



# F · I · E · L · D · N · O · T · E

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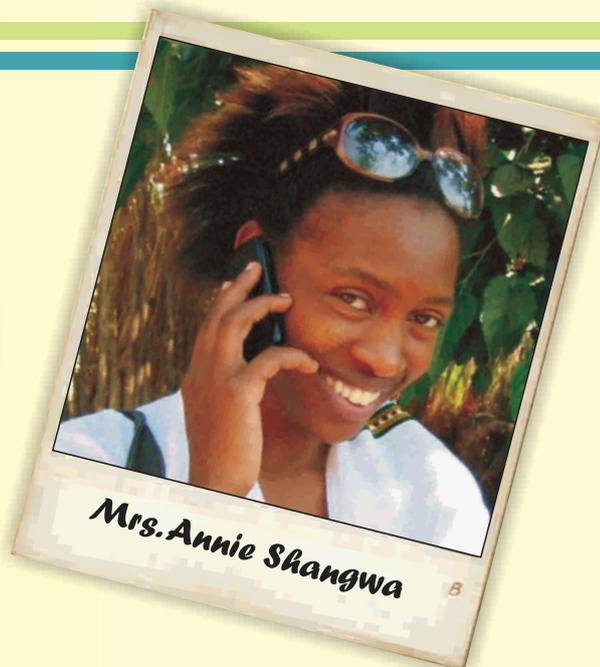
## Teaching ecological sanitation at the Chisungu Primary School, Epworth, Zimbabwe

All photos courtesy of Aquamor



# Teaching ecological sanitation

at the Chisungu Primary School,  
Epworth, Zimbabwe



“ *WJN-SA in conversation with Mrs Annie Shangwa on their ecological sanitation at the Chisungu Primary School in Epworth, Zimbabwe* ”

## Tell us about the Chisungu Primary School

The Chisungu Primary school, one of the largest in Zimbabwe, with an enrolment of 2400 pupils, has been involved as a field base for testing and evaluating water and sanitation technologies since the early 1980's. It is one of a number of primary and secondary schools located in Epworth, a peri-urban settlement close to Harare, which serves over 100 000 people.

## What is the status of water supply, sanitation and food security in Epworth?

Soils in Epworth are sandy and poor, and the piped water supply unreliable. Most families rely on their own shallow wells as a supply of domestic water. The schools rely greatly on a hand pump supply, the Zimbabwe Bush Pump being fitted over wells or boreholes. Families in Epworth rely on either pit toilets or Blair BVIP toilets for sanitation. At the schools, multi-compartment Blair VIP toilets are used. The Bush Pump and Blair VIP toilets are national standards promoted by the Government.

Most families manage their own vegetable gardens and grow maize during the rainy season. Families are poor and often unable to invest in fertilizer. However the residents in Epworth are resourceful. There is a brick making industry and entrepreneurs of all types operate there.

## How did this project come about?

In 2008 a decision was made to investigate practical methods of introducing the concept of ecological sanitation to a school in Zimbabwe, in collaboration with the EcoSanRes project at the Stockholm Environment Institute in Sweden. The school environment was chosen since schools are the major centres of learning worldwide, teachers enthusiastic and pupils eager to learn new things. The school is an obvious choice for spreading new ideas. The project was seen as a research and pilot study – to evaluate what could be done in a primary school setting.

## How is it being implemented?

By choosing dedicated teachers, encouraged by a supportive

Headmaster, pupils chosen from the 6th and 7th grades, over a three year period have shown us that they are able, with support, to build a variety of toilet types that function well. Also that the recycling of urine, for instance, leads to significant increases in the production of maize and green vegetables and even trees. Currently urine (tapped from the boy's urinal) is being used to increase the growth rate of a woodlot of gum trees and a plantation of banana. In garden experiments at the school the usefulness of urine as a fertiliser has also been shown to accelerate the growth of a variety of green vegetables.

## What is the feedback from the community?

In two large open days the parents and interested members of the surrounding community and local dignitaries and government officials have been most impressed by the pupils achievements, particularly at construction, using bricks, concrete and other building materials, and also in their knowledge on how to increase the growth rate of plants using urine.

The project has been viewed by several senior government officials, but has not yet been appraised by the department of education.

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**In many communities urine and human excreta are treated as taboos, in this project did you experience any resistance from both parents and the learners?**

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When we started with the project the community was a bit sceptical, just by hearing the subject of 'urine' so we had to carefully explain deeply about how urine is used and the benefits acquired from the urine. They found it easy to accept because their children had experimented with it.

The use of urine has not been met with resistance, once the usefulness of this nitrogen rich product has been proven in school and garden experiments. When urine (or compost) is handled, thin rubber gloves are used for protection. Some families in the outreach program now use urine to help their crops.

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**What are the main benefits of this project to the community and the learners?**

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The benefits to those involved are clear to see. Once a new toilet has been built, not only have the skills been passed on to a younger generation, but a working and valuable "monument" to their skills has been put to work and is constantly in use.

Not only that. Valuable trees are also planted in association with the toilets, so that when mature they can provide fruit or fuel or building material. In Zimbabwe household VIPs are also used as bathrooms. In this new approach, where the

types of toilet built at the school can also be replicated in the homesteads, the toilet becomes a multi-purpose unit. There are variants which make compost and also those which promote a rapid growth of trees nearby. There is an economic return for the investment of building a toilet. Even growing more firewood using a locally available nutrient makes good sense.

The school and the surrounding environment are being used, not only as a training ground for pupils but also and most importantly as an experimental test site for new ideas in sustainable and ecological sanitation. These field trials are regarded as an important part of the process. It is in effect a research site, with innovative ideas being developed and tested.

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**How do you ensure that the project is implemented in an integrated manner and use local resources?**

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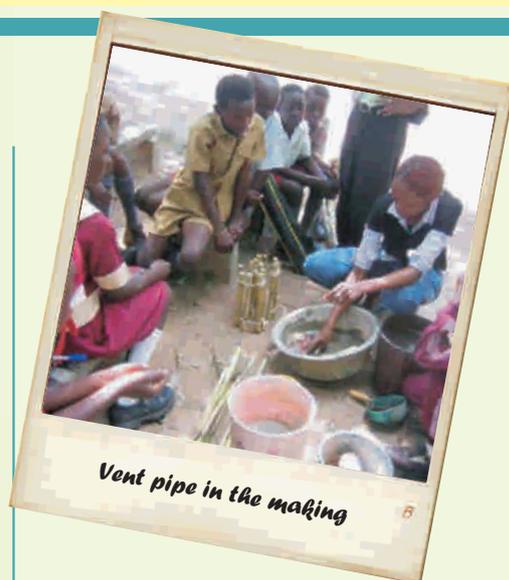
Where possible, local resources are used. Local bricks, local anthill mortars, thatching grass and other locally available materials are used to reduce costs and make things more traditional. The work is coupled with improving water supply as well. Several upgraded family wells have been built, where water quality and safety are improved. Also the maintenance of the pump head of the school hand pump is undertaken by the pupils.

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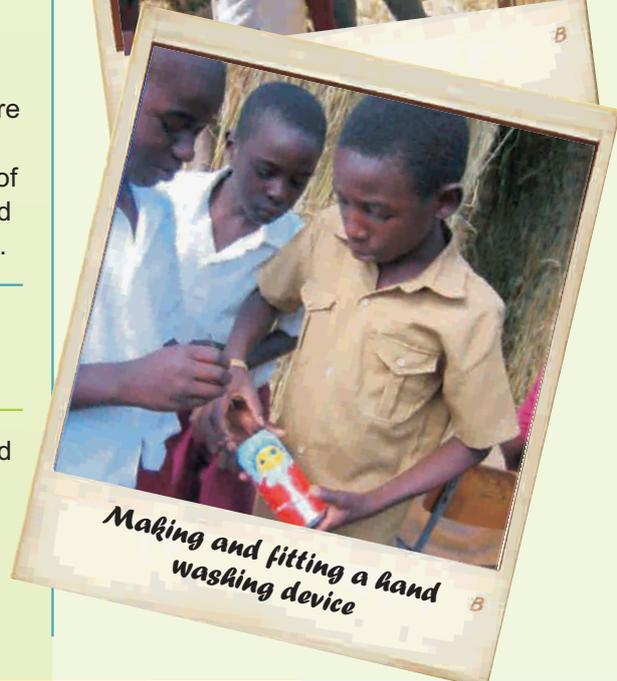
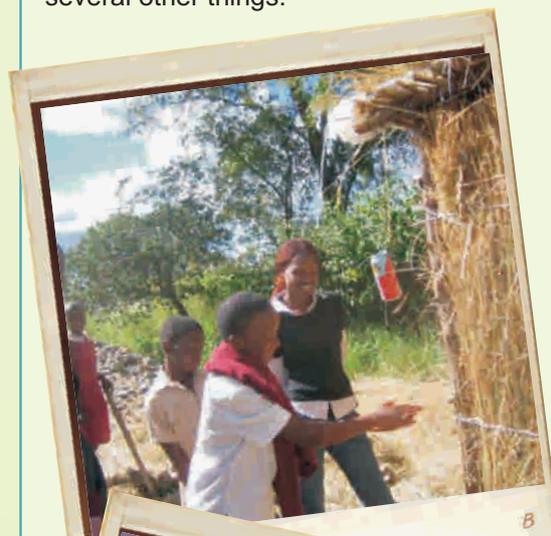
**Is Health and Hygiene part of the project?**

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Yes, the promotion of hygiene and hand washing is strongly promoted in the project. Recently the pupils won a prize at a local event when they demonstrated



how they make and use the simplest and most effective hand washing devices from discarded alloy cans. The pupils have also been taught methods of making pedestals, roofs, concrete slabs, pit lining methods, toilet super-structure construction amongst several other things.





*Moving the slab on to the ring beam*

### Why is it important for you to work with children?

They represent the future generations of Zimbabweans – which we all hope will have a bright future. They deserve encouragement and a good chance to do well for themselves. I also enjoy working with the women headed families. They play such significant roles in the community.

language, it's easier for me to relate with the kids and local people. It's easier for me to pass the information and communicate and for the children, it's easier for them to understand the concept and be able to interact and ask questions.

I gave an introductory lecture at the start of the project. From then on it was all practical in the school grounds. We like practical things in our lives – not theory.

It is the hands on and practical things that count most as important to us.

### What are some of the challenges and success of the project?

Well, we have done something good at one school, what about all the other thousands. We have written up a great deal about what we have done, and have started to distribute this information on CDs. We feel this is a research project – it is a pilot to see what can be done. We hope that others will be encouraged by our efforts and may do the same in their own schools or with support from the government or the NGOs.

The work will be a success if it really works well enough to be replicated successfully elsewhere. It is very practical and hands on. People learn by doing.

### And what About the Gender Roles?

Both girls and boys participate equally in the project. The role and involvement of the school girl is seen as an important issue to strengthen, and most of the outreach sites where the project works have women headed households. The role of girls, and women and “grannies” is seen as very important in this project. However the boys play an important part too. The project has revealed that amongst the pupils there are some real star performers when it comes to construction skills.

### The power of learners (the pupils) as agents of change.

Pupils are the leaders of tomorrow. This also helps to boost their self esteem.

Kids are easy to teach because they can easily adapt and are not resistant to change, they are eager and open to new ideas. They've got no old funny ideas “bolted” to them like grown-ups. They are not bound to old tradition and ways of doing things. Hence, they are quick to try out new things and adapt easily.

The parents have seen and learned much themselves from the involvement of the pupils and what they have done at the school. If school pupils can do it, then why not the grown ups!

Simple and useful ideas catch on if they are seen as valuable and especially if there is an economic return for the effort.

### What motivated you to work with the school children?

I am not a teacher by training, but I have been involved with teaching ecological sanitation for several years not only at this school but in the rural areas. I enjoy teaching children and passing on the knowledge that I have built up over the years.

### You conduct your lessons in Shona?

The power of Shona as a medium for communication is important. It's easy for the pupils to understand because it's their first language. English being my second

### Mrs. Annie Shangwa

#### About our organisation

I work for Aquamor, a small research and development organisation based in Harare. Its role is mainly experimental, trying new ideas in the field of low cost sanitation and water supplies.

#### Contact details

Mrs Annie Shangwa:  
 annie.shangwa@gmail.com  
 Peter Morgan:  
 petlin04@yahoo.com