RUN FOR WATER
LIVE EARTH

PRACTICA
FOUNDATION

Practica Foundation is the selected beneficiary water project for all donations raised on Dow Live Earth Run for Water- Dar Es Salaam, Tanzania

Background on Practica Foundation

Practica Foundation is officially registered as an NGO in the Netherlands at the chamber of commerce under number 09119363. They also have an official registration in Madagascar and are in the process of registering in Ethiopia. PRACTICA Foundation develops and disseminates low-cost appropriate technology in water and renewable energy in developing countries. The PRACTICA Foundation aims to facilitate research, development and commercial application of technology in the field of water and energy in developing countries. **The mission of PRACTICA** is poverty alleviation through dissemination of best practices and development and promotion of appropriate technologies and services. **The values of PRACTICA** are focus on the poor, use of proven solutions and innovations, adoption to the local context and engagement of the private sector.

Improved water supply in Tanzania- Background

The current method of water supply in Tanzania, but also throughout Africa is mostly done by expensive machine drilling. They are suitable for water supply in large towns or in areas where groundwater is too deep or geology is too hard. However, a large part of the local population lives in rural areas and could not be reached by these heavy machines. This is partly due to the high costs, but also the low priority in donor projects.

Furthermore there are dug wells, but they are vulnerable to pollution, collapse and annual fluctuation of the groundwater and provide only a small amount of water per day. In these areas it is often possible to do manual drilling (borehole with PVC casing) and create high quality wells at low

cost reducing the price of a well by a factor 4-10. With manual drilling the capacity and knowledge is transferred to local drilling teams. It uses affordable materials and tools that are locally available, and can be repaired, constructed and maintained locally. With this strategy, much more water points can be made for lower cost, while knowledge is transferred and remains in the country, especially if donor project are finished.

Project goals in Njombe- Iringa

- The main goal is to create 20 functioning safe water points for 3000 rural people.
- Technical training to field partner SHIPO and drilling teams to improve the current well
- Construction and well development. This will improve the water quality, quantity and hygienic use of new drilled wells.
- To ensure sustainability for upcoming drinking water projects by investigating the water quality of wells after drilling with low cost drilling fluids during several stages of well development and disinfection.
- Build documentation of proof on using low cost drilling fluids which will ease the acceptance of manual drilling in large scale capacity building and water supply projects.

The project (1 year) aims to start mid-2010 in Njombe, Tanzania with the field partner SHIPO and support partner PRACTICA. Contacts with Universities, local authorities and laboratories are in place enabling field assistance and direct project implementation. Currently SHIPO is using manual drilling teams to drill affordable drinking water wells for rural communities in a range of 100 km around Njombe. These local drilling teams have previously been trained by PRACTICA.

Affordable water supply in context

The current method of water supply in Tanzania, but also throughout Africa is mostly done by expensive machine drilling. They are suitable for water supply in large towns or in areas where groundwater is too deep or geology is too hard. However, a large part of the local population lives in rural areas and could not be reached by these heavy machines. This is partly due to the high costs, but also the low priority from donors and government projects. Furthermore there are dug wells, but they are vulnerable to pollution, collapse and annual fluctuation of the groundwater and provide only a small amount of water per day. In these areas it is often possible to do manual drilling and create high quality wells at low cost. Knowledge and training is needed to answer this demand to build the capacity of these drilling teams and organizations. With this strategy, much more water points can be made for lower cost, while knowledge is transferred and remains in the country, especially if donor project are finished.

Why manual drilling (boreholes with PVC casing)

- Cost saving: 5-10 times cheaper than a machine of the same borehole depth and quality.
- Better access to drilling sites, remote communities can now be achieved.
- Local manufactured drilling materials, € 2,100 initial investment for start-ups.
- Ready-to-go in emergency situations and in unstable countries.
- Local transportation of drilling equipment is light, easy and inexpensive.
- It creates jobs and knowledge remains in the country, even if donor projects are completed.
- Overcome problems on water quality and quantity in comparison with hand-dug wells.

At Http://www.practicafoundation.nl/services/publications/video-materials/ there is a short video on manual drilling in this context.

Project sustainability

The output of the project has a high level of sustainability, where manual drilling projects are being implemented through local enterprises. These local drilling companies work through the private sector, creating a healthy competitive environment with the machine drillers. It creates employment, and more important; knowledge and continuation of work stays in the country, also when donor projects are finished. In short; machine drilling + manual drilling gives access to water for small and large communities.

Project budget

The total budget to fund this project is estimated at € 55.000 with a few components that are currently being verified with the field partner. This could add or reduce € 5000 euro of the total sum.

Project donors

Currently the project has not been financed; however there are 2 donors (Liberty foundation and Aqua4all) that showed interest to contribute match funding. It is in this light that funding in the country itself through the live earth run for water in Tanzania could be the trigger to have these donors participates in match funding and start this project mid 2010.