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Kampala City Council – A Project for Promoting Ecological Sanitation in Kampala, Uganda

Final Evaluation Report

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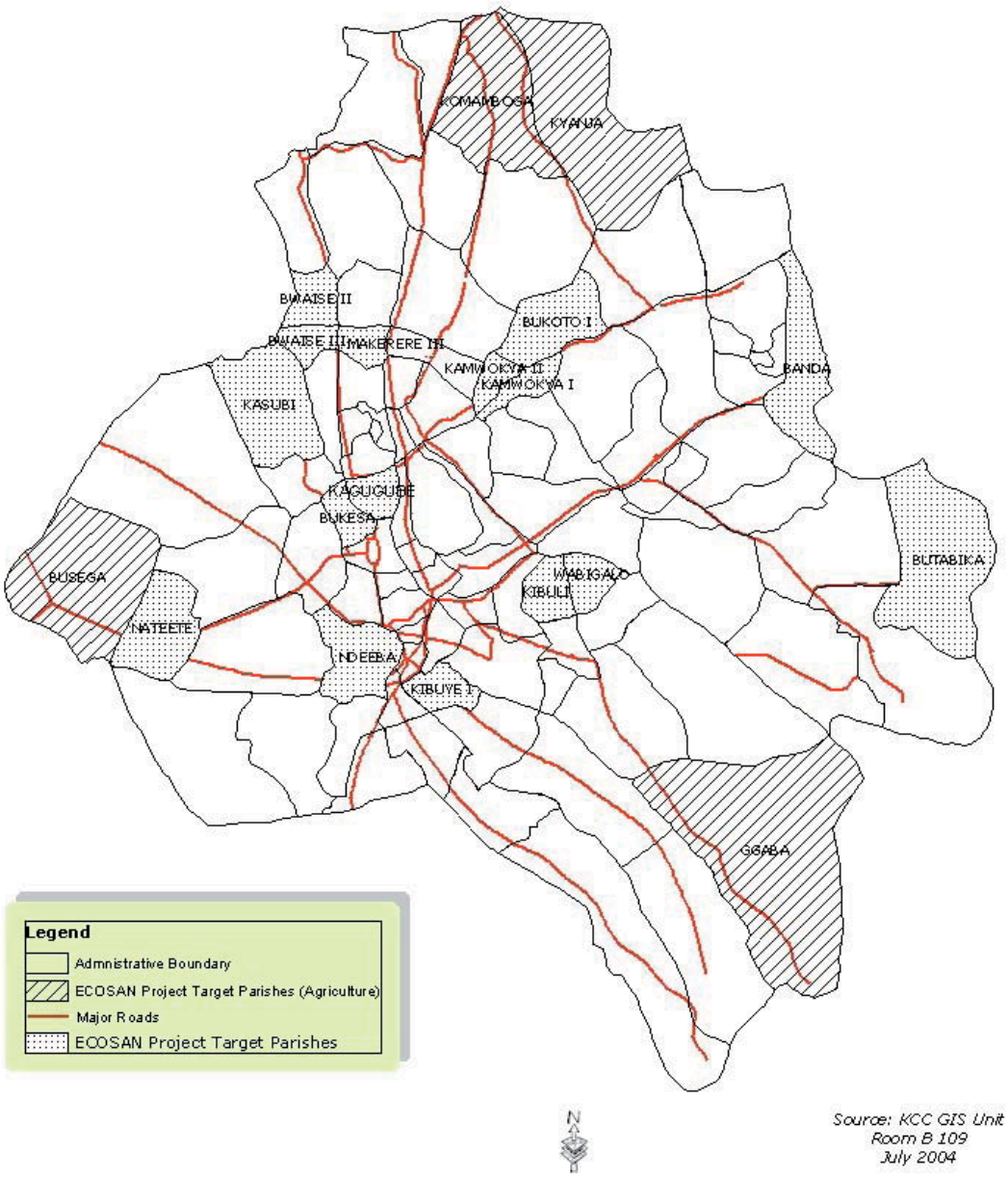
MAP of Project Area



List of Abbreviations and Acronyms

AfDB	African Development Bank
DAC	Development Assistance Committee (DAC) of the OECD
DWD	Directorate of Water Development
EcoSan	Ecological Sanitation (for definition see the main text)
ET	Evaluation Team
KCC	Kampala City Council
KfW	Kreditanstalt fur Wiederaufbau
LC	Local Council
MoH	Ministry of Health
MoWE	Ministry of Water and Environment
NGO	Non Governmental Organisation
NHP	National Health Policy
NWSC	National Water and Sewerage Corporation
PEAP	Poverty Eradication Action Plan
PMU	Project Management Unit
PPP	Public Private Partnership
PSC	Project Steering Committee
QA	Quality Assurance
SMART	Specific, Measurable, Accurate, Realistic and Time-bound (about Indicators)
Sida	Swedish International Development Agency
TA	Technical Assistance
TOR	Terms of Reference
Ushs	Uganda Shillings (1 SEK equals 275 Ushs on April 30, 2008)
WB	World Bank
WHO	World Health Organisation
WSP	Water and Sanitation Programme (of the WB)

Executive Summary

Introduction

Sida has supported the promotion of EcoSan[1] in Kampala City Council (KCC) since 2002 through the Lake Victoria Programme. Ecological sanitation is based on the principle that urine, faeces and waste water are resources in the ecological cycle (loop). The Kampala EcoSan Project makes use of dry toilets to separate urine from faeces and through recycling, and makes proper use of the two to support crop production. Important characteristics of this type of EcoSan are separation at source, efficient destruction of pathogenic organisms and recycling of urine and faeces, thereby 'closing the loop'.

The project has been implemented by KCC, which established a Project Steering Committee (PSC) and a Project Management Unit (PMU) supported by Technical Assistance (TA) from a Swedish Consulting Company recruited and financed by Sida.

The Object of the Evaluation

Based upon an assessment of the Needs and the Potential of EcoSan to provide solutions Sida and KCC in 2000 agreed to develop a Project Document with assistance of an International Consultant who submitted his report late in 2001. KCC and Sida signed a specific agreement in May 2002 whereby Sida agreed to support the proposed project for promoting EcoSan in Kampala, with a grant of 9 million Swedish Kronor (then approx. USD 1,100,000).The Swedish support to the project was channelled through the Regional Lake Victoria Programme of Sida. The project document was revised slightly after the inception phase in June 2003 but the overall and immediate objectives remained.

Objective	Narrative Description	Verifiable Indicators
Development Objective	To improve the standards of the disadvantaged people living in poorly sanitized areas of Kampala.	No Indicator Given in Project Document
Project Objective 1	To develop and demonstrate appropriate systems of ecological sanitation for poorly sanitised areas of Kampala.	An ecological sanitation system exists that reflects defined needs and preconditions, is adapted to local conditions and requirements, includes a management system of resources, is tested and accepted among the public and found functional, reliable, safe and acceptable.
Project Objective 2	To prepare for large-scale implementation of the developed ecological sanitation systems in Kampala.	A model has been presented of how to undertake large-scale implementation of an ecological sanitation programme in peri-urban Kampala exists.
Project Objective 3	To define and strengthen the institutional framework for the sanitation sector under jurisdiction of KCC.	Incorporate the Ecological sanitation approach in the design of the daily activities of KCC duties.

[1] EcoSan is the abbreviation for a comprehensive "dry" sanitary system which consists of sanitary technologies and hygienic use (toilets which separate urine and faeces is one EcoSan technology), combined with a system for re-cycling faeces and urine into agriculture as fertiliser in a manner which does not cause threats to human health and environment.

In order to achieve the project objectives the following eight outputs would be generated:

Output 1: Project structure, components and activities defined and operational;

Output 2: Ecological Sanitation Systems suitable for poorly sanitized areas of Kampala developed;

Output 3: Training and capacity-building in Ecological Sanitation and associated system approaches;

Output 4: A minimum of three alternative toilet designs suitable for Ecological Sanitation Systems in poorly sanitized areas of Kampala developed and tested;

Output 5: Promotion and awareness raising gaps in Ecological Sanitation and associated system approaches identified and filled;

Output 6: Safety from a human health point of view of proposed systems of Ecological Sanitation investigated and ensured;

Output 7: A model for popular use of urine and decomposed faecal material in farming developed and operational;

Output 8: An implementation structure for ecological sanitation in Kampala proposed.

The activities required and the indictors to be used to assess the achievements were included in the Log Frame of the Project Document.

The Findings of the Evaluation

We concluded that the outputs were not all fully achieved, and that some additional outputs would be required before scaling up can be recommended. Hence, the objectives were not fully achieved.

Outputs and activities yet to be completed:

- Output 2: Ecological Sanitation Systems suitable for poorly sanitized areas of Kampala developed
- Output 4: affordable designs for different socio-economic groups; and trained builders who can supply on market terms;
- Output 6: scientifically verified guidelines regarding safe handling of faeces;
- Output 7: feasible and financially viable system for collection and transportation of products from generators to agricultural users;
- Output 8: A suitable, transparent and cost effective implementation structure for scaling up of EcoSan in relevant areas of Kampala.

Before scaling up it is recommended to prepare the following additional outputs:

- Documentation of KCC EcoSan implementation which can be used in Media Campaigns;
- Vision and Target Setting for EcoSan in KCC;
- EcoSan Policy as Part of KCC Environmental Health policy including regulatory instruments such as zoning, and certification of technologies and products;
- Strategic Action Plan for scaling up of EcoSan as part of a "holistic approach" to Urban Environmental Management in Kampala including the management of grey water;
- Implementation Plan including Capacity Building Plan for public-private partnership implementation model.

Assessment against the Evaluation Criteria

In general the *relevance* of the Project is high. But the relevance could have been enhanced if several design errors had been avoided.

The *efficiency* of the programme has been very low. Implementation has been slow due to poor management and inadeqate strategic planning. Several outputs are not achieved in spite of spending the full budget.

The *effectiveness* of the programme has also generally been low. The budget has been spent but the objectives have only been partly achieved.

The positive *impact* on the *awareness and livelihood of the poor members of the local communities* has been that those households involved have received an improved sanitary toilet at a very low price (due to the high subsidy). The impact is enhanced hygiene and subsequently improved health. Moreover, artisans, contractors and technical staff of KCC and Parish Development Committees have received new knowledge and skills which can be used for developing the complete EcoSan system and closing the "loop" in a sustainable manner.

The *sustainability* of the established results with regard to enhanced knowledge and skills *at the community level* is positive, but the KCC has not succeeded as yet in developing a sustainable EcoSan system or a sustainable institutional implementation capacity.

Replicability was an explicit objective of the project, which should be up-scaled to include all relevant areas of Kampala in parallel with the establishment of capacity and a strategic action plan of the KCC. Unfortunately, the system is not yet in place and therefore as yet not ready for scaling up.

Summary of Conclusions and Lessons Learnt

The Evaluation Team (ET) has identified the following conclusions and lessons of general validity regarding *design and management of pilot projects* aiming at developing and testing new ideas and new approaches:

- The implementation responsibility and capacity must match the strategic requirements of the project;
- This has to be ascertained in an analysis of functions of the stakeholders, legal framework and a thorough institutional and management capacity assessment in the project design phase;
- KCC top managers did not have ownership to this project from the project start and signing of the project agreement took some convincing. This was a serious mistake; donors should never promote ownership even when the project idea is the obvious solution to a real problem of the donors target group;
- In pilot projects flexibility is a must. Analytical capabilities and strategic management skills are required in order to implement in a cost effective manner. Documentation of lessons learnt in a SMART monitoring and management information system is of strategic importance. Hence, the full integration of pilot projects in the institutional structure of the responsible executive organisation may not be the best solution, if this organisation has a bureaucratic management system and an objective which differs in nature and scope from the nature and scope of the pilot project.

The pilot project had difficulties *making the best use of its local and international professional resources.* The ET has identified the following conclusions and lessons being of a general nature:

- The KCC and Sida were obliged to provide human and financial resources on time and of predetermined and adequate quantities and qualities. When one or both partners fail to do so it is a serious sign of lack of ownership. Perhaps this project would have been better served by a one year moratorium when the Inception Report made it clear that the PMU was not in place.
- The international TA of the project is not well documented in official project documents, but informal notes makes it clear that the Contract and TOR of the international advisors should have been reviewed and revised in autumn 2004. Each TA input should have been clearly defined in terms of activities, outputs and Quality Assurance (QA) responsibilities; and a clear distinction should have been made between professional specialist inputs and strategic management support to PMU.

Based upon the assessment of achievements, constraints and potentials the ET conclude *that EcoSan can become a cost-effective, commercially viable and sustainable solution* to the sanitation problems of low laying areas of Kampala under the following assumptions:

- A national policy is approved;
- A KCC strategy and action plan is developed;
- A nationwide Media Campaign is initiated to enhance the status of EcoSan;
- Consumers of farm products accept "EcoSan Foods";
- EcoSan zoning is introduced as part of urban environmental planning and management;
- The laws of Uganda are adjusted, especially in the light of the EcoSan Strategy (under development) to include EcoSan as one of the recognised sanitation methods.
- Certification of affordable and hygienic designs are introduced and the models are promoted in the market;
- Parish Development Plans include EcoSan in a "holistic approach" to urban environmental planning and management – including grey-water handling, drainage, solid waste, urban greening etc;
- Appropriate funds and finance mechanisms are made available as credit to households replacing pit latrines with EcoSan, and with public-private partnerships which establish commercially viable collection and transport systems for the EcoSan Products;
- KCC has the capacity to monitor the health aspects of the scaled-up EcoSan system.

Recommendations to KCC and to Sida

The above conclusions and lessons learnt logically lead to the following recommendations to KCC:

- Finalise outputs 2, 4, 6, 7 and 8 in accordance with the original intentions. Seek immediate funding for this and employ one external project consultant to be responsible on a performance contract;
- Monitor and input to the approval of national policy on sanitation and participate actively, in the ongoing process for the development of the 10 Year EcoSan Strategy for Uganda under the Water and Sanitation Programme (WSP) of the World Bank (WB). Specifically recommend a review and introduction of the necessary changes in the laws of Uganda to distinguish EcoSan from pit latrines and determine how EcoSan may be regulated;
- Develop a KCC strategy and action plan before October 2008 for sanitation as an integrated part of urban environmental management. Have the action plan based upon the Parish 2008/09–2010/11 development plans and the EcoSan zoning;

- Cooperate with Ministry of Health (MoH) and Ministry of Water and Environment (MoWE) to initiate a national Media Campaign;
- Introduce Certification of affordable and hygienic EcoSan designs;
- Together with other stakeholders and donors ensure that appropriate funds and finance mechanisms are made available as credit to households replacing pit latrines with EcoSan, and with public-private partnerships which establish commercially viable collection and transport systems for the EcoSan Products;
- Enhance the KCC capacity to monitor the health aspects of the scaling up EcoSan system.

Since the EcoSan pilot project is very relevant for Sida Development Policies, and important lessons has been learnt, the *ET recommends that Sida* consider to provide an experienced short term consultant with responsibility for finalising output 2, output 4, output 6, output 7 and output 8 and to assist the KCC in the activities outlined under recommendations to KCC.

The proposed support to KCC with a management consultant having executive powers is intended to avoid some of the management difficulties in the project implementation. The ET strongly believes that despite the low level of success achieved by the EcoSan project, the concept of EcoSan is worth pursuing as one of the sanitation solutions in Kampala, and unless the project is completed and the disposal of excreta and urine ensured from the existing EcoSan toilets, the technology will be discredited as not feasible and the project will result in the opposite of its goals of promoting EcoSan as a sustainable sanitation solution,

Should Sida not be in a position to provide support for the completion of the project, KCC should urgently approach the other stakeholders in sanitation in Uganda to investigate how best the EcoSan activities can be continued. Possibilities include the ongoing projects in KCC such as the 'Kampala Integrated Environmental Planning and Management Project' and the 'Kampala Institutional and Infrastructure Development Project' as well as the sanitation activities funded through NWSC by KfW and the European Union and the support through WSP to the development of the EcoSan strategy.

1. Introduction

1.1 Background to and Rationale for the Evaluation

Sida has made a long-term commitment to support the sustainable development of the Lake Victoria region. Pollution of the Lake Victoria from the urban centres around the shore has been identified as one of the main threats to sustainable development of the region. Sida have intensified the dialogue with major cities around the lake in order to identify and prioritise problems in the urban environmental context.

The cities are experiencing rapid growth, with annual growth figures in the range of 10%. However, planning and provision of infrastructure has not been able to keep up with this development, hence a large share of the population resides in unplanned settlements with very poor urban infrastructure. There are shortcomings in areas of sanitation and potable water, drainage, solid waste management as well as housing.

The situation regarding water and sanitation in Kampala is far from satisfactory. Water for domestic use is scarce, sanitation services are inadequate, groundwater is being polluted, and more or less untreated sewage is discharged straight into Lake Victoria.

Kampala is traditionally described as being located on seven hills, with poorly drained lowland areas in between. Middle and upper class people, enjoying good standards of living, populate the "hills". The lowland areas, subsequently turning into peri-urban areas, cater for some 60% of the city's population. It is primarily poor people that reside in the lowland and peri-urban areas. Infrastructure services have not been developed in pace with the city's rapid population expansion. Piped water systems currently serve about 70% of the (official) city population, and less than 5% of the population is served by piped sewerage system.

Water-based sewerage is primarily found in the city centre and the hilly areas and the water and sewerage services as well as maintenance of infrastructure are inadequate[2]. Piped water and sewerage is the responsibility of National Water and Sewerage Corporation, (NWSC).

The situation in the lowland areas is somewhat different. These areas are characterized by being close to water bodies, groundwater being located immediately below land surface, flooding is common in densely populated areas during rainy season, and the few and often clogged drainage lines carry foul water in the immediate vicinity to people's homes. Polluted groundwater is commonly used for household purposes, whereas yard taps or public water posts which provide water of better quality are few and unreliable. Sanitation – which in these areas is a responsibility of KCC – is primarily arranged through raised pit latrines (as it is not possible to dig a pit due to the high groundwater table), which are often emptied into the drains when full. There are no realistic plans to extend a centralized sewerage system to the lowland areas, primarily because of lack of funds, ability to pay and experienced difficulties in long-term suitability and proper maintenance to keep such a system in a working condition.

During 2001 initial discussions were held between Sida and KCC. A broad outline for the cooperation was agreed identifying peri-urban slum upgrading as a major area for long-term cooperation. As an intermediate measure, KCC opted to develop an appropriate ecological sanitation system to tackle sanitation problems in low-income areas of Kampala. During September to December KCC developed a project document assisted by a consultant financed by Sida.

[2] NWSC has developed the Kampala Sanitation Master Plan in 2002 and parts of the master plan is being implemented with major investment in Kampala sewerage recently been initiated with assistance from EU and KfW (EUR 30 mill) and AfDB (EUR 45 mill)

During 2001 Sida decided to support the introduction of a local Agenda 21-process in Kampala which can be of importance for the proposed Ecological Sanitation, as well as supporting a long-term city development approach based on the methodology of the Urban Management Programme (Habitat).

Ecological sanitation has been tried in a number of places since the 70-ies all over the world with varying degree of success. In most cases it has been pilot projects in rural areas, but there also exist EcoSan projects in urban areas.

Based upon this assessment of the Needs and the Potential of EcoSan to provide solutions the parties agreed to develop a more detailed Project Document. This was done by KCC with assistance of an international consultant who submitted his report late in 2001.

KCC and Sida signed a specific agreement in May 2002 whereby Sida agreed to support the proposed project for promoting EcoSan in Kampala, to the tune of 9 million Swedish Kronor (then approx. USD 1,100,000).The Swedish support to the project was channelled through the Regional Lake Victoria Programme of Sida.

Parallel to the Project Sida also funds TA to KCC, aimed at supporting the Project Management Unit (PMU) and strengthening of KCC's capacity in the sanitation sector in the long-term. A three year contract with an international consultant (Hifab International AB) was signed and the commencement date for the Services was on the 1st of October 2002. The TA was later expanded to also include procurement of international short-term experts. The costs for the TA services are paid directly from Sida Stockholm to the consultant.

The project document was revised slightly after the inception phase in June 2003 but the overall and immediate objectives remained. A logical framework identified eight outputs to be generated in order to achieve the objectives, and for each output specific activities, inputs and indicators of achievement were identified (See Annex 3).

The project document also described the monitoring and reporting requirements and included an "End of Project Report" to be completed by KCC and a "Final Evaluation Report" to be undertaken by an external and independent consultant. The End of Project Report was completed by KCC in November 2007 and by mid-March 2008 Sida contracted PEMconsult and a National Consultant to undertake the Final Evaluation in accordance with the TOR appended as Annex 1.

This report is the Draft Evaluation Report, which is based upon desk work as well as field work in Kampala undertaken in line with the methodology and work plan proposed in the Inception Note.

1.2 Objectives and Purpose of the Evaluation

According to TOR the purpose of the evaluation is to:

1 Provide Sida with lessons to be used when designing similar projects elsewhere and give input on how to use results achieved and lessons learnt.

2 Provide KCC with an input for considerations of possibilities and constraints of scaling-up from pilot-project to full-scale implementation of the developed EcoSan strategy and system for Kampala.

The scope of service of the TOR makes it clear that the assessment of achievements should focus upon the Development Assistance Committee (DAC) agreed evaluation criteria, which are also the focus of the Sida Evaluation Manual[3].

[3] "Looking Back, Moving Forward". Sida Evaluation Manual. Sida, Stockholm 2004.

1.3 Evaluation Criteria

The following five evaluation criteria as defined in the Sida Evaluation Manual have been used in this evaluation:

Relevance: The extent to which a development intervention conforms to the needs and priorities of target groups and the policies of recipient countries and donors.

Efficiency: The extent to which the costs of a development intervention can be justified by its results, taking alternatives into account.

Effectiveness: The extent to which a development intervention has achieved its objectives, taking their relative importance into account.

Impact: The totality of the effects of a development intervention, positive and negative, intended and unintended.

Sustainability: The continuation or longevity of benefits from a development intervention after the cessation of development assistance.

Replicability: This was an explicit objective of the project, which was termed a pilot project which should be up-scale to include all relevant areas of Kampala in parallel with the establishment of capacity and a strategic action plan of the KCC.

1.4 The Evaluation Team, its Programme and Methodology

The Evaluation Team (ET) consisted of two international and one national Uganda based consultant:

- John Carlsen, Development Economist and Institutional Development Specialist (Team Leader);
- Jens Vad, International Water and Sanitation Specialist;
- Simon Peter Otoi, National Water and Sanitation Specialist.

The programme of the ET and a list of people met is included in Annex 2. The methodology of the ET is presented in Annex 8.

1.5 Limitations

The limited time available for the collection of primary information was a constraint. On average, the ET was only able to allocate 1 day for each Division and to visit and interview targeted beneficiaries for about 4–6 hours for each community. The assessment of results and impact is therefore based upon a very small sample of "case stories", which may not give full credit to the potential for EcoSan up-scaling targeting poor households of Kampala. In particular, the assessment of the long term impact of the important research and development activities has suffered from the limited time available.

With due regard to these limitations, the ET has prepared a report that assesses the achievements of KCC – Promotion of EcoSan in Kampala in the context of the rapidly growing population of Uganda and the evolving development cooperation in general and in water and sanitation in particular of relevance to KCC since the genesis of the pilot project in year 200l.

1.6 Disclaimer

The work of the ET has been greatly facilitated by the KCC Project office and the Municipality staff at all levels, the Swedish Embassy in Kampala, and the staff of the Consultant Company – Hifab.

We hereby express our appreciation for the kind and effective support which we have received from all parties involved. The preliminary findings from field work have been shared and discussed with key stakeholders in a mini-workshop, and official debriefing sessions at the Swedish Embassy in Kampala. Nevertheless, this Report remains the full responsibility of the ET, so the views and recommendations expressed in this report are not necessarily agreed to by the Government of Sweden or by the Government of Uganda.

2. The Evaluated Intervention in its Context

2.1 The Target Population

The targeted beneficiaries of the project are the population of the poorly served low-laying areas of Kampala where piped sanitation is unaffordable, and pit-latrines and septic tanks are unsuitable because of the high water table.

According to the Urban Water and Sanitation Review, 2003 (Directorate of Water Development (DWD)), Kampala maintained a growth rate of 3.8% per annum over the period 1991–2002. It is estimated that the population of Kampala in 2008 would be approx. 1,600,000. It is noted that population growth in the areas targeted by the EcoSan Project would be substantially higher than the average due to the nature of the settlements – largely informal and semi permanent structures dominate these poor areas of the City.

It is estimated that approximately 60% of the city's population live in these areas, and that they belong to the urban poor characterized by having limited productive assets such as land, housing, businesses, skills and employment. Hence, their average incomes are far below the general average for the urban population and they have very poor access to the normal city services such as water, sanitation, solid waste management, education and medical services. Many of the households in these urban informal settlements are female headed households. It is noted that the GDP for the urban population is around $ 300 per annum, which is too low for the average cost of an EcoSan of $ 1,000.

The urban environmental services in these areas are extremely poor. The sewer distribution network mainly caters for the civic centre. Its utilization capacity is estimated at only 50%. Only 5% of the population is served by private septic tanks, which in many cases are not accessible to cesspool emptier. School sanitation, especially toilet/latrine coverage, is poor.

During the field visits, it was found that many people appreciated the EcoSan concept, but were simply too poor to afford the initial cost of the toilets. Most of the toilets inspected by the ET had been installed by house owners who had many tenants. In this way poor people indirectly benefited when the landlord invested in an EcoSan toilet.

2.2 The Service Provider and Executing Agency of the Project

Kampala is the capital city of the Republic of Uganda. It is located at the shores of Lake Victoria at 0°19′N, 32°35′E and average height of 1,190 m. KCC is a district in its own right, being one of 80 districts of Uganda. It is a local government and body corporate. It was created under the Local Governments Act 1997 as amended. Like other local governments in Uganda, the executive head is the Town Clerk and all departmental heads are answerable to him. The executive head is assisted by deputies and other assistant town clerks. KCC has the responsibility for the provision of environmental and sanitation services within the municipal council boundaries.

The political leader of Kampala is the Mayor, who is also the Local Council (LC 5) Chairman, the highest local council elective position in the district. Kampala District was created out of Mpigi District and gazetted as an administrative district in the Local Governments Act.

Kampala City is divided into five divisions. They are semi-autonomous and undertake their own planning and budgeting although these are later integrated into the larger district council plan and budget. The Divisions are headed by an elected Division Chairman (LC 3) and a Division Town Clerk (Principal Assistant Town Clerk), who is the Accounting Officer. At the lower local council level are the Parish Councils. The lowest administrative unit is the Village Council. At each level, the Councils are elected by popular adult suffrage by the community.

At the community level, the project worked with Community Liaison Officers whose roles included mobilization and identification of beneficiaries, organisation of field support, development of support systems, monitoring, providing feedback, and linking beneficiaries to project management and stake-holders. The Community Liaison Officers were not necessarily part of the KCC administrative structure, but were elected by the community members, according to information from the EcoSan Project staff[4].

2.3 The Area of Intervention of the Project

The EcoSan Project had components in all the five divisions of the City as illustrated in the map below. It concentrated its projects in the poor areas of each division:

- Central Division: Kamokya Parish;
- Nakawa Division: Kyanja Parish;
- Kawempe Division: Bwaise Parish;
- Makindye Division: Wabigalo Parish, and
- Rubaga Division: Kasubi Parish.

However, the map issued in the EcoSan End of Project Report[5] shows a wider planned intervention than was eventually achieved. The implementation was scaled down greatly from approx. 19 parishes to only the above 5 parishes owing to delays in start up of the project, lower demand for the EcoSan toilets compared with the initial projections and the need to concentrate the units in a few areas to create a more pronounced impact.

The population distribution within the 5 Divisions of KCC, according to the Final EcoSan Project Report, quoting the National Population and Household Census of 2002 is 1,189,000 distributed as follows:

Table 1 Population of Kampala (2002 Census)[6]

Division	Male	Female	Total*	Percentage	Pop. Density (Persons/ km²)
Central	44,001	44,093	88,094	7	6,033
Kawempe	123,502	138,663	262,165	22	8,322
Makindye	145,556	157,615	303,171	26	7,467
Nakawa	118,098	122,526	240,624	20	5,661
Lubaga	137,918	157,170	295,088	25	8,730
Kampala (District)	569,075	620,067	1,189,142	100	7,259

* The day time population estimated at 2.4 million people reflecting the number of people who commute to Kampala for different services such as education, health, and employment.

[4] Kampala EcoSan Project. Final Report.
[5] See Map of Kampala on the first page of the Report.
[6] Kampala District Profile. Undated. At www.kcc.go.ug

KCC consists of 99 parishes and 802 villages. The EcoSan Project pilot has concentrated in only 5 parishes.

Details of the legal and institutional context of the project are provided in Annex 5.

3. Findings and Conclusions Regarding Project Outputs

3.1 The Project Implementation Approach and Strategy

The Overall Approach and Strategy

The overall approach and strategy was based upon Action Learning methodologies. The KCC departments which were responsible for the various specialities such as design, awareness raising and training, environmental health and agriculture should be involved in the actual implementation of the pilot project so that they could learn the lessons in the process of the pilot testing of EcoSan in Kampala City.

This approach and strategy is potentially very effective and very relevant under two different assumptions: i) that the departments have the necessary basic professional expertise and the required number of skilled staff and ii) if the same departments were likely to be involved in the same functions during subsequent scaling up.

Unfortunately, this was not the case of KCC. The staff of the four units had their regular responsibilities in their respective departments and was only part time engaged in the EcoSan project. They also did not have the core skills of innovative design, and health and agricultural research and therefore many important studies and activities were outsourced. As the institutional home for the EcoSan activities is not defined in the KCC organisational set-up there is no guarantee that this staff would be involved in a subsequent scaling up phase, although it it is likely that some will be involved.

The approach, which was meant to generate ownership and generate practical skills were only partly a success. The team involved in EcoSan seems to be the lonely owners of EcoSan in KCC today. And they have gained practical skills in relation to many important areas. However, there still seems to be a lack of strategic management skills in the PMU team.

The ET did not see any indicator that the implementation process had generated ownership in the top of the KCC political or administrative management. Although the ET did not discuss with the KCC top political leadership, the continued implementation problems for the EcoSan Project staff indicates that the support from higher level is missing.

3.2 Project Outputs and Activities: Achievements

3.2.1 Output 1: Project Structure, Components and Activities defined and Operational

Output 1 was supposed to be in place in the first phase of the project estimated to take four months. Of course it is incorrect to call this a project output because there were no intentions to capacitate PMU to eventually become the EcoSan office in KCC. If that had been the case the training and institutional development work should at the outset have been geared towards the mandate of such a new organisation within the Environmental Health Department of KCC.

Observations Regarding Output 1

The project Structure was only in place at an acceptable level after 2 years due to:

- Initial poor ownership at the highest levels in KCC; when the first TA arrived, the Town Clark appeared to be uninformed about the project, and staff was yet to be allocated to the PMU;
- The leadership in the KCC also changed during the project period and the project was faced with numerous delays in relation to the procurement process mainly caused by leadership and transparency/accountability issues;
- Late allocation of staff to the project, late understanding and appreciation of the project idea;
- Focus on topping up payment to staff in stead of the development of an attractive working environment; the project never managed to generate a working atmosphere which promoted dedicated and creative quality output;
- Design staff with inadequate skills in design;
- Inadequate time allocated by staff of Agricultural and Health departments;
- Poor staff management and lack of strategic considerations in the preparation of work plans.
- The Project never managed to establish itself as an important strategic poverty oriented project which could attract additional donor funding and improve the livelihood of its poor population;
- The KCC designated a project manager who had the professional qualifications as an environmental health specialist but neither had the motivation nor the necessary strategic management skills for a job of this nature. The Project Manager was about to retire when he was given this position and he did not have the necessary access to the higher officers of the KCC;
- The achievement in the first two years was partly due to the fact that study tours and other training activities gradually succeeded in establishing some commitment to the EcoSan idea in three of the four departments (Promotion, Public Health and Agriculture), while the design department appear to have been staffed by inadequately skilled technical staff;
- Another important reason seems to have been that the first TA actually worked very hard and enthusiastically to get the project of the ground. Unfortunately, she decided to leave the project after the termination of her two year contract because she had lost faith in the management of the project.

Conclusions Regarding Output 1.

- The establishment of the PMU took a long time and it never developed into the flexible, creative and supportive strategic management structure which is a prerequisite for the success of a complex multi-sectoral pilot project like the KCC EcoSan project. The inception reports and project reviews identified the Project Manager as the major constraint;
- The bureaucratic practices and procedures of KCC prevailed in design and procurement and eventually proved KCC to be an in-optimal choice for the implementation of this project;
- These constraints would most likely have been identified if the project document had included a professional institutional and organisational assessment of the implementation capacity for an experimental pilot project;
- The local government legislation in many countries (including Uganda) does actually have provision for exemption of experimental projects from normal bureaucratic procedures however this exemption was not used.

Recommendations Regarding Output 1.

- All project/programme preparations must include a professional institutional and organisational analysis in order to identify institutional constraints and enable the project designers to identify mitigating measures;
- When the project review and monitoring systems in use identify the Project Manager as the key problem it is important to act firmly and to ensure that the problem is adequately addressed.

3.2.2 Output 2: Ecological Sanitation Systems Developed

This output 2 is the full system, which would be in existence once the "loop" has been completed and all its elements successfully completed:

Output 3: trained staff and contractors;

Output 4: designs, constructed and used toilets;

Output 5: mobilised, trained and contracted users in the community;

Output 6: guidelines for the safe use of the EcoSan facilities and the safe handling of the products;

Output 7: A model for popular use of urine and decomposed faecal material in farming is developed and operational.

Observations Regarding Achievements

The project area was defined in cooperation with the divisions and parishes and the mechanism for working with the target group is well integrated into the local government structures from district to division, parish and community levels. This sub-output was achieved. However, in view of the limited number of households reached by the project, a more targeted approach with fewer parishes might have been more appropriate to facilitate the establishment of collection systems.

A problem analysis in the form of a baseline study[7] was done and completed by November 2004– 2 years after the start of the project. This formed the basis for developing the methodology, the requirements for the sanitation systems, community entry approaches, organisation and the awareness raising strategy. These elements were generally well developed to implement the project with the chosen strategy of subsidising high quality EcoSan toilets. However, the ET has not seen evidence of serious consideration of alternative strategies to promote more affordable EcoSan systems and better integrate the promotion into the normal hardware supply chains and the way households deal with providing shelter for the family.

The community activities generally seem to have worked well and there is a high level of enthusiasm for EcoSan amongst the households with well functioning toilets. There are, however, some toilets that have not been used for various reasons – outstanding work to be done by the contractor, existing pit latrine not yet full and more seriously: concerns by the users about the accumulation and disposal of the products. In some of the families visited the EcoSan was only used by some of the family members as especially the young men found the technology inappropriate. The addition of a low cost simple urinal could possibly assist in solving this problem as implemented in one of the households visited by the ET.

If EcoSan is to have an impact on the environmental sanitation situation in Kampala, a strategy of heavily subsidised toilets seems futile. The justification for the chosen approach is that it was deemed important to establish a few good examples of EcoSan toilets as a method of demonstrating that the technology is appropriate in Kampala – while this is appreciated the ET finds that it should have been accompanied with a strategy better suited for up-scaling. Plastic separation pans are available from a

[7] KCC Baseline Study Report, AquaConsult, November 2004

local plastic manufacturer and this is a good first step in making the technology available through the normal private building materials suppliers.

Different low cost toilets are available in other countries as shown under output 4 below with examples from Zambia. In the dense settlements in Kampala, a model which can be used inside the house with an appropriate collection and disposal system would seem to be an option that ought to have been investigated.

The project was established as a separate unit in KCC and although the relevant 4 departments provided part-time staff, the implementation did not result in integration of the EcoSan activities into the KCC departments. The project activities and the system established for promotion of EcoSan are therefore not likely to be sustained as there is no institutional memory or systems established; neither have some of the formal requirements for the EcoSan system been established, such as changes in the regulations and the KCC building codes to differentiate EcoSan toilets from pit latrines (which are not allowed closer than 30 metres from the home)[8]. The application of the EcoSan system would also have to be integrated in the overall urban environmental planning e.g. zoning areas in Kampala for sewerage, EcoSan (with sustainable collection systems) and pit-latrines. The TA reports indicate that this has been discussed but it seems not to have been acted upon by KCC.

The collection system has only worked by 'emergency' activities by the project staff emptying toilets for the households and collecting urine and delivering to farmers and this is obviously not sustainable. The many delays in the construction of the toilets have had the effect that there has been little time to implement any collection system as the toilets have only been in operation for less than a year.

The ET was introduced to a couple of good examples of farmers being interested in using the urine and solids from the EcoSan toilets; however the link between the toilet owners and the farmers have not yet worked sustainably without the project providing transport. The concentration of EcoSan toilets in one location and the distance between the toilet owners and the farmers are important parameters influencing the sustainability of the collection and re-use system and the zoning for EcoSan would assist in making this possible. The re-use works very well in the parishes in the outskirts of Kampala where the loop is closed within the same household or neighbours having gardens or farms.

The basic finding is that KCC did not attempt to develop and test alternative systems among which the best performing system could then become the foundation of output 8: the scaling up of the EcoSan to serve all relevant areas of the city.

The PMU developed one prototypical design of EcoSan toilets. They were required to develop at least 5 different types. The cost of the toilets was in the range of 900,000 – 2,500,000[9] and thus did not meet the socio-economic relevance criteria of suitability. The poor households are not able to pay the full cost of the system. The PMU did not develop or test different models for the popular use of urine and decomposed faecal material.

Conclusions and Recommendations Regarding Output 2

The general conclusion is that a system ready for scaling up is not as yet in place. Output 2 has not been achieved because several elements in "closing the loop" are not fully completed. (Refer to findings in sections below). Hence, the general recommendation is that KCC should identify the necessary resources to prepare a plan and budget for the completion of the elements which are required for scaling up i.e. output 4, output 6, and output 7.

[8] Although the Public Health Act identifies pit latrines as a method of sanitation, the requirement that they should be at least 30 m from residential homes is not possible to implement in most plots within the City. Both KCC and MoH hold that EcoSan latrines are quite different from pit latrines; however, the Public Health Act does not specifically mention EcoSan latrines, since they are a new technology

[9] These figures are taken from the Final Inception Report by the PMC Consultant, 2007. The Director of Rural Development Media Communications also quoted similar figures during an interview with the ET.

The project has succeeded in making the EcoSan technology accepted and appreciated by the few households and other stakeholders being involved, and introducing the technology to a wider group of stakeholders. A couple of farmers have also shown interest in using the EcoSan products as fertiliser.

However, the project has not succeeded in developing an EcoSan system which is functional and closing the loop or even ensuring collection and disposal of the products from the toilets. The designs are not affordable and little effort has been undertaken to enhance the affordability and develop an EcoSan system integrated into the normal hardware supply and house building activities.

An encouraging sign is that a few of the masons that have been trained are engaged by private individuals to build modified EcoSan designs.

3.2.3 Output 3: Training and capacity-building in Ecological Sanitation

Observations regarding Achievements

The project document describes capacity building activities under output 3 covering capacity of EcoSan implementers while the promotion and training for users and community leaders are covered under output 5:promotion and awareness-raising. In practise there is some overlap between the two outputs as workshops might have had the dual purpose of capacity building and also awareness raising and the KCC final report contains some overlapping reporting under the two outputs as the same activities are reported under both. An attempt has been made in the text boxes below to separate the activities related to the two outputs.

The project identified the training and capacity building needs of the implementers of EcoSan covering the project management and staff as well as other KCC staff and stakeholders involved in implementation[10]. This was followed by the development of a training and capacity building plan[11] and preparation of the relevant training material for the different target groups.

The training and capacity building activities included:

– 2 training workshops were conducted for 20 Contractors, 20 local artisans/ mason in construction and management of EcoSan toilets; Retraining of artisans was carried out to ensure ability to construct EcoSan toilets on their own;

– An Ecosan orientation training workshop was conducted for all the 25 Project Staff and Development Unit Members, to acquaint themselves about the EcoSan Concept in addressing Local Agenda 21;

– 2 training workshops were conducted for 30 extension staff from KCC Division & NGO Field Staff, in aspects of management principles of EcoSan toilets, Reuse of nutrients and socio-economic values of owning an Ecosan urine diverting toilet;

– 1 Project staff trained in project Management in Stockholm;

– 4 Project Staff attended an international study tour and conference in South Africa;

– 2 support staff trained in secretarial and office management courses;

Source: KCC End of Project Report, November 2007

The training plan is encompassing all the stakeholders and defines key issues such as target groups; training objectives; training methods, topics, duration, facilitators and training materials. There is some overlap between output 3 and 5 as the training materials have naturally also been used as promotional materials such as fliers and posters, photographs, video documentaries, EcoSan toilet models, user's guide, O&M guide, and demonstration toilet components.

The training and capacity building plan was implemented and the training workshops were documented in reports outlining the objectives of the training, the content, identifying the participants and the

[10] KCC, Capacity Needs Assessment, November 2003

[11] KCC, Capacity Building Plan, February 2004

trainers are, and a self-evaluation of the training by the participants. The capacity building activities have not been followed up by a capacity building impact assessment, which could be important in preparing for the continued capacity building activities for scaling up the EcoSan activities.

The training for project staff covered aspects such as project management, monitoring and evaluation, procurement, financial management as well as concept of EcoSan, knowledge of acceptance of EcoSan in Uganda and experiences worldwide, and social and cultural issues as well as internal and external study tours and exposure visits to the south western towns in Uganda where EcoSan has been extensively used, and to projects in South Africa.

The training for other KCC staff and stakeholders included the general issues of status and policy and regulatory framework for sanitation in Uganda, the concept, knowledge of acceptance of EcoSan in Uganda and experiences worldwide as well as EcoSan design and social, cultural and gender issues.

Conclusions and Recommendations

The ET finds that the training and capacity building has been effective in raising awareness and appreciation of EcoSan and establishing capacity to address sanitation in cooperation with stakeholders among the few selected KCC staff which has worked on the project and to some extent amongst the other KCC staff. Full acceptance of the EcoSan concept is probably still a challenge as illustrated by a remark reported to have been made by a senior KCC official during a site visit to a farm using EcoSan products: *'the vegetables look very nice – but don't bring them to our canteen'*.

The EcoSan project was implemented by a project unit with mainly part-time KCC staff assigned. Sustaining the institutional memory of the methodologies and experiences is therefore not secured as the project office is closed. To sustain the capacity to promote EcoSan in Kampala and prepare for scaling up it will be important for KCC to: i) define a strategy for addressing sanitation challenges in Kampala; ii) analyse the functions by KCC and other stakeholders in sanitation and iii) clarify the institutional responsibilities in the KCC departments and decide on the institutional anchoring of sanitation in KCC. Only when this has been achieved further capacity building will be effective in the longer term for KCC implementation of EcoSan as an integrated part of addressing the overall sanitation issues in the city.

The project strategy of capacitating the local government structures at division and parish level in promotion and implementation of EcoSan has been effective and the capacity exists in the 5 parishes for larger scale promotion of EcoSan.

The capacity building of artisans and contractors appears to have been effective as the construction standards of the toilets generally is adequate. However, the project has not achieved to promote EcoSan as a business opportunity for the artisans as only a few toilets are being constructed without the subsidy from the project. The training of NGOs as implementers have succeeded to some extent as e.g. CIDI is implementing sanitation with similar designs and subsidies as the KCC Project.

In the context of the general environmental situation in the informal settlements the scope of the capacity building focussing on EcoSan seems too narrow to substantially address the challenges. A more encompassing urban environmental management approach addressing grey-water handling, drainage, road infrastructure, water supply, solid waste and sanitation in an integrated manner would be more effective.

3.2.4 Output 4: A minimum of three alternative toilet designs developed and tested

Observations Regarding Achievements

The target was to develop a minimum of 5 alternative toilet designs suitable for Ecological Sanitation Systems in poorly sanitised areas of Kampala and test at least 3 of them. An important element in the definition of suitability is affordability; another is the safety in the use from a health point of view.

The first observation is that KCC PMU developed only one prototypical design of EcoSan toilets and not 5 different types. The second observation is that the cost of the toilets was in the range of Ushs 900,000 – 2,500,000 and therefore not affordable by the target group of the poor in the slums. The lower cost was achieved through direct implementation by KCC for the first toilets without engaging contractors.

Technical suitability: Technically, the EcoSan designs were structurally sound, mostly with oversized chambers. Since some of the areas where they are constructed are wetlands with high water tables, there was a clear emphasis on water proofing the walls of the vaults; however the location and design of the access covers made the water proof walls irrelevant. The majority of the toilets visited also had two vaults (storage chambers) to provided storage of the solids till they sanitised. The period of storage ranges from 3 to 6 months.

None of the EcoSan toilets visited had major structural or constructional problems. Minor problems observed included:

- Leaking roofs, leaking trap doors and warped doors.
- Chipped walls (where the 'rough cast' had scaled off the walls).
- Leaking urine pipes that caused mixing urine with faeces.

Poor operation and maintenance was noted in one case of Kawala SS (Excel SS) in Kasubi. The ET did not observe any operation and maintenance problems on the private EcoSan toilets and it is likely that the communal facilities are more difficult as they involve training of a larger number of users.

By the time of the site visits (April 2008), many of the toilets were still under the Defects Liability Period and therefore still being maintained by the contractors.

The drawings indicated that the floors were reinforced in steel and concrete, while the walls were at least 200 mm thick. This ensured that the structures were quite sound and technically adequate. Some design modifications were made along the way into the implementation:

- The slanting steel doors at the rear of the toilet were found to receive too much rain water from the roof. They modified the design to give a vertical door, but in the process losing the baking heat of the sun (which helps in drying the faecal material).
- Urinals were removed.

Affordability and Cost of the EcoSan toilets:

Rural Development Media Communications (RUDMEC) reported the highest cost figure of 2.5 million shillings. They procured the materials and hired masons to construct the toilets. In general the cost depends on the difficulty of access to the site; distance to the hardware shops; ability of the implementer to negotiate costs and the procurement process adopted.

The EcoSan toilets in use now are funded by various projects, such as AMREF and Sida with a high element of subsidy. The KCC contracted households only paid Ushs 100.000 or less than 5% of the real costs of the KCC EcoSan toilet. The systems based upon the present KCC design are too expensive for any of the intended beneficiaries to realistically afford. Affordable systems are a precondition for the scaling-up. Proposals for reducing the cost hinge on (i) redesign of the structures to emphasise more on the core use of the toilet i.e. to provide for diversion of urine from the faeces, ensuring that the faeces are kept dry and (ii) to provide for privacy for the users.

Annex 7 contains detailed comments on the designs and a number of suggestions from the ET on how the designs could be made more affordable. These suggestions would naturally have to be thoroughly assessed and tested, possibly as pilot projects, before they can be applied in a possible future up-scaling of the EcoSan project activities.

Conclusions Regarding Output 4:

- The EcoSan toilets as designed and constructed are not suitable for the income categories they are meant for. Thus they cannot easily be replicated without external funds.
- A possible scaling up of the project should emphasise Public Private Partnerships in all aspects of the project, especially in construction of low cost EcoSan toilets, using appropriate materials; collection and storage of faecal solids and urine and in reuse.

Recommendations Regarding Output 4:

- A redesign of the EcoSan toilet with low cost and readily available construction materials and techniques is necessary to reduce the cost to at most 300,000 a unit.
- Existing raised 'pit latrines' could be adapted to EcoSan urine separation techniques so that there is minimal disruption of the existing sanitation arrangements.
- Collection centres could be constructed after intensification of the facilities in the parishes. They should be designed for the expected volumes/quantities of urine and solids in an area. These centres should operate commercially, on a user-pays basis. The operators should sell the products to interested farmers and other end users.
- Scaling up requires that the designs are tested and that a full environment and social impact assessment is carried out, in wide consultations with all stakeholders. NEMA approval of the environmental and social impact studies will be required. Designs and management plan should also ensure proper sanitisation of faeces – secondary treatment may be necessary.

3.2.5 Output 5: Promotion and Awareness Raising at Community Level

Observations Regarding Achievements

The activities regarding promotion and awareness-raising began by undertaking a survey[12] and analysing the public's perceptions of EcoSan. The survey was completed in November 2004 and provided important information – not only for the development of promotion and awareness raising activities but for the overall design of the project strategy. The survey was complemented by other activities in preparation of the projects such as study tours and consultative meetings in the communities to identify the gender issues for effective community entry.

The awareness and promotion activities included:

– 20 Sensitisation workshops for Parish development committees - 280 Beneficiaries including farmers sensitised about the concept of EcoSan.
– Training for 25 participants from electronic and print media in EcoSan system and use and a study tour of the South Western towns.
– 140 beneficiary household visits to ensure acceptability, contributions and proper use of EcoSan.
– Weekly meetings (4 per month) were held to sensitise the community about EcoSan, identify beneficiaries and appreciation of the EcoSan concept.
– 2 newspapers articles published on the EcoSan and importance of urine diverting toilets.
– 4 radio jingles were developed and aired on Central Broadcasting Service Radio, Radio Simba, Radio Uganda, and Dembe Radio.
– 2 TV talk shows were held in collaboration with DWD.
– 10 talk shows on CBS about promotion of EcoSan concept.

Source: KCC End of Project Report

[12] KCC, Ecological Sanitation Project, Baseline Study Report, AquaConsult, November 2004

The next step was to define and document the awareness raising needs and develop an awareness raising strategy[13] to define the community entry approach, the target for EcoSan promotion and development of criteria for selecting beneficiaries and parishes. The strategy was only documented late in the project process (November 2006) and must therefore be based on the experiences from awareness approaches already being implemented. The awareness strategy document contains a 5 year plan and budget for the awareness activities, with some overlapping between ongoing and planned activities. By the conclusion of the project in 2007 the ET did not identify any assessment of the outcome of the implementation of the awareness raising plan.

The plan made use of the existing local government structure (district leaders; division leaders; Parish Development Committees; zonal/ community leaders) as well as the beneficiaries including farmers; existing civil society and community groups.

The plan was targeting the 150 beneficiary households, 45 technical staff, and 20 NGOs and private sector organisations. The approaches included community sensitisation meetings and workshops, media programmes (newspapers, radio jingles, TV talk shows) and IEC materials such as posters, brochures, fliers and handbills as well as demonstration of EcoSan models and urine diverting toilet pans.

Five exposure visits were conducted for the beneficiaries, media, and extension staff on prevailing sanitation situation in Kampala and existing environmentally friendly toilet alternatives in Kampala and in Kisoro, Kabale, Rukungiri and Masaka districts.

The awareness generation needs included:

– Low knowledge about EcoSan toilets and products.
– Misconceptions and taboos about EcoSan.
– Limited availability and sharing of information by individuals involved in the generating and reuse of EcoSan products.
– Negative attitudes about handling faeces.
– Misgivings about the health and safety of EcoSan products.

The awareness raising activities included hygiene messages and the ET observed that hand-washing facilities were present at most of the EcoSan toilets – without being able to conclude that these were regularly used, though, the presence of the facilities indicates that the households are aware of the need for hand-washing after toilet use.

The misuse and very heavy over-use of some of the facilities indicate that continued follow-up and awareness-raising is required to make sure that the EcoSan facilities continue to promote the EcoSan concept and do not turn into de-motivating examples because of problems with use and disposal/ re-use of the products. An example witnessed by the ET was the secondary school hostel where the previous final class had been trained in the use of EcoSan, but the present class did not have the same training and awareness raising and the facility was misused and in a very inhygeinic state. Another example is one facility visited by the ET designed for max 20 persons and now used by about 65 persons resulting in the pits filling up within a couple of months and the owner having a problem with handling the not yet matured solid content.

The Monitoring report[14] concludes: *'Success of the EcoSan largely rests on the results realized through education and training of the stakeholders. KCC supported EcoSan toilets were found to be performing better than other EcoSan*

[13] KCC, Awareness Strategy for Ecological Sanitation, November 2006
[14] KCC, Final Monitoring And Follow-Up Report, 3A Strategic Management Consultants, September, 2007

toilets in the city because of the enormous resources invested in promotion. The fact that political leaders, technical staff and community members were sensitised, community support structures put in place, reference materials provided, coupled with exposure visits among the beneficiaries, laid a firm foundation for success.'

The awareness raising amongst the farmers for reuse of the products have achieved that a few farmers are convinced and willing to use the products, but there are major problems related to the location of the EcoSan toilets and the farming areas. From the discussions with the farmers visited by the ET it is clear that the use of the urine is perceived to be without problems, but the awareness and the treatment and collection for use of the faeces is more controversial and needs more emphasis in awareness raising and demonstration of sustainable working solutions to collection and transport.

Conclusions and Recommendations

The promotion and awareness raising activities have been successful and have contributed to raising the awareness of EcoSan as an alternative to other sanitation solutions. This is evidenced by the inclusion of the EcoSan concept in new sanitation initiatives such as the on-site sanitation planned by NWSC and the implementation by some NGOs. Most importantly some private households have also to a limited extent started implementing EcoSan toilets without subsidies – KCC reports that 31 toilets have been constructed by individuals during the project period, 28 have been constructed by Civil Society Organizations and 1 toilet of 8 stances a Primary school.

The inclusion of the media in the promotion and awareness raising is very commendable and this should be continued by KCC to further raise awareness on EcoSan.

The implementation strategy for the project with 95% subsidies and the lack of emphasis on affordable EcoSan solutions could have had unintended negative impact on the spreading of the EcoSan technology. The high quality toilets gives people the impression that EcoSan is expensive and by providing a heavy subsidy it gives people the impression that sanitation is mainly KCC responsibility and not the household responsibility and thereby limiting peoples own initiatives to improve sanitation. The ET found that some users regarded the toilets as KCC toilets – especially when it came to emptying the collection chambers, and this indicates a need for more and consistent awareness-raising on the roles and a clear strategy on the subsidy issue.

Some of the EcoSan facilities visited by the ET were not yet in use, some due to outstanding work to be completed by the contractors but others because of reservations by the households on the use of the toilets and especially the reuse of the products. Thus substantial work on promoting and raising awareness about the use of the products in agriculture still remains.

The misuse and very heavy over-use of some of the facilities indicate that continued follow-up and awareness-raising is required to make sure that the EcoSan facilities continue to promote the EcoSan concept and do not turn into de-motivating examples because of problems with use and disposal/ re-use of the products.

On the positive side it must be mentioned that the attractive design of the EcoSan toilets makes the units appealing to people and features like lack of smell provide a good example for promoting EcoSan, but the affordability of the toilets remain an issue for the larger target group.

3.2.6 Output 6: Safety from a human health point of view of proposed systems

Observations Regarding Achievements

The prevalence of disease causing germs in faeces and in urine and how these can be eliminated almost completely during reuse of EcoSan products and application of ash to the faeces was studied.
The research was used to develop simple guidelines for the handling of urine and faeces. Ash also reduces the fly nuisance.

It is clear from the field visits that even children understood the essence of the ash addition – see a child demonstrating how he adds ash to the toilet below. The picture to the right shows ash on the floor, indicating ample availability of ash.

Semalulu et al quote recommendations for storage of faeces to 1–2 years for the ambient temperatures in Kampala (from 20–35°C). This was to ensure that Ascaris died off from the solids.

The key question asked: why did they reduce the time for the faecal matter to be stored from the range above, to only 3–4 months? It is even mentioned that it actually is shorter than that! According to the Project Staff, the EcoSan toilets have only been in use since March 2007, yet a number of them have been emptied once, some, like that of Nkurunziza in Kamokya, with 4 vaults, was being filled the second time.

Modelling of bacterial die-off was done at 3 sites in the EcoSan Project area and the results showed remarkable die-off, according to the Study Report[15]. The data presumes that the indicator organisms studied were present in the faeces and have therefore died off. We think this is not necessarily true. If the organisms were not present in the fresh faeces, it is incorrect to assume that they died-off! The tests should have handled organisms which were detected in the raw/ fresh faeces the die-off of which would then be measured. Additionally, die-offs should be modelled with various application scenarios of ashes, urea or lime or other substance. Actual scenarios of application of ashes should also have been modelled.

The storage of urine, as recommended in the same report, gives a contradictory situation. The numbers of coliforms actually rose rapidly with time, from nearly sterile to millions within a few weeks! This contradicts the recommendation in the report that urine should be stored before use. Instead, urine, it appears, should be used immediately after collection, before it is contaminated during storage.

The ET finds that the optimistic findings described in the study report are premature; further study is necessary[16]. It is safer, from the human health point of view, to rely on the Guidelines by Semalulu et al. ibid. although this describes storage under conditions where ash or lime has not been added.
Further tests should therefore be carried out to determine more accurately the period of storage with concomitant application of ash or lime.

Conclusions Regarding Output 6: Safety of EcoSan from the human health point of view

- The studies done by the KCC EcoSan Project on the die-off of pathogens in EcoSan toilets, we think, are misleading and dangerous and should be withdrawn. If studies on the specific conditions in Kampala are needed then fresh studies of the die-off of pathogens are needed, without presuming that the pathogens are present in the fresh faeces. *Only pathogens which are actually in the fresh faeces should be assessed for die-off.* Sampling should not be restricted to the EcoSan faecal products only, but to a wider variety of samples which have all the microbes to be studied.

- The evidence adduced from the literature reviews done by KCC and its consultants indicates that there are clear issues regarding the health and safety of reuse of EcoSan products. The storage times and pre-treatment given to the faecal solids are inadequate to allay fears that there are still pathogens in the solids after 2–4 months in the vaults. The handling of these products so far shows that the dangers are still there. Further studies are thus essential to ensure that safety is priority.

[15] Faculty of Veterinary Medicine. Modelling of Indicator Pathogen Dynamics in Ecological sanitation Systems in Kampala EcoSan Project. Bacteria studied included Clostridia; E. coli; salmonella; Shigella; vibrio cholerea and Yesinia enterocolitica. Vibrio cholerea is the causative agent of the highly infectious cholera and would not normally exist in household faeces, unless there was a cholera patient in the homestead.

[16] This view is shared by the Project Management Consultant, Paito Obote and the Project Consultant, Hifab, in their Draft Final Report, 2007. On page 35, the report ibid states that the conclusion that the faecal material with ash addition is safe after 3 months is not valid and can not be concluded based on the investigation. It recommends extension of the surveys before conclusions can be drawn.

Recommendations from Output 6: Safety of EcoSan from the human health point of view

- Storage times of less than one year should not be adopted *unless tests on samples show the absence of pathogens, on a case by case basis.*
- Where storage times are much shorter, as suggested in the Faculty of Veterinary Medicine Report, ibid, handling of solids should be at the same level of care as the handling of fresh faeces.
- New studies should be commissioned with a wider set of samples and conditions. Documents such as the Study referred to should be subjected to peer review before adoption.
- KCC should procure adequate testing facilities so that data on the safety of the EcoSan products is developed.

3.2.7 Output 7: A model for popular use of urine and decomposed faecal material

Observations Regarding Achievements

The responsible Agricultural Unit assigned two staff on part time to this important output. The first activities were undertaken in collaboration with the health unit, and the reviews were outsourced to a consultant. Due to the delays in construction of EcoSan toilets products for the field testing of the fertiliser value became available very late and could be undertaken only for urine. The field testing of urine has been successfully completed and confirms that urine is a valuable commercial fertiliser which also has some positive effects concerning pests.

The development of the model for popular use of urine and decomposed faecal material:

- Undertake a review and analysis of the present use of human waste products, in particular urine in farming activities in Kampala
- Review relevant current knowledge and practices on how to use urine and composed faecal material as inputs in productive farming practices
- Develop a set of practices as a function of crop, soil conditions, farming practices, health considerations and other criteria that are appropriate to the conditions and needs in Kampala and rural, near-by Kampala.
- Provide inputs to the development of the Ecological Sanitation System
- Provide inputs to the development of appropriate information material on the use of urine and composed faecal material in farming in Kampala.

Source: KCC End of Project Report

The list of planned activities (presented in the box) shows that that complexity of the issue of collection and transportation of the products was underestimated. No specific activities or studies were envisaged. The agricultural unit reports that a survey on the factors to be considered in designing an EcoSan collection, transportation, storage, and consumption system was undertaken with information from:

1 EcoSan project staff;

2 Extension staff in the various disciplines including Community Development, Agriculture, Health, Urban Planning, Economic Planning, Natural resources and Environment;

3 The Private sector;

4 Generators of Urine (including individual households and Institutions),

5 Consumers and Potential Consumers of Urine (including subsistence & commercial farmers in and around Kampala).

Subsequently a pilot of the collection, storage, transportation, and utilization system was undertaken parallel to the survey with three different interested categories of people:

1 A commercial farmer from Matugga (peri-urban of Kampala);

2 A women group from Mukono (peri-urban of Kampala);

3 Farmers from Kyanja Parish (Kampala).

The findings of the pilot studies is presented in several reports which include important considerations, but a "model" for the collection, storage and transportation of the urine and the faeces is not developed and the economics and financial aspects are not discussed.

KCC planned but did not put in place collection centres for faecal solids and urine. Collection centres could be operated under Private Public Partnership (PPP) arrangements on a user pay basis; the essential ingredient here being a high concentration of toilets in an area. However, with the highest number of toilets being no more than 60 in a parish, the critical mass has not been attained and a collection centre would probably not be viable. The location and sizing of these centres should be such as to handle the quantities generated by the intensified coverage of EcoSan toilets. Sensitisation of the community and end users would increase the chances of sustainability of the collection centres and the closing of the loop.

Due to the cost of such centres (setting one up requires land, tanks (may be skips for solids) for solids and liquids, fencing, an office, billing and accounting systems, staff, security, electricity and water, access roads, etc.) they would probably only be viable with either private sector initiative based upon profitability or with KCC commitment to closing the loop as part of an urban environmental management policy. The KCC collection centres could supply KCC institutions and parks, as well as other large scale users. Schools could be part of such an institutional model. Cooperation with Wakiso District with more widespread farming activities would be relevant.

Scaling up also requires that the public health and environmental issues related to the transport and storage of large quantities of faecal solids and urine are addressed at an early stage. It is therefore essential that an environmental assessment is carried out, involving all stakeholders, to ensure that all important issues are brought out and discussed. Approval of the scaling up would require NEMA approval, at the very least.

Conclusions regarding Output 7: A model for popular use of urine and decomposed faecal material

- The output has only been partly achieved;
- The testing has been limited to the use of Urine. The findings are positive;
- Aspects of the collection and transportation have been tested with a small group of potential users. This has identified the major issues which need to be addressed in a "model", but the model has not been developed and tested;
- Hence the conditions for a scaling up (output 8) to all relevant households in Kampala low laying areas is not in place.

Recommendations Regarding Output 7

- Use the collected information and experience to prepare TOR for a feasibility study of various options for the collection, storage, and transportation of urine and faecal material. The model should include the following elements of a full scale EcoSan model:
  - A household element: the household in an EcoSan zone uses all the material generated in their own gardening;

- A municipal element: the KCC parks and other institutions use the "surplus" material generated in the parks and gardens and/or as an element in the processing of solid waste into compost;
- A commercial element: private business people turn the "surplus" material in an area into a commercial product which they collect, store, treat and transport to their customers i.e. farmers and large scale users;
- A farmers' element: Large Scale Farmers use the surplus material in an area by establishing a collection, storage, and treatment and transportation system.

- Undertake the feasibility study and prepare an action plan to implement the recommendations of the Feasibility Study.

3.2.8 Output 8: An implementation structure for ecological sanitation in Kampala

Observations Regarding Achievements

The idea of the logical framework is that outputs 2 to Output 7 would generate all the preconditions for scaling up the provision of EcoSan services in all the relevant areas of Kampala. Output 8 would then provide the necessary inputs to develop an institutional framework for the implementation of EcoSan in a large scale in Kampala.

The Activities to Develop the Implementation Structure

- Undertake a review and analysis of current experience of relevant water and sanitation programs in Uganda, including the current one, and how to best promote Ecological Sanitation in Kampala
- Review current actors and their roles in the water and sanitation sector (e.g. KCC, NGOs, private firms
- Develop and propose a model for large-scale implementation of Ecological Sanitation in Kampala

This institutional framework should clearly define the roles of KCC and NWSC in promotion of on-site sanitation. The strategy should be developed considering the important building blocks that are already in place such as the Kampala Sanitation Master Plan by NWSC and the work being done as part of the Kampala Institutional and Infrastructure Project and the Kampala Integrated Environmental Planning and Management Project. The strategy must also consider the land ownership issues as an important part of private investments in sanitation facilities.

It should be noted that the original project design included a 3-phased approach where the last phase should introduce and test a low-subsidy approach in the target areas. This approach has been discarded during the implementation, likely due to the delayed project implementation.

As we have seen above outputs 2, 4, 6 and 7 have not been satisfactorily completed. The activities required to generate output 8 has been partly completed as a proposal of a division of roles and responsibilities prepared by the national management consultant Mr. Paito Obote in November 2007. The proposed division of roles and responsibilities is included in Annex 6[17]. The proposed role of the KCC is limited compared to the role during the implementation of the pilot phase.

Conclusions Regarding Output 8

- Output 8 has only partly been prepared and the pre-conditions regarding scaling up are not all in place;
- A policy and a National Strategy on sanitation which clearly identify the role of EcoSan is in the process of being developed;

[17] Paito Obote, Model for Large Scale Promotion of EcoSan in Kampala City, November 2008

- It should be followed by a strategic action plan for implementation of EcoSan in Kampala;
- But a clear vision of how the "loop" can be closed in a comprehensive strategy which fully utilise the potential of the EcoSan concept is still to be formulated.

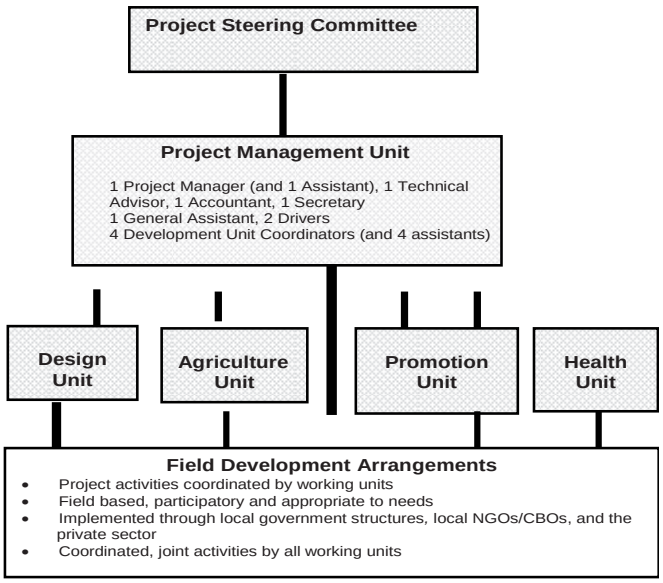
Recommendations Regarding Output 8

Finalise output 8 by preparing a scaling up strategic implementation plan.

3.3 Project Management

According to the Project Document: *"KCC is responsible for the overall running of the Project and oversees all the activities carried out throughout the implementation of the project. Furthermore, KCC will ensure the sustainability of ecological sanitation beyond the duration of the Project. KCC will house the offices running the Project and will be responsible to network with all key actors in the execution of the Project At an international level, the project will as a priority link up with a large Sida-funded initiative to support the development of ecological sanitation world wide. This initiative, EcoSanRes, supports the sharing of information and approaches, research, training, and implementation. The project will draw on expertise from EcoSanRes through information exchange and visits".*

The organogramme presented in the figure below provides the Management Structure:



3.3.1 The project steering committee

The PSC has had the overall responsibility of the project and its implementation. The committee's prime tasks have been as follows:

1 Coordinate between KCC departments, integrate project activities with KCC's normal duties, and facilitate the project's implementation within the organisation in general.

1 Scrutinize and approve:

a Proposed bi-annual and other budgets and work plans of the project.

b All other documents produced within the project and as part of the reporting to KCC, Sida revisions and the Government of Uganda.

3 This would include:
   a Ensuring that all resources (financial, human, and time) provided to the project are used as efficiently as possible without unduly losses or misuse.
   b Ensuring that appropriate coordination with relevant Government Ministries and Departments, donor agencies, and other key actors in Uganda is taking place.

The PSC was supposed to have 10 members, with one member selected as Chair. The members were supposed to represent key ministries and departments having an important role to play in the sanitation sector, a relevant political sphere, academics, and knowledge of water and sanitation. The selection and appointment of members were supposed to be interactive processes negotiated between KCC and Sida.

3.3.2 The Project Management Unit

The PMU was located within the Department of Public Health of the KCC. A description is presented in the Project Document section 14.2.4. It is made clear that the PMU consisted of KCC staff and consultants working full and half time in the project, including the Project Manager (Head of Unit), the 4 Development Unit Coordinators, the Accountant, the Secretary and other Support Staff, and the Technical Adviser.

It is also made clear that PMU activities may be contracted to other organisations or individuals, but the unit will coordinate this work, ensure the quality, efficient use of funds and human resources, and the timing in relation to other project activities. See also "Field Implementation Arrangements" below.

3.3.3 Financial Management

According to the project document KCC together with PSC and PMU will be accountable for ensuring that project funds are used to achieve project objectives and outputs as stated in this project document. The daily financial management of the project funds will be with the Project Manager and the Accountant under the supervision of the PSC and KCC. Financial data will be compiled on a monthly basis, for internal use by the project management. All budgets and quarterly financial statements shall be prepared by the PMU and approved by the PSC in a transparent and open manner. Accounts to be used and procedures for financial transfers shall follow standard Government of Uganda procedures.
All monitoring and accounting shall ensure transparency and efficiency. It is the responsibility of the project to keep Government of Uganda informed about the financial status of the project. The Auditor General of Uganda will audit the project's accounts and accounting annually, and at the end of the project. Sida can commission any additional audits to be carried out by a certified public accounts company.

3.3.4 Assessment of the Management Structure

It is evident from the assessment of the achievements regarding each of the 8 outputs, that this management structure has not been effective.

The PSC does not seem to have played its role as the overall responsible for work plans, budgets, accounts and as quality assures of documents from consultants and institutions to which work has been contracted.

The PMU has had serious difficulties in coordinating the use of resources from the various units which provided part time staff, but staff also having responsibilities (of higher priority) according to their home departments.

PMU has in particular had difficulties in achieving the outputs for which the PMU were responsible namely outputs 1, 2, 3 and 8. Actually, at the end of the project when the final report was due, the Swedish Embassy had to recruit a short term management advisor to support the PMU. At this particular crucial time the Project Manager was on sick leave and the PMU was practically disintegrating. Without the impressing contribution by the Management Consultant Mr Paito Obote an acceptable Final Report had probably not been prepared.

With regard to the financial management it is the impression of the ET that the system functioned reasonably well. The project accounts were done manually since the KCC accounts system only has one budget line for all EcoSan project activities and more detailed reporting was needed. The project reporting periods also did not correspond to the KCC financial year so separate reports were done for KCC and Sida. The financial reports have details of all payments but no overview of expenditures per detailed activity budget as outlined in the work plans and there is no connection between the work plan/ budgets and the financial reports.

The accumulated accounts for the whole project is presented below based upon figures from the latest report. It shows that additional funding was made available in order to be able to complete the project on time, but it also shows that the accounts are not accurate. Thus no funds are spent on output 8 in spite of the fact that special activities are reported to have been undertaken in November 2007. It also shows that a relatively high proportion of the funds have been spent by PMU. Contributing to the high expenditure has been the topping up of salaries which were agreed by Sida and KCC in order to provide PMU staff the same "motivation" as KCC staff working on other donor funded projects.

Table x: Project Budget and Expenditure 2002 to November 2008. Unaudited

	Output	Budget	Total Exp	Exp/budget	Per cent
1	PMU	425 238 400	592 540 194	139%	31
2	System Design	74 200 000	73 553 337	99%	4
3	Capacity Building	234 293 900	208 831 751	89%	11
4	Technical Design	424 500 000	446 016 612	105%	23
5	Promotion	182 615 000	238 790 837	131%	12
6	Health	159 300 000	181 594 500	114%	9
7	Agriculture	131 445 000	186 668 380	142%	10
8	Scaling up	0			
	Unallocated	45 274 000			
	Additional budget	270 654 248			
	Total	**1 947 520 548**	**1 927 995 611**	**100%**	

Source: Finance Report for the period July–November 2007. KCC January 2007.

Taking into consideration the poor management of the project throughout 2007 the ET is not convinced that the accounts represent a correct picture of activities undertaken and funds spent.
There seem to have been several irregularities in the collection of Community Contributions such as attempt to demand higher payments from clients for EcoSan toilets than what had been agreed in the contracts with the households.[18]

3.4 Conclusions Regarding Achievements of the Pilot Project

We concluded that the outputs were not all fully achieved, and that some additional outputs would be required before scaling up can be recommended.

Outputs and activities yet to be completed:

- Output 2: Ecological Sanitation Systems suitable for poorly sanitized areas of Kampala developed
- Output 4: affordable designs for different socio-economic groups; and trained builders who can supply on market terms;

[18] See Finance Report for the Period July to November 2007. p 3. KCC January 2008.

- Output 6: scientifically verified guidelines regarding safe handling of faeces;
- Output 7: feasible and financially viable system for collection and transportation of products from generators to agricultural users;
- Output 8: A suitable, transparent and cost effective implementation structure for scaling up of EcoSan in relevant areas of Kampala.

Before scaling up it is recommended to prepare the following additional outputs:

- Documentation of KCC EcoSan implementation which can be used in Media Campaigns;
- Vision and Target Setting for EcoSan in KCC;
- EcoSan Policy as Part of KCC Environmental Health policy including regulatory instruments such as zoning, and certification of technologies and products;
- Strategic Action Plan for scaling up of EcoSan as part of a "holistic approach" to Urban Environmental Management in Kampala including the management of grey water;
- Implementation Plan including Capacity Building Plan for public-private partnership implementation model.

The objectives were not fully achieved. *With regard to the three project objectives we conclude:*

Project Objective 1. Develop and demonstrate appropriate systems of ecological sanitation for poorly sanitised areas of Kampala. Only partly achieved.

Project objective 2. Prepare for large-scale implementation of the developed ecological sanitation systems in Kampala. Only partly achieved. Only elements of a model have been presented of how to undertake large-scale implementation of an ecological sanitation program in peri-urban Kampala exists.

Project Objective 3. Define and strengthen the institutional framework for the sanitation sector under jurisdiction of KCC. Incorporate the Ecological sanitation approach in the design of the daily activities of KCC duties. Not Achieved.[19]

4. Main Findings Regarding the Evaluation Criteria

4.1 The Relevance of the Project

In general the *relevance* of the project has been high. We find that EcoSan was in line with Sida policies; but not as yet part of Ugandan Sanitation Policies. Lack of policy and strategy became a constraint on "ownership" and allocation of adequate staff and resources.

EcoSan is highly relevant as poverty focussed approach to sustainable environmental management and sanitation in Kampala low lying areas.

Relevance could have been further enhanced in a more holistic approach. The project design was not well considered. A better prepared design would have enhanced the relevance of the project:

[19] Although not achieved in general, some of the Public Health and Community Welfare Extension staff at District and Division levels do incorporate the Ecosan concept in their hygiene promotion activities

- The division of roles and responsibilities during pilot implementation did not reflect the institutional responsibilities of the major stakeholders; too many responsibilities were put upon KCC;
- KCC was not capacitated to implement a project of this nature. A clear capacity building strategy based upon an institutional assessment of Stakeholders was never undertaken;
- The project document should have included a chapter on strategic choice and a phased implementation strategy for the outputs, so that core outputs in the "process" like output 4 and output 7 could have been outsourced and been in place early in the process, and in parallel with the KCC capacity building for implementing staff.

We summarise our findings regarding relevance for each of the outputs as follows:

Output 2: The relevance of the *EcoSan system* which has been promoted by the project is questionable. The systems involve 95% subsidy for the households and depend on a project implementer instead of utilising private sector mechanisms for households to provide their own sanitation facilities.

Output 3: The *Training and Capacity Building* activities were relevant in relation to the scope of the EcoSan project the way it was implemented as they addressed broadly the implementers training needs and included the KCC leadership and implementors from the private sector. The training topics were relevant for more widespread promotion of Ecosan; however, the capacity building activities did not result in the project management developing a vision and a more appropriate and replicable implementation strategy targeting a large number of households in a small geographical area where the collection system could be viable.

Output 4: The d*esigns are not affordable* and does not meet the demands of the low-income groups for which they were meant. The outcome of the work of the design department vis a vis output 4 has been irrelevant.

Output 5: The *promotion and awareness raising* activites are found relevant and has resulted in general acceptance of the EcoSan concept by the development committees in the target parishes and the households as well as some degree of general acceptance in the public through the media.

Output 6: The methodology and approach of the scientific tests for *safe handling of the EcoSan products* conducted by Makerere University on behalf of the Environmental Health Department was inappropriate and hence the findings are not relevant.

Output 7: The Analysis of the model for the use of EcoSan products was incomplete. It did not include faeces material and did not include all the aspects of the collection, storage and transportation to the site of use of the fertilised in a scaling up model. Hence, it did not address all the problems and was only partly relevant.

Output 8: The analysis was incomplete and therefore only partly relevant.

4.2 The Efficiency of the Project Implementation

The project has not been efficiently implemented. The first two years passed with mobilisation and capacity building for the KCC office and the Parish Field Staff;

The project has seriously lacked Strategic Management Capacity for which neither the PMU nor the international TAs were empowered;

The lack of a phased implementation strategy resulted in an sub-optimal use of resources; the international TA in particular appear to have been in-efficiently used;

Output 3 and output 5 appear to have been relatively efficient, while in particular the efficiency of output 4 seems to have been very low. Only 124 households have been equipped with EcoSan facilities (140 toilets) compared to the initial target of approximately 1.000;

The outcome of activities under output 7 and output 8 are far from the target, but the main reason is that inadequate resources appears to have been allocated to the generation of these two important outputs, without which the project objectives could not be achieved;

We summarise our detailed findings regarding the efficiency in generating the different outputs as follows:

Output 2: The efficiency of the *EcoSan system* is low as it depends on heavy subsidies for implemetation of un-affordable toilets for the main target group and KCC/ project intervention and payment for transport to make the collection system function as a temporary measure.

Output 3: The efficiency of the *Training and Capacity Building* activities has been relatively high compared to the other outputs. But the average cost of training appears to be fairly high. According to the KCC completion report, 102 persons were trained at an average cost of USD 1,200 per person. At an average number of 5 training-days per person this is about USD 200 per person-training-day, twice the common benchmark figure of USD 100. This is a very rough assessment as detailed records of number of persons trained were not available and the ET did not have access to the detailed financial data needed for a closer analysis of the capacity building cost for example to separate the cost of the general training activities in Kampala from the cost of the study tour to South Africa and the management course in Sweden.

Output 4: The efficiency of the *design* department has been very low partly because the first staff assigned to the design unit was not qualified, and partly because the KCC management decided that KCC rules and procedures regarding design and regarding procurement had to be adhered to,

Output 5: The efficiency of the *Promotion and Awareness Raising* activities has been relatively high compared to the other outputs. A total of 1200 persons were targeted directly by the promotion and awareness raising activities giving a per person cost of USD 120 per person which seems high, but this needs to be assessed in light of the financial resources used for the general promotion activities in the media. The ET has not be able to assess the efficiency more in detail as the financial records of the input were not available.

Output 6, and 7: The efficiency has been very low because all the budgeted funds was spend but the output was only partly concluded.

Output 8: The efficiency was very low. The work on output 8 started very late in the implementation period and has not been completed. The cost is not known because the accounting system does not seem to have worked well in the last year of the project.

4.3 The Effectiveness of the Project

The *effectiveness* of the project has been very low. Only the first of three project objectives have been achieved to a reasonable degree.

However, on the positive side it should be taken into consideration that important lessons have been learnt:

- Well maintained EcoSan is a very well accepted sanitation technology by the users;
- Modification of designs to make EcoSan affordable is possible and already happening in a small scale;
- The health risk is manageable in that the risks of handling faecal materials are well documented and enforced within the City; however, research in this field needs to be increased to help in the prepara-

tion of regulations to fit into the new legal dispensation that will include EcoSan in the laws of Uganda;

- The collection and reuse can be managed in a systematic three string system, which distinguishes between a "pure" household-user model, an institutional model (like the one used for solid waste management, and a commercial model involving large scale collection and use by the private sector;
- The EcoSan scaling up in KCC seems to be feasible. It appears to be politically acceptable to the KCC and a national sanitation policy, which includes EcoSan, will provide the legal and institutional framework. Hence, the preconditions for output 8 appear to be in place in the near future, when a finance model and effective finance mechanism has been developed.

Output 2: The effectiveness of the EcoSan system is not established as only a few households can be reached with the chosen system and this will in itself not have a significant impact on environmental sanitation in Kampala.

Output 3: The effectiveness of the Training and Capacity Building activities: the perceptions have changed and a number of people embrace the EcoSan concept. Capacity has been established in the divisions and parishes for continued implementation of EcoSan. However, the capacity building has not been effective in putting sanitation on the KCC agenda and provoked KCC leadership to develop a sustainable and replicable sanitation approach. Sustainable capacity for implementing EcoSan has not been established in KCC as the institutional memory to a large extent will be lost with the closure of the project office.

In view of the general environmental situation in the informal settlements, a more encompassing urban environmental management approach would be more effective addressing drainage, road infrastructure, water supply, solid waste and sanitation in an integrated manner.

Output 4: The effectiveness of the design is very low as an affordable system has not been developed.

Output 5: The effectiveness of the Promotion and Awareness Raising activities: Generally the promotion and awareness raising activities seem to have been effective as evidenced by the many persons the ET interacted with who were highly entusiastic about EcoSan. Especially the study tours to existing EcoSan facilities seems to have been effective in changing the opinions about the appropriateness of EcoSan.

Output 6, output 7 and output 8: the three outputs have not been fully achieved and have therefore not contributed to the objectives. Hence the effectiveness is low.

4.4 The Impact of the Project

The intended and unintended positive impact of the project has been remarkable:

- KCC and Parish Development Committee staff has gained knowledge and new skills which is relevant for their work;
- Communities and individual users including a few farmers have gained knowledge and changed attitudes. The farmers have also obtained an alternative to commercial inputs and pesticides;
- It has been established that the fertiliser value of Urine is acceptable, although lower than in Europe;
- Hygienic situation in participating households have been improved. A marginal improvement in the health situation has been observed in a few households which participated in a small health impact survey;

- Artisans and contractors have acquired new knowledge and skills, but are yet to use them in a scaling up;
- Households have in general been given a broader choice when improving their sanitary installations; EcoSan does not smell and does not attract flies; it can be used inside the houses and provide enhanced privacy;
- EcoSan has been included in the curriculum at Makerere University.

The impact of the specific outputs is summarised below:

Output 2: The impact of the *EcoSan system* is positive in the context that a few households have been convinced and made into active promoters of EcoSan towards neighbours and visitors, however the impact on the general sanitation situation in Kampala is very limited as the EcoSan system which has been established will not be able to reach a considerable proportion of the target group.

Output 3: The positive impact on the *awareness and livelihood* of the poor members of the local communities: the impact has been limited outside the few benefiting households – this is not as much a reflection of the training and capacity building activities directly as it is a consequence of lack of emphasis on affordability, replicability and use of market forces in the overall project strategy. The training of the Parish Development Committees will have a positive impact on the continued implementation of EcoSan.

The impact on the *capacity of the Municipal Council* has been limited. A few dedicated KCC staff have fully embraced the EcoSan concept; however, the training has not had considerable impact on the focus of the overall leadership in KCC for solving sanitation issues in Kampala.

The impact on *the national capacity for EcoSan* has been positive. The project activities especially the activities targeting the media have had a positive impact on the possibilities for promoting EcoSan more widely in Uganda.

Output 4: The high cost of the *design* is likely to have a negative impact on the dissemination of the EcoSan technology, until the time when the KCC officially approve low cost design and provide a health certificate for affordable low cost solutions.

Output 5: The positive impact on the *awareness and livelihood of the poor members* of the local communities: the awareness of proper use of EcoSan can potentially have a large impact on the livelihood in the informal settlements – there are, however, a number of urgent issues to deal with regarding the reuse and collection of the products which need to be addressed to ensure that the existing EcoSan do not turn into negative examples of bad hygiene and sanitation.

The impact on the *awareness in the Municipal Council* is still relatively limited. The awareness in KCC on EcoSan is generally established; however, the full acceptance of the technology and especially the use of the products needs to be reemphasised.

The impact on the *national Awareness* on EcoSan: the activities and especially the inclusion of the media through the radio and TV shows will have had an impact on awareness of EcoSan in general; however, it needs to be sustained. The Monitoring Report finds that over 60% of the users are using the EcoSan toilets correctly. This indicates that the awareness raising and user training has had an impact but it also emphasises the need for continued follow-up and training and incorporate the follow-up in the normal functions of the KCC health inspectors.

Output 6, output 7 and output 8: Till this moment the impact has been limited as the outputs have not been adequately completed.

4.5 The Sustainability of the Benefits Generated by the Project

A system and sustainable models are not as yet in place. Hence the discussion of sustainability is premature.

In general knowledge and skills and attitude changes will only be sustainable if EcoSan is maintained as a part of a sanitation strategy for KCC.

A discussion of sustainability of outputs is presented below:

Output 2: The sustainability of the *EcoSan system* is questionable as the collection system is not functioning without active intervention by the project staff. The promotion of the EcoSan system and the part of the project activities which falls within KCC's mandate have not been integrated into the relevant departments in KCC.

Output 3: The sustainability of the achievements with regard to *institutional capacity at the municipality* is not secured as yet. The EcoSan and the sanitation activities are not anchored clearly in the institutional set-up of KCC. This is evidenced by the problems with the project management set-up with input from 4 key departments in the city council – and the project has not influenced the KCC to adjust the institutional responsibilities for effectively addressing sanitation in Kampala. The institutional memory from this project is likely to be lost and dissolved with the end of the project organisation.

Output 4: The designs are not relevant and should therefore be modified before the discussion of sustainability becomes relevant.

Output 5: The sustainability of the established results with regard to *enhanced knowledge and skills* at the community level is only achievable if the full system is established. The limited numbers of community members having benefited from the EcoSan toilets as well as the community liaison officers are continuing the promotion and demonstration of the EcoSan concept as evidenced by a number of the households visited by the ET. Other actors e.g. the farmer collecting the urine from households in Kampala also promotes EcoSan in the community in the farming areas in the outskirts of Kampala indicating some sustainability in the capacity building activities. The trained artisans are also being engaged by other households to build EcoSan toilets – also an indication of sustainability of the capacity building activities as the methods and concept is spread by the artisans and the households.

Output 6, output 7 and output 8: The discussion of sustainability is not applicable because benefits have not as yet been generated.

4.6 Replicability and Up-scaling

Scaling-up was part of the logics of the KCC EcoSan project, and therefore replicability was one of the important success criteria. In general a system which is ready for scaling up has not as yet been achieved, but it is important to point out that it is achieveable.

Of the activities and strategies considered replicable the following should be mentioned:

Output 3: The training plans and materials could be utilised again in a similar project set-up; however, the lack of institutional home in the KCC for EcoSan and sanitation in general makes it unlikely that the capacity which has been developed for EcoSan training will be utilised.

Output 4: The basic design can easily be modified to become affordable, and different designs for instance constructed inside the house for enhanced privacy is also a possibility.

Output 5: The promotional materials developed by the project are available; though, considering the closing of the project office, and no apparent home for the sanitation activities, urgent action is needed

by KCC to ensure that the experience and the materials are used in continued awareness campaigns. Vital aspects of the promotion material e.g. the retention time before use of faeces as fertiliser on vegetables need to be revised before these can be used. The priority for KCC to provide funding for sanitation activities seems to be low based on the consultations with the KCC staff as there are many competing uses for the very limited resources available to the Council and therefore it is unlikely that the EcoSan activities will be replicated without external funding.

Output 6: the field testing results from the use of urine is available and can be use in a scaling up strategy.

5. Conclusions, Lessons Learnt and Recommendations

TOR of the evaluation specifically request for recommendations regarding:

- Project sustainability, relevance, effectiveness and efficiency, to be used in project/program design elsewhere;
- KCC's further implementation work of the strategy for Ecological Sanitation in Kampala;
- How to use project results and lessons in the further promotion of EcoSan particularly in the Lake Victoria region;
- Possibilities for dissemination and further promotion, e.g. through the Sida financed City Development Strategies (CDS) project, the Lake Victoria Regional Local Authorities (LVRLAC)-project or the UN-Habitat LV-WATSAN project.

In the following we are focussing on the steps required to completed the project in order to sustain the benefits. We are distinguishing between conclusions and lessons learnt in three different but strongly interrelated areas:

- Design and Management of the Pilot Project;
- Allocation of resources to project implementation;
- The Appropriateness of EcoSan in Kampala.

We find it premature to develop recommendations based upon a not yet fully completed project with regard to the wider Sida use of the lessons learn. But it is important to note that most of the 150 households which have installed EcoSan in Kampala find it very suitable and fully accept the technology provided the loop can be closed.

5.1 Regarding Design and Management

The ET has identified the following important conclusions and lessons of general validity regarding design and management of pilot projects aiming at developing and testing new ideas and new approaches:

- The implementation responsibility and capacity must match the strategic requirements of the project;
- This has to be ascertained in an analysis of functions of the stakeholders, legal framework and a thorough institutional and management capacity assessment in the project design phase;
- Lack of real "ownership" is a common cause of project failure. This is an old lesson. Apparently KCC top managers did not have ownership to this project from the project start and signing of the

project agreement took some convincing. This was a serious mistake; donors should never promote ownership even when the project idea is the obvious solution to a real problem of the donors target group;

- In pilot projects flexibility is a must. Analytical capabilities and strategic management skills are required in order to implement in a cost effective manner. Documentation of lessons learnt in a SMART monitoring and management information system is of strategic importance. Hence, the full integration of pilot projects in the institutional structure of the responsible executive organisation may not be the best solution, if this organisation has a bureaucratic management system and an objective which differs in nature and scope from the nature and scope of the pilot project.

5.2 Allocation of National and International TA Resources

The pilot project had a big problem in accessing and making the best use of its local and international professional resources. The ET has identified the following conclusions and lessons which are of a general nature:

- The KCC and Sida were obliged to provide human and financial resources on time and of predetermined and adequate quantities and qualities. When one or both partners fail to do so it is a serious sign of lack of ownership. In such situations attempts to "muddle through" instead of addressing the root of the problem is likely to result in poor project management and ineffective implementation. Perhaps this project would have been better served by a one year moratorium when the Inception Report made it clear that the PMU was not in place.
- The international TA of the project is not well documented in official project documents, but informal notes makes it clear that the Contract and TOR of the international long term advisors should have been reviewed and revised in autumn 2004. Each TA input should have been clearly defined in terms of activities, outputs and a QA system; and a clear distinction should have been made between professional specialist inputs and strategic management support to PMU.

5.3 The Appropriateness of EcoSan in the Kampala Context

Based upon the assessment of achievements and constraints and potentials the ET conclude that EcoSan can become a cost-effective, commercially viable and sustainable solution to the sanitation problems of low laying areas of Kampala under the following assumptions:

- A national policy is approved;
- A KCC strategy and action plan is developed;
- A nationwide Media Campaign is initiated to enhance the status of EcoSan;
- Consumers of farm products accept "EcoSan Foods";
- EcoSan zoning is introduced as part of urban environmental planning and management;
- The laws of Uganda are adjusted, especially in the light of the EcoSan Strategy (under development) to include EcoSan as one of the recognised sanitation methods.
- Certification of affordable and hygienic designs are introduced and the models are promoted in the market;
- Parish Development Plans include EcoSan in a "holistic approach" to urban environmental planning and management – including grey-water, drainage, solid waste, urban greening etc;

- Appropriate funds and finance mechanisms is made available as credit to households replacing pit latrines with EcoSan, and with public-private partnerships which establish commercially viable collection and transport systems for the EcoSan Products;
- KCC has the capacity to monitor the health aspects of the scale up EcoSan system.

5.4 Recommendations to KCC

The above conclusions and lessons learnt logically lead to the following recommendations to KCC:

- Finalise outputs 2, 4, 6, 7 and 8 in accordance with the original intentions. Seek immediate funding for this and employ one external project consultant to be responsible on a performance contract:
- Monitor and input to the approval of national policy on sanitation and participate actively, in the ongoing process for the development of the 10 Year EcoSan Strategy for Uganda under the Water and Sanitation Programme (WSP) of the World Bank (WB). Specifically recommend a review and introduction of the necessary changes in the laws of Uganda to distinguish EcoSan from pit latrines and determine how EcoSan may be regulated;
- Develop a KCC strategy and action plan before October 2008 for sanitation as an integrated part of urban environmental management. Have the action plan based upon the Parish 2008/09–2010/11 development plans and the EcoSan zoning;
- Cooperate with Ministry of Health (MoH) and Ministry of Water and Environment (MoWE) to initiate a national Media Campaign to enhance the status and acceptability of EcoSan;
- Introduce Certification of affordable and hygienic EcoSan designs;
- Together with other stakeholders and donors ensure that appropriate funds and finance mechanisms are made available as credit to households replacing pit latrines with EcoSan, and with public-private partnerships which establish commercially viable collection and transport systems for the EcoSan Products;
- Enhance the KCC capacity to monitor the health aspects of the scaling up EcoSan system.

5.5 Recommendations to Sida

Since the EcoSan pilot project is very relevant for Sida Development Policies and important lessons has been learnt the ET recommends that Sida consider to provide an experienced short term consultant with responsibility for finalising output 2, output 4, output 6, output 7 and output 8 and to assist the KCC in the following:

- Participate actively, in the ongoing process for the development of the 10 Year EcoSan Strategy for Uganda under the WSP of the WB[20];
- Cooperate with MoH and MoWE to initiate a national Media Campaign to enhance the status and acceptability of EcoSan;
- Recommend a review and introduction of the necessary changes in the laws of Uganda to distinguish EcoSan from pit latrines and determine how EcoSan may be regulated;
- Introduce Certification of affordable and hygienic EcoSan designs;

[20] Development of the 10 Year National EcoSan Strategy is being coordinated by the National Sector Working Group. Our National Consultant, on the invitation of KCC, attended one of the workshops in the strategy development process. Some of the findings of this evaluation may have a significant input into the process, if they are made public by Sida.

- Together with other stakeholders and donors ensure that appropriate funds and finance mechanisms are made available as credit to households replacing pit latrines with EcoSan, and with public-private partnerships which establish commercially viable collection and transport systems for the EcoSan Products;
- Enhance the KCC capacity to monitor the health aspects of the scaling up EcoSan system.

We understand that the Sida LVI programme at the moment has no budget for such an extension of the project and that Sida would like to be convinced that KCC is ready to provide the necessary support to the completion of the project. The justification for the extended Sida support is that the objective of promoting EcoSan not just in Kampala but in the Lake Region is considered achievable with a relatively small additional grant and the necessary changes in the Management.

The proposed support to KCC with a management consultant having executive powers is intended to avoid some of the management difficulties in the project implementation. The ET strongly believes that despite the low level of success achieved by the EcoSan project, the concept of EcoSan is worth pursuing as one of the sanitation solutions in Kampala, and unless the project is completed and the disposal of excreta and urine ensured from the existing EcoSan toilets, the technology will be discredited as not feasible and the project will result in the opposite of its goals of promoting EcoSan as a sustainable sanitation solution,

Should Sida not be in a position to provide support for the completion of the project, KCC should urgently approach the other stakeholders in sanitation in Uganda to investigate how best the EcoSan activities can be continued. Possibilities include the ongoing projects in KCC such as the 'Kampala Integrated Environmental Planning and Management Project' and the 'Kampala Institutional and Infrastructure Development Project' as well as the sanitation activities funded through NWSC by KfW and the European Union and the support through WSP to the development of the EcoSan strategy.

Annex 1 Terms of Reference

1 Background

Kampala City Council (KCC) and the Swedish International Development Cooperation Agency (Sida) initiated discussions on possible areas of collaboration in the environmental sector in 2001. Following discussions with Sida officials, Project Outlines for some priority areas were prepared. Among them were support to Local Agenda 21 (to result in a District Action Plan for implementation), and Ecological Sanitation. While the support to Local Agenda 21 took off early in 2002, for the Ecological Sanitation component a team of consultants (Akkadia Environment Management Consultants) were first contracted through Sida to assist KCC in the preparation of the Project Document. This was done at the end of 2001.

A Specific Agreement between KCC and Sida was signed in May 2002, whereby Sida agreed to support the proposed Pilot Project for Promoting Ecological Sanitation in Kampala (hereafter referred to as "the Project" or "the Kampala EcoSan Project") to the tune of 9 million Swedish Kronor. The Swedish support to the Project is channelled through the regional Lake Victoria Programme. Funds are disbursed directly from Sida to KCC.

Parallel to the Project Sida also funds Technical Assistance (TA) to KCC, aimed at supporting the Project Management and strengthening of KCC's capacity in the sanitation sector in the long-term. A three year contract with an international consultant (Hifab International AB) was signed and the commencement date for the Services was on the 1st of October 2002. The TA was later expanded to also include procurement of international short-term experts. The costs for the TA services are paid directly from Sida Stockholm to the consultant.

A revised Project Document was submitted in July 2003 with minor change in content. The project time was later extended up to end of March 2006 with a follow up period up to March 2007. The follow up period was further extended up to September 2007 due to late award of the monitoring consultancy. The agreement between Sida and KCC ends in December 2007.

Objectives

Development Objective:

To improve the standards of the disadvantaged people living in the poorly sanitized areas of Kampala.

Specific objectives:

To develop and demonstrate appropriate systems of ecological sanitation for the poorly sanitized areas of Kampala.

To prepare for a large-scale implementation of the developed sanitation systems in Kampala

To define and strengthen the institutional framework for the sanitation sector under the jurisdiction of KCC.

The draft final Project report is expected to be submitted in November 2007.

Sida now intends to perform an external and independent end-of-project evaluation, starting after receipt of the draft Final Project report. This document outlines the terms of reference for the evaluation.

2 Kampala ECOSAN Evaluation

2.1 Purpose

The purpose of the evaluation is to;

- Provide Sida with lessons to be used when designing similar projects elsewhere and give input on how to use results achieved and lessons learnt.
- Provide KCC with an input for considerations of possibilities and constraints of scaling-up from pilot-project to full-scale implementation of the developed EcoSan strategy and system for Kampala.

2.2 Stakeholder involvement

The main stakeholders in the evaluation are Sida, KCC, Community organisations, representatives for NGOs and masons/construction firms (possible providers in construction work), recipients of ECOSAN-products and Ecosan users/single households. The Ministry of water and environment / Directorate for Water Development (DWD), and the Ministry of health are also stakeholders of the evaluation. While the evaluation is commissioned by Sida, it is also obvious that conclusions and recommendations will be useful to all stakeholders. They should therefore, to the extent deemed practical and useful, be involved in:

- Commenting of ToRs, methodology and work plan (KCC only)
- Giving their views on project successes and failures
- Discussing and commenting on preliminary findings
- Receiving the final conclusions and recommendations from the evaluation

2.3 Evaluation questions

Were the project objectives reached?

Can the project costs be justified by the results?

Was the project design in line with needs and priorities of the target group?

Are the project benefits likely to be maintained after project ending?

What are the overall *unintended* effects of the project, e.g. on EcoSan promotion in Uganda?

Specifically for Purpose 1

To what extent are the project results generally applicable to the Lake Victoria region? How can the results and lessons be used for further promotion of EcoSan in the region? Replicability

What are the most important results, recommendations and lessons learnt, to be documented and spread for dissemination to target groups? Who are the main target groups for information dissemination, locally, regionally and internationally? What is the present level of documentation and what is required for dissemination through the identified channels?

Specifically to Purpose 2

Context

The revised Project Document of July 2003 contains eight planned outputs. Two outputs are central and build to a large extent on other outputs:

- Output no 2: Ecological sanitation systems suitable for poorly sanitised areas of Kampala developed.
- Output no 8: An implementation structure (strategy) for ecological sanitation in Kampala developed.

In principal, all relevant aspects for large scale implementation should be covered, both in system design and developing an implementation strategy. The aspects could be sorted into technical (hardware) and institutional (software) aspects.

The hardware aspects refer to parts of the technical system developed and tested, such as toilet design, means of construction and delivery, system for collection and transport of products, re-use of products etc. An important issue in this context is the limitation to tested systems, focusing on toilets for urine and faeces, excluding management of greywater, drainage and household waste, as well as the spread in technical solutions tested, e.g. differences in toilet design.

The software aspects refer to institutional issues, such as organisation, governance, legislation, awareness raising, training/capacity building and last but not least, financial viability and affordability and need for subsidies for tested systems to reach the targeted groups in Kampala.

Questions

Which aspects have been developed and tested and deemed appropriate for large-scale implementation? Which aspects have not been developed and tested at all or at the required level of detail? What is the quality of the testing and development? Are all areas necessary for full-scale implementation tested and developed, or are there parts missing?

How feasible is KCC's strategy for further implementation? What criteria have been used when developing proposals for future systems and to what extent do these systems fulfil the criteria? To what extent is the strategy characterised by a system-thinking, linking and integrating the various aspects to each other? How has the EcoSan project been obtained political support and commitment?

To what extent have/is the project permeating the KCC organisation and what are the plans for institutionalising the sanitation issues, how will the corporate memory be kept and expanded? How are dialogue and sharing of responsibility with other responsible parties dealt with, in particular the National Water and Sewerage Company (NWSC)? What are KCC's conclusions from the project, is there an interest for continued promotion of EcoSan proposed and tested, or for any other EcoSan-system?

Based on the lessons learned from the pilot project, how relevant, feasible and sustainable is the KCC strategy? Is it based on realistic assumptions and risk assessments? Analyse

For Purpose 1 and Purpose 2

In addition to specified questions above, underlying causes of successes and failures respectively need to be identified and analysed.

2.4 Recommendations and lessons

The evaluation shall:

- provide lessons learnt and give recommendations to Sida based on project sustainability, relevance, effectiveness and efficiency, to be used in project/program design elsewhere;
- give recommendations for KCC in its further implementation work of the strategy for Ecological Sanitation in Kampala;
- give recommendations on how to use project results and lessons in the further promotion of EcoSan particularly in the Lake Victoria region;
- give recommendations on possibilities for dissemination and further promotion, e.g. through the Sida financed City Development Strategies (CDS) project, the Lake Victoria Regional Local Authorities (LVRLAC)-project or the UN-Habitat LV-WATSAN project.

2.5 Methodology

The Consultant shall develop and propose the methodology to be used, using the indicative guidelines below. It is expected that the work shall consist of:

- Review of documentation (see the attached list of documents)
- Field work for verification and for collection of complementary information and views

Field work methods proposed to be used include:

- Key informant interviews
- Semi-structured group discussions
- Site visits
- Collection of other relevant data and documentation

Key informant interviews are expected to include but not be limited to:

- Sida, Stockholm and Lake Victoria Initiative (Embassies of Nairobi and Kampala)
- PIU, PMU, Public Health Department and other relevant departments and staff at KCC
- The TA Consultant (Hifab International)
- Community representatives and single households with/without ECOSAN toilet.
- Recipients of ECOSAN products
- Construction firms/NGOs?
- National Water and Sewerage Company, NWSC
- The directorate for Water Development,
- Ministry of Water and Environment, Ministry of Health
- LVRLAC
- UN-Habitat
- Lake Victoria Basin Commission (LVBC)
- Other donors interested in Ecosan e.g. GTZ, WSP of the World Bank.
- Research and teaching institutions eg (National agriculatural research organisation (NARO), KARI, MAAIF, Makerere university (faculties of agriculture and technology

The Consultant shall consider if and how to inform informants and organisations on beforehand and request them to prepare their inputs to the evaluation in various ways.

3 Work Plan and Schedule

The work is proposed to start with a Start-up meeting at Sida headquarters in Stockholm in mid-March. The Consultant will then perform a desk study including elaboration of a detailed schedule for the field mission. The study and schedule will be discussed in Stockholm at a project meeting prior to the field visit. The Consultant is expected to spend 2–3 weeks in the Lake Victoria Region, particularly Kampala. The Consultant is also expected to visit the Swedish Embassy in Nairobi. At the end of the visit the Consultant shall hold a de-briefing seminar with key stakeholders to present and discuss preliminary findings. The Consultant shall also at the end of the visit perform a workshop for external organisations, with the purpose of disseminating preliminary findings and receive feed-back on how lessons and results can be utilised. After the field visit the Consultant will prepare a draft Evaluation

Report. The report will be submitted to major stakeholders for comments, to be taken into account in the final report.

The field work is expected to be undertaken during April 2008.

Draft reports are expected to be submitted to Sida two months after commencement. Sida and selected stakeholders shall thereafter provide comments within two weeks. Final reports shall thereafter be prepared within two weeks.

The following shall be contributed by Sida and the Swedish Embassy in Kampala:

- Consultations and information sharing with all relevant stakeholders on the purpose and work plan of the evaluation/review before commencement of work
- Introductory letters and contact addresses
- Feedback on proposed work schedules and draft reports

The following will be contributed by KCC upon timely request:

- Names and contact addresses of partners
- All basic documentation concerning the projects before the start of the assignment
- Any complementary information necessary (through documentation or interviews)
- Feedback on proposed work schedules and draft reports
- Facilities for meetings etc
- Organisation of field visits

4 Reporting

The contents of the report shall:

- Consider the report format in Sida's Evaluation Manual, Annex B
- Reflect the areas of particular interest to Sida (see sections 2.3 and 2.4 above)
- Specifically produce a cumulative overview of all costs inputs vs realised outputs for the entire period and account for any deficiencies relative to the plans
- Be presented along with a completed Evaluations Data Work Sheet
- Not exceed 30 pages, including an Executive Summary not exceeding 2 pages

5 Evaluation Team

The work shall be carried out by a team of two consultants. To complement the team a Local consultant contracted by the Embassy of Uganda will be provided for, to strengthen the team's understanding of prevailing local conditions.

The Consultant team shall possess the following qualifications:

- Experience from development co-operation projects in Africa Region (planning and implementation)
- Experience from evaluations or reviews
- Proven good communication skills
- Fluency in the English language

- Experience from working with local authorities, and.
- Experience from ECO-Sanitation systems

It is considered a merit if the consultant has working experience from the Lake Victoria Region. It is also considered a merit if the Consultant has knowledge of municipal sanitary planning and inspection, as well as knowledge of Sida.

6 Budget

The ceiling amount is SEK 400 000 including reimbursable expenses.

7 Tentative List of Documents

Kampala ECOSAN
Sida Assessment Memo

KCC Project Document

KCC Periodic Reports

KCC Technical Reports (own reports and consultants' reports)

TA Periodic Reports

International Short-term assistance reports

Other documents

- "Looking back, moving forward: Sida Evaluation Manual", 2004
- Lake Victoria strategy

Annex 2 Programme and List of People Met by the ET

Date	Activity	People Met
28.03.08	Preparation of Fieldwork by KCC and Local Consultant	Ruth Muguta Tusaasirwe: Project Coordinator, KCC Henry Mugerwa, Assistant Project Coordinator (Health), KCC Vincent Kiribaka, Senior Urban Planner, KCC (formerly with the Project) Kassim Waiswa, Project Driver and informant.
1.4	Travelling to Nairobi by int consultant	
2.4	Meeting at Swedish Embassy Nairobi Travelling to Kampala by int consultant	David Nielson
3.4	Briefing Swedish Embassy	Gertrude Ngabirano
3.4	Briefing at KCC	Ruth Muguta Tusaasirwe, Ag. Project Coordinator Henry Mugerwa, Assistant Project Coordinator (Health), KCC Vincent Kiribaka, Senior Urban Planner, KCC (formerly with the Project) Semwanga Margaret Azuba, Senior Agriculture Officer, KCC Emmanuel Kizito: Engineer, KCC
3.4	Household visits in Kampala	28.03.08: Harriet Batte, Kawempe 28.0308 and 04.04.08: Jane Mugerwa, Kamokya 28.03.08 and 07.04.08: Nalongo Katende: (Kasubi Parish) 28.03.08 and 07.04.08: Edith Tushabire (Wabigalo Parish) 28.03.08: Canan Musitwa (Luboyera?) 04.04.08: Beatrice Kanyamabwa (can not be traced from the list) (Kamokya Parish) 04.04.08: Charles Nkurunziza (Kamokya Parish) 04.04.08: Robert Murungi (Parish Development Secretary, Kamokya Parish) 04.04.08: Robert Lubyogo (Community Liaison Officer, Kamokya Parish) 04.04.08: Gerald Ashaba (tenant to Jane Mugerwa, Kamokya Parish) 07.04.08: Nalongo Nakato (Kasubi Parish) 07.04.08: Kawala Excel SS (Kasubi Parish) 07.04.08: Faisal Mutemanya (Kasubi Parish) 07.04.08: Susan Kigongo (Kasubi Parish) 07.04.08: Sarah Kaddu and Dirisa Kisalirwe (Parish Focal Persons, Kasubi Parish) 07.04.08: Ahmed Mugisha, Teacher, Excel SS, Kawala. 07.04.08: Asiya Nakayiwa (Wabigalo Parish) can not be traced on the list 07.04.08: Badru Walusimbi (Wabigalo Parish) 07.04.08: Hussein Wasswa (Wabigalo Parish) (not in use) 07.04.08: Citizens' Trust Academy (not in use) 07.04.08: Gabriel Asporo (Parish Focal Person, Wabigalo Parish) 08.04.08: Canan and Lydia Luboyera, farmer family, Kyanja Parish 08.04.08: Hanifa Nakawunde, Kyanja Parish 08.04.08: Sinani Matovu (has an incomplete EcoSan type toilet at Kiwatule Central Parish)
4.4	Household visits in Kampala	
5–6.4	Reading reports	All team members
7.4	Household visits in Kampala	

Date	Activity	People Met	
8.4	Household visits in Kampala		
9.4	Household visits in Kampala		
10.4	Visits to institutions and private sector	Hamidu Kizito and Ismail Twase, officers of Rural Development Media Communications (RUDMEC), an NGO	
		Sinani Matovu, who is constructing a private EcoSan toilet at Kiwatule Central (incomplete)	
		Patrick Mukiibi, a farmer and fruit processor in Matugga, Luwero District. He has a functional EcoSan toilet.	
		Benjamin Muhanguzi, Kamua Engineering Services, a contractor of two lots of EcoSan toilets	
		Paito Obote, the Project Management Consultant, a key informant.	
		Sam Mutono of the Water and Sanitation Programme of the World Bank, Uganda.	
14.4	Dissemination Seminar	Staff of PMU and Stakholders from KCC and NGOs	
21.4	Debriefing at Swedish Embassy	Johan Willert	Sida
		Gertrude Ngabirano	Embassy of Sweden
		Dr. Mesach Mubiru	District Director of Health Services, KCC
		Semwanga Margaret Azuba	KCC
		Henry Mugerwa	KCC
		Mohamed Kirumira	KCC
		Grace Ajello	KCC
		Simon, Jens and John	Consultants

In addition the ET has had phone conversations and e-mail correspondence with the HIFAB on the implementation of the projects and the provision of TA as well as detailed discussion with Anna Tufvesson, who provided the initial TA input for the first two years.

Annex 3 Logical Framework and Verifiable Indicators

Output	Activity	Verifiable Indicators
Output 1: Project structure, components and activities defined and operational	1.1 Establish and run a Project Steering Committee	Meetings are held and
	1.2 Establish a Project Management Unit (PMU)	Offices, equipment, Terms of Reference and administrative procedures in place.
	1.3 Run a PMU	Offices, equipment, transport and other communication available.
	1.4 Run a PMU (staff)	Staff available and motivated
	1.5 Support activities: a) Overall Work Planning b) Resource Mobilisation c) Procurement and contracting d) Reporting e) Meetings and coordination	Work plans and Budgets are prepared. Resources and procured materials or human resources are available in time. Required documents exist. Meetings are held.
	1.6 External coordination and networking	Documentation exists.
	1.7 Initial information and advocacy	Project known and accepted within KCC
Output 2: Ecological Sanitation Systems suitable for poorly sanitised areas of Kampala developed	2.1. Routine Work: a) Running of the Unit (PMU), b) Work Planning, c) Documentation	Work plans and Budgets are prepared. Required documents exist.
	2.2 Define the project area and the mechanisms for collaboration with the target group	Targeting methodology, targeted areas and collaboration mechanisms documented
	2.3 Undertake a problem and need analysis of the planned project area	A review and analysis report of problems and needs exist
	2.4 Based on the above analysis, define and specify verifiable terms of requirement new sanitation systems have to satisfy	The result is reported
	2.5 Based on the terms of requirements, outline alternative organisational structures/ operational systems for ecological sanitation	Reports are presented
	2.6 Based on the above lists of priorities, develop and test a fully functional ecological sanitation system that is mature for large-scale implementation.	Complete description exists of how to prepare for, build, operate, use and manage a system of ecological sanitation in Kampala
Output 3: Training and capacity-building in Ecological Sanitation and associated system approaches	3.1. Routine Work: a) Running of the Unit (PMU), b) Work Planning, c) Documentation	Work plans and Budgets are prepared. Required documents exist.
	3.2 In close cooperation with the other three units, define all training and capacity building needs that should be addressed	Training and capacity building needs are identified and documented
	3.3 Develop a training- and capacity building plan and relevant training material for these groups.	A training- and capacity building plan exists. Relevant training material for various groups are developed
	3.4 Implement the training and capacity building according to plan.	Activities undertaken according to the above plan An analysis and summary of the process, the activities and results over the project period.

Output	Activity	Verifiable Indicators
Output 4: A minimum of three alternative toilet designs suitable for Ecological Sanitation Systems in poorly sanitised areas of Kampala developed and tested.	4.1. Routine Work: a) Running of the Unit (DU Technical Design), b) Work Planning, c) Documentation	Work plans and Budgets are prepared. Required documents exist.
	4.2 Based on the terms of requirements defined under Output 2, define and outline a minimum of five alternative designs, suitable for households and communal set-ups.	
	4.3 Develop and test these prototypes	Complete descriptions exist of these prototypes, and all test activities are described and documented.
	4.4 Install and test a minimum of three alternative and fully functional toilet designs that are ready for large-scale implementation.	All installation and testing activities are documented, plus analysis and summary of the process, activities and results over the project period
Output 5: Promotion and awareness raising gaps in Ecological Sanitation and associated system approaches identified and filled	5.1 Routine Work: a) Running of the Unit (DU Promotion), b) Work Planning, c) Documentation	Work plans and Budgets are prepared. Required documents exist.
	5.2 Undertake a review and analysis of the public's perceptions regarding ecological sanitation that are critical to the project's success.	A review and analysis report on public perceptions of ecological sanitation
	5.3 In close cooperation with the other three units, define all awareness raising needs that should be addressed	Awareness needs defined and documented
	5.4 Develop an awareness raising plan that will be undertaken in order to make both specific individuals and the public at large positive to ecological sanitation and its associated system approach.	An awareness raising plan defined and documented
	5.5 Implement awareness campaigns according to plan.	Activities undertaken according to the above plan An analysis and summary of the unit's activities and results over the project period.
Output 6: Safety from a human health point of view of proposed systems of Ecological Sanitation investigated and ensured	6.1 Routine Work: a) Running of the Unit (DU Health), b) Work Planning, c) Documentation	Work plans and Budgets are prepared. Required documents exist.
	6.2 Based on current knowledge of the linkages between human health and water, sanitation and hygiene, review the risks that proposed ecological sanitation systems may have on human health and determine minimum health risk criteria.	A review report of the health risks of Ecological Sanitation in Kampala exists "Unacceptable" risks are defined
	6.3 Identify, describe and avoid any potential risk to human health that the new toilet designs and re-use techniques may pose.	Main results of these consultations documented.
	6.4 Evaluate new systems on their effects on human health, and determine if these are acceptable or not.	Results documented and reported
	6.5 Provide inputs to the development of the Ecological Sanitation System.	The agriculture component of the system approach adequately supported. Transfer of experience and considerations documented.
	6.6 Produce recommendations, manuals etc on the safe use of ecosan toilets, produced resources and their re-use in agriculture.	Guidelines, manuals etc on the safe use of the sanitation systems, including the re-use of collected resources developed and produced. An analysis and summary of the unit's activities and results over the project period.

Output	Activity	Verifiable Indicators
Output 7: A model for popular use of urine and decomposed faecal material in farming is developed and operational	7.1 Routine Work: a) Running of the Unit (DU Health), b) Work Planning, c) Documentation	Work plans and Budgets are prepared. Required documents exist.
	7.2 Undertake a review and analysis of the present use of human waste products, in particular urine in farming activities in Kampala	A review and analysis report on the present use of urine in farming in Kampala.
	7.3 Review relevant current knowledge and practices on how to use urine and composed faecal material as inputs in productive farming practices	A review and analysis report on the current knowledge and practices on how to use urine and composed faecal material as inputs in productive farming practices
	7.4 Develop a set of practices as a function of crop, soil conditions, farming practices, health considerations and other criteria that are appropriate to the conditions and needs in Kampala and rural, near-by Kampala.	Extensive field demonstration activities have been undertaken. These have been recorded in terms of pictures, growth with and without urine/faecal material applied, growth as a function of different application amounts and procedures, etc. A complete set of data from all activities from demonstration and research sites reported.
	7.5 Provide inputs to the development of the Ecological Sanitation System	Manuals and guidelines on the handling and application of urine and faecal material for the growth of commercial and subsistence plants in Kampala and neighbouring rural areas are produced and available
	7.6 Provide inputs to the development of appropriate information material on the use of urine and composed faecal material in farming in Kampala.	An analysis and summary of the unit's activities and results over the project period.
Output 8: An implementation structure for ecological sanitation in Kampala proposed	8.1 Undertake a review and analysis of current experience of relevant water and sanitation programs in Uganda, including the current one, and how to best promote Ecological Sanitation in Kampala.	A review and analysis report of current experience of relevant water and sanitation programs in Uganda, exists
	8.2 Review current actors and their roles in the water and sanitation sector (e.g. KCC, NGOs, private firms)	A review report on current actors and their roles in the water and sanitation sector, exists
	8.3 Develop and propose a model for large-scale implementation of Ecological Sanitation in Kampala.	The required model exists and is reported.

Annex 4 List of Literature

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KCC Baseline Study Report, AquaConsult, November 2004.

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Uganda Financing Strategy for Sanitation and Hygiene Promotion. Rapid Situation Analysis. Sector Working Papers. WSP, 2005

Annex 5 The Legal and Institutional Context of the Project

This section presents the legal and institutional framework which provides the national framework which influences urban environmental sanitation, providing the set-up under which the government and other players like NGOs and donors operate; it also presents donors with opportunities and limitations for the bilateral government-to-government development assistance. The section also highlights the role of government and non-government institutions.

The Uganda Financing Strategy for Sanitation and Hygiene Promotion[21] gives a long list of policies and legislation relevant to the sector. We shall review only a few of them in this Report.

The policies relevant to sanitation and hygiene promotion include:

- The Constitution of the Republic of Uganda.
- The Poverty Eradication Action Plan (2007/2008) as the overarching policy framework.
- The National Heath Policy (1999).
- National Environment Management Policy (1995).
- National Water Policy (1999).
- Environmental Health Policy/National Sanitation Policy (2005).
- School Health Policy (draft 2004).
- National Gender Policy.

The acts, regulations and standards relevant to sanitation and hygiene promotion are:

- The National Environment Act.
- The Water and Waste Discharge Regulations (1998).
- The Sewerage Regulations (1999).
- The Waste Management Regulations (1999).
- Environmental Impact Assessment Regulations (1998).
- National Environment (Standards for Discharge of Effluent into Water or on Land) Regulations (1999).
- National Environment (Waste Management) Regulations (1999).
- School Health Minimum Requirements.
- Local Government Act.
- Kampala City Council Solid Waste Ordinances (1998).
- Public Health Act and downstream regulations, such as public health building codes and drainage and sanitation rules.
- Country and Town Planning Act.
- The Water Act.
- National Water and Sewerage Corporation Act.
- Water (General Rates) Regulations, 2000.

[21] Uganda Financing Strategy for Sanitation and Hygiene Promotion. Rapid Situation Analysis. Sector Working Papers. WSP, 2005

The strategies relevant to sanitation and hygiene promotion are:

- Infant and Maternal Mortality Strategy
- Urban Water Supply and Sanitation Reform Strategy (2003)
- The Long-term Strategy for Investment Planning, Implementation and Operation and Maintenance of Water Supply and Sanitation in Small Towns (2004)
- Water and Sanitation Communications Strategy (2005) (not yet released)
- Water and Sanitation Gender Strategy (2003)
- Rural Growth Centre Strategies (2004)
- Strategy for "water and sanitation for emergency response"
- Kampala Sanitation Master Plan
- Kampala Urban Sanitation project
- Kampala Ecological Sanitation
- The Rural Water Supply and Sanitation Sub-sector Strategy (2000)
- The Urban Water Supply and Sanitation Sub-sector Reform Strategy (2003)
- The Uganda Water Action Plan (1994)
- Rural Water Supply and Sanitation 5-year Operational Plan 2001–2006 (2003)
- Water Sector Investment Plan 2015 (2004)
- Ministry of Health, Health Sector Strategic Plan, Health Sector Support Programme (2004)
- Ministry of Gender, Labour and Social Development, Community Empowerment Strategy
- Kampala City Council Working Document on Solid Waste Management (undated)
- Kampala City Council Strategy to Improve Solid Waste Management (1998, updated 2002)
- Kampala City Council Strategic Framework for Reform – Alternative Service Delivery (1997, updated 2002)

In addition to these strategies, there are: i) the Kampala Declaration on Sanitation (KDS) (1997); ii) the Memorandum of Understanding (MoU) (2001); and iii) an unwritten subsidy policy.

The Poverty Eradication Action Plan (2004/5–2007/8)

The PEAP provides an over-arching framework to guide the public action to eradicate poverty. Improved sanitation is a key element of Pillar 5: Human Development of the PEAP. A healthy and well-educated population is both a necessary condition for development and one of the central objectives of development. Improved health is realised through the reduction in diarrhoeal diseases, water borne diseases and in improved public health. While the water supply coverage nationally has improved dramatically over the years, the challenge is in improving the sanitation coverage, especially in impoverished urban settlements, such as those targeted by the Project. Further improvements in water supply have been achieved through PPP arrangements for towns under NWSC and smaller towns under DWD.

The PEAP also emphasises preventive over curative care; this emphasis is realised by improved sanitation coverage since poor sanitation allows the spread of water borne diseases. Community approaches are emphasised, with hygiene promotion and sanitation at the household level being targeted.

The National Health Policy (NHP), 1999

The National Health Policy (NHP) 1999 is a milestone in the governments' commitment to reduce mortality and morbidity rates in Uganda. It recognises poverty as the main underlying cause of the poor health situation in the country. It underpins the heavy burden of health related problems in the country of treatable infectious diseases, although there is an upsurge in the occurrence of non-communicable diseases such as hypertension, cancer, diabetes, metal illnesses and chronic heart diseases.

Other major problems in the health sector are related to health care organisation, management and financing. For instance there is inadequate funding of the sector with total annual health expenditure in the range of US$ 7 to US$ 12 per capita, with government contributing only US$ 3.5, the balance coming from individuals and donors. The health status remains poor by world standards, although indicators like Infant Mortality Rate, Under 5 Mortality Rate, Total Fertility Rate and Maternal Mortality have decreased since the advent of the National Resistance Movement government.

The National Health Policy was formulated within the context of the provisions of the Constitution of the Republic of Uganda, 1995 and the Local Governments Act (Cap. 243, Laws of Uganda), which decentralised governance and service delivery. In addition, the Policy derives guidance directly from the National Health Policy Sector Strategic Plan Framework and the PEAP.

It further derives guidance from the Declaration of Health for All Strategy. A 5-year Health Sector Strategic Plan 2000/5 was also subsequently formulated and released in 2000 as the main mechanism for implementing the NHP. The overall underlying philosophy of the Policy is to prevent rather than to cure, after all 'prevention is better than cure'.

The private sector, NGOs, advocacy and public awareness (sensitisation) are also encouraged.

The National Environment Management Policy, 1995

Considerable progress has been made in creating an enabling environment for environmental management in Uganda since 1994. The framework comprises the National Environmental Management Policy, National Environmental Act (Cap 153 Laws of Uganda) and associated regulations, the National Environment Management Authority (NEMA), biannual State of Environment Reports and National Environmental Action Plans (COWI, 2005).

The Ugandan Constitution, 1995

The Constitution of the Republic of Uganda, 1995 is the main body of legislation in the country. It offers, 'every Ugandan the right to clean and healthy environment (clause 39)' while at the same time expects citizens to play their part in creating a healthy environment. It is the duty of every Ugandan to create and protect a clean and healthy environment (clause 17j).

Following the enactment of the 1995 Uganda Constitution (as amended), several Statutes and Acts were passed aimed at achieving the National Objectives set in the Constitution, including the National Environment Management Act, the Public Health Act and the Town and Country Planning Act.

The Public Health Act Cap. 269

The Public Health Act (Cap. 269 the Laws of Uganda), requires local authorities to take practicable measures to prevent the outbreak of infectious diseases and to safeguard and promote public health. It gives the basis for local authorities and municipalities to enforce drainage and sanitation requirements.

National Environmental Act, Cap 153

The National Environment Act Cap 153, laws of Uganda provides tools for environmental management. The Act imposes a mandatory duty on a project developer to have an Environmental Impacts Assessment conducted before embarking on a project. The Third Schedule of the Act made under

section 18 of the Act specifies the types of the projects to be subjected to EIA. The EcoSan Project would be one of the projects to be subjected to an environmental assessment. Kampala Infrastructure and Institutional Development Project carried out an environment assessment of its interventions, many of which also apply to the EcoSan Project.

The EcoSan Project does not trigger wider environmental assessments in accordance with the NEMA Act since it does not lead to widespread environmental impacts, or to large scale human resettlement. However, a scoping of environmental issues should have been done to ensure that all impacts are identified and acted upon as would be recommended.

Town and Country Planning Act Cap. 246

Though the Act provides for the orderly and progressive development of land, towns and other areas whether urban or rural, the planning areas that form the basis of intervention by the Town and Country Planning Board are areas declared as such under Section 5 of the Act. The planning areas are the urban areas, some of which are listed in the First Schedule of the Act.

Outline and detailed schemes as provided for in Sections 10 and 15 of the Act and Second Schedule to the Act provides the outlay for including roads, amenities, public utility services, transport, community, buildings and other structures. This Act is a relevant guide to the Consultant in the designing of the project, the contractor in the construction phase and in the operations of the EcoSan toilets.

Land Act

S.43 Utilisation of land according to various laws

A person who owns or occupies land shall manage and utilize the land in accordance with the Forests Act, the Mining Act, the National Environment Act, the Water Act and any other law. It is noted however that utilisation of land in the urban settlements of Kampala is largely not in accordance with the provisions of the relevant sections of the above Acts, which has led to very unsanitary and congested settlements.

S.71 Rights of way

All land, whether alienated or un-alienated, shall be subject to all existing public rights of way which shall be reserved to and vested in the Government on behalf of the public; and all such rights of way shall be maintained by the public uninterrupted unless they are terminated or altered by the direction of the Minister (responsible for lands) in writing. However, the urban settlements are often so unplanned and congested that roads and public utilities are nearly impossible to construct in the areas.

Local Government Act

The local government act (LGA) gives effect to government's decentralisation policy. The LGA transfers some power and functions from the central government to district, urban and lower government councils.

S. 31 (1) (d) states that subject to the constitution, a local government council (in this case KCC) shall, within its area of jurisdiction ensure the implementation and compliance with government policy.

Government Institutions' in Water, Sanitation and Environmental Management

Ministry of Health

The provision of sanitation to urban, schools and households is under both the Ministry of Health and Ministry of Water (which fact has sometimes led to great inertia in this sub-sector). Household sanitation plays a key role in the prevention of water borne and diarrheal diseases and is hinged on the presence of clean, potable water supply. In the large sections of the city targeted by the project, water supplies are available as in-house connections, yard taps or public stand posts.

The Ministry of Health has the following strategic objectives relevant to sanitation at the household level:.

To establish policies, guidelines and standards for the delivery of a minimum healthcare package in the districts and at national level.

To co-ordinate and facilitate all stakeholders in the health sector to achieve the national goals for health.

To provide efficient and effective systems and interventions for the aversion of or early identification and control of epidemics.

Following the Kampala Declaration for Sanitation (KDS) in 1997 and the Memorandum of Understanding in 2001 (MOU 2001), three line ministries share the responsibility for sanitation:

The Ministry of Health at all levels is responsible for household sanitation promotion.

The Ministry of Education and Sports is responsible for school sanitation investment and promotion.

The Ministry of Water and Environment is responsible for hygiene promotion around water points and promotion in public institutional sanitation facilities (rural growth centres).

The MOU is worded in terms of the line ministry but by implication this is taken as the function rather than just pertaining to the central ministry activities.

Coordination exists in form of the National Sanitation Working Group (NSWG) which consists of government and development partners, NGO's and representatives from various other stakeholders and interest groups in the sector[22].

Ministry of Local Government

The Ministry of Local Government is the overseer of the local governments in the country. It oversees Kampala City Council. To the extent that MoLG oversees KCC, it has a role in the planning, development, implementation and dissemination of the lessons and experience of the EcoSan Project. It links the KCC experiences with the other central and local government institutions. It participates also as the agency responsible for reporting and coordination of all local governments in the country.

Ministry of Water and Environment

Ministry of Water and Environment through the Directorate of Water Development and the Directorate of Water Resources Management and the National Environment Management Authority, is the Lead Sector agency for the government. It is responsible for regulation and setting of sector policies. It was responsible for the introduction of the EcoSan type latrines in Uganda through the South-western Towns Water and Sanitation Project, also for advocacy and education on the EcoSan toilets.

In conjunction with the ministries of Health and Local Government, the MoWE plays a key role in the design and dissemination of the concept aimed at popularising the EcoSan toilet types. It also oversees research in the EcoSan project. Get more information on this.

Activities on EcoSan are carried out by the National Advisory Committee on Ecological Sanitation (NACES), drawing its members from the line ministries and departments: Ministry of Local Government (MoLG), National Environment Management Authority (NEMA), National Agriculture Research Organisation (NARO), MUK and other stakeholders including Austrian Cooperation, Sida, the World Bank Water and Sanitation Programme – Africa Region (WSP-AF), and DANIDA. The effort was led by the Ministry of Health – Environmental Health Division (MoH-EHD), and the Directorate of Water and Development (DWD) under the Ministry of Water and Environment (MoWE)[23].

[22] National Sanitation Working Group. Inception Report. Jan. 2008.
[23] National Sanitation Working Group. Inception Report. Jan. 08.

National Water and Sewerage Corporation

The National Water and Sewerage Corporation (NWSC) is responsible for providing water and sewerage services in the 22 largest towns in Uganda. Although on-site sanitation is not within the mandate of NWSC the planning for sanitation in Kampala is closely linked to the provision of sewerage. NWSC spearheaded the development of the Sanitation master Plan for Kampala in 2002 and is implementing a number of projects that also include promotion of on-site sanitation technologies. NWSC also provides facilities for cesspool emptying and received the effluent from septic tanks and pit latrines at its treatment plant in Kampala.

Collaboration with the Civil Society and the Private Sector

The project networked and collaborated with a number of institutions and projects like EcoSanRes – Sweden, GTZ-EcoSan, KUSP, World Bank Water and Sanitation Project (WSP), WaterAid Uganda Urban WatSan Programme, South Western Towns Water and Sanitation Project (SWTWS) – DWD, EcoSan Club (Austria), and Advisors on Urban Environment and Development (WASTE – Netherlands) to gain valuable experience and skills in EcoSan system development.

Participation in EcoSan coalition, a forum for organisations promoting EcoSan in the country, brought the opportunity for sharing valuable experiences and information.

Collaboration with the Kampala Urban Sanitation Project (KUSP) provided opportunity to share lessons in working with communities and local government in Kampala, resources, and systems set up with local government.

The project provided critical inputs in the development of the Kampala Sanitation Master Plan undertaken by National Water and Sewerage Corporation (NWSC) – EcoSan promotion in Kampala was recommended[24].

[24] Kampala EcoSan Project: Final Report.

Annex 6 Proposed Roles and Responsibilities for up-scaling EcoSan

Proposal for Division of Roles and Responsibilities

Component	Key Inputs	Institution	Remarks
Regulation and Control	Development of policy, guidelines, and designs. Technical supervision to ensure conformity to policies, strategies, standards, and laws. Setting up an EcoSan management system. Management of resources availed for sanitation improvement.	KCC	Line ministries, statutory bodies, and donors will advice as necessary.
Promotion and Awareness Creation	Dissemination and demonstration of successful EcoSan practices. Raising the profile of EcoSan. Mobilisation and sensitisation of actors for adoption of appropriate EcoSan practices. Development of IEC materials.	KCC	NGOs contribute towards promotion and awareness creation at community level.
Provision of Facilities and Services	Construction and installation of toilet. Establishing products handling systems. Provision of drainage facilities. Training in proper operation and maintenance. Training in proper handling and reuse of products.	Private sector, NGOs, and CBOs.	KCC supervises and controls for quality assurance and compliance to guidelines.
Management, Institutional, and Technical Support Services	Design and setting up of operational systems i.e. toilet components supply system, collection system, and processing and reuse system. Capacity building and support supervision for service provision and management. Establishing linkages and networks with other service providers. Provision of extension services to support proper management and utilisation of EcoSan services and products.	KCC	Private sector and NGOs provide professional and research services to KCC.
Monitoring, Evaluation, and documentation	Continuous observation and assessment of EcoSan acceptability (and rate of uptake). Assessing the performance of the EcoSan systems. Documentation of lessons and experiences. Dissemination of experiences and lessons to the various stakeholders to contribute to the review of approaches and also attract further funding.	KCC, NGOs, CBOs	KCC take the lead with the divisions playing key role.
Co-ordination	Holding joint planning meetings with EcoSan actors. Holding joint feedback and review meetings for all EcoSan actors. Harmonising promotional and service provision approaches. Sharing resources and experiences in EcoSan work. Organising technical and management support where necessary.	KCC	KCC assumes the overall responsibility but all actors involved in EcoSan activities in the city are obliged to participate and contribute to the process.

Annex 7 EcoSan Design Experiences and Considerations for low-cost Designs

Poor operation and maintenance was noted in one case of Kawala SS (Excel SS) in Kasubi

Figure 1: Dried faecal material contaminated by water through the rear trap door.

Figure 2: Poor operation and maintenance of the EcoSan at Kawala SS. Note the use of newspapers for anal cleansing and almost no ash applied.

Figure 3 The slanted trap door serving the important role of absorbing heat from the sun.

Figure 4 The vertical trap door, with reduced heating from the sun.

A redesign should address the costly materials used for the construction and the design itself. The design emphasises a large, solid structure, which in our opinion is not essential. The use of cheap baskets or wooden boxes to contain the faeces and ashes would obviate the need for the strong vaults. Simple wooden vaults could therefore be constructed to replace the concrete. Even where the ground conditions are waterlogged, it is only necessary to use plastic containers for the faeces or to elevate the floor to just above the high water mark. It is not essential to make the vaults water proof. The baskets can readily be procured or made by the owner, while wooden boxes can easily be made locally, at a low cost. Lining them with paper (or with plastic kavera) is all that is essential.

Privacy of the toilet to the user is to ensure that users feel at ease at any time of day, when they are using the toilets. This requires that the walls offer sufficient privacy to the person. For crowded areas such as the slums, such privacy is not to be taken for granted. It is therefore essential that the low cost

systems still provide such privacy as is necessary; this can be in the form of plywood sides and iron sheet roof, or even iron sheet walls. The privacy offered should be similar to that of the residential houses in the neighbourhood.

The high cost of the EcoSan toilets makes them virtually out of reach of the people they are meant for. Only those who have alternative technologies (such as water borne toilets systems) may afford the high cost. At the present cost, the affordability of the EcoSan is minimal.

Figure 5 A clean vaults with two plastic baskets containing faeces.

Figure 6 A clean vault using locally made baskets. Note the filled basket on the side.

An all timber construction of the EcoSan toilet would be the most ideal for scaling up since it can even be carried on the back of a small truck and moved from site to site. They could be 'mass produced' from carpenters' workshops and be delivered to the site easily. These all timber constructions would be very suitable for extremely narrow areas and for temporary encampments, such as displaced peoples camps or contractors' camps.

Adaptation of existing systems

In the parts of the city where the water table is too high, the community already uses elevated latrines (see figure 7), which are similar in appearance to the raised EcoSan toilets. The project should have considered adaptation of these latrines to EcoSan by modifying them. Removal of the faecal matter, disinfection and modification of the resulting chambers by installation of urine diverters and a door, is, in our opinion, a feasible technique which can convert or adopt these latrines to EcoSan. Once the rear door is fitted, baskets or boxes would be used to collect the faeces just like the low cost EcoSan described above.

A comparison of the Project designs with those of other countries is given below. Below left is a toilet where the filled up pit is covered and the superstructure relocated to another pit, while to the right is a pit latrine with alternate pits.

Figure 7: The EcoSan latrine imitation? No, this is the raised pit latrine, near the EcoSan latrine, figure 8.

Figure 8: An EcoSan latrine located just 30 m from the raised pit latrine in figure 7. The raised pit latrine can be adapted to EcoSan by modifying it.

Figue 9 Two kinds of low cost toilets, Zambia.

Figure 10

The slanted trap doors facing the sun would help in raising the temperatures inside the vaults. However, it is noted already that a design change was effected leading to the vertical trap door. Painting the doors black would also increase its heat absorption, but this painting was not always practiced. Moreover, the toilets were often located in crowded areas where possibility of direct sunshine was reduced greatly. The pictures below shows a toilet in the middle of a garden and a toilet for a small school. In the background are iron sheets, indicating that a wall will soon be constructed there, thereby reducing solar energy.

Figure 11 A child demonstrates how ash is applied to the pit after use.

Figure 12 Plenty of ash, may be too much, ensures odour free and insect free environment.

Figure 13: A leafy environment reduces the tempera-tures in the EcoSan latrine, which may reduce pathogen die-off.

Figure 14 A well exposed EcoSan. However, there is a wall coming up at the back, which will reduce the solar radiation.

Annex 8 Methodology of the Evaluation

The work of the ET was based on primary sources of information, in particular interviews with members of the Target Groups for the various KCC activities at community level. During the field work, the ET made a deliberate attempt to understand the extent to which KCC support has managed or has a potential to impact upon the livelihood of the poorest groups in the community, and the extent to which concerns for poverty reduction, gender equality and HIV/AIDS have been taken into account in the design and implementation of interventions.

The collection and interpretation of primary information was guided and enriched by a broader appreciation and understanding of KCC and its context achieved through reference to secondary sources of information, such as reports prepared by the KCC staff; studies and reports prepared by independent researchers and consultants, some financed by KCC; and other relevant documents prepared by the TA of Hifab. A list of documents referenced is presented in Annex 4.

The list of questions and guidelines provided in TOR regarding lessons learnt and areas in which recommendations are needed is very clear and also comprehensive:

- provide lessons learnt and give recommendations to Sida based on project sustainability, relevance, effectiveness and efficiency, to be used in project/program design elsewhere;
- give recommendations for KCC in its further implementation work of the strategy for Ecological Sanitation in Kampala;
- give recommendations on how to use project results and lessons in the further promotion of EcoSan particularly in the Lake Victoria region;
- give recommendations on possibilities for dissemination and further promotion, e.g. through the Sida financed City Development Strategies project, the Lake Victoria Regional Local Authorities project or the UN-Habitat LV-WATSAN project.

TOR correctly points out that output 2 and output 8 are the ultimate results of the project, but in our assessment it should not be overlooked that in particular output 4, output 6 and output 7 are important pre-conditions for the development of an affordable and sustainable system which is ready for large scale implementation. International research and consultancy reports have documented that community and household acceptability of the toilet system and the development of a market for the toilets as well as for the "products" – the manure – to be use in urban agriculture is the key success factor to the development of EcoSan[25].

Methodologically we have taken our point of departure in the Project Logical Framework in order to assess if the targeted outputs were achieve in the quantity, quality and at a reasonable and affordable cost, and to assess if the risks and assumptions were correctly identified and effectively managed during the implementation of the project.

The KCC End of Project Report contains information on the achievement of all planned outputs and the ET has worked with a team of resource people from the KCC to verify the results recorded in this End of Project Report.

The work was undertaken in the following phases:

1 Reading all relevant documents

[25] Elisabeth-Maria Huba, Inception Report, 10 Year National Strategy on Ecological Sanitation 2008 – 2018, World Bank and National Sanitation Working Group, February 2008

2 Site visits to Households and Institutions with Installed Systems
3 Visits to Households and Institutions without Installed Systems
4 Visits to Contractors and Masons involved in installations
5 Discussion with designers of Hard Ware
6 Visits to Farmers involved in trials and farmers not involved in trials
7 Visits to Municipal Waste Collection Authorities and Private Sector Operators
8 Discussion with KCC Health and Agriculture Departments Staff
9 Discussion with KCC Project Management
10 Meetings and discussions with other stakeholders
11 Dissemination of Findings Seminar
12 Debriefing Seminar with focus on "The Way Forward ".

Approximately 150 EcoSan systems have been installed and a small selection was visited as follows:

EcoSan Hard Ware Installed by Project January 2003–November 2007	
EcoSan toilets Installed	EcoSan toilets inspected and assessed by ET
Kamwoka – Central Division 53 installed	6 visited
Kyanja – Nakawa Division 31 installed	6 visited
Wabigalo – Makindye Division 20 installed	6 visited
Bwaise – Kawempe Division 6 installed	3 visited
Kasubi – Lubaga Division 32 installed	6 visited
5 at Divison Offices	1 installation visited
20 stances of EcoSan in 5 primary schools	2 schools visited

Source: KCC End Of Project Report, Section 3.3. Project Achievements p.22

The ET visited a selection of installations at households and institutions in each Division and undertook focus group discussions with the following teams:

- The design process: the KCC Team Leader and the design section;
- The selection and interaction with contractors and masons: The KCC Team Leader and a group of contractors and Masons;
- Household Use and Maintenance including acceptance, affordability, commercialisation, house hold benefits and costs: groups of households which has accepted followed by group of households which has not accepted;
- The system for re-use of urine and decomposed faecal materials as fertiliser: The Agricultural and Health head of division of KCC; group of farmers with whom fertiliser testing was done.

Subsequent to the interviews with primary sources of information the ET had a discussion with the KCC PMU and the heads of the four departments in order to verify the findings presented in the End of Project Report. The outcome of this discussion is an agreed and updated table which is presented in section 3 of this report and presents the actual objective findings of the evaluation.

The table of agreed findings formed the point of departure for meetings with relevant stakeholders in order to discuss these achievements in a National and Regional Context and to collect information on comparative performance of other programme and projects as an input to the generation of Lessons Learnt.

Recent Sida Evaluations

2008:33 Southern Africa AIDS Trust Project Evaluation, 2008
Ron Titus, Unity Chari
Sida

2008:34 Contribucioned de Asdi al Desarrollo del Sector Privado en Bolivia, 2003–2007, Resultados e Impactos
Erik Larrazábal Antezana, Miguel Zalles Denegri
Sida

2008:35 Sida's Support to the Swedish Committee for Afghanistan (SCA)
Göran Carlsson, Staffan Engblom, Tove Myhrman
Sida

2008:36 Performance Analyses of the Cooperation between Swedish Radio and Radio Republic Indonesia 2000–2005
Madeleine Elmqvist, Lars Rylandaer, Lukas Luwarso
Sida

2008:37 Programa Regionalizado de la Gestión Defensorial en Colombia
Francesca Jessup, Elisabeth Hayek
Sida

2008:38 Environmental Sustainable Support to Civil Society in Asia, Africa and Latin America – Results and Effects of Sida's Framework Agreement with the Swedish Society for Nature Conservation (SSNC) 2005–2007
Hans Peter Dejgaard, Hans Hessel-Andersen, Maria del Socorro Peñaloza, Emelia Arthur, Sunitha Bisan
Sida

2008:39 Mid Term Review of Sida/Lake Victoria Initiative Support to Community-Based Strategies for the Management of the Environment and Resources of Lake Victoria (COSMER-LAV) 2005–2008
Irene Karani, Mike Wekesa
Sida

2008:40 Study of the International Organization for Migration and its Humanitarian Assistance
Anders Olin, Lars Florin, Björn Bengtsson
Sida

2008:41 Uri Hydro-Electric Project, India: Evaluation of the Swedish Support
Mike J. McWilliams, L.V. Kumar, A.S. Wain, C. Bhat
Sida

2008:42 What is SwedBio and what does Sida want to do with it? An external evaluation of the Sida-supported Swedish International Biodiversity Programme 2003–2007
Thorsten Celander, Anders Fahlén
Sida

2008:43 The 2007 Joint Elections Assistance Programme (EAP) in Kenya
Tim Sheehy, Wachira Maina
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