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### Introducing a closed-loop option for management of human waste in Kampala, Uganda

#### Introduction

This paper will present the Project for Promoting Ecological Sanitation in Kampala, and the headway it has made in systematic piloting of Ecological Sanitation not only as a sanitation option but in support of sustainable urban agriculture. It will also make comparisons with other projects in Kampala with similar long-term objectives but differing approaches.

#### Sanitation in Kampala

Kampala has a fast-growing population, which has now reached more than 2 million people during the day. Sanitation services are inadequate. Only 6,4% of the population is served by sewers (KSMP, 2004), and functional latrine coverage in many areas is below 50%. Drainage is poorly developed and maintained. A small proportion of solid waste is properly handled either locally or as part of any systematic collection system. Treatment of sewage and septic tank sludge is inadequate.

This “sanitation gap” results in frequent health problems like malaria, cholera epidemics and other sanitation related diseases.

Major expansion of the sewer network is not deemed feasible due to high costs. Among the reasons for the low coverage of on-site sanitation are said to be poverty, lack of awareness, lack of space, and lack of appropriate technology for areas with high water table.

Kampala City Council (KCC) and the National Water and Sewerage Corporation (NWSC) are responsible for the on site- and sewerage sanitation respectively.

#### Re-use Practices in Agriculture in Kampala

Urban Agriculture has a prominent role in Kampala; According to certain figures, up to 40% of the food consumed in the City is grown within its borders. Still, the soil management practices are inadequate to sustain the productivity of the land. Use of organic fertilisers is on the increase.

## **Project for Promoting Ecological Sanitation in Kampala**

Since 2002, KCC implements the 3-year “Kampala EcoSan Project”, with a budget of 1,1 million USD (by grant from the Swedish International Development Cooperation Agency, Sida), plus Technical Assistance.

At an overall level, the Project strives to contribute “To improve the standards of the disadvantaged people living in poorly sanitised areas of Kampala”. More specifically it will:

- Develop and demonstrate appropriate systems of ecological sanitation for poorly sanitised areas of Kampala
- Prepare for large-scale implementation of these ecological sanitation systems
- Define and strengthen the institutional framework for the sanitation sector under jurisdiction of KCC

The Project puts emphasis on “closing the loop”, i.e. seeing Ecological Sanitation not just as a solution to some sanitation problems, but as an opportunity for sustainable urban agriculture. From initial contacts in the target communities as well as at other levels can be seen that many show interest in the toilet design, as well as in the re-use concept. Their key areas of concern seem to be the cost of the toilet units, and a need to see hands-on proof of the functioning of toilets and re-use trials.

The Project targets user communities whose present on-site sanitation systems do not perform well. Within this context, it has limited itself to dealing with the human urine and faeces waste flows only, and to promoting the dry (urine-diverting) toilet. The Project thus does not foresee to develop comprehensive solutions for the City-level to challenge e.g. water-borne solutions for the richer strata. Still, it has already, through advocacy, had an important impact on the “Kampala Sanitation Master Plan”, which was recently prepared under NWSC leadership. In this plan, Ecological Sanitation is considered a serious alternative for many Kampala communities over the next 30 years.

The Project recognises that no ready-made concepts yet exist for “closing the loop on sanitation” in an urban environment like that of Kampala’s. It therefore proceeds with caution, ensuring that adequate resources for “software” as well as for “learning” accompany the introduction of Ecological Sanitation as a new, alternative technology. Following the successful completion of the Kampala EcoSan Project, KCC expects it will be possible to initiate large scale dissemination of Ecological Sanitation in Kampala.

Due to its cautionary principles, the Project has been seen to progress comparatively slowly. The first set of EcoSan system components for testing was developed by KCC based on existing experiences from within Uganda and elsewhere, with support from EcoSanRes network members, CSIR and others.

## **Other initiatives to introduce Ecological Sanitation in Kampala**

A number of initiatives to improve the sanitary situation in Kampala are being taken by KCC and NWSC, together with various Central Government agencies, Non-Governmental- and Community-based Organisations, and the Private Sector. By now, most of these actors are aware of and appreciate the concept of Ecological Sanitation, and have (in dialogue with the different Donors) adopted different approaches to its introduction and promotion;

- Introducing EcoSan as one of several sanitation options as part of integrated community-based programmes for improved health and hygiene.
- Continued promotion of VIPs and water-borne solution only, awaiting results from the Kampala EcoSan project as proof of that EcoSan is really an option for Kampala.
- Provision of public/ communal urine-diverting toilet hardware, leaving “software” for later as well as the question of what to do with the fertiliser products.

The Kampala EcoSan Project links up with these other ongoing activities in Ecological Sanitation. It will try to incorporate them into its system of Monitoring and Evaluation, to maximise the “learning” effect to the benefit of the further improvement of Ecological Sanitation concepts and implementation modalities suitable for the Kampala setting.