

## Micro Hydro Project in Garung Village

### Location

Garung village, Indonesia

### Problem

Lack of electricity in rural village

### People

Remote rural village of 107 households

### Solution

Construction of a 15kW microhydro plant

### Timeframe

2001- present

### Results

Electrification of 75 households, a small library and an assembly room, and initiation of income-generating activities, including battery charging services, coconut shredding, coffee grinding and flour and rice milling for Garung villagers and those of a nearby village.

Garung is a remote village on the southwest side of the Indonesian city of Bandung, in which daily village activities center around basic subsistence agriculture. Lack of electricity prohibited connection with the outside world through radio and television, and limited time available to children to study. The village is bordered by a mountain and a small river, largely unutilized prior to the project.

In 1999, with USAID support, Winrock International's Indonesian REPSO, YBUL (the Environmental Business Foundation), initiated a microhydro project with a community development approach. YBUL contracted the Bandung-based NGO POKLAN, who provided community development implementation, funded through the YBUL-managed Indonesian GEF Small Grants Program (GEF-SGP).

In August, 2001, YBUL selected the Garung site, and began planning the project with POKLAN. YBUL and POKLAN gave guidance to the community on forming a community organization, LPKM, facilitated by grant from GEF-SGP.

LPKM donated the land and building materials for the power station, and under YBUL supervision built the powerhouse in early 2002, establishing plant and electricity use regulations, including rates, collection of payments, and penalties for non-payment. LPKM now operates the system, and serves as business and savings & loan units. YBUL partner PT HEKSA built the 15 kW microhydro plant with land and timber from the community, facilitated by a 0% interest loan from YBUL to LPKM.

Electricity from the 15 kW turbine is used to provide lighting for 78 houses, a small library and an assembly room. Each electrified household must pay a monthly fee set by LPKM based on previous monthly kerosene expenditures, plus an installation fee. In return, each household receives three points of connection and three light bulbs.



*Flour milling in Garung*

Capacity not reserved for household lighting (around 7.5kW) is used for income-generating activities, including battery charging services, coconut shredding, coffee grinding and flour and rice milling, both for Garung villagers and those from a nearby village. Through these income-generating activities

community members are able to pay for their electricity.

Since construction completion, YBUL has supported business development and financial aspects of the project, providing technical assistance to local businesses and assisting them in identifying income-generating activities. As cooperatives play a key financing role in rural areas, YBUL has been actively coordinating with the Ministry of Cooperatives (MOC).

MOC has committed to providing about US\$15 million annually for selected credit unions across Indonesia to finance member business activities. YBUL sees this program as a community business financing opportunity, and plans to partner with these credit unions for scale-up and replication of the Garung project, using a revolving-fund approach, and targeting community businesses involving high consumption of electricity/energy with insufficient electricity supplies, and a site with potential for renewable energy resources.