The Global Water Initiative
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BRIEFING NOTE

Breakthroughs with Arborloos in Ethiopia

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The Arborloo: How it works

Catholic Relief Services (CRS) and local partner Meki Catholic Service (MCS) are working with poor rural communities in Dugda and Bora Districts of the Great Rift Valley in Ethiopia through the Global Water Initiative (GWI). These are arid areas characterized by degraded land masses and growing natural resource management issues such as deforestation.

Planted seedlings on a filled arborloo pit

The target communities are Oromo people who have mixed agricultural- and livestock-based livelihoods. Communities generally lacked awareness about Water Sanitation and Hygiene (WASH). Open defecation was a common practice which especially impacted the health of children under five years old as the prevalence of intestinal parasites and diarrhea are very common in this age group.

To combat some of these challenges, GWI partners introduced Ecological Sanitation (ecosan) latrines called arborloos. An arborloo is a latrine of relatively shallow pit depth (up to 1 meter) with a cement slab placed on the pit around which a mobile wooden structure is built for privacy. Ash and dried soil are put on top of waste after each defecation to increase the ph balance for faster decomposition and moisture absorption. This also helps to eliminate flies and bad odors from the area. Dried soil helps to kill substances that cause disease and also increases the pace of decomposition. The combination of ash and soil with human waste produces quality compost with high nutrient value, which can be used as fertilizer to enrich plant growth. After an arborloo pit is filled with waste (usually about six months for one household), the slab and surrounding structure are moved to another area and placed over a new latrine pit. The compost needs about six months to allow for elimination of dangerous organisms that cause disease. Once the fertilizer is ready, seedlings are planted on the pits, usually indigenous fruit trees such as papaya or mango, or vegetables like tomatoes. Depending on what is planted, the timeframe for agricultural yields ranges from three months to two years. This is faster than average and production rates are observed to be three times higher than normal due to the nutrient-rich fertilizer.

The slab is placed on the pit after excavation

Promoting Arborloos in the Community

In order to support overall community transformation related to environmental and domestic WASH, the program worked with established community governance structures to promote the arborloo as an eco-friendly waste disposal option with the added benefit of providing compost for fertilizer. These structures included lower level government bodies and community-based organizations called *Iddirs, Mehaber, Abagedas*, and *Bokkus*. *Iddirs and Mehabers* are social solidarity groups established to support members during hard times (such as death or illness) while *Abageda* and *Bokku* are strong groups in Oromo culture that address issues such as dispute resolution and advise the community on important matters. The program also created strong linkages between project animators, government health extension workers, and development agents to promote arborloos through community members with an established presence and trust within the community. Partners created demonstration sites for arborloos near community water points to promote

learning and interest while people collected water. Once the program generated enough community interest through demonstrations and other awareness-raising activities, partners provided households with slabs for the arborloos. A 'first come first served' approach was adopted in slab provision; slabs were only provided to households who dug pits first. Creating a pre-condition for slabs stimulated competition among households and interest to take part. In order to assist households to most effectively use arborloo fertilizer, GWI staff provided technical support on seedling plantation, care, and reproduction.

Excavated arborloo pit

Based on an assessment study conducted in March 2011, the following key findings show that communities are readily adopting arborloos, expressing satisfaction with this choice, and experiencing positive outcomes.

- A random observation in 24 sample households indicated use of arborloo as the preferred latrine option. Some households had even constructed another separate arborloo for children and made their own slabs out of stone. This shows high potential for communities to use locally available materials to replicate and expand the number of arborloos independently.
- Households who are using arborloos correctly are acting as role models and teaching fellow community members about arborloos.
- Focus group participants reported the arborloo as their preferred latrine type due to the relative ease of construction, the benefit of fertilizer production, strong durability of the cement slabs, and the mobility of the slab to new latrine sites.
- An impressive number of fruit trees and vegetables such as papaya, mangos, tomatoes, and avocados have been planted on old arborloo pits and are currently healthy. However, focus group participants reported that there is limited access to seedlings and they are reliant on the program to provide them. When people don't receive seedlings on time, they are slow to move the slab and structure from filled arborloo pits onto new pits.

Lessons and Recommendations

Existing community governance structures such as *Iddirs* serve as useful entry points for arborloo promotion. The active collaboration of these entities has been remarkable and their support is very valuable to achieving intended impact through GWI.

Shrubs and dried sticks make a mobile privacy shelter

The program can do more in Phase II to strengthen these groups to be even more effective at arborloo promotion. The approach of having the program animators live in the communities and work closely with government health extension workers has also positively contributed to success in regards to arborloo adoption.

Using the water points as demonstration sites for arborloos proved to be an effective technique to promote ecosan adoption. In addition community experience sharing on arborloo use is a cost effective and useful means of knowledge transfer and ecosan promotion. The next phase should reduce or eliminate subsidization of slabs and explore ways to address sustainability of this project.