CASE STUDY 11

BABA BASHIR AND BIOGAS

Author: Rajesh Bhakta Shrestha
Country: Pakistan
Sector: Rewable Energy

CHALLENGE

Pakistan faces a serious challenge due to environmental degradation, harrowingly proven by the great floods this past monsoon season, when thousands died, millions remain displaced and a huge amount of property was destroyed. Land degradation due to the destruction of vegetation was identified as a major contributory factor in the floods. Millions of rural households mainly use firewood for cooking. Dung cakes are another energy source for cooking in rural areas. Burning dung cakes not only destroys essential nutrients that can potentially be recycled into the land but also pollutes living quarters, with the smoke causing diseases among women and the elderly, consuming energy and resources, polluting the air and contributing to the greenhouse effect.

Pakistan has one of the largest numbers of cattle in the world, and is currently the fifth largest dairy producer internationally. Proper application of the dung produced to generate biogas would immensely contribute to helping solve the aforementioned challenges, while at the same time contributing to the alleviation of the immense and chronic power shortages (electricity and natural gas supplies) facing the country.

Biogas has had a rather troubled history in Pakistan. A few shortlived and isolated interventions were attempted, but they lacked co-ordinated or programmatic application and were never at a scale to display any marked results. A lack of emphasis on proper design, quality of construction, and a proper needs assessment, combined with poor attention to quality control meant that previous projects failed to provide acceptable results. Most important of all, there was a lack of long-term vision seeking sustainability through a multi-stakeholder and market-driven approach using the private sector as a driving force.

CLIENTS

The current partner of SNV is a national-level NGO – Rural Support Programmes Network (RSPN). RSPN has experience and expertise in collaborating with its network partners, that are well-regarded Pakistani NGOs, noted for their work in social mobilisation. In early 2007 RSPN carried out the pilot construction of several biogas plants with the technical assistance of SNV. RSPN is also positioned to be able to link and engage in dialogue with other government and private sector entities. The feasibility study carried out by SNV provided impetus for the partnership between RSPN, SNV and Winrock to initiate the Pakistan Domestic Biogas Programme (PDBP). SNV funded the startup for 10 months beginning January 2009 and the Embassy of the Kingdom of the Netherlands took up funding the project for four years from November 2009.

The actual clients of the project are the Biogas Construction Companies (BCCs). BCCs are private, supply-side actors or enterprises at a local level. BCCs construct biogas plants upon demand in rural communities. BCCs are responsible for ensuring quality through the provision of guarantees and after-sales service. BCCs are also involved in marketing their products to potential client households. In this respect they are the mainstay of the domestic biogas sector. As of now the project has set up 18 such BCCs.

SNV is providing technical assistance in the form of a full-time Senior Advisor under its core funding to help strengthen capacity within the project and the implementing partner, enabling them to strengthen the capacity of the BCCs along with other stakeholders playing a role in the demand side, such as the local NGOs, local government agencies and financing agencies.

METHOD / SNV INTERVENTION

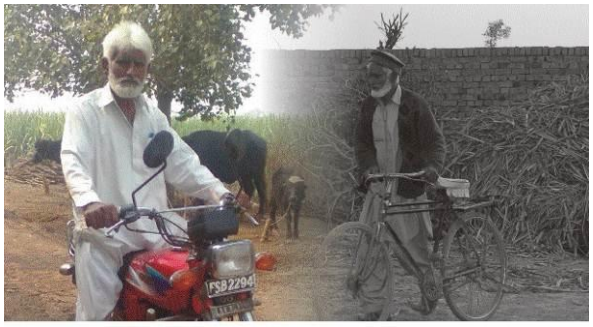
Through its advisory services, SNV is helping the project and the implementing partner develop strategies to strengthen the sector. Emphasis is on developing intervention strategies relevant to all stakeholders from the Ministry of Environment at a national level, to the district and provincial line agencies at the

meso level and the LNGOs and BCCs at the micro level. Some examples include the development of ToR for the National Biogas Steering Committee, development of plans and strategies for implementation of the project, as well as plans and strategies to strengthen BCCs and LNGOs.

- SNV and its advisors have been instrumental in the identification, training and coaching of the BCCs and LNGOs
- It has been instrumental in setting up project planning, implementation, quality control and monitoring systems
- It has played a key role in the acceptance of the multi-stakeholder and market-oriented approach within the implementation partner

SNV has played a key role in enhancing knowledge of the partnering staff through its knowledge networks.

OUTCOME



The outcome of the project can be aptly illustrated by the story of a BCC. 62-year-old father of eight Mr. Bashir Ahmed is a retired mason, residing in Risalewala Tehsil, Faisalabad District. He took part in the first orientation on domestic biogas technology and its market potential that the project provided to masons and contractors in the Faisalabad area in March 2009. Mr. Ahmed was a biogas sceptic as he was the victim of a botched attempt by the government to introduce biogas in 1982. At that time he was contracted to construct floating-drum designed plants. However, after he had dug out the necessary pit he could not get the drum to lie evenly, despite repeated follow ups. Hwever, upon the insistence of his friend and neighbour he agreed to participate in the PDBP biogas mason training. He was part of the first batch of masons trained by the project, several of whom agreed to register as BCCs. Bashir was the first mason and BCC under the project to construct a biogas plant for his household. His reasoning for the investment was that he would have to be convinced by his own personal experience, and a working biogas plant would make it easier to convince potential clients. His 6m^3 plant is now a year old and performing perfectly. He claims that it saves him PKR 3-4,000 per month on fuel costs notwithstanding the time saved and improved dometic hygiene. He also stated that his daughter-in-law was now able to spend more time teaching children from the neighbourhood to read and write due to the time saved by the plant.

His plant has become a showpiece, with passersby, visitors from other villages, local NGOs, MFI representatives, and donor representatives regulary coming to see his plant to learn about biogas plants and their functioning.

Bashir has constructed more than 70 plants of various sizes in the last year. He employs four masons and a marketer. He pays his masons and labourers better wages and has instituted profit-sharing from plant construction. From a bicycle he has moved on to buy two motorbikes, which are now used for marketing and follow-up activities. His dream is to be able to buy a truck so that he can transport equipment and men to construction sites more efficiently and to set up a separate office. All his client households are satisfied with the work and the other BCCs look upon him as an example to emulate.

He is the top performing PDBP BCC and continues seeking ways to improve and increase the number of plants under construction. PDBP is helping him strengthen his capacity through coaching, regular reviews and training.

IMPACT

Bashir has more than 70 satisfied households (560 persons) who are currently benefiting from the biogas plants. Many of these households are using the bioslurry in their crop fields, thereby improving the soil structure and their crop yields. He has five people more or less employed full time and provides work opportunities to unskilled labour, with an average of 10 person days per plant (700 person days). Once he achieves larger plant numbers, the impact on the environment will also be significant in terms of reduction in indoor air pollution and greenhouse gas emissions.

LESSONS LEARNED

Bashir is one of many people to have received PDBP training. Many more educated and younger persons have failed to perform. This indicates that screening candidates for training and grooming for developing into a BCC (or for any other sector) requires looking beyond whether they are young, energetic or educated - aptitude and drive should also form principle criteria for selection.

TESTIMONIALS

Bashir, who is often fondly addressed as Baba Bashir, says "being a user of a functioning biogas plant has helped me to convince my clients."

STANDARD DATA

- Start and end date of contract : January 2009 to January 2011
- Consistence of team: One SNV Senior Advisor