Smokeless Stoves Project in Geita, Tanzania
3rd Project Report

Project Goals
The main aims of this project are to build 140 smokeless stoves in seven villages in Geita, to train 70 youths to build smokeless stoves and to increase community awareness of local environmental issues, including regeneration. This project will directly benefit 140 households in Geita and indirectly benefit a further 20,064 community members in the Ihanamilo ward.

Youths preparing to construct the Mkombozi 1 Stove whilst listening to a technician

Overview of activities to date

A feasibility study was completed on the villages in Geita and presented to Plan Tanzania's office in May 2009. This included the sharing of a Memorandum of Understanding (MoU), between Plan and the selected implementing partner – GTZ ProBEC (Programme for Basic Energy and Conservation). Importantly the report highlighted a need for an additional pilot phase to evaluate the following, before a full scale roll out:

- The design of the best smokeless technology (both stove and ventilation) and fuel for use in the stoves
- An awareness programme to educate men and women on the health and environmental benefits of cooking on smokeless stoves, in order to improve adoption and sustainability of the project

Pilot Testing Strategy and Activity Plan

On the 26 August, Plan Tanzania and ProBEC organised a meeting with key partners to discuss the project strategy and how to best meet the overall goals of the programme. The meeting was held at Plan Tanzania's conference room in Geita and was facilitated by Mr A Ndilanha, ProBEC's National Coordinator. A further five people attended including; two representatives from ProBEC; two from Plan Tanzania's Geita Office and a final representative from Tanzania's Society for Agricultural Education and Extension.

The main objectives of the meeting were to familiarise ProBEC with the project goals and to agree a strategy for the pilot testing. The meeting also provided the opportunity to present six types of stoves for consideration. These are detailed below:

Rocket Stove

- ProBEC presented the '**Rocket Stove**' – portable and fixed. The benefits of this when compared with the three stone stoves, are on average a 50% fuel saving, when compared with three stone stoves (existing). They are smokeless and should last for around 2-3 years if constructed well and used correctly. The materials used in the construction of the ProBEC stoves are brick, cement, lime, grog (crushed brick), sand and water. The estimated cost of producing the Rocket Stove is Tzs 13,000 -18,000 (£5.92 - £8.20)*.

Mkombozi 2 Stove

- TaTEDO presented two types of stove the **Mkombozi 1 and 2** – both fixed types. The benefits of this when compared with the three stone stoves are it saves, on average, a 50% fuel saving. They are smokeless and should last for around 2-3 years if constructed well and used correctly.

  The materials used in the construction of the **Mkombozi 1** stoves are bricks, clay, anthill soil, grass (Mlenda), cow dung, water and ashes. The estimated cost of producing the stoves is between Tzs 3,000 - 3,500 (£1.37 - £1.60). The **Mkombozi 2** uses only soil and therefore only labour costs need to be taken into account at Tzs 0 – 500 (£0.23).

- **United Nations Development Programme (UNDP) -** ProBEC's National Coordinator informed the meeting that UNDP had previously supported the construction of mud stoves in Kigoma. It was understood that the UNDP had used a modified version of the TaTEDO Mkombozi 2 type stove in Kigoma, to meet the cooking requirement of the local people. It was therefore agreed to test the technology in Geita too, under the free technology introduction scheme. The materials required include clay, anthill soil, slippery grass (Mlenda), cow dung, water and ashes. The estimated cost of the UNDP brand of stove is Tzs 0- 500 (£0.23), as only labour costs need to be taken into account.

* Note in Oct 09: 1GBP = 2,196.54 Tzs

- EAETDN presented the **Upesi Stove** and **Shingela Stove** - both of these stoves are portable and made of clay, which would usually be fired using local kilns. In addition to clay, this brand of stove requires slippery grass (Mlenda) and water. The cost of creating these stoves hasn't been estimated, as it was agreed to buy ready made stoves for pilot testing at Tzs 2,500 (£1.14). If they were successful during pilot testing, arrangements would need to be made to produce them in the project area. Please note that the Shigela Stove is the same design as the Upesi, but larger in size.

Shigela Stoves

Project Activities - August

The meeting of the 26 August recommended five of the above brands be introduced in **three selected villages** within the project area, as part of the pilot testing phase. In additional to this, ten youths (aged 15-35) per pilot village, would be chosen as trainees and these 30 would then form part of the overall 70 selected for this programme. After pilot testing, the villagers will select the type of technology that performed the best and this will then be rolled out to the whole project area.

The strategy recommended by the meeting also included the following elements:

- Three prototypes of each of the five technologies would be introduced in each village, a total of 45 - 48 stoves. The stoves used for pilot testing will not be included in the total number identified for the overall roll out.

- A suitable area to be used as a site for comparison testing (outside of the villages). In this area one stove of each brand would be constructed and all stoves would be of the same size. It was agreed that an evaluation meeting would take place at the comparison site, where cooking tests would be conducted to compare the five stove types. During the cooking tests all stoves would cook the same amount and type of food. Participants attending the evaluation meeting would include representatives from the households with pilot testing stoves, representatives from all seven villages, experts from project implementing partners and invited guests. This evaluation meeting would then recommend the most suitable stove technology for the roll out phase.

- Posters for each brand would be created and displayed during the evaluation meeting to raise awareness. It was agreed that Plan Tanzania would prepare the criteria and circulate the posters.

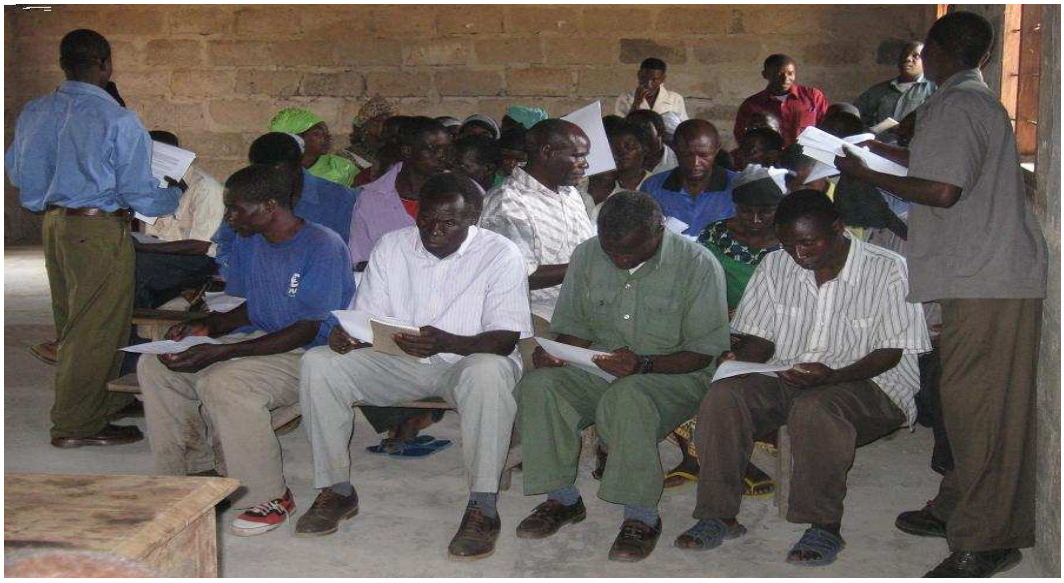
- To conduct awareness raising meetings in all villages for the pilot testing and roll out phases. These meetings would be organised by Plan Tanzania. During these meetings the potential trainees would also be selected based on agreed criteria. Some of the criteria proposed included:

    - Masonry – has construction knowledge and skill
    - Willingness to volunteer
    - Accepted by the community
    - Aged 15 – 35 years of age

- Monitoring of the pilot testing would be carried out by Plan Tanzania in conjunction with respective partners where required.

Recent Activities - September

On the 2nd of September 2009 a meeting with Ihanamilo extended Ward Development Committee was held. It was during this meeting that the three pilot villages were selected; **Mwagimagi, Nyanguku and Bunegezi**.



Meeting with Ward Development Committee

Throughout September awareness raising meetings were scheduled, where Village Executive Officers were tasked to ensure that all village members were made aware of the effects of indoor air pollution and kitchen ventilation improvement, with the help of a representative from the District Medical Office. They were also made aware of other project details, including the criteria for them to select the 30 youths who would be trained on how to construct the community's preferred pilot tested stoves.

Plan Tanzania drew up the list of selected households and of suitable trainees and the introduction of the pilot testing took place in the last two weeks of September, after all materials were prepared. For ten days after the introduction of the stoves, during the drying period, monitoring will take place and a report on the status of the stoves will be completed.

Between the 27th and 29th of September, Plan Tanzania prepared the pilot testing evaluation criteria and organised a suitable time for a meeting to discuss the progress of the pilot testing phase.

Youths constructing Mkombozi 1 under supervision

A villager with her stove made for the pilot testing phase

Future Activities

Training will take place throughout October/November, to ensure that all users know how to correctly operate their newly installed stoves. The trainees and their stoves will continue to be monitored for five weeks to ensure all stoves are being used properly, so a fair evaluation can take place.

By the 13th of November a meeting will be planned to agree the roll out phase of the stoves and the project should be completed by the end of 2009.

Budget to date

Exodus has raised £18,429 of the total project budget of £21,697

Thank you for your ongoing support!

Registered Charity Number: 276035