

## **Project Update: July 2010**

Population growth and deforestation linked with it are serious problems in Nepal. Forest – the most important natural resources for rural people, and environmental maintenance – is under great pressure for meeting firewood, fodder, timber, medicines and infrastructure development. The extensive utilisation and increasing demands for forest products has led to its dwindling both in area and quality, which is seen in the forests of protected areas also.

The research was conducted in Mahendra Nagar, Suda and Beldandi buffer zones of the wildlife reserve. Various organisations have implemented alternative energy programmes like solar panel technologies and biogas in buffer zones to reduce the pressure of fuel wood consumption and to enhance livelihood of the locals.

A questionnaire survey was performed in 35 households from the study area. The initial result showed that the most of the respondents were literate and agriculture is their main occupation. Besides different form of alternative energy, they are using firewood, electricity, and kerosene as source of energy. A large portion of firewood is used for preparing livestock feed and also for cooking food. Local people were motivated to use biogas due to scarcity of fuel woods in the village; as well as due to the subsidy rate and health benefits and are positive towards the benefit of biogas. Locals are supported by different organisations both in terms of financial and technical for the installation of biogas plant. The installation of the plant dates back 15 years, though organisations have been promoting it in the recent years only. Studies showed that biogas is not completely able to replace the fuel wood required for cooking but lessens the per capita fuel wood required for cooking by about 55%, thus reducing the dependency on nearby reserve forest. During winter the efficiency of biogas is much less so the locals have to largely depend on firewood for every kind of energy use.

Different organizations like National Trust for Nature Conservation, Western Terai Landscape Complex Project, and Biogas Support Program have been promoting biogas in the communities of the buffer zones. Initial findings showed that the households using biogas is more in the communities residing far from reserve than those adjoining to the reserve forest. If such programme could be made more effective to the adjoining communities, pressure on reserve forest for the fuel wood could be reduced.

After the initiation of alternative energy programme in the study area, locals have felt that the habitat of the wild species has improved and wild animals like deer and wild boar have become common. But birds like eagle and parrot are less frequently seen. This shows that the population of mega wild species has improved; this can be attributed as positive change in biodiversity. Buffer zone user's committee is concerned about the importance of reserve forest in biodiversity conservation. In Beldandi, locals have been establishing a new community forest in the barren land; which acts as management indicator of biodiversity conservation. Alternative energy programme plays a very effective role in the participatory conservation of the forest and biodiversity since they are very effective in reducing the fuel wood demand.