## Green Tech



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## A ray of hope for healthier chars

A little solar power brings aid with livestock-saving vaccines



Shadat Hossain Babu, a local veterinarian, places a vaccine in a solar-powered refrigerator.

CLP only transfers assets to those who do not have outstanding microcredit debts, who have assets of less than Tk 5,000 and who have stayed on the char for at least six

months

ARAPAKHIA village in Belkuchi upazila of

IQRAMUL HASAN

Sirajganj district is a remote char area with a seminomadic population of a mere 10,000. The annual degradation of the Jamuna River's banks makes the life of the people so volatile that it is hard for them to stay in a single place for even a year.

The land's sandy soil is rarely able to sustain crops, so most of the people of these chars rear livestock -- cows and goats, as well as chickens. But isolation makes rearing livestock difficult to bring perishable items, even vital ones.

In 2007, Abdur Rashid, an inhabitant of the char, lost 70 chickens to Ranikhet disease. With no vaccine, Rashid could not prevent a huge death toll among his chickens. It was a common problem in the chars.

But this sad scenario changed in

2009, when the Chars Livelihood Programme (CLP) gave the local veterinarians refrigerators powered by solar energy. These were able to preserve the livestock vaccine and deliver to the people of the chars.

CLP is an independent project funded by the UK Department for International Development and sponsored by Bangladesh's Rural Development and Co-operatives Division of the Ministry of Local Government. The programme is implemented through Maxwell Stamp PLC, a London-based international economics consultancy with a permanent office in Bangladesh.

Most of the CLP's work is in the chars. Ric Goodman, operations director of CLP, says the programme started in 2004 by targeting 4.5 million people in 150 unions of five districts -- Kurigram, Gaibandha, Bogra, Sirajgonj and Jamalpur. Here, the yearly monga -- seasonal hunger between mid-September and mid-

December -- is as regular as the erosion problem.

Goodman says asset transfer, one of the basic CLP programmes, lets people to choose the type of asset they want. "Most people choose livestock, especially cows and bulls, as their first choice."

The livestock and poultry sectors in CLP's core area have an estimated value of at least Tk 2.27 billion, Goodman says, so the char dwellers depend heavily on livestock and poultry for supplemental income and asset building.

The CLP does not implement the programme directly. Rather, it subcontracts this to locally successful non-government organisations.

The aid package consists of one-time gift of Tk 17,000 per family, and another Tk 8,000 for maintenance of the cattle spread over 18 months. CLP distributed 67,000 cattle to 55,000 families under the programme. In total, 2.75 lakh people directly benefitted.

The criterion the CLP followed when choosing households was to target the extremely poor, Goodman explains. CLP only transfers assets to those who do not have outstanding microcredit debts, who have assets of less than Tk 5,000 and who have stayed on the char for at least six months.

Mozaharul Islam, market development programme manager of CLP, said when they distribute cattle among the char families, education on the diseases of cattle is a natural part of the plan. Livestock diseases, especially ones that can be prevented with vaccination, are very common in the char areas.

Barek Rana, a local veterinarian of Char Kazaikate in Rowmari thana of Kurigram district, said his area is 20 kilometres away from the Rowmari thana, and return trip along the muddy roads requires from morning to afternoon.

"Sometimes the vaccine required is not available in the thana area, and I have to wait to collect the vaccine from the remote area beside the thana or even from the district town," he added.

Islam said CLP selected from the five districts 387 people who have prior experience and were willing to serve the locals as veterinary doctors. "We gave these persons 15 days of basic training and another 15 days of refresher training to get some expertise on livestock treatment," he added.

Shadat Hossain Babu, a local veterinarian of Barapakhia village of Belkuchi, was one who received training from Jubbo Unnoyon for three months. "CLP's three-day training is far better than my whole previous training, and currently I serve five households daily on average," he added.

CAUSE AND EFFECT

DISEASE

Islam said CLP not only trained those people but also supplied the subsidised equipment required to treat livestock. "The main aim of this programme is to make those people self-sustaining, so that they don't need to depend upon anyone," he added.

REFRIGERATOR

It seems to have worked. Babu said now he earns around Tk 15,000 per month -- triple his prior income.

According to Mozahrul, as part of the equipment supplied, CLP distributed 35 chest-refrigerators powered by solar panels to the veterinary doctors, known as Livestock Service Providers (LSP).

Mozahrul said initially the CLP distributed just five subsidised refrigerators to the LSPs. They paid Tk 30,000 each; a fraction of the full cost of the system.

"Then we distributed another 30 refrigerators among the LSPs of the char areas of five districts on the same cost-sharing basis," he says. Mozahrul adds that the improvement from vaccine preservation in char areas is immense.

Babu, an LSP, brought anthrax vaccine to the local people this year, so that the disease was not widespread in Barapakhia. "Due to the refrigerator, I can easily supply the necessary vaccine for the livestock diseases" he adds.

After the successful completion of the first project, CLP expanded the programme to Kurigram, Gaibandha, Rangpur, Nilphamari and Lalmonirhat. Like the people of Barapakhia, many char people of those areas can thank the CLP for changing their fate.

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## A focus on solar

The CLP initially imported five solar refrigerators through the Phocos Solar Bangladesh, a representative of Phocos Germany. These five refrigerators have a capacity of 160 litres, which the CLP says easily meets the demand of the chars.

Later, it imported 30 120-litre refrigerators through the same Vendor. These refrigerators run on direct current, rather than alternating current common in households.

Grameen Shakti, a local solar-equipment supplier, supplied panels and related equipment to the CLP for the refrigerators. The first five refrigerators cost Tk 1.5 lakh each. The rest cost Tk 1.2 lakh each.

Each panel has a capacity to supply 130 watts. The refrigerator requires about 120 watts to run for a whole day. The remaining 10 watts powers a light in the veterinarian's office.

The solar panel costs around Tk 70,000 per system. The system includes a solar panel, a battery and a charge controller. Grammen Shakti ensures free servicing of the panel for five years with a warranty of 20 years. One veterinarian complained he didn't get the after-sale service of solar panel on time.

According to the CLP, the cost for each solar-powered refrigerator system is about Tk 1.75 lakh. The veterinarians paid Tk 30,000 for each solar-powered refrigerators system while the CLP provided the rest.

The CLP also gave vaccines and other equipments to the veterinarians, including a tiny portable cooling system on a cost-sharing basis.



A solar panel is placed on top of a roof. Each panel has a capacity to supply 130 watts. The refrigerator requires about 120 watts to run for a whole day. The remaining 10 watts powers a light in the veterinarian's office