

## **Abstract: Third International Conference on Ecological Sanitation**

<b>Title</b>	<b>Ecological Sanitation in Guara-Guara</b>
<b>Keywords</b>	
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### **Ecological Sanitation in Guara-Guara**

#### **Introduction**

Although previous sanitation literatures in Mozambique describe various sanitation alternatives including the skyloo kind and others classified as ecological, skyloo facilities were constructed in 2001, in Dondo, Sofala Province. By that time the Program for Rural Water Supply and Sanitation in Sofala (PAARSS) funded by Austrian Development Cooperation, designed a versatile squatting model of urine-faeces diverter concrete slab that was used to construct the first 8 public dry latrines in 3 schools and 1 health centre in Dondo Municipality.

With funds from Beira Rotary Club, 4 geminated ecological toilets were latter constructed for homeless people in Madjimane village, a suburb within the city of Beira. A larger scale ecosan project, with 210 toilets, was later implemented by PAARSS in 2003, in Guara-guara, Búzi district, also financed by Austrian Development Cooperation.

#### **Why Guara-Guara?**

The emergency situation caused by floods of Búzi River in 2000 displaced around 4000 people within the district of Búzi, and forced the PAARSS team to extend the ecosan initiative to Guara-Guara resettlement area where pit latrines were considered a threat to public health since water supply is provided by the groundwater source, in an area where the average groundwater table is less than 1.5 meters deep.

Post-emergency challenges targeted to improve peoples' livelihood through providing of adequate water and sanitation facilities, made the project in dialog with the displaced communities add a bathing compartment to the original eco-latrines skyloo model. Hence the project designed a model not only to provide basic sanitary infrastructures but also at same time introduced people to domestic water resources protection and management.

#### **Introducing the Ecosan concept**

The solution to the Guara-guara sanitation problem was considered in February 2000, when an Emergency Water and Sanitation Committee was created to address the needs of water supply and sanitation during acute emergency in temporary camps.

In the subsequent stabilized emergency phase, when the Government decided to resettle the displaced people in a safer place, PAARSS was called in to introduce integrated durable and sustainable solutions to water supply and sanitation.

Since the ecosan solution in the beginning looked like an expensive solution the project partners hesitated but when the communities were given an opportunity to participate in the

planning of the resettlement area they gave highest priority to an sanitary solution that would not pollute the ground water.

### **Training**

Seven local activists and ten local constructors were trained on-the-job to facilitate the awareness campaign and hardware construction. The task of the activists was also to continue to supervise the proper use of the infrastructures.

### **Getting stakeholders involved**

Any sanitation alternative in this area of Mozambique is usually regarded with suspicion, as people fear to have culturally conflicting sanitation concepts. However, Guara-guara people accepted the new skyloo toilet peacefully because model was elaborated according to their own needs. On their search for alternatives to pit latrines they started piling up soil instead of digging; the project took that idea and discussed with beneficiaries the technological options.

PAARSS hired a local consultant to prepare three different models of squatting toilets with a bathing compartment, which were submitted to Guara-Gura Community approval. The chosen model was later developed and implemented with local artisan supervised by the consultant.

Prior to peoples' decision, the idea was thoroughly discussed at provincial level with technicians working within the directorates of Agriculture, Environment, Public Works and Housing, Sanitation and Health issues. The Búzi district authorities were then taken on board when a half-day seminar was held in Búzi.

During the community consultation phase, the contribution of beneficiaries to the project was also discussed. It was agreed upon that every family should collect sand, stones, make blocs, dig the toilet foundation, and supply water during the construction.

### **Project cost and duration**

The project had a time span of 9 months, August 2002 – April 2003. The total amount spent was US\$ 117,000:- approximately, distributed as follows:

**Table – Cost distribution per activity**

<b>Activity</b>	<b>Total US\$</b>	<b>Beneficiary</b>
200 Family toilets	78,940.9	200 families
10 Public toilets	7,000	400 families
Community Education	10,398.6	400 families
Consultancy	13,982.	Project
Supervision	6,215.59	DAS/Project

In this acceptance, the average cost per family was US\$ 488:- for the 200 families, corresponding to an investment per capita of about US\$ 81:-.

In collaboration with UNICEF it will be possible to cover the settlement 100% . Additional 200 latrines has been constructed by local artisans and the activists support families with problems.

### **Recycling**

The model was not conceived in an attempt to not contaminate the ground water in area

where cholera is endemic.

The focus during the implementation was not the reuse but convince the communities of the safety of handling of the excreta. Urine and grey water from the bathroom was from the beginning being infiltrated to the sandy soil and when one of the chamber were full the excreta was burnt.

Since the model now has been accepted and the usage of the facilities is the appropriate, the provincial, and district authorities have capacitated extension worker in the principles off ecosan. Small experimental plots for producing vegetable, maize and sweet potatoes are now introducing humanure and ecofert.

Student in public heath at the Catholic University is starting a yearly health survey in the African community with 100 % coverage of EcoSan.

### **Expansion**

The cultural acceptance of the technical solutions has been recognised as a sanitary solution for areas where pit latrines are not recommended according the national standards. The strive of all involved from government to local artisan is find a model which is more affordable for the single family .In peri-urban area the model is solicited by individuals who want to invest in their domestic infrastructures.