



A 10 kW MICRO-HYDROPOWER PROJECT IN KINKO VILLAGE, TANGA REGION

INTRODUCTION

In order to promote small industries in rural communities of Tanzania, United Nations Industrial Development Organization (UNIDO), ETC Netherlands, and Tanzania Traditional Energy Development Organization (TaTEDO) agreed to partner in the efforts to develop, install, and implement a micro hydropower project in Kinko village of Lushoto District in Tanga Region. A plant with a capacity of 10kW has been installed. It is envisaged that, provision of electricity to Kinko village, will assist in poverty reduction through improvement of existing and introduction of new livelihood strategies, which can improve their livelihood assets.



Villagers' participation during excavation canal headrace

OBJECTIVES

The project has set up a Community ICT Development Centre (CDC) at Kinko village in Lushoto District. The CDC is powered by customizing locally available pumps as micro hydro turbines. The objective is also to build local capacities for installation of small scale hydro projects as well as operation and maintenance at local level. This project is also aiming at demonstrating the possibility of generating power using small rivers in off grid localities necessary for sustainable development in rural communities so that it can be replicated to other areas with suitable characteristics



Typical traditional sugarcane juice extractor (mkoroto) for local beer processing can be replaced with sugar cane pressing motor powered by micro electric hydropower.

PROJECT RATIONALE

The project rationale is the productive use of electricity for rural development. It fosters in particular, industrial development and empowers rural communities in capturing unexploited opportunities for development, including among others:

- Establishment of community ICT centre consisting of satellite dish receiver, 3 computers with internet connectivity & printer unit and one TV set
- Replacement of diesel milling machine with the electric machine thus reducing running cost and conserving environment,
- 100 houses are provided with Quality lighting reducing lighting energy source costs,
- merging of SMEs providing local community with employment, such SMEs includes hair cutting and hair

making saloons for both men and women, etc.

- Development of small scale agro processing industries like sugar cane pressing motors used to produce cane juice for local brew,
- Food preservation and packaging,
- Opening up stationeries and secretarial services,
- Telephone charging – already about 30 mobile phone exist in the village,
- Establishing a battery charging station for households not connected to the local grid.

BENEFICIARIES

Villagers, Small and medium enterprises (SMEs) and the school.

ACTIVITIES

The implementation of actual construction of the project started in early December 2005 with TaTEDO playing a big role in surveying and mobilisation of construction materials and workforce. The actual construction started in March 2006. The project was commissioned in July 2006 and official inauguration was held on 21st September 2006 by the Minister of Energy and Minerals. Total project duration is approximated to 6 months.



TaTEDO Engineer installing mechanical joint for holding the penstock



UNIDO Consultant installing control sluice valve



Villagers watching TV powered by the micro-hydro power at the community centre, Kinko village



Canal diverting water to run the turbine



Minister of Energy and Minerals cutting the ribbon to mark official inauguration of the project



Lighting for the village community

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