



Biogas Consortium Afghanistan (BCA)

گروه مشارکین بیوگاز



Biogas and Gender

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Energy needs and the rural afghan household

The domestic energy needs of the rural Afghan households are met by either the purchase of cooking gas or even open inside fires.

The gas bottles pose the safety risk of explosion and greatly increases the financial burden on the average household. Due to this financial strain, many households resort to open cooking fires inside their houses. These fires are fueled by shrubbery, leaves, thereby further diminishing scarce natural resources in the area, dung-paddies, or even trash plastic.

The burden of collecting the necessary burning materials lies on the women and children of the household.

While open fires also result in an increased risk of incidents of burning, the main hazard is the health risk they pose for afghan women and children, who spend considerably more time inside and at home than the men.

Excessive indoor smoke from fuel wood combustion has inflicted the majority of rural women and children with eye and respiratory problems that are thought to contribute to over 1.5 million death a year from acute lower respiratory infections (ALRI).

Almost 54,000 women in Afghanistan suffer from smoke related illnesses (WHO 2010). Therefore, the burdens conventional methods place especially on rural afghan women are many.

Disadvantages of the current energy management in rural afghan households

Safety: Risk of natural gas explosions or fires from open cooking places

Health: Smoke related illnesses in women and children, which are difficult and costly to treat in rural areas

Time: Women and girls have to spend a lot of time collecting fire-wood or other flammable materials, or creating dung-paddies for burning. This increases the likelihood of girls missing school, especially in cold-climate areas before winter sets in.



woman making dung cakes, No sanitation
(photo Courtesy of blogs.reuters.com)

Sanitation: Dung-paddies, when used to fuel fires, are not sanitary and could be used to fertilize fields instead.

Environment: Collecting the sparse amounts of naturally growing shrubbery and wood results in further erosion and risk of flooding in spring.

Positive effects of Biogas technology on rural afghan women

Since it is the afghan women, who are responsible for household chores it is of vital importance, that any improvements in meeting their energy needs do not increase their work-load, but rather lift their burdens in day-to-day activities:

- Biogas plants can reduce their expenditures for fuel wood and other traditional cooking fuels.
- Using biogas for cooking produces no noxious fumes or smoke, thereby dramatically improving the health of the households' women and children
- There is no safety risk associated with the use of biogas for cooking.
- Use of biogas plants reduces the time and labour of women and girls in collecting fuel wood.
- Use of bio-slurry on fields improves agricultural production and food availability.
- Use of biogas plants enables girls to attend school by freeing them from fuel wood collection.



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Implications for the Implementation of Biogas Technology

Since, as mentioned above, it is the women in a rural afghan household, that are solely responsible for tending to the home, tending to animals that are kept at home, and cooking, it is they, who most directly benefit from the advantages of using biogas technology for cooking.

This also means, however, that it is they who must be active participants in the introduction of biogas technology to the household. The integration of the households' women is a vital factor for success during all stages of implementation and mustn't be neglected by implementing groups.

Gender Components during different stages of implementation process:

Site assessment:

While it is the men, who sign the building agreement and approach the implementing groups with a desire to obtain biogas technology, it is absolutely vital that the households' women are involved in the site visit that determines the viability of biogas technology for any particular household (site assessment).

Women

- Know, which kitchen is used most often for cooking- This is vital to assess future piping from the plant
- Know, for how many people food is being prepared and with what frequency.
- Are in charge of cleaning stables and tend to livestock, whose waste will be fed into the biogas plant
- Are therefore most likely in charge of feeding the plant.

Not including the households' women during this assessment can lead to false planning in design, layout, faulty bill of quantities and, most importantly, a low acceptance of the new technology by those, who will interact with it on a daily basis.

Building and Installation:

The introduction of biogas technology does not finish with the building of the plant, but necessarily includes the installation of modified gas stoves that allow for efficient and effective usage of the biogas for cooking.

The households' women must be included in the installation of these new cookers, ideally in combination with a brief training, if possible, even though the plant itself will not produce biogas for the first two to three weeks after installation.

This will allow the women to ask questions, to become familiar with the modifications to regular stoves.



Women working at Biogas building Site

Follow Up and Site Visits:

As soon as the plant produces gas, a follow up visit is needed to assess the quality of the gas and to get a first feedback from the women on the process of cooking with it.

Also, at this stage, the process of feeding the plant is not entirely free of problems, such as a lack of added water during feeding. There might also be reservations about the frequency of feeding, insecurity about what constitutes biomass and other issues.

All these things need to be addressed and resolved with the women of the household, since they are in fact the main stakeholders and beneficiaries of this technology.

Likewise, it will be the women, who will be the first to notice of there are technical problems with the plants, since this will directly affect gas output in the kitchen.

Best Practices for implementing groups:

As has been illustrated above, the successful implementation and sustainable use of biogas technology in rural afghan households depends largely on the involvement and acceptance of the technology by the women in the household. Implementing groups can do the following to foster this:

- Include a clause in the building contract that explicitly states that the implementing groups needs to talk to and train the women of the household in the use and maintenance of biogas technology during the visits.
- Have women on your construction team. They must be able to explain the technology, feeding process, modification of stoves and basic maintenance of the plant to the women BEFORE and DURING the construction period.
- Schedule a separate visit of the women on your team to the household to be present during the cooking of a meal with biogas.
- Make sure that at least one woman from your team is present at all site visits post-installation and that she actively seeks out and speaks to the women of the household and documents the results.
- If possible, create a forum where the women using biogas technology can exchange their ideas and experiences. Be aware that this might be difficult in rural areas, where women might not leave their household, village, etc.



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