

CASE STUDY 84

Implication of multi-actors in the development of domestic biogas in Cameroon

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Country & Sector: Cameroon, Renewable Energy

Context

Cameroon is one of the sub Saharan countries where energetic production and consumption systems are not yet sustainable from an economic, social and even environmental perspective. Close to 60% of the urban and rural households still rely on traditional methods such as firewood for their cooking and lighting needs. The use of these non-renewable sources is more visible in the rural areas where more than 48% of the poor population lives, representing about 9 120 000 inhabitants. As direct consequences, we notice a gradual deterioration of the environment as well as exposure to health, hygiene and sanitation problems.

Conscious of this situation, the Cameroonian government proceeded since 2005 to the development of a National Energy Action Plan for Poverty Reduction (PANERP). This document states the vision and policy on energy - MDG by 2016 with the aim of putting the issues of access to modern energy services as the basis of economic and social development of the country.

In line with her orientation towards improved livelihood of the rural population's through access to basic services, SNV has identified and invests in supporting the promotion and development of domestic biogas as a sustainable means to manage renewable energies for poverty reduction. A feasibility study coupled to a demonstrative phase has encouraged the development of the program in which SNV brings support to develop the institutional, organisational and operational framework.

Thus, considering the negative impact of poverty in rural area, developing biogas as an alternative would procure great advantages on economic, social and environmental aspects.

Clients and partners

1. The client: Ministry of the energy and water (MINEE)

The Ministry of energy and water (MINEE) is the governmental entity in charge of energetic issues. Its main objective is to reduce the energetic cost for the poor population and encourage access to renewable energies in semi-urban and rural areas through the promotion especially biogas.

After validation of the feasibility study results, the ministry engaged in the implementation of the National Program for Development and promotion of domestic biogas. Its main role is to facilitate the access for the poor to the biogas through and among others:

- i. Elaboration of a legal framework for renewable energies,
- ii. Subsidising the construction of bio-digesters,
- iii. Mobilising staff and consultants in the program,
- iv. Ensuring collaboration with other relevant ministries,
- v. Facilitating the setting up of an autonomous structure for the management of the program,
- vi. Searching and establishing financial and technical partnerships around the program,
- vii. Supporting and validating opportunities for cost reduction of the bio-digesters,

viii. Ensure mediatisation through public and private media.

However, the realisation of these activities requires some competences and capacities that the government still lacks. It is in this light that SNV's support is solicited, based on her experiences in other Asian and African countries.

Alongside the Ministry, SNV is thus engaged to: i) Facilitate the promotion and construction of bio-digesters following the Nepalese model GGC 2047, ii) Contribute to the search for technical and financial partnership, iii) Contribute to develop the institutional, organisational and operational framework, iv) Participate in the follow up and monitoring of activities, v) Facilitate information flow and network development among partners around the biogas program, vi) Contribute to the reflection on elaborating a regulatory framework for renewable energies in Cameroon.

2. The partners: Heifer International, Integrated Rural development project – Chari Logone (PDRI-CL).

This partnership is based on a MoU defining obligations of each party to attain the objectives.

- 1) The relevance of the collaboration with HEIFER international proceeds from their intervention in the rural area, implementing an innovative 'pass one the gift' system that allows for cow acquisition by rural farmers and ensure availability of raw material (dung) to feed bio-digester on a regular basis.
- 2) PDRI-CL foresees to construct some boring in the Chari and Logone area as well as to subsidise some poorest households to access water and biogas.

Intervention logic and methods

The intervention of the SNV is articulated around:

- The establishment of partnerships to implement the programme,
- Capacities strengthening of local actors,
- Sensitisation/promotion,
- Households selection,
- GPS localisation of constructed bio-digesters,
- Principles of gradual ownership by the government and the private sector.

Outcome

The implementation proper started in April 2010, and so far has yielded the following results

1 On the institutional aspect

A number of partnerships are formalised, giving the possibility to implement the programme based on clearly defined roles and objectives between the parties involved with SNV, namely the Ministry of the energy and water (MINEE), HEIFER International, and the Integrated rural development project-Chari Logone (PDRI-CL).

2 On the organisational plan

(i) 10 staffs of the ministry have been designated by government to follow up activities in the 5 regions covered by the biogas programme (North west, West, Adamawa, North and Far-North), ii) 05 local capacity builders are recruited for the promotion, training of masons, construction of bio-digesters and after self-services in 4 regions of the national territory.

3 On the operational plan

(i) 34 masons trained with 80% qualified, among which 2 supervisors, (ii) 63 bio-digesters constructed in Adamawa, For-north, North, North west and West

regions with 80% functional, (iii) Local capacity builders that contracted with SNV contributed to promotion, identification, and household selection, (iii) 2 local craftsmen manufacture and contribute to improve stoves, (iv) Communication tools (posters, flyers) and household training modules for operation and maintenance are produced.

Broadly speaking, beneficiaries have been sensitised on the advantages of biogas use. The LCBs involved have made use of convincing sufficiently communication techniques in rural communities to attract, motivate adherence (decision) and action (to construct a bio-digester) at household levels.

3.A. In relation to households contribution

Current beneficiaries are generally those of the middle class self-financing the construction of their bio-digester.

Otherwise, a credit system does not yet exist to ease access to the technology. Microfinance institutions and banks have been contacted, but are still to be assured of the guarantee and the means that will allow potential loan beneficiaries to promptly repay, and this can be proven only through a socio economic survey demonstrating the potential income generating interest of a bio digester as well as the social impact.

4 Gender and social inclusion issues

The dissemination of the biogas technology is obviously beneficial to an increased the number of women and children in the different area of intervention.

Considering that the 63 already constructed bio-digesters are in households made up of at least one woman and an average of 6 children, it becomes evident that SNV contributed to have about 504 people directly benefit from the advantages of biogas in less than a year.

Impact

At this advancement level of the program on institutional, organisational and operational aspects SNV contribution has allowed 63 households direct access bio-digesters for their cooking needs and benefit from advantages of biogas, at least in terms of absence of smoke in the kitchen, the serious reduction of firewood purchase and collection, less time put for the cleaning of the pots, the time gain to invest in other socio economic activities.

Most beneficiary households of bio-digesters have improved the status of their kitchen through new repairs to improve on the outlook and standard of equipment (pots, tiles, cupboards, etc.) like they see in modern kitchens.

Lessons learnt

- Get some results in a partnership with government bodies requires patience and time;
- There are very few actors in the biogas sector. It will take time to create awareness and interest in order to see them adhere and connect to ensure the sustainability of the programme;
- Promotion is a cornerstone in this new sector, without which, this new sector will not be known and understood by the general population. It therefore calls for financial support for promotion agents to widen their geographical intervention areas, to vary and multiply tools and communication channels to reach their targets;
- The lack of budget does not permit to implement activities as planned;
- The high cost of a bio-digester compared to the weak financial capacity of the poorer households does not permit this category of the population to easily access easily the technology;
- The lack of subsidies and/or loans hinders the attainment of the programme objectives as planned till end of the first phase;

- The assessment of a Ministry (MINEE) as a specific client is quite difficult following SNV procedures. It is important to find other options or develop other tools for the assessment of such clients.

Photos and quotes



For me biogas is a manna fallen of heaven. Before constructing my 6m3 bio-digester, I used to spend about 15 000 F CFA/month to purchase firewood. Since two months I don't buy firewood anymore. The biogas allows me to save money. Now, when my wife comes back from farm she cooks meals in less time. Kwenti Godfreys, pig farmer/North-west Cameroon

The biogas is an excellent opportunity for the population. My bio-digester was constructed in October 2009. Today I can assure you that I have already returned in my investment. My wife is very happy. I am going to construct it in the other kitchens of my daughters-in-law. HAMADOU BABA, cow Breeder/Far-North Cameroon



Photos of sensitisation by LCBs promotion