, collection and transport of faecal sludge and urine and training operators estimated at € 105,250 shall be procured using shopping procedures because the requirements are small and suppliers for these are readily available.

3.4.6 Project management (€ 163,450) and knowledge management, including documentation of best practices and disseminating the project approach activities (€ 65,100) entail operating costs and shall be procured under national rules and procedures.

3.4.7 Contracts for Consultancy Services or Works of value higher than € 50,000 will be subject to prior review by the AWF. The following documents are subject to review and approval by the AWF: Specific Procurement Notices (SPN), tender/ bid documents or requests for proposals from consulting firms, tender/bid evaluation reports or reports on evaluation of consultants' proposals.

3.4.8 Contracts for Consultancy Services or Works of value less than € 50,000 will be subject to post review by the AWF, and will be processed under the full responsibility of KIWASCO. Ex-post technical verification and ex-post financial control systems will be used in these instances to enable KIWASCO to expedite procurement of goods, works and to acquire consulting services. Procurement documents including SPNs, tender/bid documents or request for proposals, tender/bid evaluation reports as well as signed contracts will be kept by KIWASCO for periodic review by the AWF supervision missions or special audits. In addition to the prior review and supervision to be carried out by the Bank, the capacity assessment of the Implementing Agency has recommended two procurement supervision missions to visit the project and carry out post review of procurement actions.

3.5 Disbursement Arrangements and Expenditure Schedule

3.5.1 The project will utilise the special account disbursement method as explained in the Disbursement Handbook. The project will operate one Euro special account (SA) into which the proceeds of the grant will be deposited. A local currency SA will be operated for payments in national currency and receive part of the grant through the Euro SA. Both accounts will be opened at a bank acceptable to the African Development Bank (AfDB). The opening of the foreign and the local currency special accounts will be made a condition precedent to first disbursement of the grant. The first tranche will be disbursed to the Euro SA based on expenditure forecast for the project and on the agreed work plan approved by the AWF upon the initial disbursement request submitted after the effectiveness of the project. Disbursement

Requests for subsequent tranches will be supported by Statements of Expenditures (SOE).
The opening of the special account will be a condition precedent to first disbursement and should be done as soon as the grant is approved.

3.5.2 The proceeds of the Grant shall be disbursed by the AWF in three tranches, based on the implementation schedule and progress with estimated amounts as shown in Table 6. The first tranche will be disbursed when the conditions for Grant Effectiveness are met, estimated to be within three months of grant signature. The second and third tranches will be disbursed upon draw down of the Special Account estimated to be within 12 and 24 months after grant signature.

Table 6: AWF Expenditure and Disbursement Schedule (amounts in Euros)

Category of Expenditures	*Tranche 1*	*Tranche 2*	*Tranche 3*	*Total*
Goods	100 000	50 000	83 100	233 100
Works	200 000	200 000	123 508	523 508
Services	104 000	150 000	193 392	447 392
Total	**404 000**	**400 000**	**400 000**	**1 204 000**
Percentage	34%	33%	33%	

3.5.3 Obligations of the AWF to make the first disbursement of the Grant shall be conditional upon the opening of a Special Account, the nomination acceptable to the AWF of the Project Team Leader, preparation of an implementation plan (including a procurement plan), and presentation of memoranda of understanding with the collaborating partners (ref. 3.2.1). Supporting documentation for replenishment of the Special Account before disbursement of the second and third tranches will be a Statement of Expenditure (SOE) of funds supported by bank statements, justifying that at least 50% of previous disbursement has been utilised. For the second tranche, an updated work programme and cost estimate for the remainder of the project and evidence for co-financing as defined has to be included. For the release of the last tranche, justifications covering at least 50% of the second tranche and the remaining unjustified portion of the first tranche shall be submitted.

3.5.4 Additionally, the last tranche would be released not later than six months to the grant closing date. The last tranche shall be justified within three months after the grant closing date. All detailed documents related to utilisation of AWF funds will be held by KIWASCO for subsequent verification and confirmation by the external auditors.

3.6 Accounting and Audit Arrangements

3.6.1 KIWASCO shall be responsible for the financial management of the project. KIWASCO has sufficient qualified and experienced financial management staff including: Project Manager, Administrative Assistant and a dedicated Accountant. They will maintain an accounting system and books of account specifically for the AWF project, and shall prepare quarterly financial statements in accordance with AfDB procedures. These statements will be submitted together with the quarterly progress reports. All payments will be endorsed by the Project Manager. Segregation of duties shall be maximised between authorising, accounting and control functions.

3.6.2 Two audits are expected to be carried out by an external auditor recruited by the AWF: an interim audit approximately half-way through the project (i.e. 18 months after project commencement), and a final audit at the end of the project. The AWF will recruit and retain an auditor for this purpose, and the cost of the audit shall be paid from the AWF administrative budget, not from this Grant.

3.7 Supervision, Monitoring and Reporting Arrangements

3.7.1 During the grant's execution, KIWASCO shall coordinate the implementation of the project and manage procurement, project monitoring, reporting and evaluation; contractual relationships with the Bank and other financiers; financial management record keeping, accounts and disbursements. The AWF's supervision of the project will include regular communication and correspondence with KIWASCO, as well as review of the Quarterly Progress Reports and other documents. AWF may undertake field supervision missions whenever necessary. Two annual supervision missions are anticipated.

3.7.2 A project monitoring system will be developed at inception to track project progress and performance that will result in evidence-based adjustments. A comprehensive M&E plan will be prepared and submitted to the AWF after Grant approval. The Project Manager will be responsible for implementation of the project, under the supervision of the Managing Director of KIWASCO and the PSC. The LFA shall serve as the basis for a results-based assessment of the outputs of the project during implementation and after completion. The key indicators for monitoring progress of project implementation and overall performance as identified in the LFA will be further elaborated to prepare a detailed Implementation Plan. The M&E framework will align with any existing sector monitoring systems. The following procedures for M&E shall be followed among others:

- A yearly self-assessment of Beneficiary Partners' progress in organisational capacity development and asset management;
- Semi-annual monitoring meeting between the Project Directorate and Project Management Team to decide on required adjustments to achieve the project objectives;
- Internal review by experts on the implementation of newly introduced methodologies and technologies;
- External final review to assess project success or otherwise in the achievement of the objectives.

3.7.3. The Recipient shall submit to the AWF the reports/documents noted in Table 7. The project completion report shall include details on project activities and achievements, as well as a comprehensive expenditure report on the utilisation of the Grant. All documents shall be transmitted to the AWF in soft and hard copies.

Table 7: 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 as noted in Section 3.4	As noted in Procurement Section	Review and "no objection"
3. Quarterly Progress Report in AWF format (with report on expenditures)	Within two 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 Effectiveness and Efficiency

4.1.1 The project is fully in line with relevant policies like the Poverty Reduction Strategy Paper (PRSP), the National Water Service Strategy and the Water Services Trust Fund (WSTF) strategies. The project attracts substantial co-funding from KIWASCO and other partners, thereby offering good value for money. Project activities will apply an effective and innovative approach that assures financial sustainability through re-use to provide sustainable services along the sanitation value chain to the pro poor urban population.

4.1.2 Adoption of public private partnership through lease contracting arrangements in the delivery of services, with opportunities to provide incentives for faecal sludge collection, processing and re-use ensure effective and efficient management of faecal sludge in the poor urban areas. In addition, institutional anchoring of the sanitation value chain and adequate knowledge management through learning, documentation and sharing of project related experiences enhance the efficiency of services delivery.

Table 8: Effectiveness and Efficiency

Objective	*Description*
Increase hygiene awareness and sanitation coverage in Manyatta	Increasing hygiene awareness coupled with the establishment of a micro-credit financing scheme for household sanitation will contribute to generate increased demand for improved access to safe sanitation services for the 48,000 urban poor residents in Manyatta.
Establish a franchised partnership arrangement for faecal sludge and urine collection and transport under PPP franchised management arrangement.	An innovative approach to the delivery of sustainable FS collection and transport services by the private sector (CBEs, private company) with public sector support for: (i) initial capital investments, (ii) financing of operation and maintenance costs, through user fees and re-use revenue; and (iii) staff training. This arrangement will enhance the capacity of the private sector for sustainable delivery of critical services along the value chain.
Demonstrate the potential for valorisation and marketing of FS and human urine for energy and fertiliser production.	Appropriate processing and treatment options will be employed to convert FS and urine into reusable end products. Resulting biogas will be used for cooking and to generate electricity. Digested sludge will be composted with solid waste or dried as fertiliser pellets for use by farmers to improve crop yield and local income. Existing cultural habits that negatively affect ready use of such end products are overcome through increased community sensitisation that targets various economic groupings.
Upscale project outcomes to all informal settlements of Kisumu.	This will result in improved sanitation and hygiene access to an additional 240,000 urban poor people living in two informal settlements in Kisumu to improve their environmental health and productivity.
Disseminate to other cities and WSPs in Kenya and beyond.	The lessons learned on socio-economic impacts will be documented along the innovative approaches and technologies adopted and incorporated in advocacy and project planning materials for dissemination in 20 other Kenyan cities and elsewhere. This will contribute to reduce environmental health costs and poverty in informal settlements in cities across the continent.

Table 9: Sanitation Infrastructure per Capita Investment Costs (Euros)

Description	*Persons served*	*Unit Cost*	*Cost per capita*
Capturing and Storage			
Household Toilet (UDT)	20	250	12.5
Rehabilitated Pit Latrine	20	150	7.5
Treatment			
Construction of FS treatment and Processing Facilities	300,000	450,000	1.5
Urine Hygienisation	150,000	70,000	0.5
Description	*No. of Trips / day*	*Daily Capital cost*	*Capital cost per trip*
Collection and Transport			
Hand cart	3		
Tri-cycle	3	2.4	0.8
Exhauster	6	35	5.8
Urine Tanker	6	35	5.8

4.2 Sustainability

4.2.1 Stakeholder consultations by the WTG with recipients/beneficiaries in Manyatta have created commitment for project implementation. The hygiene awareness actions (Component 1) and continued involvement of the WTG, local NGOs & CBOs will sustain and enhance this commitment.

4.2.2 At the level of *relevant policies*, the project is supported by the national strategic objective to increase urban basic sanitation access from fifty five percent (55%) to seventy seven and a half percent (77.5%) by 2015. The Water Services Trust Fund is committed to support up scaling to other Kenyan towns.

4.2.3 The project also considers *other factors that are critical to project sustainability*. The micro-credit fund creates a revolving fund for future investments in rehabilitation and purchase of toilets which will stimulate long-term private sector involvement. Recurrent costs for transporting FS and urine are covered partly by the revenue accruing from the pit latrine mechanical emptying services and partly by the revenue from re-use sales. Future additional costs are likely to be financed with revenue from water tariff increase. The capacity building activities under the project will also enhance sustainability. Environmental sustainability is addressed by multiple aspects, including reduced surface and groundwater pollution, reduction in the use of chemical fertilisers and substitution of charcoal with electricity and biogas.

4.2.4 The sustainability of the project results has been considered carefully in terms of financing and institutional arrangements, environmental management and equitable access to project benefits.

4.2.5 With regard to financing arrangements, the most important source of funds for O&M of improved infrastructure will be user fees. This is in line with sector policies supporting cost recovery for water supply services including O&M and systems expansion and improvement, and the widespread practice of payment for WASH services is in all urban communities. In addition, the participatory decision-making will facilitate improved financial management and willingness to pay. Also, capacity building by NGOs will include support with tariff setting and review. The role of the private sector in the O&M of facilities will be encouraged, with payment for services made by the communities and therefore greater sustainability of investments is expected from better served clients.

4.2.6 Environmental Management issues will be taken care of by complying with National Environmental Management Authority (NEMA) regulations and procedures as follows:

- The NEMA in Kenya has clearly laid out procedures for ensuring compliance with regulations. These require environmental assessments and registration, preparation of environmental management plans where required, on-going monitoring and routine tracking and reporting on environmental actions.

4.2.7 Socio-economic and gender benefits will be considered and assured as follows:

- The initial analysis and studies under the project include detailed socio-economic reviews. The outcomes are used to overcome social barriers such as illiteracy, poverty and gender inequity, cultural and religious barriers.
- The project activities will include preparation and dissemination of information products which will help promote gender, including (i) gender awareness training materials; (ii) preferential access to training opportunities for women; and (iii) promotion of women's participation at all levels and in community leadership.

4.2.8 The risks posed by climate change and variability will be considered in the design of faecal sludge processing and drainage facilities. The flood proof location of dry sanitation facilities will receive the required attention.

4.2.9 ***Expected Re-use Revenue:*** The table below shows a calculation of the potential revenues assuming that > 90% of FS and urine is collected. The indicative market values for urine, faecal compost and biogas / electricity are based on: (i) phosphate and nitrogen fertiliser costs (conservative estimates); (ii) commercial value of compost; and (iii) current electricity price in Kenya. The potential total revenues are in the range of € 150,000 to € 180,000. These revenues will be used to cover operation expenditures of FS and urine processing, marketing, transport, etc. The computations show that this aspect of the sanitation value chain could be self-financing.

Table 10: Sales Targets

Product	*2014*	*2015*	*Indicative market value*	*Potential annual revenue (indicative)*
Urine	10,000 m^3/a	15,000 m^3/a	€ 3-5 / ton	€ 45,000 – 75,000
Faecal compost		600 t/a	€ 5-10 / ton	€ 3, 000 – 6,000
Biogas / energy	250,000 kWh/a	500,000 kWh/a	€ 0.2 / kWh	€ 100,000
Total Annual Revenue				*€ 150,000 - 180,000*

4.2.10 Kiwasco intends to cross-subsidise the delivery of sanitation services through a surtax on drinking water (of 20 Kshs/m^3). Given 60,000 Manyatta residents, and at 15 liters per capita daily consumption, expected revenue is about Kshs 6,570,000 (€ 60,000) per year or Kshs 109 per person per year (approximately 1 €). It may be desirable for action to be taken to conclude the relevant consultative processes to enable such tariff increases in the near future.

4.2.11 KIWASCO will be supported with AWF funds to purchase relevant vehicles and equipment (transportation vehicles, latrine emptying equipment, etc., with approximate value of € 160,000) that will be leased to the two outsourced companies. Based on 8 years depreciation, expected annual lease cost is € 20,000; and with operation & maintenance costs (including fuel) of about € 40,000, and staff cost (18 persons) of about € 50,000 per year, the companies are barely able to break even compared to the expected revenue from the Pit Exhauster amounting to about € 104,000 per year. The secondary collection and transportation services will therefore be cross-subsidised with accrued savings from the sale of the FS end products. Additional revenue derived from further water tariff increases will contribute towards ensuring full cost recovery and financial sustainability.

4.3 Environmental and Social Impact

Environment: The project will not have any adverse social or environmental impacts and thus fits in **Category 3** of the Environmental and Social Assessment Procedure. On the contrary, the project will have significant positive environmental and social impacts:

- Introduction of 1,500 improved toilets and rehabilitation of 500 existing pit latrines will reduce groundwater pollution;
- Increased sanitation coverage and hygiene awareness will reduce water-borne diseases;

- Re-use of organic fertiliser will serve as alternative source of nutrients for agriculture as resources for mineral fertilisers (especially phosphates) are increasingly becoming scarce, globally.

Climate Change: Accumulated and untreated faecal sludge from existing latrines already causes methane emissions (with 25 times more greenhouse impact than CO_2). This project aims at collecting and digesting faecal sludge along with controlled capture of biogas to produce reusable products. The biogas will serve as a source of energy to reduce the over dependence on fossil fuels like diesel that are increasingly becoming scarce. In addition, using FS and urine fertiliser will diminish use of artificial fertilisers, reducing significant amounts of (indirect) CO_2 emissions.

Gender*:* The project will have positive impacts on gender that include: (i) increased access to improved and safe toilets for women and children, (ii) reduction of violence against women related to use of shared toilets, especially at night (iii) increased job opportunities for women regarding promotion and marketing of sanitation related activities, processing and sale of end products. Also, the project will ensure that women and men are provided with equal opportunities, and participate equally in the decision-making process.

Social*:* The project will have positive social impacts that include:

(i) *Job creation*: New jobs will be created along the value chain for marketing of micro-finance, sale of ecosan toilets, rehabilitation/construction of latrines/toilets, emptying of latrines, transporting and managing collected FS and urine, and processing and sale of reusable products. It is expected that each of these activities will generate up to 10 jobs. Together, about 64 jobs will be created, of which more than 50% will be for women. Most jobs will be targeted at the low(est) income groups, thereby contributing to an improvement in their income.

(ii) *Women and children*: Women and children will have access to safe and improved toilet facilities, with observance of better hygienic practices. Women and children are disproportionately affected by poor hygiene and environmental sanitation.

(iii) *Ownership:* More house owners will own toilets thereby reducing the number of people that depend on shared toilet facilities.

(iv) *Improved Health:* The project will reduce the environmental ill health of the people through reduction of environmental pollution and the incidence of sanitation related diseases. Approximately 80 percent of the outpatient hospital attendance in Kenya is due to preventable diseases, of which 50 percent is related to poor water supply, sanitation and hygiene.

Involuntary Resettlement: The project will not result in any involuntary resettlement of people. The treatment facilities will be constructed at the current site for municipal sewage treatment in Kisat. Temporary storage tanks will be constructed at designated sites provided by the Municipal Council of Kisumu.

Anticipated Negative Social Impacts: The project may result in high expectations in Manyatta - the target community, and may cause a backlash in neighbouring communities that are not direct project beneficiaries. These will be mitigated by making sure that accurate information is disseminated through stakeholder meetings and community involvement, and the scaling up of project activities to cover the neighbouring poor communities in Kisumu.

5. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

5.1 The project offers an opportunity to improve the sanitation situation in Manyatta and other informal settlements with financial contribution from the African Water Facility. The approach adopted is an innovative model of a self-financing (financially viable) sanitation value chain that is replicable in other towns and cities in Kenya and in other African countries.

5.2 Also, 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 impact adversely on successful implementation of the project.

5.4 The total project cost is € 2 152 000 of which the AWF is requested to fund € 1 204 000, constituting some 56%. The remainder is covered through the combined financial contribution of the Recipient, implementing partners and project beneficiaries.

Recommendations and Conditions

5.5 It is recommended that a Grant not exceeding € 1 204 000 from the African Water Facility resources be extended to KIWASCO for the implementation of the project as described in this appraisal report.

5.6 Obligations of the AWF to make the first disbursement of the Grant shall be conditional upon the nomination of a Project Manager acceptable to the AWF, the opening of a Special Account in a commercial bank in Kenya acceptable to the AWF and the preparation of revised Implementation and Procurement plans.

ANNEX 1: Map of Kenya with AWF Project Location

	AWF Project Location

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*

ANNEX 2: Cost Estimate (Amounts in Euro)

Activity description	Item (see Note number)	Unit	Unit Cost	Quantity	Amount	Total	AWF	Contribution
Component 1 - Improved hygiene awareness and sanitation service access						**€ 182 290**	**€ 64 478**	**€ 117 812**
Output 1.1: Hygiene and Sanitation Promotion						*164 990*	*49 950*	*115 040*
Activity 1.1.1 School campaigns: at 4 schools in informal settlements						***€ 80 100***	***€ -***	***€ 80 100***
Hygiene promotion and awareness creation, construction of improved toilets and hand washing facilities. Includes construction of at least 20 toilets.	Promotional materials for hygiene awareness and school health clubs	Per school	€ 500	4	€ 2 000		€ -	€ 2 000
	Toilets and hand washing facilities	Per school	€ 17 000	4	€ 68 000		€ -	€ 68 000
	KIWASCO pro poor coordinator	Month	€ 1 200	2	€ 2 400		€ -	€ 2 400
	VEI Football for WASH coordinator	Month	€ 7 700	1	€ 7 700		€ -	€ 7 700
Activity 1.1.2 Hygiene awareness campaign among informal settlement residents						***€ 34 940***	***€ -***	***€ 34 940***
Increase hygiene awareness in relation to safe and sanitation practices among residents of Manyatta and other informal settlements in Kisumu. Activities include handwashing promotion, promotion material (posters, flyers). The campaign will build on Sana's and Umande's network of local NGO and CBOs. Campaigning will a.o. take place through local shops.	SANA Community awareness worker	Month	€ 1 500	6	€ 9 000		€ -	€ 9 000
	Radioshows / talk shows	Broadcast	€ 100	48	€ 4 800		€ -	€ 4 800
	Promotion material	Lumpsum	€ 10 000	0,5	€ 5 000		€ -	€ 5 000
	Hire of theatre for development groups, hygiene and sanitation promotion		€ 96	90	€ 8 640		€ -	€ 8 640
	Transport	km	€ 0,75	10000	€ 7 500		€ -	€ 7 500
Activity 1.1.3 Sanitation marketing and micro credit fund promotion						***€ 22 750***	***€ 22 750***	***€ -***
Promote improved toilets and latrines (with capture) and purchase of these toilets through the micro credit fund among informal settlement residents and land lords. The campaign will run alongside the awareness campaign and is closely linked to it. The campaign build on the results of the assessment of appropriate toilet systems.	Micro finance specialist *(a)*	Month	€ 1 500	3	€ 4 500		€ 4 500	€ -
	Promotion specialist *(a)*	Month	€ 1 500	3	€ 4 500		€ 4 500	€ -
	Promotion material *(1)*	Lumpsum	€ 10 000	1	€ 10 000		€ 10 000	€ -
	Transport *(2)*	km	€ 0,75	5000	€ 3 750		€ 3 750	€ -
Activity 1.1.4 Monitoring of behavioral change						***€ 27 200***	***€ 27 200***	***€ -***
Awareness creation and behavior change will be monitored with a baseline survey, a mid term and a final survey. The consortium will use Knowledge, Attitude and Practice (KAP) Surveys (WHO, 2008) to monitor uptake and behavioral changes during the project.	Monitoring specialist (a)	Month	€ 7 700	1	€ 7 700		€ 7 700	€ -
	Local coordinator (a)	Month	€ 1 200	2	€ 2 400		€ 2 400	€ -
	Support staff for surveying	Month	€ 800	12	€ 9 600		€ 9 600	€ -
	Transport *(3)*	km	€ 0,75	10000	€ 7 500		€ 7 500	€ -
Output 1.2: Survey on establishment of Micro Credit Fund						*12 250*	*10 864*	*1 386*
200 interviews to validate user's willingness to borrow and pay back - before setting up micro credit facility. A Micro Credit Fund will be established for residents to purchase an Ecosan toilet or rehabilitate a pit latrine.	Micro credit specialist (a)	Month	€ 1 200	2	€ 2 400		€ 2 400	€ -
	VEI senior techn. advisor sanitation	Month	€ 7 700	0,5	€ 3 850		€ 2 464	€ 1 386
	Local consultant	Day	€ 300	20	€ 6 000		€ 6 000	€ -
Output 1.3: Listing of toilets to be sold through Micro Credit Fund						*5 050*	*3 664*	*1 386*
Various options will be assessed - incl. leveraged ecosan and toilets with innovative storage system (available in the African market). The list will incorporate GIZ-WSTF recommendations. Mobile toilets may be favorable for tenants.	Sanitation specialist (a)	Month	€ 1 200	1	€ 1 200		€ 1 200	
	VEI senior techn. advisor sanitation	Month	€ 7 700	0,5	€ 3 850		€ 2 464	€ 1 386

Activity description	Item (see Note number)	Unit	Unit Cost	Quantity	Amount	Total	AWF	Contribution
Component 2 - FS collection and transport services						€ 884 750	€ 413 920	€ 470 830
Output 2.1: Capturing and storage infrastructure installed						*451 950*	*61 892*	*390 058*
Activity 2.1.1 Construction of 100 demonstration toilets						**€ 15 650**	**€ 14 264**	**€ 1 386**
Support the sanitation marketing and micro credit fund promotion (activity 1.1.3). Draw attention to the various toilet types that are eligible under the micro credit fund. Construction will be done under supervision by consultant *(a)* and VEI.	Elevated UDDT toilets	Piece	€ 250	10	€ 2 500		€ 2 500	€ -
	Tenants' UDDT toilets	Piece	€ 100	30	€ 3 000		€ 3 000	€ -
	Rehabilitated pit latrines	Piece	€ 150	10	€ 1 500		€ 1 500	€ -
	Construction supervisor (a)	Month	€ 1 200	4	€ 4 800		€ 4 800	€ -
	VEI senior techn. advisor sanitation	Month	€ 7 700	0,5	€ 3 850		€ 2 464	€ 1 386
Activity 2.1.2 Purchase and / or construction of toilets						**€ 426 650**	**€ 39 364**	**€ 387 286**
Toilets sold to residents of Manyatta and other informal settlements (who may use micro credits), either through local retailers or establishing dedicated companies. Especially women will be trained to sell the toilets / latrines with combined micro credit. All toilets will be subsididized with 10% discount	Purchase / install new toilets *(4)*	Piece	€ 250	990	€ 247 500		€ 24 750	€ 222 750
	New improved toilets *(4)*	Piece	€ 100	970	€ 97 000		€ -	€ 97 000
	Rehabilitated pit latrines	Piece	€ 150	490	€ 73 500		€ 7 350	€ 66 150
	Micro credit specialist (a)	Month	€ 1 200	4	€ 4 800		€ 4 800	€ -
	VEI senior techn. advisor sanitation	Month	€ 7 700	0,5	€ 3 850		€ 2 464	€ 1 386
Activity 2.1.3 Training of local artisans						**€ 9 650**	**€ 8 264**	**€ 1 386**
Local constructors (3-4 companies) will be trained to rehabilitate and improve existing latrines in Manyatta and other informal settlements, following the recommended toilets under 1.3	Training materials, tools	Set	€ 1 000	4	€ 4 000		€ 4 000	€ -
	Sanitation specialist (a)	Month	€ 1 200	1,5	€ 1 800		€ 1 800	€ -
	VEI senior techn. advisor sanitation	Month	€ 7 700	0,5	€ 3 850		€ 2 464	€ 1 386
Output 2.2: FS and urine transport services operational						*432 800*	*352 028*	*80 772*
Activity 2.2.1 Construction of 3 collection points and purchase of collection drums						**€ 164 550**	**€ 143 164**	**€ 21 386**
Collection drums will be purchased, to be used to collect faecal sludge and urine. Kiwasco will, supported by the international partners, establish 3 collection points in Manyatta for temporary FS / urine storage. Each collection point will have two urine collection tanks (2 X 24 m3 tanks each) and a lined and roofed concrete floor for storage of the vessels / containers. In addition it will have a small office for the collection point manager	Collection drums	Piece	€ 10	5000	€ 50 000		€ 30 000	€ 20 000
	Urine storage tanks (24 m3)	Piece	€ 3 500	6	€ 21 000		€ 21 000	€ -
	Concrete floor lining	Piece	€ 4 500	3	€ 13 500		€ 13 500	€ -
	Roofing	Piece	€ 4 000	6	€ 24 000		€ 24 000	€ -
	Small office	Piece	€ 5 000	3	€ 15 000		€ 15 000	€ -
	Construction supervisor (a)	Month	€ 1 200	1	€ 1 200		€ 1 200	€ -
	VEI senior techn. advisor sanitation	Month	€ 7 700	0,5	€ 3 850		€ 2 464	€ 1 386
	Site supervisors *(5)*	Month	€ 400	90	€ 36 000		€ 36 000	€ -
Activity 2.2.2 Collection and transport of faecal sludge and urine						**€ 208 250**	**€ 148 864**	**€ 59 386**
Kiwasco will outsource transport of FS / urine from the collection points to off-side processing units to a dedicated transport company. This company will also be responsible for management of the 3 collection points. The revenues of the company will be output-based (based on transported amounts of FS and urine).	Drum collection	Per drum	€ 0,02	780000	€ 15 600		€ -	€ 15 600
	Transport of faeces (fuel, maintenance, staffing)	Year	€ 15 000	2	€ 30 000		€ 15 000	€ 15 000
	Tri cycle for transport	Piece	€ 4 000	10	€ 40 000		€ 40 000	€ -
	Tanker for urine transport	Vehicle	€ 60 000	1	€ 60 000		€ 60 000	€ -
	Transport of urine (fuel, maintenance, staffing)	Year	€ 10 000	3	€ 30 000		€ 17 000	€ 13 000
	KIWASCO supervisor	Month	€ 800	36	€ 28 800		€ 14 400	€ 14 400
	VEI senior techn. advisor sanitation	Month	€ 7 700	0,5	€ 3 850		€ 2 464	€ 1 386
Activity 2.2.3 Purchase of new equipment for latrine emptying						**€ 60 000**	**€ 60 000**	**€ -**
New exhauster to empty existing pit latrines (instead of manual emptying)	Exhauster *(6)*	Vehicle	€ 60 000	1	€ 60 000		€ 60 000	€ -

Activity description	*Item (see Note number)*	*Unit*	*Unit Cost*	*Quantity*	*Amount*	*Total*	*AWF*	*Contribution*
Component 3: Improved FS treatment and safe Re-use						**€ 703 650**	**€ 440 620**	**€ 263 030**
Output 3.1: Treatment plant designed, constructed and operational.						*638 450*	*383 464*	*254 986*
Activity 3.1.1 Design of processing units						***€ 28 450***	***€ 23 464***	***€ 4 986***
Detailed design of the processing units under activities 3.1.2 – 3.1.4 will be outsourced to a local consultant	KIWASCO technical specialist	Month	€ 1 200	3	€ 3 600		€ -	€ 3 600
	VEI senior techn. advisor sanitation	Month	€ 7 700	0,5	€ 3 850		€ 2 464	€ 1 386
	Local consultant	Day	€ 350	60	€ 21 000		€ 21 000	€ -
Activity 3.1.2 Sludge drying bed, composting system						***€ 75 000***	***€ 75 000***	***€ -***
The current sludge drying beds at Kisat wastewater treatment site will be extended to cater for the increased production of sludge. A composting unit will be constructed.	Sludge drying bed (500 m2)	Piece	€ 25 000	1	€ 25 000		€ 25 000	€ -
	Composting system (500 m2)	Piece	€ 30 000	1	€ 30 000		€ 30 000	€ -
	Sieve	Piece	€ 20 000	1	€ 20 000		€ 20 000	€ -
Activity 3.1.3 Anaerobic digester						***€ 395 000***	***€ 145 000***	***€ 250 000***
An anaerobic digester to produce biogas and electricity will be constructed in year 3 of the project when sufficient FS volumes are collected (planned for end 2014 - Fecal compost 600 t/a).	Digester (400 m3) *(7)*	Piece	€ 350 000	1	€ 350 000		€ 100 000	€ 250 000
	Sludge pump	Piece	€ 20 000	1	€ 20 000		€ 20 000	€ -
	Gas storage reservoir	Piece	€ 25 000	1	€ 25 000		€ 25 000	€ -
Activity 3.1.4 Urine holding tanks						***€ 140 000***	***€ 140 000***	***€ -***
Two tanks for minimum storage of 6 months ensure hygienization before agricul. use	Holding tank (2000 m3)	Piece	€ 70 000	2	€ 140 000		€ 140 000	
Output 3.2: Bio-fertilizer and electricity from biogas produced and sold						*65 200*	*57 156*	*8 044*
Activity 3.3.1 Farm demonstration of agricult. value of fertilizer products						***€ 34 100***	***€ 31 328***	***€ 2 772***
Three demonstration projects of one year, proving the fertilizing value of FS and urine products, will be conducted for nonfood cash crops (sugar, cotton) at different farmers, to convince the agricultural sector of the added value.	Urine holding tanks on site (24 m3)	Piece	€ 5 000	3	€ 15 000		€ 15 000	€ -
	Compost sample analysis	Analysis	€ 7	200	€ 1 400		€ 1 400	€ -
	Workshop / exposure	Workshop	€ 2 000	5	€ 10 000		€ 10 000	€ -
	KIWASCO project manager	Month	€ 1 700	0	€ -		€ -	€ -
	VEI senior techn. advisor sanitation	Month	€ 7 700	1	€ 7 700		€ 4 928	€ 2 772
Activity 3.3.2 Consultation with the Ministry of Agric. and other authorities						***€ 3 900***	***€ 1 400***	***€ 2 500***
KIWASCO will consult with the Ministry and provide it with information on the project	KIWASCO managing director	Month	€ 2 500	1	€ 2 500		€ -	€ 2 500
	Travel	Per flight	€ 150	5	€ 750		€ 750	
	DSA	Per diem	65	10	€ 650		€ 650	€ -
Activity 3.3.3 Select and train Operators, establish Association						***€ 9 500***	***€ 9 500***	***€ -***
Training of primary collectors, private secondary transport, treatment plant operators, Establishment of FS Collectors Association	CBE training *(8)*	Lumpsum	2000	1	€ 2 000		€ 2 000	€ -
	Transport company training *(8)*	Lumpsum	2000	1	€ 2 000		€ 2 000	€ -
	Plant Operator training *(8)*	Lumpsum	2500	1	€ 2 500		€ 2 500	€ -
	Fertilizer User Association *(8)*	Lumpsum	2000	1	€ 2 000		€ 2 000	€ -
	FS Collectors Association *(8)*	Lumpsum	1000	1	€ 1 000		€ 1 000	€ -
Activity 3.3.4 Marketing for sales of final products						***€ 17 700***	***€ 14 928***	***€ 2 772***
Initiate marketing activities to support sales of the final products	Develop Marketing / Sales Strategy	Lumpsum	€ 5 000	1	€ 5 000		€ 5 000	€ -
	Promotion material *(9)*	Lumpsum	€ 5 000	1	€ 5 000		€ 5 000	€ -
	KIWASCO project manager	Month	€ 1 700	0	€ -		€ -	€ -
	VEI senior techn. advisor sanitation	Month	€ 7 700	1	€ 7 700		€ 4 928	€ 2 772

Activity description	Item (see Note number)	Unit	Unit Cost	Quantity	Amount	Total	AWF	Contribution
Component 4 - Project and Knowledge Management						**€ 278 650**	**€ 227 424**	**€ 51 226**
Project management - Outputs 4.1 - 4.4						*€ 177 450*	*€ 163 590*	*€ 13 860*
Steering committee will guide the project, make strategic decision, report to AWF	Allowances (4 external, 6 internal members)	Per diem	€ 60	60	€ 3 600		€ 3 600	€ -
Day to day project management, project reporting (to steering commitee)	KIWASCO project manager	Month	€ 1 700	33	€ 56 100		€ 56 100	€ -
	VEI senior techn. advisor sanitation	Month	€ 7 700	5	€ 38 500		€ 24 640	€ 13 860
	Office costs	Month	€ 500	36	€ 18 000		€ 18 000	€ -
	Transportation	Month	€ 500	36	€ 18 000		€ 18 000	€ -
	DSA	Diem	€ 65	450	€ 29 250		€ 29 250	€ -
	Financial audit *(10)*	Piece	€ 15 000		€ -		€ -	€ -
	Mid term and final review	Piece	€ 7 000	2	€ 14 000		€ 14 000	€ -
Knowledge management - Outputs 4.5 - 4.7						*€ 101 200*	*€ 63 834*	*€ 37 366*
Output 4.5 Financial sustainability of the value chain documented								
Activity 4.5.1 Analysis of financial sustainability of value chain						***€ 17 700***	***€ 14 928***	***€ 2 772***
Based on the current project experiences, an analysis of the financial sustainability of the (various steps in the) value chain will be assessed and documented	VEI financial specialist	Month	€ 7 700	1	€ 7 700		€ 4 928	€ 2 772
	Master Thesis	Student	€ 5 000	2	€ 10 000		€ 10 000	
Activity 4.5.2 Documentation of best practices						***€ 15 400***	***€ 9 856***	***€ 5 544***
Best practices documented and available for dissemination	KIWASCO project manager	Month	€ 1 700	0	€ -		€ -	€ -
	VEI senior techn. advisor sanitation	Month	€ 7 700	2	€ 15 400		€ 9 856	€ 5 544
Output 4.6 Approach of upscaling to other informal settlements of Kisumu								
Activity 4.6.1 Upscaling the process of collection and transport						***€ 48 100***	***€ 24 050***	***€ 24 050***
At least one additional collection point will be constructed	Collection drums	Piece	€ 10	2000	€ 20 000		€ 10 000	€ 10 000
	Urine storage tanks (24 m3)	Piece	€ 5 000	2	€ 10 000		€ 5 000	€ 5 000
	Concrete floor lining	Piece	€ 4 500	1	€ 4 500		€ 2 250	€ 2 250
	Roofing	Piece	€ 4 000	2	€ 8 000		€ 4 000	€ 4 000
	Small office	Piece	€ 5 000	1	€ 5 000		€ 2 500	€ 2 500
	Sanitation specialist (a)	Month	€ 1 200	0,5	€ 600		€ 300	€ 300
Output 4.7 Results disseminated to other Kenyan cities and operators								
Activity 4.7.1 Disseminating the project approach to other WSPs and municipalities						***€ 20 000***	***€ 15 000***	***€ 5 000***
Through WASPA (Water Services Providers' Assocation) with 64 members in Kenya. The WSPs and municipalities / county governments will be invited to seminars and exposures. VEI will also disseminate the result to current WOPs in Nakuru and Mombasa. The NGOs will disseminate the results through their networks.	Workshop / exposure	Workshop	€ 2 000	5	€ 10 000		€ 10 000	€ -
	Conference	Conference	€ 10 000	1	€ 10 000		€ 5 000	€ 5 000

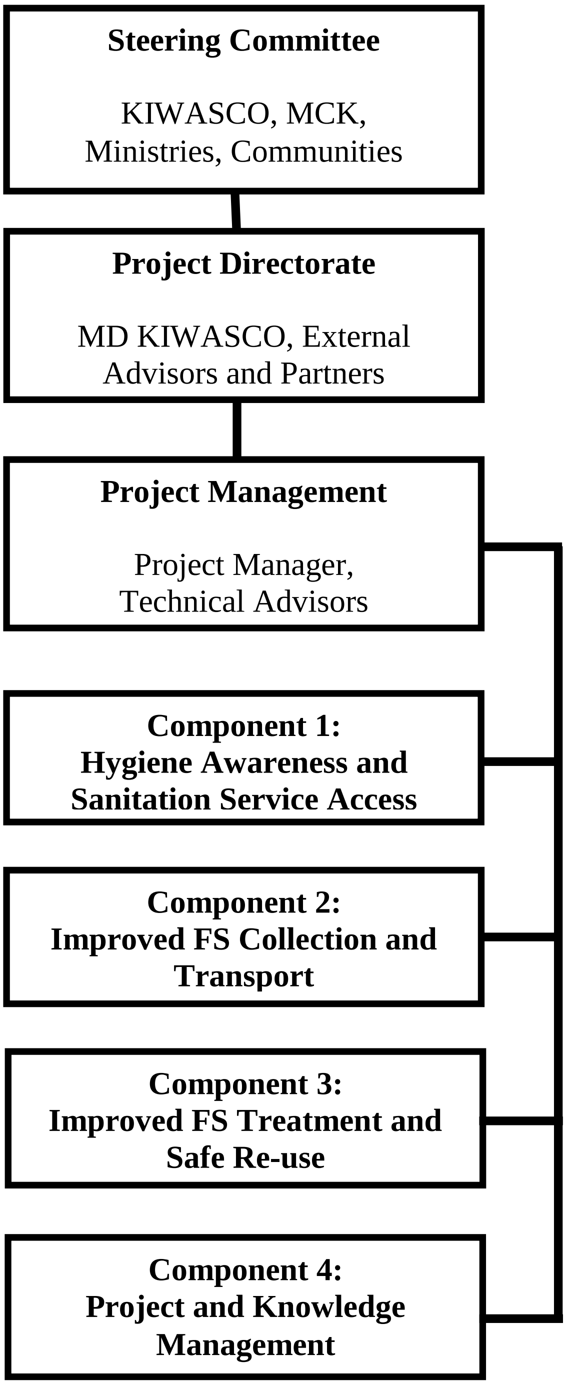
	Total	AWF	Contribution
Component 1 - Improved hygiene awareness and sanitation service access	182 290	64 478	117 812
Component 2 - FS collection and transport services	884 750	413 920	470 830
Component 3: Improved FS treatment and safe Re-use	703 650	440 620	263 030
Component 4 - Project and Knowledge Management	278 650	227 424	51 226
Total	*2 049 340*	*1 146 442*	*902 898*
5% Contingency (rounded)	*102 660*	*57 558*	*45 102*
Total Cost	**2 152 000**	**1 204 000**	**948 000**
		56%	44%

	NOTES:
1	Promotion material: Folders (10.000 pcs, 2500 €), Banners (5 pcs, 1000 €), Bill boards (5 pcs, 6500 €)
2	Transport: 35 km/day, 140 field days/6 months = 35*140=5000 km
3	Transport: 35 km/day, 2 teams/2 campaings of 70 days = 35*2*2*70 = 10000
4	New toilets have storage, toilet with option for urine diversion, toilet building. New improved toilets have only an adopted slab and toilet, it is inside a house.
5	Site supervisors are present at the collection centres. 3 collection centres are supervised 12 hours*6 days/week, i.e. 1.8 persons/site. AWF pays 16 months of staffing, Kiwasco the rest.
6	One exhauster is purchased to show modern technology and to act as price breaker serving the poor although insufficient.
7	The procurement of a innovative low cost digester will attract export subsidy from Dutch government or EU. The AWF contibution aids developing local production of this technology.
8	4 hours per training, total 500 €, incl. accomodation, lunch, transport, 2 speakers; CBE, Transport Companies, each 4 training sessions; Plant Operators 5 sessions; Fertiliser Association 4 sessions; FS collectors 2 sessions.
9	Market analysis 3000 €, advice on sales organisation / distribution canals 2000 €; Promotion material: 4 banners 800 €, 3 billboards 3900 €, 100 glossy folders 300 €
10	Interim and final audit funded under AWF administrative fund.
a	Competitive selection.

Annex 3: Implementation Schedule

Month	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	31	32	33	34	35	36
Component 1: Hygiene awareness and Sanitation Services																																				
Output 1.1: Hygiene and sanitation promotion																																				
1.1.1 School campaign: Hygiene awareness, improved toilets and hand washing at 4 schools	■	■	■	■	■	■	■	■	■	■	■	■																								
1.1.2 Hygiene awareness campaign among informal settlement residents			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
1.1.3 Sanitation marketing and micro credit fund promotion among informal settlement residents and land lords			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
1.1.4 Monitoring of behavioural change	■	■											■	■																			■	■		
Output 1.2: Survey on establishment of Micro Credit Fund																																				
1.2.1 End user's willingness to borrow and pay, Establishment of Micro Credit Fund	■	■	■	■	■	■																														
Output 1.3: Listing of toilets to be sold through Micro Credit Fund		■	■																																	
Component 2: Improved FS Collection and Transport																																				
Output 2.1: Capturing and storage infrastructure installed																																				
2.1.1 Construction of 100 demonstration toilets				■	■	■	■	■	■	■	■	■	■	■	■																					
2.1.2 Purchase and / or construction of toilets							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.1.3 Training of local artisans				■	■	■																														
Output 2.2: Collection and transport facilities																																				
2.2.1 Construction of 3 collection points, incl. purchase of collection				■	■	■	■	■	■	■	■	■	■	■	■																					
2.2.2 Collection and transport of faecal sludge and urine							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.2.3 Purchase of new equipment for latrine emptying							■	■	■	■	■	■																								
Component 3: Improved FS Treatment and Safe Re-use																																				
Output 3.1: Treatment Plant operational																																				
3.1.1 Design of processing units				■	■	■	■	■	■	■	■	■																								
3.1.2 Sludge drying bed, composting system							■	■	■	■	■	■	■	■	■	■	■	■																		
3.1.3 Anaerobic digester																			■	■	■	■	■	■	■	■	■	■	■	■						
3.1.4 Urine holding tanks							■	■	■	■	■	■																								
Output 3.2: Bio-fertiliser and electricity from biogas sold																																				
3.2.1 Three demonstrations of agricultural value of FS end products													■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
3.2.2 Consultation with the Ministry of Agricultural and other relevant		■												■																					■	
3.2.3 Selection and Training of Operators, Establishment of Associations				■	■	■	■	■	■							■	■	■	■	■																
3.2.4 Marketing for sales of final products																		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Component 4: Project and Knowledge management																																				
Output 4.1 - 4.4: Project management	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Output 4.5: Knowledge Management											■			■					■						■	■	■	■	■	■	■	■	■	■	■	■

ANNEX 4: Summary Implementation Chart



ANNEX 5a: Details of Procurement Arrangements

A.5.1 National Procedures and Regulations - Use of Country Procurement System

The main findings of National Competitive Bidding (NCB) Assessment Reports (NCB Report) for Kenya was that the national procurement procedures NPP in Kenya is globally consistent with the Bank's Rules and Procedures for NCB, but with minor deviations. The conclusion of the assessment is that due to the minor deviations observed, the Bank should accept the NPP in Kenya when NCB is anticipated in Bank's financed projects, provided that the following exceptions to the law are accepted: (a) Government-owned enterprises may participate in procurement only if they can establish that they are legally and financially autonomous, operate under commercial Act, and are not dependent agencies of the Recipient or Sub-Recipient; (b) Joint Ventures shall be permitted on voluntary basis with a requirement for joint and several liabilities to be respected; (c) Bidders shall be allowed not less than 28 days to prepare and submit bids for medium to large NCB procurements; (d) Any application Margin of Preference for suppliers or contractors based on region or locality of registration, small size, ethnic ownership, shall be discussed and agreed with the Bank; and (e) Price adjustment shall be permitted for contracts extending beyond 18 months. Further, the national SBDs document misses several sections and Standard Forms compared with the Bank's and cannot be accepted in its present form; however it should be accepted provided it is revised and aligned to the harmonised SBD. In the meantime, Kenya should continue to use the Bank's SBD. In addition, the following specific mitigation measures shall be taken by the Bank to address potential risks with respect to internal controls: (i) Carry out procurement capacity assessment of the Execution Agency (EA), (ii) set up prior review thresholds based on procurement risk of the EA, (iii) recommend the prior review of a number of NCB contracts, (iv) ensure the annual post review of NCB contracts. All of the discrepancies identified in the NCB report and which have been summarised in the GAP presented in Section B.5.7, will be reflected in an annex of the Financing Agreement of the Project.

A.5.2 Procurement Arrangements

All procurement of goods, works and acquisition of consulting services financed by the Bank will be in accordance with the Bank's Rules and Procedures: "*Rules and Procedures for Procurement of Goods and Works", dated May 2008*; and "*Rules and Procedures for the Use of Consultants", dated May 2008*, using the relevant Bank Standard Bidding Documents, and the provisions stipulated in the Legal Agreement.

The various items under different expenditure categories are described below. Each contract to be financed by the Grant, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior-review requirements, and time frame are agreed between the Recipient and the Bank project team will be provided in the Procurement Plan (see section B.5.5).

3.4.1 Procurement of goods, works and consultancy services financed by AWF shall be in accordance with the ***AWF's Operational Procedures***, the Bank's ***Rules and Procedures for Procurement of Goods and Works,*** and ***Rules and Procedures for the Use of Consultants,*** and based on the relevant Bank Standard Bidding Documents. The Procurement arrangements for the project are summarised in Table 5 below.

Table 5: Procurement Arrangements (in Euros)

Description	AWF	Non-AWF Funded	Total
Goods			
Purchase of promotional materials, household toilets, training materials, tools, collection drums, tanker, exhauster	€ 222,000	€ 37,000	€ 259,000
Non-Consulting Services			
Transport for hygiene awareness campaign, sanitation marketing and micro-credit fund promotion, collection and transport of faecal sludge and urine and training operators	€ 54 150	€ 51 100	€ 105 250
Works			
Construction of demonstration toilets and rehabilitation of pit latrines	€ 4 000	€ 68 000	€ 72 000
Purchase and install new toilets	€ 32 100	€ 385 900	€ 418 000
Purchase of collection drums and construction of 3 collection points	€ 73 500	-	€ 73 500
Sludge drying bed, composting system	€ 75 000	-	€ 75 000
Anaerobic digester	€ 145 000	€ 250 000	€ 395 000
Urine holding tanks	€ 140 000	-	€ 140 000
Urine holding tanks for Farm demonstration	€ 15 000	-	€ 15 000
Up scaling works	€ 13 750	€ 13 750	€ 27 500
Consultancy services			
Mid-term and final review	€ 14 000	-	€ 14 000
Hygiene awareness in schools and informal settlements	-	€ 32 540	€ 32 540
Sanitation marketing and micro-credit fund promotion, monitoring of behavioural change and survey on end users	€ 39 564	€ 1 386	€ 40 950
Listing of toilets, supervision of purchase and / or construction of toilets, training of local artisans, design of processing units, supervision of demonstration works for toilets, drums and construction of 3 collection points, supervision and up-scaling of collection and transport of faecal sludge and urine and design of processing units	€ 102 448	€ 27 702	€ 130 150
Farm demonstration, consultation with the Ministry of Agric. and other authorities, select and train operators, establish association, marketing for sales of final products	€ 14 856	€ 8 044	€ 22 900
Miscellaneous			

Project management	€ 149 590	€ 13 860	€ 163 450
Knowledge management, documentation of best practices and disseminating the project approach	€ 51 484	€ 13 616	€ 65 100
Sub-Total	**€ 1 146 442**	**€ 902 898**	**€ 2 049 340**
5% Contingency, rounded	€ 57 558	€ 45 102	€ 102 660
Total	**€ 1 204 000**	**€ 948 000**	**€ 2 152 000**

3.4.2 ***Goods:*** Purchase of Promotional materials, household toilets, training materials, tools, collection drums, tanker, exhauster estimated at € 222,000 shall be procured under shopping procedures because the requirements are small and suppliers for these are readily available.

3.4.3 ***Consultancy Services:*** Consulting Services for Mid-term and final review (€ 14,000) will be procured using Least Cost Selection. LCS is recommended because these assignments are standard or routine in nature and well-established practices and standards exist. All other services related to Sanitation marketing and micro-credit fund promotion, Monitoring of behavioural change and survey on end user's, Listing of toilets, Supervision of Purchase and / or construction of toilets, Training of local artisans, supervision of collection drums and construction of 3 collection points, supervision and up-scaling of collection and transport of faecal sludge and urine and Design of processing units, Farm demonstration, Consultation with the Ministry of Agric. and other authorities, Select and train Operators, establish Association, Marketing for sales of final products, Project management, Knowledge management, Documentation of best practices and Disseminating the project approach worth € 226,540, will be procured using other appropriate procurement methods such as Quality Based Selection (QBS), Fixed Budget Selection (FBS), Least Cost Selection (LCS), Selection Based on Consultant's Qualifications (CQS), Single Source Selection (SSS) or use of Individual Consultants. This is because the services entail many small assignments of a standard or routine nature but with requirements are spread over time for which QCBS may not be the most economic and efficient procurement method. In this regard, the KIWASCO will submit to the Bank updated procurement plans for approval, indicating schedules and budgets for these activities, including procurement methods, within two months of the start of each fiscal year.

3.4.4 ***Works:*** Procurement of civil works for Construction of Anaerobic digester (€ 395,000) shall be undertaken under National Competitive Bidding (NCB) procedures. NCB is recommended because nature and scope of works may not attract international contractors. Moreover, an adequate number of local contractors are available in the country which will ensure good competition. Procurement of works for demonstration toilets and rehabilitation of pit latrines (€ 72,000), Purchase of collection drums and construction of 3 collection points (€ 73,500), Sludge drying bed, composting system (€ 75,000), Urine holding tanks (€ 155,000) will be done using shopping. Purchase and install new toilets (€ 418,000) and up-scaling works (€ 27,500) will be procured under national rules and procedures. In this regard, KIWASCO will submit to the Bank updated procurement plans for approval, indicating schedules and budgets for these activities, including procurement methods, within two months of the start of each fiscal year. The national procurement Procedures and Regulations have been reviewed and found to be acceptable for implementation of these activities.

3.4.5 ***Non-Consulting Services***: Procurement of transportation services for various activities including Hygiene awareness campaign, Sanitation marketing and micro-credit fund promotion, Collection and transport of faecal sludge and urine and training Operators estimated at € 105,250 shall be procured using shopping procedures because the requirements are small and suppliers for these are readily available.

3.4.6 Project management (€ 163,450) and Knowledge management, including documentation of best practices and disseminating the project approach activities (€ 65,100) entail operating costs and shall be procured under national rules and procedures. In this regard, KIWASCO will submit to the Bank updated procurement plans for approval, indicating schedules and budgets for these activities, including procurement methods, within two months of the start of each fiscal year.

3.4.7 Contracts for Consultancy Services or Works of value higher than € 50 000 will be subject to prior review by the AWF. The following documents are subject to review and approval by the AWF: Specific Procurement Notices (SPN), tender/ bid documents or requests for proposals from consulting firms, tender/bid evaluation reports or reports on evaluation of consultants' proposals.

3.4.8 Contracts for Consultancy Services or Works of value less than € 50 000 will be subject to post review by the AWF, and will be processed under the full responsibility of KIWASCO. Ex-post technical verification and ex-post financial control systems will be used in these instances to enable KIWASCO to expedite procurement of goods, works and to acquire consulting services. Procurement documents including SPNs, tender/bid documents or request for proposals, tender/bid evaluation reports as well as signed contracts will be kept by KIWASCO for periodic review by the AWF supervision missions or special audits. In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended two procurement supervision missions to visit the project and carry out post review of procurement actions.

A.5.3 Assessment of the Executing Agency

The assessment revealed that KIWASCO has a procurement unit responsible for coordination of all corporate procurement activities, established in line with the national Public Procurement and Disposal Act (2005). The unit has a staff establishment of 5 (five) officers, but is currently staffed by 4 (four) officers. A Procurement Officer is to be recruited to fill the vacant position.

The Company has a Tender Committee that approves procurement processes for high value procurement, while the Procurement Committee adjudicates over small value purchases, procured mainly through shopping. The Company also has an Internal Audit Committee responsible to the Board of Directors, and an internal audit unit staffed by three (3) staff responsible for internal control, risk management and related corporate governance responsibilities.

KIWASCO has documented procedures for procurement and internal audit in operational manuals, and also has a computerised information management system for accounting and financial management. There is no procurement management system, but the company is planning to procure an integrated system that will incorporate procurement, contract management and payment modules with accounting modules.

Although staff is familiar with application of national procurement regulations, none of them has been trained in Bank procurement procedures. A review of their annual procurement workload shows purchases of goods and services worth about KES 30 million annually (approximately 3 million Euros). The resources, capacity, expertise and experience of KIWASCO may be considered adequate to meet the procurement requirements under the project, if a procurement officer is recruited, and staff trained in application of Bank procurement procedures. Thus, KIWASCO’s overall risk rating on procurement management is considered to be moderate.

A.5.4 General Procurement Notice

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

A.5.5 Procurement Plan

The Recipient developed a Procurement Plan for project implementation at appraisal, which provides the basis for procurement activities. This Procurement Plan will be updated by the Recipient’s Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. Any revisions proposed to the Procurement Plan shall be submitted to the Bank prior no objection. The Recipient shall implement the Procurement Plan in the manner in which it has been agreed with the Bank.

Goods and Works and non-consulting services

Prior Review Threshold: Procurement Decisions subject to Prior Review by the Bank as stated in Appendix 1 to the *Rules and Procedures for Procurement of Goods and Works:*

N°	Procurement Method	Prior Review Thresholds	AWF Review
1.	Shopping (Goods)	*Above € 50 000*	*All*
3.	NCB (Works)	*Above € 50 000*	*All*
N°	**Procurement Method**	**Post Review Threshold**	**Bank's Review**
1.	Shopping (Goods)	*Below € 50,000*	*All*
2.	NCB (Works)	*Below € 50 000*	*All*
3.	(Non-Consultant Services)	*Below € 50 000*	*All*

Any Other Special Selection Arrangements: *None*

Goods and Works Contracts with Procurement Methods and Time Schedule:

1	2	3	4	5	6	7	8
Ref. No.	**Description**	**Estimated Cost € '000**	**Procurement Method**	**Review by Bank (Prior / Post)**	**Expected SPN Advertising Date**	**Expected Contract Commencement Date**	**Comments**
1	Digester	*395*	NCB	*Prior*	*Aug 2014*	*Jan 2015*	*All Contracts*
2	Collection drums & centres, Urine tank, & composting unit & sludge bed	*375.5*	*Shopping*	*Post*	*Aug 2014*	*Jan 2015*	*All Contracts*
3.	Collection equipment & vehicles	*219*	*Shopping*	*Post*	*Aug 2014*	*Jan 2015*	*All Contracts*
	Purchase new toilets & up-scaling collection infrastructure	*445.5*	Direct Contracting	*Post*	*July 2015*	*Aug 2015*	*All Contracts*

Selection of Consultants

Prior Review Threshold: Selection decisions subject to Prior Review by Bank as stated in Appendix 1 to the *Rules and Procedures for the Use of Consultants.*

	Selection Method	Prior Review Thresholds	Bank's Review
1.	Competitive Methods (Firms)	*Above € 50,000*	*All*
2.	Single Source (Firms)	*N/A*	*All*
3.	Individual	*Above € 15,000*	*All*

Short list comprising entirely of national consultants: Short list of consultants for services, estimated to cost less than € 200,000 equivalent per contract, may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the *Rules and Procedures for the Use of Consultants.*

Any Other Special Selection Arrangements: *None*

Consultancy Assignments with Selection Methods and Time Schedule:

1	2	3	4	5	6	7	8
Ref. No.	**Description of Assignment**	**Estimated Cost € '000**	**Selection Methods**	**Review by Bank (Prior / Post)**	**Expected EOI Publication Date**	**Expected Contract Commencement Date**	**Comment**
1.	MTR & Audit	*115.3*	*LCS*	*Post*	*Feb 2014*	*Aug 2014*	*All Contracts*
2.	All other consultancy contracts	*247.44*	*Other*	*Prior*	*Feb 2014*	*Aug 2014*	*All Contracts over € 50 000*

A.5.6 Frequency of Procurement Post Review mission

In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended two annual procurement supervision missions to visit the project and carry out post review of procurement actions. To this end, the Recipient shall retain all documentation (including signed original contract, analysis of the respective proposals and recommendations for award) with respect to each contract during project implementation and up to two years after the closing date of the Financing Agreement. The Bank shall reserve the right to carry out post review of such documents, at any time before or after the first disbursement.

A.5.7 Global Action Plan for improvement to National Procurement Procedures.

The following discrepancies with the Bank's Rules and Procedures: "*Rules and Procedures for Procurement of Goods and Works", dated May 2008,* have been identified in the national procurement law and regulation Public Procurement and Disposal Act (2005), and shall not be used for procurement activities financed by the Bank:

<table>
<tr><th>ISSUES</th><th>Mitigation Measures</th><th>Responsible Agency</th><th>Implementation Status</th><th>Completion Deadline</th></tr>
<tr><td colspan="5">COMPLIANCE WITH BANK FIDUCIARY OBLIGATION</td></tr>
<tr><td colspan="5">Discrepancies identified in the PPDA Act and Regulations</td></tr>
<tr><td rowspan="2">Missing provisions on:
i) Eligibility of parastatal organisations and state enterprises to bid;
ii) Participation of Joint-Ventures;
iii) Minimum time for bid preparation and submission shorter than the Bank's requirement for 28 days;
iv) Prohibition of advance contracting and retroactive financing.</td><td rowspan="2">Provisions to be incorporated</td><td>PPOA</td><td>Prepare proposal to GOK amending the Act.</td><td>December 2011</td></tr>
<tr><td>Parliament</td><td>Act amendment passed</td><td>December 2012</td></tr>
<tr><td colspan="5">Discrepancies identified in the National Standard Bidding Documents</td></tr>
<tr><td>Missing sections of ;
(a) Instructions to Bidders and General Conditions of Contract
(b) Non-conformity of the Bid Data Sheet and Special Conditions of Contract
(c) The SBD for Works has discrepancies and several sections and standard forms missing.</td><td>Inclusion of missing sections and harmonisation of discrepancies</td><td>PPOA</td><td>Amend Instructions to Bidders, Conditions of Contract and include missing standard forms in the Kenya SBD</td><td>December 2011</td></tr>
<tr><td colspan="5">STATUS OF COMPLIANCE WITH BANK FIDUCIARY OBLIGATIONS</td></tr>
<tr><td colspan="5">The new constitution promulgated in 2010 requires revision of the procurement laws to harmonise with constitutional requirements. The deadline for this is August 2014 and PPOA has been holding consultations with various stakeholders since 2011 in order to establish the key aspects that need to be incorporated in the revised procurement law. As an interim measure pending the substantial revision of the procurement laws, the government has, this year, issued several regulations is to operationalise some of the constitutional requirements but none of the new regulations addresses any of the discrepancies identified in the PPDA Act and Regulations.</td></tr>
</table>

ANNEX 5b: Financial Management Assessment

Demonstrating and introducing an innovative sanitation value chain for the un-sewered urban poor Project in Kisumu, Kenya
Implementing agency: ***Kisumu Water and Sewerage Company Limited (Kiwasco)***
December 2012.

Executive Summary

The project's implementing agency is the Kisumu Water and Sewerage Company Limited (KIWASCO). KIWASCO became operational on July 1, 2003 as a limited company after the transformation of the Water and Sewerage Department of the Kisumu Municipal Council. KIWASCO had earlier been registered under Companies Act in the year 2001. The Company draws its mandate from Water Act 2002 which replaced Water Act Cap 372. KIWASCO'S mandate is to effectively and efficiently provide adequate water to customers and to collect, treat and dispose sewerage in a safe and environmentally friendly manner.
As at the end of financial year 30 June 2011, the company had a revenue base of Kenya Shillings 312 million.

The Financial Management System of KIWASCO is adequate and capable of recording accurate and complete transactions and delivering financial reports timely. The company uses Pastel accounting system to record its transactions on a daily basis and the project's financial management (FM) transactions will be managed within the existing set-up of the company. For the day to day management of the new Project, a Project Coordinator will be appointed who is going to head the project management team. A project accountant will also need to be assigned to the project before implementations start. The FM capacity of the company has been assessed as adequate for purposes of carrying out the FM of the project subject to improvement needed to address the strengthening of its staff capacity to ensure there is a clear separation of duties between auditors and management accountants. The finance department of the company has a compliment of five (5) accountants; this number includes three (3) qualified accountant. There is a financial procedure manual in place and the company is ISO (International Standards Organisation) certified. The company has an Internal Audit department staffed with two auditors.

Actions outlined in the Financial Management Action Plan will be undertaken by both KIWASCO and the Bank to strengthen the financial management system in order to ensure that the project is effectively implemented. KIWASCO will ensure that appropriate staffing arrangements for the new project are maintained throughout the life of the project.

On Disbursement, the project will utilise the special account disbursement method as explained in the Disbursement Handbook. The project will operate one Euro special account into which the proceeds of the loan will be deposited and further to a local currency special account. Both accounts will be opened at a reputable commercial bank acceptable to the African Development Bank (AfDB). The opening of the foreign and the local currency special accounts will be made a condition precedent to first disbursement of the grant. An initial disbursement will be deposited in the project Special Account (SA) in Euro based on a cash flow forecast for the project and the agreed work plan approved by the AWF. Disbursement Requests for subsequent tranches will supported by Statements of Expenditures (SOE).

***The opening of the special account will be a condition precedent to first disbursement and should be done as soon as the grant is approved*.**

The results of the assessment indicate that the financial management risk of the project has been rated as moderate after mitigation measures are put in place. In conclusion, the proposed financial management arrangements put in place meet the Bank's minimum requirements as per its project financial management policies and guidelines and therefore adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by AWF.

Introduction

This report is a record of the results of the assessment of the proposed financial management arrangements for the African Water Facility (AWF) grant to be implemented by KIWASCO as the Implementing Agency. The objective of the assessment is to determine whether:

(a) KIWASCO has adequate financial management arrangements to ensure grant funds will be used for purposes intended only in an efficient and economical way;

(b) The Grant's financial reports will be prepared in an accurate, reliable and timely manner; and

(c) Assets bought using the Grant's proceeds will be safeguarded.

The financial management (FM) assessment was carried out in accordance with the Guidelines for Financial Management and Financial Analysis of Projects (January 2007).

Summary of Project's Description

The Overall project objective is the introduction and demonstration of a commercially viable sanitation value chain for the un-sewered poor in Manyatta (60,000 people) and other informal settlements (240,000 people) of Kisumu. This will increase hygiene awareness and sanitation coverage in Manyatta, contract (private) companies for faecal sludge and urine collection / transport, demonstrate the potential for valorisation and marketing of faecal sludge and human urine for energy production and fertiliser production and upscale project outcomes to all informal settlements of Kisumu.

Financial Management Risks

The overall project risk is assessed as moderate when the recommended mitigation measures are implemented.

The FM risks identified include lack of a clear distinction between the audit and finance departments where an auditor is also acting as a management accountant. Various weaknesses have also been identified in the annual external audit including un-reconciled receivables. These risks should be mitigated by increasing the capacity of the above departments and ensuring that all audit recommendations are implemented on time.

Institutional and Implementation Arrangements

The Grant will be administered by KIWASCO who are already implementing another project being funded from the Netherlands. The accounting officer is the Managing Director of the company. The Grant accounts will be done by the assigned Project Accountant under the supervision of the Finance Manager. The Managing Director through the Project Coordinator will be responsible for delivering the financial statements of the grant.

During the grant's execution, KIWASCO shall coordinate the implementation of the project and manage procurement, project monitoring, reporting and evaluation; contractual relationships with the Bank and other financiers; financial management record keeping, accounts and disbursements.

Budgeting arrangements

The Company's budgeting cycle starts with the planning and assessment of all organisational activities in the forthcoming period by the Heads of the various departments. The Finance manager then collates all these information and prepares a draft budget which is presented to the Executive Committee of the Company for review and revision where applicable. The Managing Director then presents the revised budget to the Finance and Commercial Committee of the board for approval. The Finance Manager is tasked with the role of ensuring that the budget is executed as approved.

Key Accounting system, policies and procedures

KIWASCO uses PASTEL accounting software to record its financial transactions on a daily basis. A specific "ledger" will be created for the project to ensure that all transactions related to the project are captured and reports can be produced directly from the system. Before the transactions are recorded in the system, proper approval process is followed as documented in the finance manual.

Payments are only approved by designated officers (including the internal auditors who counter checks). Monthly bank reconciliations are performed.

Internal Control and Internal Audit

KIWASCO has a detailed procedures manual covering all areas of finance summarised in a financial manual. The implementation of this project will follow these procedures. The following internal control procedures should be in place: Segregation of duties in payments and cash management, monthly bank reconciliations, timely banking of receipts, physical control of the cash office, system security through enhanced password and restriction of system access rights, budgetary control and monthly variance analysis. There should be no co-mingling of funds and the project's bank accounts will only receive the grant's funds and will only be used for making legible project expenses duly approved.
For Internal control, KIWASCO has an internal audit department with two staff members. Periodic audit reports need to be shared with the bank. There is need to strengthen this department and ensure auditors do not act as accountants also.

Banking and Funds Flow arrangements

Bank Accounts

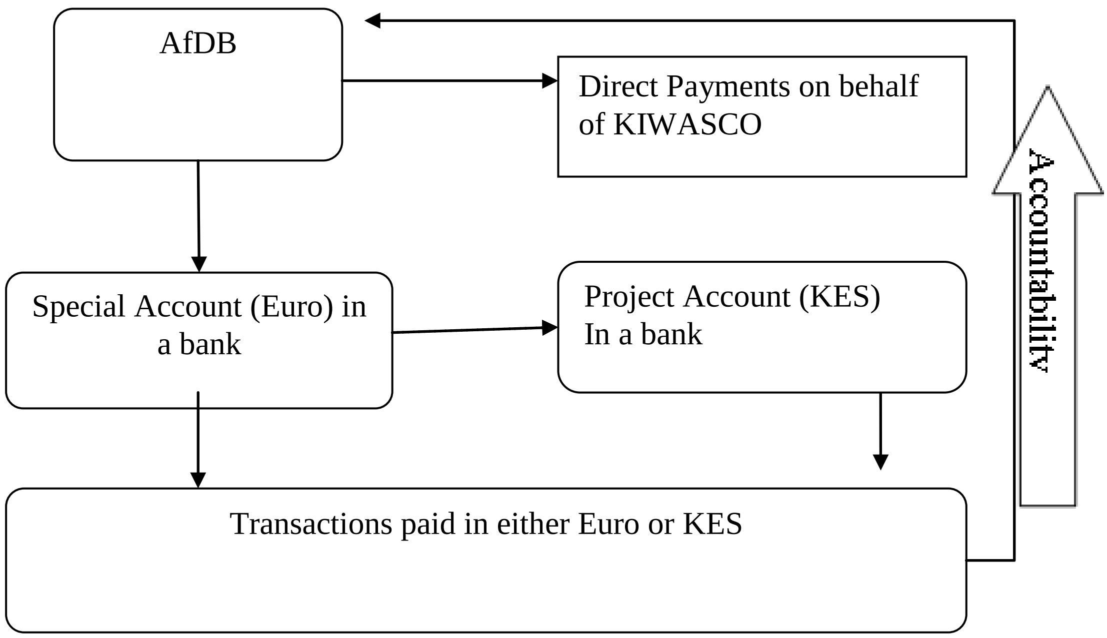
The following bank accounts will need to be authorised by KIWASCO's Board of Directors and maintained for purposes of implementing the project:

- Special Account (SA): Denominated in Euros where disbursements from the Bank will be deposited.
- Project Account: This will be denominated in local currency. Transfers from the Special Account (for payment of transactions in local currency) will be deposited on this account.

These bank accounts shall be opened at a commercial bank in Kenya acceptable to the AWF. The signatories for these bank accounts will be the authorised signatories of the organisation as detailed in the finance manual.

Disbursement Arrangements*:* The project will use the Special account (SA) method as prescribed in the Bank's Disbursement Handbook. The project will operate one foreign special account into which the proceeds of the loan will be deposited and further to a local currency special account. Both accounts will be opened at a reputable commercial bank in Kenya acceptable to AfDB. The opening of foreign and local currency special accounts will be made a condition precedent to first disbursement of the loan. An initial disbursement will be deposited in the project Special Account (SA) in foreign currency based on a six month cash flow forecast for the project and based on the agreed work plan approved by the Bank through the initial Withdrawal Application to the Bank after the effectiveness of the project. Actual expenditures will be replenished through submission of Withdrawal Applications supported by Statements of Expenditures (SOE).

The Project's Funds flow chart



If ineligible expenditures are found to have been made from the Special Account, KIWASCO will be obligated to refund the same.

The Bank will have the right, as reflected in the General Conditions to suspend disbursement of the funds if reporting requirements are not complied with.

Financial Reporting

The annual project financial statements will be prepared in accordance with the International Financial Reporting Standards (IFRS) annually three months after the closure of KIWASCO's fiscal year.

The annual financial statements should include: (i) a Balance sheet that shows assets and liabilities; (ii) a statement of Receipts and Expenditures showing separately Bank's funding, from those co-financiers if applicable, and cash balances; (iii) Statement of Special Accounts, both Euro and Kenya Shilling accounts and (iv) Notes to the Financial Statements describing the applicable accounting principles in place and a detailed analysis of the main accounts.

The Project will also submit to the Bank Interim Financial Reports every quarter. The due date for the IFRs is 45 days after the end of the quarter. This report should also include Form A2 for justification of expenses reported on the statement.

External Audit
Two audits are expected to be carried out by en external auditor recruited by the AWF: an interim audit approximately half-way through the project (i.e. 18 months after project commencement), and a final audit at the end of the project. The AWF will recruit and retain an auditor for this purpose, and the cost of the audit shall be paid from the AWF administrative budget, not from this Grant.

Governance and anti-corruption
This project will be implemented within the governance framework of KIWASCO. The Managing Director will be the accounting officer. There will be a Steering Committee which will provide general guidance and direction to the Project team. The Internal Audit Department will assist in monitoring and evaluating the internal controls. External oversight will be provided by the Auditor General. The AfDB will provide some oversight especially during supervision missions. All the Anti-Corruption measures that pertain to government will apply to this project.

KIWASCO is governed by a Board of Directors comprising eleven (11) members, headed by a Chairman, while the other nine directors represent the various stakeholders including the Government, the municipal council, manufacturers etc.

Daily operations are headed by the Managing Director and his management team. The Company has 126 permanent staff members and 185 temporary ones and the structure consists of the following departments; technical, commercial, Finance & Control, Human Resources and Internal Auditing.

There exists an anti-fraud policy as detailed in the finance manual which details responsibilities regarding the prevention of fraud.

Financial Management Action Plan
The action plan below indicates the actions to be taken for the project to strengthen its financial management system and the dates that they are due to be completed by.

	Action	Date Due	Responsibility
1.	Selection of the Project Coordinator and an accountant to handle fully the project (separate from existing projects)	Before effectiveness	KIWASCO
2.	Train KIWASCO Staff in Bank Financial Management and Disbursement Guidelines	Effectiveness of the project	Bank FMS / Disbursement Assistant
3.	Internal audit reports to be shared with the Bank	Periodically	KIWASCO
4.	Strengthening the capacity of the finance	March 2014	KIWASCO

	Action	Date Due	Responsibility
	department to ensure auditors do not act as accountants		

Supervision Plan

The project will be supervised on a risk based approach. Unless a substantial risk is observed, the supervision mission will be made as part of sector led supervision mission of the project twice a year.

Conclusion

The financial management arrangements of the organisation have been found to be adequate to provide, with reasonable assurance, accurate and timely accounts/information on the status of the Project as required by the Bank.

ANNEX 6: Business Case for Treatment of Faecal Sludge

TREATMENT (Parameters and Costs)		
Target population / FS generation	**60,000**	**persons (p)**
Specific faecal sludge production (20% dry solids, DS)	150	g/p/d
COD	50	g COD/p/d
Total annual FS generation	3285	t/a
Total annual organic matter	1095	t/a
Biogas / electricity generation		
Specific biogas production	350	m^3/ton COD
Annual biogas potential, 60% CH_4	383,250	m^3/a
Specific electricity generation (per kWh/m^3 biogas, 60%) CH_4)	2	kWh
Annual electricity potential (excl. primary sludge of KISAT WWTP)	766,500	kWh/a
Investment costs digester (incl. CHP system and gas storage, max. capacity 5000 – 6000 m^3 FS/a)	€ 400,000	400 m^3 reactor
Staff (1 FTE, annual cost)	€ 8,000	1
Maintenance (annual cost)	€ 20,000	
Total annual operation costs	€ 28,000	
Cost per kWh (from future biogas)	€ 0.04	3.30 KSh
Current costs per kWh (from grid)	€ 0.16	17 KSh
Composting		
Dry matter of FS	20%	
Organic matter	80%	of dry matter
Digestion loss %	35%	of organic dry matter
Compost dry matter	80%	
Annual compost production	427	t/a
Compost unit load	0.89	t DS / m^2 per year
Size (incl. drying beds)	480	m^2
Investment costs	€ 50,000	incl. drying bed, max. 500 m^3/a
Staff (0,5 FTE, annual cost)	€ 4,000	
Total operational costs	€ 4,000	
Sales compost / ton	€ 5	
BUSINESS CASE (Re-use Revenue)		

	annual costs	annual sales	Balance
Electricity (revenue from selling electricity to Kenya Power at commercial rate or reducing current electricity bill)	€ 28,000	€ 122,640	€ 94,640
Compost	€ 4,000	€ 3,135	€ -1,865
Potential revenues			€ 92,775

ANNEX 7: Communication and Visibility Guidelines

Communication and brand visibility greatly matter to the AWF. The AWF views communication as a strategic function firmly tied to its strategies and business objectives. Steady communication with AWF stakeholders helps build credibility and secure their trust and esteem, which in turn, helps AWF build and protect its reputation. Communications is also about disclosure. The AWF is a multi-donor fund, and is accountable to a Governing Council that expects the AWF to hold itself to the highest level of accountability and transparency. The AWF is committed to making every effort to disclose, share and report information useful and relevant to its stakeholders and the greater public. This entails effectively communicating its achievements, progress, and results by using all means available, in a timely manner. All these elements are important for business and essential to attract and retain donors, and for AWF to maintaining its social license to operate.

Brand awareness is about making sure the public knows AWF exists and can tell the AWF apart from other water funds or organisations. The brand is a visual, memorable trigger, or a logo, that embodies the AWF and captures its core identity. Brand awareness is achieved over time, through activities meant to increase brand visibility, by repeated use and exposure of the logo at strategic places and times. The AWF logo is used as a seal or a signature used to signal AWF financial support or special collaboration.

The AWF has established ***Communication and Visibility Guidelines*** *to the attention of partners, AfDB regional offices and grant recipients to help AWF more effectively achieve its brand and communications objectives, as laid out in the AWF Long Term Communications Strategy 2006 approved by the AWF Governing Council in 2006.*

1. GENERAL REQUIREMENTS

1.1 At an early stage, when preparing communication activities related to an AWF supported event of project, contact the Communication Officer at AWF Secretariat, copying the AWF Project Manager.

1.2 At a minimum, and wherever possible, the AWF logo should be applied to outreach materials that pertain to AWF supported projects or events. The proper use of the logo should be discussed with the AWF Communication Officer.

1.3 The AWF should be verbally mentioned as donor of the project it is funding at public speaking events where the project is discussed, and also be mentioned as donor in any Power Point presentations relevant to the project funded by the AWF, using the name and the logo of the AWF appropriately.

1.4 The logo is to be obtained upon request from the AWF Communication Officer.

1.5 Documents and publications related to an AWF supported project or sponsored publication should contain the AWF logo, as well as this phrase on the cover page: "*This project/program/study is funded by the African Water Facility*".

1.6 Implementing and executing agencies should always have a link to the AWF website on the page of their website relevant to an AWF-funded project/activity. The website is: www.africanwaterfacility.org

1.7 <u>The AWF asks that grant recipients report back to the AWF Secretariat, any special mention, award nominations or recognition that the project may have received.</u>

2 VALIDATION PROCESS

2.1 <u>The AWF management is responsible for the final clearance of AWF communications products/outputs.</u>

3 PRESS RELEASES & MEDIA ADVISORIES

3.1 The AWF will issue an AWF-branded press release every time a project is approved and/or signed, and when completed (handover).

3.2 AWF press releases must always include a quote from the Coordinator of the AWF, which must be cleared by the Coordinator.

3.3 The AWF encourages and appreciates initiatives to issue joint press releases with its grant recipients. A standard joint press release can be issued at any time agreed with the AWF (between launch and completion).

3.4 When the grant recipient wishes to produce a press release, liaising with the AWF Communication Officer is required, as well as receiving a quote from the AWF Coordinator, as appropriate, and getting approval and clearance.

3.5 The AWF should be included in the title and/or first paragraph of the press release, as appropriate.

3.6 The press release should incorporate the AWF logo, mention that funding was provided by the AWF, and mention the amount of the AWF funding.

3.7 If a press conference is planned, the press release should include the name of an AWF senior representative who will be present at the press conference, when relevant.

3.8 All press releases must bear the name and contact information of the AWF Communication Officer, and if possible that of the communication/media representative from the grant recipient.

3.9 The AWF boilerplate text ("About the AWF") must be added to the text, including the AWF web site address. Please contact the AWF Communication Officer for the latest version.

3.10 The AWF has final validation of all its press releases, following a review process involving reviewers.

3.11 The rules above also apply to media advisories.

4 PRESS CONFERENCES

4.1 Press conferences to launch projects funded by the AWF should be organized in cooperation with the AWF, as much as possible.

4.2 The invitations should bear an AWF logo.

4.3 The AWF logo of a visible size should appear on any banner or poster to be displayed at the site of the conference.

4.4 Press kits need to include a press release with the AWF logo.

4.5 Whenever possible, an AWF banner should be on hand and set up to serve as a backdrop for TV and photo purposes.

5 PRESS VISITS

5.1 When appropriate, journalists should be invited to visit the project funded by AWF, accompanied by representatives of the AWF or the AWF Focal Point in the respective authority / government of the grant recipient.

6 VISITS BY GOVERNMENT OFFICIALS, AWF DONORS

6.1 Visits to projects by government officials and AWF donors are encouraged. Those should be prepared in coordination with the AWF and the AWF Focal Points of the host government. This can include meetings with local beneficiaries.

6.2 These visits may also include government officials and AWF donors' participation to roundtables and other events, as relevant.

7 LEAFLETS, BROCHURES AND NEWSLETTERS

7.1 All leaflets and brochures relevant to the project/program financed by AWF should incorporate the basic elements of the AWF visual identity, i.e. the AWF logo -with or without tagline.

7.2 Leaflets and brochures produced by a grant recipient must also incorporate a definition of the AWF (boilerplate text).

7.3 The cover page of all documents pertaining to the project financed by the AWF must clearly identify the activity as being part of an AWF-funded activity.

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

8 ELECTRONIC COMMUNICATION

8.1 Electronic communication disseminating information on AWF-funded projects including websites, newsletter, and social media platforms, should link to the AWF website.

9 SIGNAGE

9.1 The grant recipient should produce display panels, posters or banners to promote their AWF-funded or AWF-related activities at exhibitions and other events, placed in strategic locations for all to see.

10 VEHICLES, SUPPLIES AND EQUIPMENT

10.1 AWF generally requests that vehicles, supplies and equipment funded by AWF be clearly identified, and visibly carry the AWF logo and the phrase "Provided with the support of the African Water Facility" in English, French or Portuguese, as relevant.

10.2 This requirement is subject to negotiation between AWF and the grant recipient as some supplies and equipment may be exempt.

10.3 The grant recipient must provide evidence of compliance with this rule (digital photos sent by email are recommended.)

11 PHOTOGRAPHS AND AUDIOVISUAL PRODUCTIONS

11.1 Professional high resolutions (300 Dpi) digital photographs of the project funded by AWF should be supplied to the AWF throughout the different phases of the project, to document the progress of actions and events related to these, and to be used in print and online publications.

11.2 All photos should be submitted with full caption and credit information.

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

11.4 Whenever relevant, audiovisual materials should acknowledge AWF support, by featuring the AWF logo at the beginning and/or end of the movie/documentary.

11.5 Copies of the movie(s) / documentary (ies) should be supplied to the AWF.

12 COMMEMORATIVE PLAQUES OR SIGNAGE

12.1 Whenever relevant, the grant recipient should place a permanent plaque, or some other type of large, commemorative signage on the most visible part of the building, infrastructure or nearby the project site, which received funding by AWF, beside the name of the implementing agency and/or name of the project, for visitors to see.

12.2 When appropriate, the plaque or signage could contain the following sentence: "This [name of the infrastructure] was funded by the African Water Facility" alongside the AWF logo.

13 PROMOTIONAL ITEMS

13.1 Before taking any decision on the production of such items, the Communication Officer at the AWF should be consulted.

13.2 Promotional items bearing the AWF logo can be distributed to support communications activities related to the project funded by AWF. This may include T-shirts, caps, pens, notebooks, USB keys etc.

ANNEX 8: Memorandum of Understanding (MOU)

MOU Between Implementation Partners on Introducing an Innovative Sanitation Value Chain for the Unsewered Poor – An African Water Facility/AfDB funded Project in Kisumu

Preamble

Given the existing friendly and cordial professional relations, Kenyan and international partners jointly aim to demonstrate and implement an innovative sanitation value chain for the people living in Manyatta and other informal settlements of Kisumu.

The demonstration includes collection and transport infrastructure for human wastes (rehabilitation of pit latrines, purchase of improved toilets and establishment of a collection company), a processing plant for fecal sludge (FS) and urine and of commercialization of processed human and organic wastes.

The ultimate goal is to provide a solution to sanitation and organic waste problems in Kisumu's informal settlements while making a profitable business case.

We:
Vitens Evides International (Vitens)
An international utility based in the Netherlands, active in drinking water and sanitation field

and

Kisumu Water & Sewerage Co. Ltd (KIWASCO)
A water utility registered in Kenya and operating in Kisumu Kenya

and

City of Kisumu
A County Government public body responsible for service delivery in the City of Kisumu

and

Sustainable Aid In Africa International (SANA)
(Together with Umande Trust and Cordaid)
An international NGO active in water and sanitation sector in Kenya

Conscious of the mutual advantages that co-operation can bring;

Cognizance of professional strengths that each of the partners will contribute to the project as it explores the common interests of the parties hereto;

Given the desire to deepen knowledge and extend scientific research in finding solutions for society's well being;

The parties hereto demonstrate their willingness to co-operate through the use of knowledge, experience, information, technology to obtain the most efficient results in the areas referred to in this MOU.

Article 1 objective

The purpose of this agreement shall be:

(a) To facilitate co-operation between the partners in implementing the pilot project introducing innovative sanitation value in unsewered areas hereafter called the (project)

(b) To direct and co-ordinate implementation of co-operation between the partners in realization of the project.

Articles 2: Areas of Co-operation

- Piloting and encouraging use of improved toilets in Manyatta to support the project
- Arrange micro-credit to finance construction of improved toilets
- Training of local private sector to improve the toilets

- Hygiene campaign in Manyatta and in schools to promote behaviour change
- Prompt hygienic collection of faecal waste and urine and transporting the same to processing centres
- Design, construction and commissioning of a pilot treatment plant for urine and feacal waste to produce energy and fertilizer
- Manage the project to meet cost, time and functional targets
- Avail space at Kisat sewage for construction of the pilot project
- Actively disseminate the results of the pilot.

Article 3: Means of Co-operation

(a) Co-ordination, identification, prioritization and implementation of activities designed to advance the project and its objectives

(b) Manage joint activities within the scope of the agreement

(c) Establishing clear lines of communication, contact points as part of the on-going process of partnership

(d) Sharing of knowledge, experience, expertise, information, research and best practice through training and provision of equipment

(e) Deployment of financial and human resources as expressed in the project proposal document

Article 4: Implementation Activities

The parties mutually agree to co-operate with each other to complete implementation of their respective activities as provided below:

KIWASCO/Vitens

(a) School campaign: hygiene awareness creation and construction of improved toilets and hand washing at 4 schools in informal settlements of Kisumu

(b) Marketing for sales of final products

(c) Analysis of financial sustainability of value chain

(d) Documentation of best practices

(e) Up scaling the process of collection and transport

(f) Disseminating the project approach to other WSPs and municipalities

(g) Disseminating the project approach to African Water Facility (AWF) and international relevant stakeholders

(h) Three projects to demonstrate agricultural value of fertilizer products

(i) A steering committee to guide the project, make strategic decision, and report to AWF.

(j) Construction of sludge drying bed and composting system

SANA/KIWASCO

(k) Sanitation marketing and micro credit fund promotion among informal settlement residents and land lords

(l) Purchase of collection drums and construction of 3 collection points

(m) Survey on end user's willingness for borrowing money and pay-back feasibility and establishment of Micro Credit Fund

SANA/ City of Kisumu

(n) Monitoring of behavioral change

SANA/Vitens

(o) Listing of toilets to be sold through Micro Credit Fund

(p) Construction of 100 demonstration toilets

Vitens/SANA/City of Kisumu

(q) Capturing and storage infrastructure installation:
- 500 existing pit latrines will be rehabilitated and improved to be more hygienic.
- 1,500 new improved toilets based on Water Services Trust Fund (WSTF) / GIZ recommendations will be installed.

(r) Hygiene awareness campaign among informal settlement residents

SANA

(s) Training of local artisans

Vitens

(t) Construction of an Anaerobic digester

(u) Purchase of urine holding tanks

(v) Purchase of new equipment for latrine emptying

(w) Design of processing units

KIWASCO

(x) Collection and transport of faecal sludge and urine

(y) Consultation with the Ministry of Agricultural and other relevant authorities

Article 5: Confidentiality

The parties shall neither disclose confidential information nor forward such information to third parties unless consent is received in writing.

Articles 6: Working Team

The parties may establish Working Teams on different aspects of the project as part of the co-operation on temporary basis as may be agreed from time to time.

Article 7: Expenses

Unless otherwise agreed, the parties shall bear the expenses detailed in Annex 1 in furtherance of the aims of the project.

Article 8: Dispute Resolution

In event of any dispute arising between the parties, whether such disputes arise from interpretation or execution of its terms –

(a) The parties shall in first instance make every reasonable effort to reach an amicable settlement

(b) In the event of failure to reach such settlement, the dispute shall be settled through arbitration. An arbitrator for such purpose will be appointed by the parties by mutual agreement. In the event of failure, an arbitrator will be appointed by Water Resources Regulatory Board (WASREB). Each party shall bear its costs of the arbitration.

Article 9 : Language of Communication

All communications under this agreement shall be made in English.

Article 10: Implementing Agency

The parties appoint Kisumu Water and Sewerage Co. Ltd as the primary implementation agency of this agreement.

Article 11 : Contact Point for the Implementation of Agreement

Organization	Name	Position	Address	Phone No.
Vitens Evides PO Box 1205 8001 BE Zwolle	Mels Adriaan	Programme Manager	Adriaan.mels@vitens.nl	+31610468841
KIWASCO PO Box 3201 KISUMU	Eng. David Onyango	Managing Director	md@kiwasco.co.ke	+254 723 686401
City of Kisumu PO Box 105 KISUMU	Christopher Rusana	City Manager	townclerk_kisumu@yahoo.com	+254 722 602053
SANA International PO Box 1137 KISUMU	Alfred Adongo	Team Leader	okeyoadongo@yahoo.com	+254 722 206505

Article 12: Amendments

This agreement may be amended by mutual consent of the parties in writing. Any such amendments shall enter into force in accordance with the procedure set forth in Article 13 of this agreement.

Article 13: Entry into Force, Duration and Termination

(a) This agreement shall enter into force 14 days after the date of signature of all parties.

(b) This agreement shall remain in force until completion of the project for which the agreement is drawn

(c) Should any party desire to terminate this agreement prematurely, it shall give notice to the other parties, who shall enter into consultation in order to fully evaluate the consequences of termination of this agreement and take such actions as necessary to alleviate problems that may result from the said termination.

(d) Co-operation activities already initiated in the framework of this agreement at the time of notification of termination, such as implementation arrangements, or other co-operation activities shall continue until completion.

In witness thereof, the undersigned have signed this agreement on ……………30th………... day of June 2013.

For: Vitens/Evides International

MelsAdriaan
Programme Manager

For: KIWASCO

Eng. David Onyango
Managing Director

For: SANA International

Alfred Adongo
Team Leader

For: City of Kisumu

Christopher Rusana
City Manager

Annex 1

Area of Partnership	Total costs	AWF contribution	Own contribution	Vitens Evides	SANA	KIWASCO	MCK	Community
Component 1 Increased hygiene awareness and sanitation promotion								
Activity 1.1.1 School campaign: hygiene awareness creation and construction of improved toilets and hand washing at 4 schools in informal settlements of Kisumu	€ 80,100	€ -	€ 80,100	€ 77,700		€ 2,400		
Activity 1.1.2 Hygiene awareness campaign among informal settlement residents	€ 56,440	€ 51,440	€ 5,000		€ 5,000			
Activity 1.1.3 Sanitation marketing and micro credit fund promotion among informal settlement residents and land lords	€ 26,500	€ 26,500	€ -					
Activity 1.1.4 Monitoring of behavioral change	€ 39,500	€ 39,500	€ -					
Component 2 Sanitation (value) chain established and operational								
Output 2.1: Capturing and storage infrastructure installed								
Activity 2.1.1 Survey on end user's willingness for borrowing money and pay-back feasibility and establishment of Micro Credit Fund	€ 12,250	€ 10,864	€ 1,386	€ 1,386				
Activity 2.1.2 Listing of toilets to be sold through Micro Credit Fund	€ 6,250	€ 4,864	€ 1,386	€ 1,386				
Activity 2.1.3 Construction of 100 demonstration toilets	€ 24,550	€ 23,164	€ 1,386	€ 1,386				
Activity 2.1.4 Purchase and / or construction of toilets	€ 426,400	€ 53,278	€ 373,122				€ 186,561	€ 186,561
Activity 2.1.5 Training of local artisans	€ 7,450	€ 6,064	€ 1,386	€ 1,386				
Output 2.2: Collection and transport services established and operational								
Activity 2.2.1 Purchase of collection drums and construction of 3 collection points	€ 133,600	€ 130,828	€ 2,772			€ 2,772		
Activity 2.2.2 Collection and transport of faecal sludge and urine	€ 228,250	€ 161,814	€ 91,386			€ 91,386		
Activity 2.2.3 Purchase of new equipment for latrine emptying	€ 60,000	€ 60,000	€ -					
Output 2.3: Treatment plant designed, constructed and operational.								
Activity2.3.1Design of processing units	€ 42,450	€ 37,464	€ 4,986	€ 1,386		€ 3,600		

Activity2.3.2 Sludge drying bed, composting system	€ 75,000	€ 75,000	€ -					
Activity2.3.3 Anaerobic digester	€ 445,000	€ 145,000	€ 250,000	€ 250,000[2]				
Activity2.3.4 Urine holding tanks	€ 140,000	€ 140,000	€ -					
Output 2.4: Production of bio-fertilizer, biogas and energy.								
Activity 2.4.1 Three projects to demonstrate agricultural value of fertilizer products	€ 35,800	€ 33,028	€ 2,772	€ 2,772		€ 2,500		
Activity 2.4.2 Consultation with the Ministry of Agricultural and other relevant authorities	€ 3,250	€ 750	€ 2,500					
Activity 2.4.3 Marketing for sales of final products	€ 14,400	€ 11,628	€ 2,772	€ 2,772				
Component 3 Documentation of best practices, dissemination and upscaling								
Output 3.1 Financial sustainability of the value chain demonstrated and documented								
Activity 3.1.1 Analysis of financial sustainability of value chain	€ 7,700	€ 4,928	€ 2,772	€ 2,772				
Activity 3.1.2 Documentation of best practices	€ 18,800	€ 13,256	€ 5,544	€ 5,544				
Output 3.2 Approach in process of upscaling to other informal settlements of Kisumu								
Activity 3.2.1 Upscaling the process of collection and transport	€ 48,100	€ 24,050	€ 24,050		€ 300	€ 23,750		
Output 3.3 Results disseminated to other Kenyan cities and to (partners of) African Water Facility								
Activity 3.3.1 Disseminating the project approach to other WSPs and municipalities	€ 20,000	€ 20,000	€ -					
Activity 3.3.2 Disseminating the project approach to AWF and international relevant stakeholders	€ 4,500	€ 4,500	€ -					
Component 4 Project management	€ 239,000	€ 214,052	€ 24,948					
Total	**€ 2,195,290**	**€ 1,291,972**	**€ 878,268**	**€ 348,490**	**€ 5,300**	**€ 126,408**	**€ 186,561**	**€ 186,561**
Physical contingency (5%)	€ 109,765	€ 64,599	€ 43,913	€ 17,425	€ 265	€ 6,320	€ 9,328	€ 9,328
Price contingency (3%)	€ 65,859	€ 38,759	€ 26,348	€ 10,455	€ 159	€ 3,792	€ 5,597	€ 5,597
Total cost	**€ 2,370,913**	**€ 1,395,330**	**€ 948,529**	**€ 376,369**	**€ 5,724**	**€ 136,521**	**€ 201,486**	**€ 201,486**

[2] **Not guaranteed: depending on options for receiving subsidy through Dutch water funding. VEI is committed to do utmost in retrieving this funding.**