

## ECOSAN OPPORTUNITIES IN AFRICA

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**Summary:** *This paper reviews lessons learned about demand for ecological sanitation of sanitation in Africa. A review of how ecosan has been approached in Africa highlights lessons which can be applied in the future development of solutions which work at scale. The paper argues that situations where environmental concerns are strong, provide opportunities for major gains in effective coverage from ecosan solutions. The paper concludes with some proposed areas of focus for future work on ecological sanitation in Africa.*

### Introduction

Context - The population of Africa, Asia, Latin America and the Caribbean will increase dramatically over the next twenty-five years. Growth in Latin America and the Caribbean will be close to 50%, in Asia 75 - 85%, while in Africa the population is set to double by 2025. The bulk of this growth will occur in informal and peripheral urban areas. This growing population will increase pressure on already inadequate public services such as water and sanitation. Coverage figures in Africa are poor, and unlike any other region, have fallen over the last 10 years. Currently sanitation coverage is lowest in rural areas<sup>1</sup>, but high population growth in cities, will create the most serious challenges over the next 25 years.

The sanitation sector faces 3 distinct challenges: (1) improve sanitation coverage overall (2) close the gap between rural and urban coverage, and (3) meet the enormous growth in urban areas most of which will be amongst the poor who live in informal settlements.

Making a significant impact in sanitation in Africa requires moving from problem recognition and pilots to scaled-up long term programs for effective sanitation coverage. There remain serious questions about the most effective way to introduce new thinking on the environmental aspects of sanitation. Two key challenges face those who promote ecological sanitation (1) how to build the “big picture” questions of resource security and environmental protection into policy formulation at both regional and country levels and (2) to move beyond the simple promotion of technologies, which we know is only one part of the job at hand.

### Experience in Africa:

The critical lessons gathered on sanitation promotion over the last 20 years in Africa, include:

- Marketing sanitation is critical: responding to demand alone does not work, and health is not the main driver for marketing sanitation
- Price matters: solutions must be designed around target prices, not predetermined standards because households' willingness to pay for what they perceive is of direct impact is important
- Subsidies can do both harm and good: it is more effective to subsidize promotion than production
- Sanitation is a business: From a long list of options it is possible to identify target markets where options fit demand; supply-driven approaches don't work. It is

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<sup>1</sup> Global Water Supply and Sanitation Assessment 2000 Report.

possible to earn a living in the sanitation business and supporting the growth of this business should be the focus of external interventions

- Keep it simple: complex sanitation plans do not work, local level capacity needs to be developed
- Think upgrades and city-wide linkages: gradual improvements in sanitation linked to investments in trunk infrastructure (eg. sullage disposal in urban areas) under institutional frameworks that employ households and communities resources are more effective and less risky.
- Sanitation is a long term business: results should be judged over 20 years, not 20 months, increasing demand for sanitation is about encouraging major changes in lifestyles.

### **Discussion of Experience with Ecological Sanitation:**

What does the experience with ecological sanitation have to teach us in Africa?

The idea of "Closing-the-Loop" in excreta and waste management is not new in Africa; it has been applied for many years. Many pilots schemes for municipal composting (with source separation of refuse) and household composting latrines (in cases where re-use of stabilized excreta is advocated strongly) has been tried with little follow-up. Experience, so far, shows little has been achieved in many previous donor-driven attempts at promotion of ecosan in Africa

But there appear to be opportunities for increasing demand for ecological sanitation in areas where households face environmental challenges. Physical conditions, especially geo-hydrology (e.g. hard-rocky terrain, high-water table, and water-scarce semi- arid areas) can have a direct impact the type of sanitation technology that will be selected by households.

This paper presents field examples from Dar-es-Salaam – Tanzania, Kisoro-Uganda, and Accra-Ghana that demonstrate circumstances which would favour the selection of ecosan facilities over the current sanitation technology.

Households have tackled high water-table in Dar-Es-Salaam by building cesspits and latrines above ground and using pit-emptying trucks at high costs. In Kisoro, rocky and fissured formations made digging for latrines or sewers both difficult and expensive ; these same conditions also threatened direct pollution of scarce groundwater sources. In Accra, many households depend on improved VIP latrines but the high coastal water-table and building congestion in some areas remain a challenge.

In all these examples, retrofitting ecosan facilities to existing structures (with chambers above ground ) is relatively easy and avoids the need for digging in difficult conditions. The easier handling of properly sanitized excreta also makes such facilities attractive alternatives to what households have tried themselves.

On the other hand, there are factors that, for now, limit the use of the full range of benefits of ecosan facilities. In the few examples in Africa, re-use of urine is not important<sup>2</sup>, while in a number of cases costs are not within the means of poor households even though subsidies are provided, and ecosan tend to be promoted more in small towns and rural areas.

These positive and negative experiences need to be put together within an overall

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<sup>2</sup> Ingvar Andersson, March 2001 Ecosan Roundtable 1 Discussions, Nairobi.

strategy for improving sanitation coverage.

For example, areas where geological conditions constrain use of “traditional” latrines could be the focus of a major marketing push for ecological alternatives. Similarly, countries who are supporting an “upgrading approach” should be exposed to the upgrading potential of ecological latrines. The promotion of ecological sanitation as an appropriate solution for poor and crowded urban areas requires much more effort. Options for communities who do not yet see the need for urine re-use also need to be explored.

The experience also teaches us that the special attributes of ecosan need a critical look so that promotion is targeted at areas that can generate replication.

In presenting the full potential of ecological sanitation, there is the need for a shift from the often cited simplistic picture of closing-the-loop as that of excreta storage to land application.

To meet wide acceptance of the concept requires that all the activities that occur within the loop segments are explored and the different stakeholders identified. In this way real-life factors that influence the marketing of ecological sanitation will be appraised and verified.

## **Conclusion**

There is a major challenge to reach over 400 million people without access to improved sanitation in Africa. Meeting this challenge will require actions which create better institutional environments to promote the development and spread of alternative technologies, the growth of the private sanitation sector and the creation of national and local channels for discussing the need to balance environmental concerns against individual demands for sanitation.

The focus should not be to construct more ecological latrines but to enable households to make informed choices from amongst an appropriate range of options including ecological latrines.

More work is needed to analyze country-level experience and build linkages between technology, policy and strategy. Promoting ecological sanitation needs to be located within an overall strategy for marketing sanitation as a whole.

WSP will play a significant role in filling these gaps. Through its established networks, ability to create partnerships and advantage of field presence WSP will support the research, the establishment of networks and development of databases for reference and knowledge sharing in some of the following areas:

- Segmentation of the sanitation market and identification of key interventions to promote its growth and development;
- Balanced review of technology options, production of revised manuals,
- Promotion of partnerships and links between stakeholders
- Policy development and scaling up
  - Placing ecosan within a range of policy and institutional options to improve sanitation coverage
  - Supporting large scale investment programs by including ecosan options.

The Water and Sanitation Program has initiated a study into how technologies used in a number of past projects may have influenced excreta re-use. The study will add to our knowledge on how technologies are linked to re-use and sanitation promotion in general, as well as providing better insight into the issues around ecosan promotion and use.