



NOTE FROM THE FIELD

Greening Microfinance to Turn Waste Into Wealth

Local MFIs in India provide an integrated approach in addressing poverty alleviation, global health and energy.



A biogas plant in Cochin, Kerala.

Photo courtesy of GreenMicrofinance

“Renewable energy provisions could provide access to income-earning avenues and would ultimately complement the efforts to reduce the poverty,” says Paul Thomas, Director of ESAF. “A full range of appropriate energy options should be considered while providing energy services to the poor.”

Integrating clean energy initiatives with microfinance, besides benefiting clients, has the potential to positively impact the environment by creating viable, renewable, localized energy sources that can simultaneously improve health and reduce deforestation. In India, where approximately 260 million of the country’s total 1.2 billion population live below the poverty line, the shortage of cooking fuel is a key problem. Some households burn cow dung cakes as an alternative fuel source, creating environmental hazards and causing harmful health consequences, including acute respiratory infections in children. According to a 2006 Shell Foundation Report¹, deaths linked to biomass smoke exposure compete with malaria as the leading cause of death in adults in developing nations every year.

Since 2002, GreenMicrofinance™ (GMf™) has worked with microfinance institutions (MFIs) to help them provide clients with clean, renewable, locally based energy technologies—solar, wind, hydro, and biomass—to enhance their physical and economic well-being while reducing greenhouse gas emissions and deforestation. GMf’s services include market study research with the MFI to assess the demand for and supply of renewable energy systems, as well as the potential suppliers for partnership. Based on these findings, GMf works with the MFI in the design of the *business model* and a *loan product* for renewable energy technologies. This Note highlights efforts to scale up the clean energy lending initiatives undertaken by two GMf partners in the south Indian state of Kerala.

The Link between Poverty, Waste, Health, and Fuel in India: Wesco Credit

Wesco Credit is the financial arm of Welfare Services Ernakulam (W.S.E.), a leader in Indian rural development. Wesco currently operates in 172 villages and oversees some 2,000 local self-help

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groups (ShGs) comprising more than 35,000 of the most economically impoverished women in the region. Recently, Wesco engineered the development of a pioneering, durable solution to regional disease control and waste management.

During the 2006 monsoon season, there was an outbreak of *chikungunya* fever, a deadly mosquito-borne virus for which no vaccine exists, in Ernakulam, a city north of Cochin, the commercial capital of Kerala. Understanding the connection between waste and health, Wesco Finance decided to pursue integrated waste management systems as a preventive measure for future outbreaks. Wesco Credit began promoting and constructing biogas plants, which generate both clean energy and income for families (primarily by reducing household energy costs). Thus far, they have constructed 350 biogas plants for individual households, as well as for commercial establishments such as shops, hotels, slaughterhouses and hospitals. Smaller household units cost approximately \$325, servicing a family of five to six. These units are financed by ShGs supported by Wesco Credit with loan terms of two years. One installment loan payment is collected in advance as a security deposit. The villagers are carefully instructed on operation of the solidly constructed plant, which has an approximate 20-year life span. Program participants place biodegradable waste, usually manure, along with wastewater into the biogas cement chamber and

seal it. The waste decomposes anaerobically inside the chamber, producing a mixture of methane-carbon dioxide biogas that is pumped directly to the kitchen's gas-run stove. The process also generates solid compost called sludge slurry, which serves as a potent fertilizer that Wesco clients use to promote organic farming. "All these programs are interlinked from the grassroots level to industry and the marketplace," said Father Moonjely, Executive Director.

With the assistance of GreenMicrofinance, Wesco Credit is now planning to scale up its biogas initiative, as well as other renewable energy products. Over the next year, it intends to install about 1,200 residential biogas units, 1,000 family-size units and 200 units to be used in rural farms. It also plans to install 50 institutional biogas plants to be used at hospitals, parish halls, and apartment complexes.

Promoting Waste Management: Evangelical Social Action Forum (ESAF)

Evangelical Social Action Forum (ESAF) is a dynamic, environmental leader in Indian microfinance working in five states throughout India. To ensure that the correct alternative energy solution is provided to its 250,000 clients, ESAF had to assess the right energy product for the different localities. The organization recently completed an energy demand study for 1,200 of its clients in three

states: Kerala, Maharashtra, and Jharkhand.

Paul Thomas, Director of ESAF, states, "Renewable energy provisions could provide access to income-earning avenues and would ultimately complement the efforts to reduce the poverty. A full range of appropriate energy options should be considered while providing energy services to the poor." Thus far, ESAF has installed five biogas plants attached to institutions, restaurants, and hospitals. Through ESAF's partnership with GMf, it seeks to launch a long-term energy program, which will encompass a full range of appropriate energy options focused on biogas, biofuel, and solar. With the assistance of GMf and energy service providers, ESAF is now in the process of developing appropriate financial products to support the energy products.

The Path Forward: Upcoming microLINKS Speakers Corner

The highlighted work of Wesco Credit and ESAF shows the importance and potential of scaling up environmentally sustainable microfinance initiatives. The GreenMicrofinance Team will facilitate the upcoming USAID Speaker's Corner from November 18-20, entitled **Microfinance and Climate Change: Can MFIs Promote Environmental Sustainability?** Key discussion questions include: What is the role of donors and investors in ensuring environmental sustainability of an MFI and their clients? How can MFIs promote environmental

sustainability while still meeting their 'core mission' of reducing poverty? What is the impact of microenterprise and microfinance clients on the natural environment?

For more information or to sign up, visit

www.microlinks.org/sc/greenmicrofinance.

Further resources:

GreenMicrofinance –
www.greenmicrofinance.org

Welfare Services Emakulam
(Wesco Credit) –
<http://welfareservices.org>

Evangelical Social Action Forum -
www.esafindia.org

SKG Sangha - www.skgsangha.org

ⁱ Hoffman K. Killer in the kitchen. Shell Foundation Report. 2006. Available at: <http://www.shellfoundation.org/index.php?articleID=27> Accessed April 30, 2008.