

Pioneering Micro Finance for Rural Access to Clean Energy Technologies

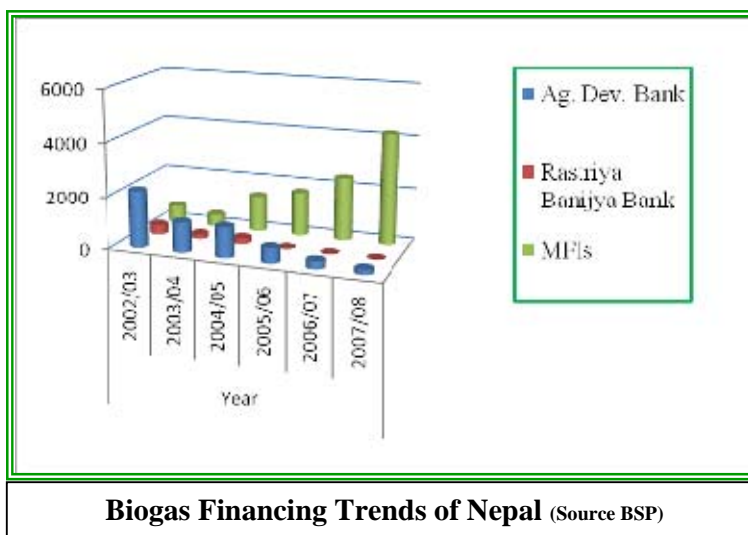
Winrock has pioneered clean energy services for poor households through access to micro finance in Nepal, and supports additional livelihood enhancement by promoting small and medium enterprises using clean energy. Since 2003, Winrock has been working with rural poor households, the government, micro finance institutions (MFIs), energy companies, commercial/development banks to develop market mechanisms for the mutual benefit of all stakeholders.

Through USAID's **Microfinance Capacity Building Program**, Winrock catalyzed construction of more than 5,000 additional biogas plants and 2,000 solar PV systems between 2003-2006. Furthermore, the capacity building program laid a foundation for growth in the renewable energy financing sector. The fundamental objective of the project was to make biogas and other renewable energy technologies (RETs) accessible to rural households.

The capacity building program reached out to over 150 MFIs and six micro finance development banks. MFI loans towards RET financing has exceeded US\$ 1 Million leveraging the total investment of over US\$ 1.7 million. These RET systems have mitigated over 23,000 tons of CO₂ annually¹ by the project



awareness activities. The Clean Energy Development Bank (CEDB) a specialized bank for financing cleaner energy technologies has also prepared its institutional policy and procedures for providing wholesale loans to MFIs. The project has also facilitated partnership between the Bank



Biogas Financing Trends of Nepal (Source BSP)

Winrock trained more than 300 MFIs around the country (2003- 2006) jointly with AEPC and BSP so that the MFIs could access biogas credit fund from AEPC. In fiscal year 2005/2006², AEPC approved around US\$ 1 million as wholesale loan to MFIs.³

In addition to facilitating use of biogas credit fund through MFIs, Winrock has also emphasized the mobilization of commercial sources of financing, and has catalyzed numerous capacity building and

¹ CTP Final report 2006

² The fiscal year in Nepal extends from mid July to mid July.

³ Source Biogas Credit Fund of AEPC

of Kathmandu (BOK), and two leading MFIs, Sahara Saving and Credit Cooperative, and Karnali Saving and Credit Cooperative of Jhapa. Both MFIs have become models for biogas and other RETs financing using loans from BOK and AEPC's biogas credit fund.

In order to facilitate an increase in biogas plant installations through micro credit, Winrock collaborated with Nepal Rastra Bank (NRB), the Central Bank of Nepal, Nepal Government's AEPC and BSP to **Generate a Favorable Policy Environment**. NRB has classified RET lending (only for biogas and solar home systems) as "deprived sector" lending. This policy strongly encourages commercial/development and other formal financial sectors to provide more loans towards the installation of biogas and solar home systems. NRB has also increased the micro-credit limit per household from US\$ 425 to US\$ 715 (Nrs. 30,000 – 50,000). This increase has enabled MFIs to simultaneously provide micro-credit for renewable energy systems, and for micro enterprise for income generating activities. This facility can increase the dispensable income of households to help pay back loans.

This project also catalyzed 150 MFIs to provide loans exceeding US \$ 100,000 for 5000 poor households to construct biogas plants. An additional US\$ 700,000 was also mobilized from these household contributions, and government subsidy. A sample study of 100 of these biogas adopters in 2006 has shown an average increase of US\$ 136 per household per year from the sale of biogas slurry, and increased vegetable production.

The project was recognized and awarded as one of the best practice project in micro financing of RETs by Wuppertal Institute for Climate, Environment and Energy (WISONS), Germany.

http://www.wisions.net/DownloadDateien/1st_PREP_issue_06.pdf

This project was recognized as a best practice project in the field of micro finance and energy services by the Wuppertal Institute for Climate, Environment and Energy of Germany (WISONS). Through this activity Winrock:

- Influenced government policy to include the energy sector as a priority investment sector for microfinance.
- Built capacity of 300 MFIs to support for clean energy promotion to poor households.
- Built the capacities of, and established linkages between MFIs, energy companies, the Alternative Energy Promotion Centre (AEPC) and commercial banks.
- Developed several guidebooks, manuals, and newsletters catering to MFIs and potential biogas adopters.
- Winrock has subsequently supported World Wildlife Fund (WWF) Nepal to link microfinance and energy technology promotion based on the lessons from this program. Winrock provided **Technical Service to World Wildlife Fund (WWF)** to prepare its strategy to establish a biogas loan fund. From 2005- to 2008 almost 3000 biogas plants have been constructed in its Terai Arc Landscape project. Winrock helped WWF develop the policy and operational manual for management of this loan.



Another USAID funded project **Conflict Mitigation through Community Based Rural Electrification** has mobilized micro-finance to help poor households obtain access to electricity supply, and to develop small and medium enterprises. Winrock's enterprise development capacity building works with rural households to support them to analysis the total value chain from input suppliers to the end users.

- Winrock worked with two Rural Electrification Community Organizations (RECOs) to build their capacity to also operate as a microfinance institution. These two RECOs provided the total credit worth US\$40,000.
- They provided micro credit to 155 poor households to connect to the national electricity grid
- 189 households were supported to establish small and medium enterprises and run income generating activities.
- After the success of this pilot project Winrock has expanded its program with a target to electrify 5,000 households with grid electricity through microfinance.

Winrock has supported the establishment of the Clean Energy Development Bank and its capacity building in Nepal through USAID's **Technical Advisory Services to the Clean Energy Development Bank (CEDB)** project. Winrock has helped the development of the Bank's policy and procedures to work with rural micro finance institutions and other financial intermediaries to provide micro finance access for acquiring clean energy systems and for using energy for income generating activities.

- A guarantee fund to support entrepreneurs set up commercially viable ICT services in rural Nepal has been established at CEDB through the Information and Communication Technologies Global Development Alliance (ICT GDA) project. This mechanism is expected to encourage the banking sector to be more proactive in ICT-related ventures in rural Nepal.



Winrock is currently implementing a Ford Foundation funded **Increasing Access of Poor Nepali Communities to Biogas Technology to Strengthen Livelihoods and to Enhance Environment Management** project in eight districts in the mid hills. Winrock is leading the implementation of this project with Federation of Community Forest Users, Nepal (FECOFUN) as the local implementing partner. This project is running in third year implementation period. We are encouraged by the results so far and are confident it will significantly contribute to construction of quality biogas plants in low penetration districts through different kinds of financing

mechanism. Significant results of the project are as below:

- A total of 2489 biogas plants have been installed in rural poor households in eight districts in Year 2008/09. As a result of these installations, over 12445 people now have access to clean cooking fuel.
- Almost 25611 person days of employment has resulted in construction of 2489 biogas plants. This is based on a study⁴ done by Winrock in 2006. The study estimates that 1. 29

⁴ Employment opportunities created by biogas financed through MFIs done by Winrock International in September 2006. The study was undertaken in the three developmental regions of Nepal viz. Eastern, Central and Western covering 10 districts and over 160 households who have installed biogas plants through micro credit and 22 MFIs.

person days is needed for MFIs to process a biogas loan, and 9.34 person days are needed by a skilled mason to construct a plant.

Winrock International and Practical Action are now piloting the **Scaling-up of Indoor Smoke Alleviating Technologies in High Hills of Nepal** project to reduce indoor air in at least 1000 household in high and remote hills. This project is ongoing in its second year. So far project has established smoke hoods in around 800 household, identified 10 MFIs, and established a revolving fund and also provided different kinds of training and capacity building programs to both MFIs and local manufacturers.

With the support from AEPC/ Energy Support Assistance Program AEPC/ESAP, Winrock together with two implementing partners, National Cooperative Federation of Nepal, and Sana Kisan Kendria Sangh has designed the **Credit Financing of Solar Home Systems** project to increase access to SHS through micro financing. Twenty one MFIs were selected from six pilot project districts. The pilot project has been successful in creating awareness, and generating demand of about 5,500 SHS. About 1165 SHS have already been installed against the target of 1000. Major achievements:

- Winrock is lead consultant in introducing microfinance loans to expand the use of SHS.
- 1150 HH received SHS in six off grid districts, reaching approximately 5500 people, of which approximately 2200 children have a better quality of light for studying.
- Unleashing more than Rs 8 million (more than USD 100,000) from rural micro finance institutions and community
- Business to Business linkages of LFI with commercial banks setting up a wholesale loan agreement of more than Rs 5 million (more than 65,000 USD)
- Extension of the SHS program to additional districts and willingness to participate by 6-8 more banks.

Conclusion

Nepal has immense potential to enhance rural livelihoods with all RETs - biogas, solar home systems, improved water mills, improved cook stoves, mini hydro etc. We have very diverse and difficult topography where grid connection is very costly and time consuming, so we are dependent on stand-alone technologies like solar home systems and biogas for energy and lighting. RETs are capital intensive products which rural communities generally can't pay upfront. Micro finance services are best suited to our country to enable such communities to gain access to energy services and enhanced lives. Winrock International is dedicated to promoting RETs through the micro finance services, and has reached out to almost 50,000 individuals in remote parts of the country.

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