

# **Innovations in Water and Sanitation**

Promoting ecological sanitation in Ethiopia through the ArborLoo latrine

## What is an ArborLoo?

The ArborLoo is a simple toilet costing between \$5 and \$8 that households can construct on their own. It is one of several components of ecological sanitation (Ecosan) -- a revolutionary approach that views human excreta as resources to be utilized rather than as wastes to be avoided.

Consisting of a shallow pit and a simple privacy structure, the ArborLoo has become popular in part because the design suits various cultures. Women in particular appreciate the privacy and ease of construction.





A man washes his hands after using his ArborLoo in Tuka Langano, Ethiopia. Photo: Andrew McConnell



A boy stands beside his ArborLoo in Bedossa Betella, Ethiopia. Photo: Andrew McConnell

## How does it work?

Designed by Peter Morgan of Zimbabwe especially for African conditions, the ArborLoo is the simplest of all ecotoilets. A pit measuring 80 centimeters deep and 60 centimeters wide is dug, then dry leaves are added to the bottom and a concrete slab is placed over the opening. After each use, a cup of soil and wood ash mixture is added to encourage composting, reduce smell, and discourage insect breeding. A very simple structure can be added above for privacy.

The toilet is used by a household for one year and then the slab is removed, the pit is topped up with good topsoil, and a fruit tree seedling or other crop is planted in the topsoil. As the roots grow downward into the pit, the seedling takes up rich nutrients, which result in a very healthy tree that produces in abundance.

In Ethiopia, local farmers have elected to make the pits smaller and use a toilet site for only about four months, so that they can speed up the planting of seedlings.

#### What is CRS doing with ArborLoos?

CRS/Ethiopia and its partners have explored ecological sanitation as an option since October 2004. Partners have been carrying out latrine trials in local partner compounds, rural households and schools, as well as crop trials on the various sanitation options. Of these, the ArborLoo has proven to be the most popular. In 2006, CRS began promoting it in all project areas, while still educating about other aspects of ecological sanitation. By the end of 2008, nearly 40,000 rural households had chosen to construct ArborLoos and about 75% of these were among Muslims. Many communities achieved 100% sanitation coverage in areas that had 1% or less before the project.

The ArborLoo is successful because:

- its design addresses past obstacles to sanitation
- its construction is simplified, reducing financial outlay and construction costs
- it emphasizes marketing and participatory efforts
- it increases the output of additional organic fertilizers
- it promotes sanitation by "positive association"

With a population of over 78 million, Ethiopia still counts many households in need of assistance. The Government of Ethiopia does not endorse subsidies for sanitation and therefore households must purchase slabs and pay other building costs. Many private artisans have been trained to make the small slabs for the ArborLoo, but materials are often hard to come by. Project partner organizations still have to assist in getting materials, and often have to cover



Young tree growing in an ArboLoo pit. Photo: Mayling Simpson-Herbert

the cost of slabs for the poorest families. Slowly, however, the ArborLoo is becoming a part of Ethiopian rural culture by providing a payback for efforts made.

### Looking ahead

The success of the ArborLoo latrine in Ethiopia is now being replicated in other CRS country programs in East Africa, especially Kenya, Tanzania and Uganda. Increasingly, the concept is being used in sub-Saharan countries in West and Southern Africa. Most proposals for water and sanitation activities include the ArborLoo as one of several options for latrine design. Its low cost and simple design are particularly attractive in countries where community-led sanitation concepts are being adopted. A key aspect of successful ArborLoo promotion is community education. The need to understand the health impacts of basic sanitation, the value of human excreta to household agriculture, and the simplicity of the design is crucial to the introduction of this concept. The Ethiopian experience illustrates the importance of promotion and education as the basis of community acceptance. CRS will continue to introduce the ArborLoo concept in areas where basic sanitation is lacking and, at the same time, maintain support to programs where this method has begun to take root and generate growing demand from communities.