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A Guide on Gender Mainstreaming in the Africa Biogas Partnership Programme (ABPP)

Prepared by

ENERGIA: the International Network on Gender and Sustainable Energy

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Preface

The Africa Biogas Partnership Programme (ABPP) is a six country initiative for supporting the construction of some 70, 500 biodigesters over a period of 5 years. The programme is funded by DGIS (Netherlands Directorate-General of Development Cooperation), managed by Hivos and Technical Assistance is provided by SNV. In each country, implementation by multi stakeholders is coordinated by a National Implementing Agency. This Gender Mainstreaming (GM) Guide has been developed by ENERGIA, the International network on Gender and Sustainable Energy, as preparation for the Workshop on Gender Mainstreaming in ABPP, to be held in Nairobi on 18-19th May, 2010. The draft was discussed at the workshop, and additional inputs incorporated in the final version.

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I. SETTING THE SCENE

Background and Introduction
How to use the GM Guide
Gender Mainstreaming in ABPP

1. Background and Introduction

The Africa Biogas Partnership Programme (ABPP) is a six country initiative for supporting the construction of some 70,500 biodigesters over a period of 5 years. This Gender Mainstreaming (GM) Guide, developed by ENERGIA¹, provides guidance on how to integrate gender concerns within the ABPP in particular and in biogas programmes in general: in particular, what gender interventions can be undertaken as part of ABPP programme activities, what institutional aspects need to be looked at and how to monitor the progress made on gender aspects of the programme. The GM Guide targets non-gender specialists in recognizing and addressing gender issues in their work, with the intention of demystifying gender, and clarifying the concept and practice of “gender mainstreaming” within ABPP.

Most importantly, it shows how GM in ABPP can help the Programme achieve its goal of *achieving the MDGs* (Millennium Development Goals) better and enhance its sustainability, in other words, to increase the chances that the users, both men and women, will continue to maintain and use their biodigesters even after the ABPP has withdrawn its support. More specifically, it aims to provide the NIAs (National Implementing Agencies) participating in the ABPP the necessary knowledge and information to

- identify gender issues pertinent to their national biogas programmes, through use of practical tools,
- identify, plan and implement gender focussed activities in their programmes, and
- track the performance of the programme on gender issues.

It must be mentioned at the outset that gender mainstreaming is mostly common- sense, and does not require high technical or any other skills. All it takes is some sensitivity and a certain degree of openness to learn, unlearn, and adapt.....

The GM guide is based on experience on biogas worldwide, and more recently, on the experience and documentation that ENERGIA has produced, as part of its Gender in Energy Projects initiative, being supported by the Swedish International Development Cooperation Agency (SIDA). It also incorporates inputs and suggestions from representatives from the six ABPP countries in Africa, and representatives from the Indonesian and the Rwandan biogas programmes, who attended the workshop on Gender Mainstreaming in the Africa Biogas Partnership Programme, held in Nairobi on 18-19 May 2010².

¹ ENERGIA is an international network working on gender and sustainable energy (www.energia.org). Started in 1996 as an initiative of committed individuals working on gender and energy research, the ENERGIA network today connects more than 3000 members across the world, and has an active presence in 23 countries in Africa and Asia. The ENERGIA network is hosted by the ETC foundation in the Netherlands.

² The Indonesian and the Rwandan biogas programmes are not part of ABPP, but are supported through DGIS and follow the same structure and logic as ABPP.

2. How to Use the GM Guide

The GM Guide for ABPP is divided into seven sections, and is accompanied with a separate companion volume, a Resource Kit. Each section, in addition to guidelines and examples, has a list of useful resources, highlighted in green.

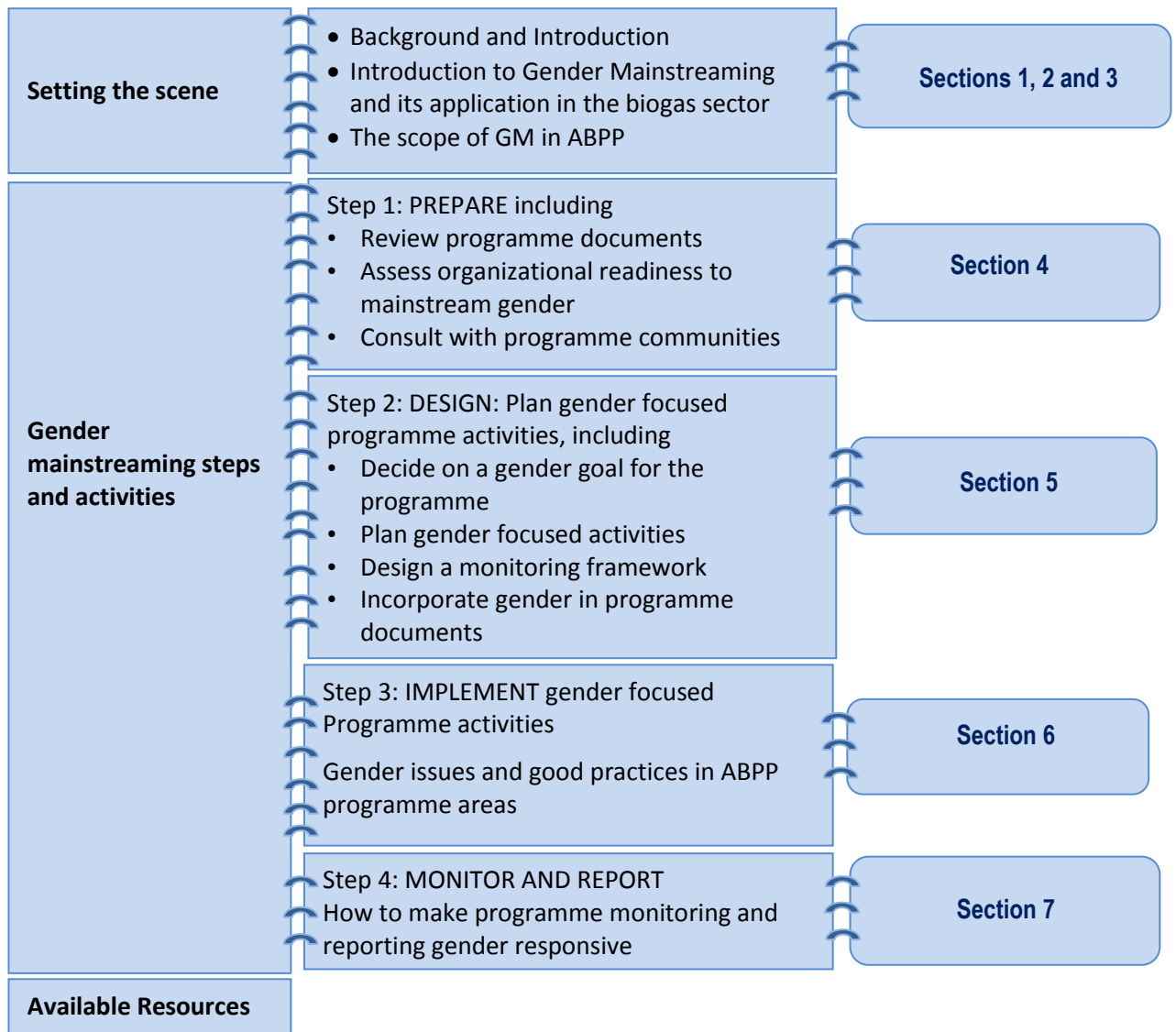


Figure 1. Structure of the GM Guide

3. Gender Mainstreaming in ABPP

3.1 Clarifying Basic Gender Concepts: What is Gender Mainstreaming?

As many would say, why do we need to mainstream gender in an energy programme such as biogas, in the first place? It is a sad reality that in the societies we live, everywhere there are ways in which men's and women's roles, responsibilities, opportunities and influence are unequal. Whilst there are some instances where men are disadvantaged in comparison to women, in general, women and girls have fewer opportunities, lower status and less power and influence than men and boys. Millions of women around the world:

- work harder than men to secure their livelihoods (research in sub-Saharan Africa suggests that women spend some 40 billion hours a year collecting water—the equivalent of a year's worth of labor by the entire workforce in France. In most cases, women and children in Africa are forced to travel more than two kilometers to fetch fuel wood),
- have less control over income and assets (only 13% of women in sub Saharan Africa have a say in large purchase in the households and 35% in daily purchase),
- are subject to violence and intimidation, especially as they walk distances to collect water and fuel wood,
- have a subordinate social position, and
- are poorly represented in policy- and decision-making (19% of ministerial positions are held by women).

Today, women represent up to 70% of the rural poor, earn 10% of the world's income and own 1% of the world's property; they also account for two-thirds of the total number of illiterate people³. Two-thirds of children who are denied primary education are girls, and 75% of the world's 876 million illiterate adults are women⁴.

What does this mean for biogas programmes which aim to improve the living conditions of women and men? As such, biogas programmes do not consciously discriminate against women. In principle, all men and women can benefit from a biogas programme, provided they have adequate cattle, purchasing power to invest in the biodigester and so on. However, in reality, women have different levels of access and control over such resources and opportunities than men, which makes it difficult for women to participate in and benefit from biogas (and all developmental) programmes in the same way as men do.

Box 1. What does gender equality mean?

Gender equality does not necessarily mean equal numbers of men and women or boys and girls in all activities, nor does it necessarily mean treating men and women or boys and girls exactly the same.

It signifies an aspiration to work towards a society in which neither women nor men suffer from poverty in its many forms⁵, and in which women and men are able to live equally fulfilling lives.

It further means enhancing the ability of women and men to enjoy the status and opportunities that enable them to realize their potential to contribute to social, economic and political development.

As defined by the United Nations, gender mainstreaming is:

³ World Bank (2005). *Gender Issues in Monitoring and Evaluation in Rural Development: A Tool Kit*.

⁴ Oxfam, 2007. Millennium Development Goals Gender Quiz, http://www.oxfam.org.uk:80/generationwhy/do_something/campaigns/healthandeducation/quiz/index.htm

⁵ In addition to low income, which limits people's ability to provide for their needs, poverty has other dimensions such as lack or limited access to basic services, including education, safe water supply, roads, transport, and electricity, lack of time to take up livelihood activities and so on.

“...the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women’s as well as men’s concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated.”

A Select Glossary of basic gender terms is included in the Resource Kit as Annex 1.

3.2 Gender Issues in Biogas Programmes in Africa

The ABPP was launched in Africa in 2009. Prior to that, there have been several other efforts at promoting biogas digesters in many countries. The main gender focused problems and concerns faced in disseminating biogas digesters in Africa are mapped in figure 2. An over-arching gender issue faced is a low participation of women in all aspects of biogas programmes: in planning and design; in implementation; in the supply chain as masons, supervisors and mobilizers, and as end users. In the various sections of this Guide, these are discussed in detail. Several of the ABPP national domestic biogas programmes are trying to address these through specific gender mainstreaming actions. All the country programmes are required, under ABP, to conduct a social and gender baseline survey. Most also plan to involve women as biogas masons. There are however other gender issues that are yet to be addressed, including the need to set up a gender-sensitive participatory monitoring and evaluation system for the ABPP countries, and the need to incorporate gender concerns in the various ABPP programme areas. For these, the GM Guide provides examples of actions for gender mainstreaming.

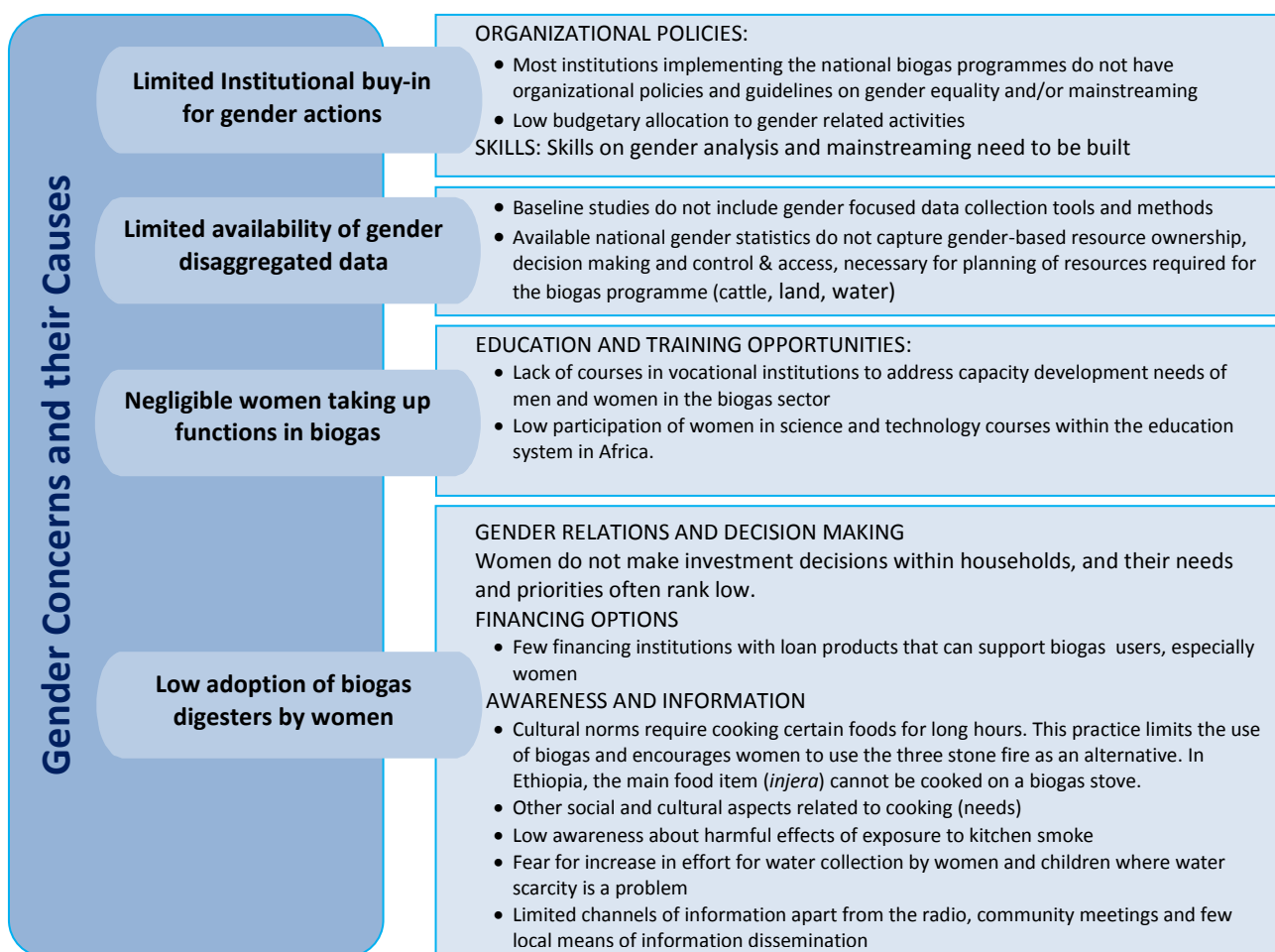


Figure 2. Gender Concerns in the Biogas Sector in Africa

3.3 The Objectives of GM in ABPP

What does the ABPP aim to achieve? The overall objective of the Africa Biogas Partnership Programme *is to contribute to the achievement of the MDGs* through the dissemination of domestic biodigesters as a local, sustainable energy source through the development of a commercial, market oriented sector in selected African countries. In order to maximize the benefits of gender mainstreaming in ABPP, there are two dimensions this Guide looks at:

- How to ensure that both women and men benefit equally from a biogas programme, and
- How to maximize the overall developmental benefits of a biogas programme

Ensuring equal participation and benefits

Ensuring that both women and men benefit equally from the programme simply means removing any additional barriers that one of the two (either men or women) face in adopting and using biodigesters. In GM parlance, this requires the Programme to

Firstly, recognize that men and women often have different needs and priorities,

....they face different constraints, and

.....they may have different aspirations and contribute to development in different ways.

And in response to the above, the Programme needs to design and implement gender-focused activities within ABPP. Some elements of gender mainstreaming can be introduced by fine-tuning or modifying existing Programme Activities, for example, by specifying the proportion of women to be covered in biogas user trainings. Others however may require a reorientation of the programme strategy and call for new activities with additional budgets and staff requirement.

So, what additional constraints do women typically face in participating in biogas programmes and what activities can be undertaken to address them? Some of the commonly faced constraints by women in acquiring and using biogas plants include: for implementing agencies, reaching women as potential customers is often difficult; women may not have the decision making power within the household to invest in a biodigesters, even if they wanted to; women as biogas users are normally ill-equipped to carry out minor repair and maintenance of their biodigesters; women find it challenging to operate as biogas masons and supervisors because of restrictions on their mobility and domestic responsibilities. In the following sections, we discuss how these can be addressed.

Maximizing overall impacts

The primary users of biodigesters are typically women who are responsible for cooking and the benefits of biodigesters to women are well known. These include time saving (through time saved in fuelwood collection, as biodigesters eliminate/reduce the use of fuelwood); workload and drudgery reduction; health benefits (reduces/ eliminates emissions and indoor air pollution in kitchens); convenience (biogas can be “switch on” by turning a knob, kitchens and utensils remain cleaner), among others. These benefits will usually result automatically in any biogas programme (but need to be monitored).

One of the main objectives of systematic gender mainstreaming in ABPP is to explore how to strengthen these further, and more importantly, how the biogas technology can be a vehicle for larger, social changes. Can we, for example, use a biogas programme to improve women’s livelihood opportunities? Can we use the biogas programme to empower women? Can we use a biogas programme to bring about better gender relations within homes and communities? And so on.

At the same time, there are ways in which GM in ABPP can help it achieve its goal of contributing to the achievement of the MDGs, some of which are presented in the table below.

Table 1. Mainstreaming Gender for Achieving MDGs in ABPP

MDG	How GM can help achieve MDGs within ABPP
MDG1: Eradicate poverty and hunger	<p>Women and women headed households in rural areas are typically the poorest. Biogas programmes can reduce expenditure on fuelwood for them.</p> <p>Construction and installation of biogas creates employment and additional income.</p> <p>Biogas saves the use of traditional cooking fuels.</p> <p>Additional income through selling bio-slurry, using biogas for domestic based income generating activities such as commercial cooking</p>
MDG 3: Promote gender equality and empower women	<p>Biogas programme can improve the quality of life for women by:</p> <ul style="list-style-type: none"> Freeing/ reducing time spent in fuelwood collection Reducing indoor air pollution Increase incomes through sale of vegetables (through use of bio slurry) It can enable girls to attend school by freeing them from fuelwood collection Women can improve their livelihoods by working as biogas masons, supervisors and social mobilizers. Women can be socially more empowered by using freed time for education, social activities, productive activities Biogas can provide light, and help women and girls to extend the amount of time they can study and gain access to information or engage in economic activities
MDGs 4, 5 and 6: Health benefits	<p>Biogas reduces health risks (e.g. respiratory diseases, eye ailments, burning accidents) associated with indoor air pollution.</p> <p>Biogas improves the sanitary condition of the farm yard and its immediate surroundings, by disposing animal and human waste.</p> <p>Application of bio-slurry can improve agricultural production and food availability.</p>

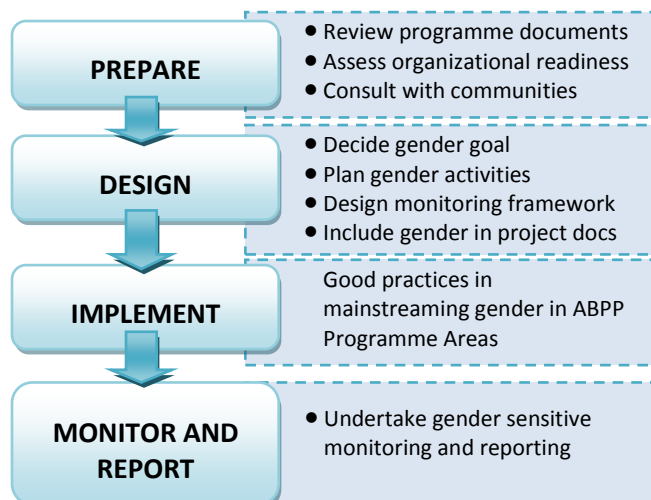
As evident from the discussion, systematic gender mainstreaming can help achieve one or more of the above objectives. In the following sections, we show how this can be done.

II. GENDER MAINSTREAMING STEPS AND ACTIVITIES



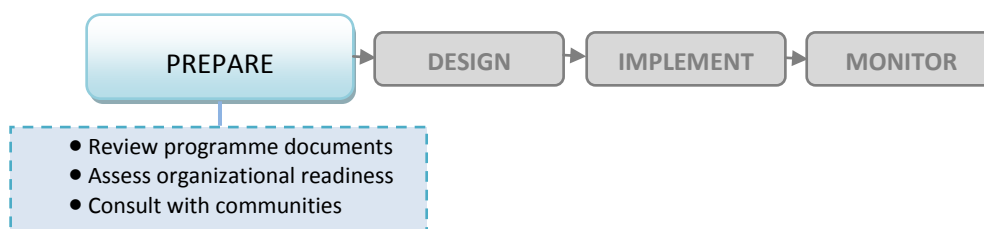
In this section, we outline a step by step process that the NIAs can follow, in order to identify, address and track gender issues in their national biogas programmes. The GM Guide helps the NIAs to

- *Diagnose potential gender dimensions* that need to be addressed within their biogas programme (PREPARE). Based on this,
- *Design the gender component* for the programme (DESIGN), which includes
 - deciding on a concrete gender goal (what the programme aims to achieve from a gender standpoint),
 - planning specific activities to meet these gender goals,
 - designing a monitoring framework for tracking the performance of gender activities, and
- *Implement* the gender component (IMPLEMENT)
- Undertake gender-sensitive monitoring and reporting (MONITOR AND REPORT)



The discussion on each step starts with why the step is important, how to carry it out, examples and available resources that you can refer to. Resources such as check-lists, questionnaires and other data collection instruments are included in the separate Resource Kit.

4. PREPARE: Identify Pertinent Gender Issues



4.1 Review Programme Documents

Most programme documents, such as the proposals/ Programme Implementation Documents (PIDs) etc. include statements about women or gender, but they often lack specific activities to operationalize these statements. And it is here that opportunities for undertaking gender activities lie.

As a first step, you need to go through the programme documents to examine what are the gender issues the programme has identified and whether it includes a specific gender goal. In the ABPP country programmes, critical documents to review are the feasibility study, the PID, the annual plans and baseline studies undertaken.

Box 2. Gender in the Kenya Programme Implementation Document

The Kenya PID identifies as a specific objective the following, which has a clear reference to gender.

.....To optimize benefits that are currently under-developed in the Kenya biogas sector, specifically related to:

- Gender aspects, women economic and children's educational status
- Improved health from nutrition and reduced indoor air pollution
- Environmental protection through reduced deforestation and environmental degradation
- Employment creation, especially in the rural areas
- Improved food security due to agricultural application of bio-slurry

It further goes on to set for itself a number of concrete gender-disaggregated and quantifiable outcomes, including:

- Significant improvement of the health of over 15,000 men and women and 38,300 children
- Time saving: approximately 15 to 18 million hours per annum (equivalent up to 2,000 person-years) saved for women and children fetching firewood and other biomass sources for cooking and heating
- Effort saved in cooking, warming food and water and cleaning cooking pots for 7,700 households, representing over 15,000 men and women and about 38,800 children

If the programme documents do not include specific gender goals, then you can check what are the gender goals and issues *implied* by the overall programme goals. As mentioned above, working towards MDG 3 (Promote gender equality and empower women) can be taken as an implicit goal for all countries participating in the ABPP. This review of programme documents gives a first-cut idea of what the gender goals of the biogas programme are *or could be*, and whether strategies and indicators are in place for achieving these goals. Majority of the ABPP PIDs discuss involving women in masons' training, and some as also talk about involving women in other supply side functions as mobilizers/ as trainers/ as extension workers. In such cases, the GM strategy needs to work out how best to do this: what constraints are faced by rural women in becoming biogas masons? How to tailor masons' trainings for women? How to encourage biogas companies to engage women in supply side functions? What additional support does the programme need to provide to encourage rural women to train as biogas masons, to further ensure that women who train do not drop out, but continue to work as masons, and rise to supervisors, start biogas enterprises and so on.

Once we know what the programme has committed to achieve in terms of gender, we are a step closer to designing specific activities. The review of the programme document indicates what are possible

entry points to operationalize gender in the programme? What possible missed opportunities need to be explored through field work? Box 3 illustrates how the Programme document provides entry points for gender activities in the Lao PDR Biogas Pilot project.

Box 3. Entry Points in the Lao Biogas Pilot Project Programme Document

ENERGIA has been working with the SNV-supported Biogas Pilot Project (BPP) since 2008. The Project Document of BPP visualizes the project to have eight broad components, explained in some detail in the project document. A review of the pro-doc revealed that Component 5 states “Training” includes “biogas user training with emphasis on women. It can be difficult to involve women in training unless they are specifically targeted.”

The gender considerations in component 5 that the project needs to investigate what could be some ways of involving women more actively in biodigesters user training.

Entry points for gender mainstreaming then include:

- Incorporate questions on these aspects in the baseline survey.
- Review BPP training strategy to see how gender sensitive it is.

In summary, reviewing the programme documents helps to

- Developing a first cut idea of what the programme can achieve, from a gender standpoint.
- What additional information should be collected through fieldwork?

Resources you can use:

Resource Kit Annex 2. A Gender-mainstreaming checklist for project documents, adapted from UNDP and from Gender criteria for review of gender mainstreaming in SDN Portfolio, World Bank

Resource Kit Annex 3. An Example of an energy project document review: Some gender dimensions and gender mainstreaming opportunities in the Lao BPP

4.2 Assess Organizational Readiness to Mainstream Gender

Before planning gender activities, it is important to have a realistic understanding of what the organization and the Programme staff can and cannot do. For instance, it is rather futile to plan elaborate gender based PRA and other data collection exercises, if the programme cannot spare trained staff to carry it out and cannot muster additional budget to hire new people. In such cases, you would want to explore if any of your partner organizations has skills on gender that can be used, and collaborate with them. If your programme wishes to involve women in supply-side functions, you need to have a clear idea on how receptive the biogas companies or entrepreneurs are towards working with women. How many of them have women staff who can be trained as extension workers and trainers? Would the biogas companies need additional incentives to train and support women as biogas masons? These issues are discussed further in the section on Implementation.

Hence, before starting with gender mainstreaming work, you need to know exactly what is the organisational readiness is, to adopt gender mainstreaming in its biogas operations; what capacities and resources can you draw on, and what gaps you need to address. While a series of tools are available to undertake a gender-based institutional assessment and are listed in section 3, we recommend that at the minimum, together with the key programme staff, you make a rapid assessment of the issues identified in box 4.

Box 4. Scanning Organizational Readiness to do Gender: Issues to Reflect on

- What is the policy context on gender? How conducive is it to work on gender mainstreaming in projects?
- What is the level of understanding about gender issues within the organization
- To what extent, does the management support a gender-sensitive approach and is open to invest resources and staff to practice it.
- Whose responsibility is it to integrate gender equality issues in the Programme?
- Is sensitivity to gender issues included in job descriptions/ assessed at interview/monitored at appraisals?

- What are the issues that we face in involving women in our biogas programme and in its management?
- Is there funding available if I want to do something on gender?
- Do the field teams have expertise on social and gender issues? How many have participated in gender training and can use it in the field?
- Does the Programme have any partner organizations that have expertise on gender.

Resources you can use⁶:

Annex 4. A gender capacity needs assessment tool used in the Lao PDR biogas programme

4.3 Consult with Programme Communities: Baseline Studies

4.3.1 What you need to know from the community and why?

The programme document review and discussions within the programme team has revealed the relevance of gender issues in the programme and provided some clues towards entry points and opportunities for gender work.

However, it is critical to complement this with field-level information on what, from the community's point of view, is the starting point for gender in the programme? You need to do a reality check on the ground, to see whether the thinking so far is in line with the needs and priorities of the targeted beneficiaries, the men and the women in the communities the programme is working for.

Ideally, the field work on gender mainstreaming should be incorporated into already planned programme field work such as baseline surveys and user surveys, being carried out as part of the programme cycle, which are planned to be conducted in all ABPP countries. However if no other programme field work is planned in the immediate future, then separate field work to gather information about gender issues would be necessary.

What do we need to find out from the communities? Collecting information from communities involves looking both at what women and men do, and what they do not do, to see where activities must expand in order to transform gender relations. Questions that would help in designing the programme better are, on which information can be collected in baseline study are:

- What opportunities/constraints do cultural practices pose to involving men and women in project processes?
- What do people currently use for cooking energy? How much time and effort is spent on the same? What difficulties do women and men face in obtaining and using cooking energy fuels?
- Who (men/women) will use biodigesters and who controls investment decisions on energy technologies, including biodigesters? (Household level and community level)
- What are the views of men and women on the value of the proposed biodigesters?
- Who (men/women) will be involved in operating the biogas system? Who is responsible for fetching water? How much time and effort is spent on this?
- Who (men/women) are going to be involved in maintenance and repair, and is capacity building necessary? If so, for whom?
- Which women from the communities have the potential to take up roles of biogas masons, supervisors and mobilizers? What kind of support would the Programme need to provide them?

⁶ These resources are available with ENERGIA on request.

- Who (men/women) are going to be involved in programme management and under what arrangements?

Box 5. Understanding gender potential dimensions of a biogas programme through fieldwork: two examples

Empowering women through a biogas programme: The Pakistan Biogas Programme aims to “Promote gender equality and empower women” and “Eliminate disparity in education.” Its recently concluded baseline assessment collected data on current levels of women’s empowerment:

- What are the (community/household/village institutional/project) bottlenecks to women’s empowerment?
- What is the level and causes of women’s illiteracy?
- Can women’s literacy be improved through energy interventions/biogas in particular?
- Can the project undertake some pro-active measures (additional activities) to promote women’s empowerment?

The baseline survey was also helpful in checking whether the product information shared with men and women in the provinces in line with their literacy levels, are attractive, focus on their concerns, and are routed through information channels that do not bypass either men or women (for example, in many energy programmes, all the motivators are men, who prefer to talk to men, as a result of which the women either get information indirectly or it is incomplete or do not get it at all)?

Taking a cue from the BPP Lao Programme document: The SNV-supported Biogas Pilot Project (BPP) has eight broad components, one of which, Component 5 states “Training” includes “biogas user training with emphasis on women. It can be difficult to involve women in training unless they are specifically targeted.” Fieldwork should try to assess why this is so:

- What are the bottlenecks and practical difficulties or “de-motivating factors” for women to participate in user training?
- What could be some possible measures to address these? For example,
 - Would it be useful to conduct user training at cluster of houses level, where women can gather more easily than a common central location in a village?
 - Design pamphlets and user guidance manuals in a manner (pictorial perhaps) that is in line with women’s level of literacy and comprehension
 - If women are to take care of and maintain their plants, it might be useful to put all the maintenance information on a laminated sheet pictorially, which can be hung up in the kitchens.
- Is the user training and communication package gender sensitive and in line with the existing level of women’s awareness, knowledge and cultural practices?

To sum it up, in a biogas programme, fieldwork at the initial stages helps to provide information that helps to:

- Identify special product features that women as users would prefer in biodigesters (for example, easy cleaning and maintenance; one/ two/possibly three burners in the biogas stove; biogas with light option)
- Identify specific constraints that women face in accessing biodigesters, for example:
 - Biodigesters can actually end up increasing women’s workload in water scarce areas, or where women fetch water from a distance, since a biodigester needs additional water to be fetched.
 - Women-headed households find it more difficult to obtain bank loans for constructing biodigesters, so a credit line specifically tailored for women headed households (in line with their cash flow patterns, flexi-duration, additional incentive etc.) may be required.

- In Senegal, polygamy is a widely prevalent practice. In houses inhabited by more than one wives, management of a common biodigester can be a challenge. The baseline survey provides an opportunity to firstly understand the situation, and at the same time, explore alternatives to deal with situations like these.
- Check the existing literacy levels and knowledge of national language vs local languages of women and men so as to ensure that the product information shared with men and women beneficiaries (posters/ maintenance pamphlets/ TV and radio ads) is in line with their literacy levels, is attractive, focuses on their concerns, is routed through information channels that they use traditionally (e.g., opinion leaders).
- Check the feasibility of women taking up roles of masons, supervisors and social mobilizers, by examining their existing literacy and numeracy skills, business acumen, and potential for taking up these roles.
- Provide the programme management some directions on whether we can envisage a role for women beyond as just users of the technology? Are there specific functions in the supply chain that women can perform, if they received adequate training and support? If yes, then the fieldwork needs to identify what are the specific constraints that will need to be overcome if women are to become producers, entrepreneurs, salespeople or promoters.

4.3.2 How to collect information from communities: data collection tools

Fieldwork involves relatively brief spells of interaction with the communities, and it is important that it is done well. Unless we are careful, we run the risk that the information collected may not be accurate or reflect the ground realities, and hence using it for decision making can be risky. Most programme staff is experienced in conducting field work; however, they may not be as familiar with conducting gender-sensitive fieldwork. Annex 5 in the Resource Kit provides do's and don'ts for undertaking gender-sensitive field work with communities.

Focusing in on the most relevant gender and energy issues for the project and gathering information about these can be a "rapid appraisal" approach. Participatory Rural Analysis (PRA) methods can be used for participatory data collection from communities, households and women. A number of PRA handbooks are available, which provide tools and methodologies for data collection. The remainder of this section reviews four typical approaches that are commonly used by energy and development projects for participatory field work, and offers some suggestions on how to "engender" these tools to ensure that the needs and views of both women and men are included.

- Direct observation
- Community level PRA tools
- Discussions with focus groups and key informants
- Household surveys

Please remember that the exact combination of tools that you select should depend on the questions you want answered from the fieldwork, the resources and time you have at hand, and the experience of the information collection team. *If the group does not have experience in PRA tools, they are best left alone* and we recommend that you rely on household surveys, and focus group discussions.

Direct Observation

Direct observation of processes within a village can be quite enlightening. It can provide useful information on the socio-economic status of households, how men and women operate within the household and the community, how they manage energy resources, and how they cope with shortages and scarcities. Some of the things to observe include:

- Variations in housing types (walls, floors, roofing), a useful indicator of socio-economic status
- Level of indoor air pollution in kitchens (which the programme aims to reduce)

- Numbers and types of LPG stoves, radios, TVs, bicycles, motorbikes and utensils
- Age and proportion of boys and girls in school
- Fuel collection pattern and distance to fuel sources

Community-level PRA Tools

A number of tools are available for collecting information on the socio-economics of the community. The field worker must be conscious of the local divisions of labour and skills in deciding who will provide accurate information on fuel use, agricultural practices, land holdings, assets, etc., and take this into account when information is gathered.

- In large communities, it may be necessary to follow up large meetings with smaller planning groups (also known as focus group discussions), including key women representatives, where women's roles, responsibilities, priorities and constraints can be elaborated in more detail.
- You may find a tendency for only some persons to show interest in attending a meeting. Maybe men will come and assume women should not. Your job is to ensure that women attend! And participate! The same with other people who need to be encouraged: the youth, the ethnic minorities, the shy people, the religious minorities, the illiterates, the very poor, and the marginalized.
- Early consultation with men, particularly community leaders, helps to promote positive attitudes towards women's participation. Men's negative attitudes to women's increased involvement have often shifted once the benefits to the community, households, and women themselves have been demonstrated.

Some useful tools that can be used to record information are as follows:

- Village Resources Map, which are drawn to depict various natural and physical resources in a community. Mapping the village will give information on where the concentration of cattle is, the location of grazing lands, distance from woodlots, land use, location and size of farms or homesteads, and location and availability of services.
- Activity and Decision Making Profile of energy related tasks (to identify existing roles and responsibilities of women and men in the energy use and management and who has access to and control over energy facilities at household and community level).
- Wealth ranking , to investigate perceptions of wealth differences and inequalities in a community
- Activity Profile to Assess the workloads of women and men
 - Seasonal Activity Calendar, to learn about the seasonality of women's and men's labour, important to plan programme activities and decide during which months women and men are relatively freer for biogas awareness campaigns, for attending biogas masons and user trainings.
 - Daily routine for learning about the division of labour by gender and socio-economic group. Mapping a woman's daily schedule provides important baseline data on how much time they spend in fuel collection, which the biogas programme aims to reduce.

Discussions with Focus Groups

Some possible stakeholder groups for focused discussions are: men & women-headed households, local energy service providers and administrative structures. In the rural context, where men and women have different roles and expertise, talking to men's and women's groups is often the most practical basis for collecting information. In such rural contexts where women may not express their views in front of men, forming separate men and women's groups is necessary simply to have equal voices heard. Some relevant issues for discussion with a women's group could include:

- What kind of information would you like to have, before installing a Biodigester?

- Have you seen or heard of a biodigester? What do you think are its most useful features?
- Do you think women in your village would be willing and able to work as masons or social Mobilizers for a Biogas programme? (would you want to? Would anyone object?)
- What would be necessary to make this possible for yourself? For other women?
- What are the 2 or 3 most significant problems faced by women in your village, that affect their ability to take part in programmes like this one, or any other initiative?

Box 6. Women as focus groups: Why and how to consult with them

- The programme needs to ensure that programme information reaches women that they are able to attend meetings and that meetings provide a forum in which they can actively participate
- Women are responsible for cooking in rural areas, and are likely to have an in-depth understanding on issues related to cooking, a relevant area for biogas.
- Inform the women well in advance about the meeting. This gives them the time to make arrangements (with neighbours, elder women in the households etc.) for looking after children, and other household chores such as fodder, water and fuelwood collection, cooking etc.
- Encourage women to attend as a group (ask Self Help Groups to mobilize women participants) is effective since they can make arrangements among themselves to facilitate attendance.
- ‘Women only’ meetings in the village help women get the confidence to attend and participate. This however may not be enough, and needs back up through informal women’s meetings and house to house visits

Household Surveys

The objective of collecting household level data is to identify the energy needs and demand of men and women, to compare knowledge levels on energy use/management of men and women, who controls and benefits from energy resources. Household data is typically collected through sample surveys.

In order that the gender aspects are captured accurately, and that the women feel free to voice their views and opinions in these surveys, it is essential that:

- the survey enumerators include both women and men. According to cultural situation, it may be important for the most reliable information for women to interview women and men to interview men in the same household.
- women are interviewed in their homes or kitchens or wherever they feel most comfortable and if necessary during the course of their work
- women and men in the households are surveyed separately.

Resources you can use:

Resource Kit Annex 5. Do’s and don’ts for undertaking gender-sensitive field work with communities

Resource Kit Annex 6. Data collection instruments (survey questionnaires for households, survey questionnaires for women, village socio economic profile, focus group discussions) from the recently conducted gender baseline survey for the Pakistan Biogas project.

Resource Kit Annex 7. Data collection instruments (activity profile and seasonal calendar, access and control profile) from the Gender baseline survey of the Lao BPP

4.3.3 Designing a gender sensitive baseline survey

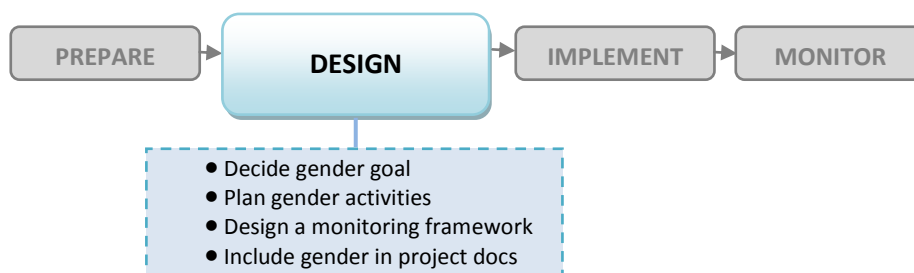
As discussed above, the two specific purposes for which detailed information is required to be collected from communities, right at the beginning of the programme are, firstly to ensure that all aspects of the programme are designed well and are grounded in reality, and secondly, to develop baseline data with which the project performance can be compared later.

In designing a baseline survey, it is important to first identify the few broad ‘gender’ questions or issues that you need information on, and then use these as a basis for developing the survey questionnaires and other data collection tools. Some examples of these are presented in table 4.

Table 2. Approach for a Gender Sensitive Baseline Survey

Guiding Questions and purpose of data collection	Information to be collected	Data collection tool
To create a baseline on the impact of the biogas programme on MDG 3 (women's empowerment and gender equality)	Time and effort spent in fuelwood collection/ cooking and other tasks by women and girls Incidence of respiratory and eye problems Involvement of women in community activities Role divisions within the household and the community	Activity matrix Household survey Focus group discussions, discussions with opinion leaders Activity matrix for men and women
To design a gender-sensitive promotional strategy?	Who (men/women) will use biodigesters and who controls investment decisions? What features/ benefits do men and women value in biodigesters? What is the literacy level of men and women? Which places do men and women frequent most and would be appropriate for displaying promotional material? Which months/ seasons are most suitable for conducting promotion campaigns and training programmes?	Focus group discussions with men and women Focus group discussions with men and women Household survey with men and women separately Household survey with men and women separately Seasonal calendars
To design strategies to encourage women to become masons and supervisors	Which women, within the community, have the potential to undertake these tasks? What constraints are they likely to face and how to address them?	Focus group discussions with men and women
To design strategies to involve women in user training	What are the practical difficulties for women to participate in user training and how can they be addressed? Is the present training material and communication package gender sensitive, and in line with the existing level of women's awareness, knowledge and cultural practices?	Discussions with men and women separately Focus group discussion

5. DESIGN: Plan Gender Focused Programme Activities



By now, you have a good idea of

- What the programme document has committed to achieve by way of gender. In case the programme makes no specific commitment on gender, we have some ideas on how GM will help achieve other programme objectives better. For example, involving women pro-actively in user training will help the overall programme sustainability, as the installed biodigesters are likely to be used and maintained better, if the primary users, i.e. women are trained in maintenance aspects themselves, as opposed to their depending on others to undertake small repairs and maintenance.
- How well equipped is your Programme to undertake gender work, in terms of organizational support, manpower and financial resources.
- What is the community's standpoint on gender? What are the needs and priorities of women and men from the biogas programme?
- What constraints are women likely to face in participating in the biogas programme in supply side functions as masons, as social mobilizers, as entrepreneurs, and how to address these?

Based on our understanding so far, you now need to design the gender component for your biogas programme or the Gender Action Plan). As mentioned before, this involves:

- Agreeing on a gender goal (what the programme aims to achieve from a gender standpoint), and
- Planning specific activities to meet these gender goals
- Including gender in Programme documents, and
- Designing a monitoring framework for tracking the performance of gender activities.

5.1 Decide on a Gender Goal

Your biogas programme may have a well-defined gender goal already. For example, does it aim to improve quality of life for men and women? Does it aim to empower women? Or bring about improvement in livelihoods for women or generate incomes for women? Does it want to improve gender equality in the community?

If it does not have a specific gender goal, you will need to consider whether to propose one, and/or what are the ways in which gender mainstreaming can help achieve better the overall programme goals? What is the relevance of gender in the programme? Sometimes, the programme may mention women in connection with implementation activities (for example, train women as biogas masons or involve



Figure 3. Thinking through Gender Action Plan

women in user training), but not have a gender goal per se. What then are the gender issues that a biogas programme needs to plan for? Any biogas programme can try to achieve several, different things for women and women. Selecting one or more of this as a gender goals helps to know where you want to reach.

- At the most basic level, a biogas programme will *meet the cooking energy needs* of the users. In order to do so, the programme needs to ensure that the product (the biogas digester, the stove etc) is indeed in line with the needs of the primary users or women. Do women like its features? Is it affordable? How simple is it to operate? To what extent, it reduces workload for women? Can the women handle minor repair works?
- The programme need not however stop at this. It can be more ambitious and can aim to *improve women's livelihoods*. Any biogas programme, in principle, is gender-neutral, which means that it encourages both men and women to become biogas entrepreneurs, and/or perform specific functions in the supply chain. However, in reality while the programme may be treating both men and women at par (whoever has the interest and the ability to become an entrepreneur can do so), gender inequalities in the society mean that women have less access to credit facilities, information and training (see Box 1). They often have less exposure to the outside world, lower confidence in themselves, and sometimes, even restricted movement outside homes. In such a scenario, if the biogas programme wants to improve women's livelihoods, its gender strategy will need to identify specific constraints that women face and address them, either directly within the programme, or by creating other linkages outside, with other institutions.
- At another level, your biogas programme may choose to incorporate a role for women in specific programme activities. For example, can some of these rural women be trained as trainers for biodigester construction? Is it possible to (a) include women in decision making roles higher up: this could start at the province levels, where some of these could be made part of the programme management team, and (b) diversify their role, to include providing repair services, and others. Even within marketing, there could be a system of incentives (a small finder's fee) for the women marketers.

In general, the starting point for selection of gender mainstreaming activities should be the 'gender goal' of the biogas programme: the programme needs to fix for itself where it wants to reach/ what it wants to achieve in terms of gender: does it want to just ensure that women have an 'energy solution' that meets their cooking energy needs. Or does it want to increase women's incomes through the programme, or any other.

5.2 Plan Gender Focused Activities

Once the programme has decided one or more gender goals for itself, the strategy needs to identify where, why and how specific gender initiatives need to be applied, in order to achieve the gender goal/goals. Clearly, the gender strategy and activities will vary, according to the gender goal(s) selected. Table 5 presents examples of how the gender activities would vary, depending on what gender goal a programme chooses to work towards, and Box 9 shares some gender focused activities being implemented under the Nepal Biogas Support Programme (BSP).

Table 3. Possible Gender Goals, Outcomes and Activities of a Biogas Programme

Gender Goal	Expected Outcomes	Examples of Gender Activities
Improve quality of life for men and women though biodigesters	<ul style="list-style-type: none"> • Reduced drudgery for women in collecting fuelwood • Reduces indoor air pollution in kitchens • Reduced consumption of 	<ul style="list-style-type: none"> • Encourage flexibility for biogas stove designers to build in features to make them attractive for women (easy cleaning and maintenance/ one/ two/ three burners/ biogas with light option). • As part of R&D, collect information on what features women look for in cooking energy technology (collect data in baseline survey on local fuel type used/

	fuelwood	<p>preferred sizes and features of devices, purchasing power etc)</p> <ul style="list-style-type: none"> • Introduce local service centres and train local masons to ensure availability of parts/ replacement • Ensure that women attend biogas user trainings and organize them at locations convenient for women to attend
Improve women's livelihoods through biodigesters	<ul style="list-style-type: none"> • Increased incomes of men and women • Increased entrepreneurship among women 	<ul style="list-style-type: none"> • Encourage women to become biogas masons and entrepreneurs: <ul style="list-style-type: none"> - Provide for safe staying place when a woman goes to construct biodigesters in another village - Encourage women's groups to take up biogas work - Hire women for promotion and motivation work (giving them a commission for identifying a client). - Credit support for women entrepreneurs (group collateral, convenient repayment schedules, pigmy collection systems) • Link biogas programme with income generation to use freed time for economic activities
Promote gender equality and women's empowerment (MDG 3)	<ul style="list-style-type: none"> • Increased education level of girls • Women undertaking self improvement activities • Improved family health 	<ul style="list-style-type: none"> • Introduce an adult literacy programme for women • Provide incentives for parents of girls who were assisting their mothers in fuelwood collection, to send them to school (Free books and school uniforms every year for every girl that completes a year at school) • Ensure women's representation in biogas programme management committees and provide appropriate support to develop the skills for this role

Box 7. Gender focused Activities in Biogas Support Programme, Nepal

- Norms on women's participation (50%) in user trainings
- Targeted training for Women Mobilizers/motivators
- 50 women cooperatives have been mobilised for loans
- Priority to women entrepreneurs in order to establish biogas (6 women owned biogas companies), provision of separate training and incentives to women masons, award for best mason/supervisor/entrepreneur [women and men separately]
- Inclusion of new gender indicators at programme level

5.3 Incorporate Gender in Programme Documents⁷

In the context of ABPP, the programme framework agreed between the donor and the implementing organization is the key reference document, and in order that gender activities are an integral part of the overall programme, it is necessary that the programme documents clearly include commitments and deliverables on gender. This will ensure that attention is paid to gender issues in processes of management, resource allocation, and monitoring, and it opens the door to increasing attention to gender issues in review processes. For this reason, the gender teams will want to consider whether their programme documents meet the definition of gender mainstreaming, or do they need to be adjusted?

⁷ Adapted from DFID. Gender manual: A practical guide for development policy makers and practitioners, Helen Derbyshire, April 2002.

Where and how to include gender in project documents

Some ideas on where and how to include gender concerns in documents are as follows:

- Target groups
 - The PID and the annual programme plans should clearly state who the programme is targeting. It should be clear which activities and outputs are targeted to women, which to men and which to both
 - Replacing general terms such as “the poor” or “poor farmers” with, where appropriate, “poor men and women” and “poor men and women farmers” makes women as well as men clearly visible and avoids misunderstanding.
- Purpose and goal
 - The promotion of gender equality (benefit for women as well as men) should be an aspect of the purpose and goal of all development policies/projects concerned with impacting on people’s lives. This should be reflected in Indicators and, where possible, also in the wording of the purpose/goal statement.
 - If benefit to men and women is part of the goal and purpose, specific activities/outputs will be required to bring this about and need to be included in the logical framework.
- Outputs

In some projects, it may be useful to have one output specifically concerned with targeted activities for women. However, it is important not to isolate women’s activities within one output with a very small claim on resources and no influence on the rest of the project. *Targeted outputs of this kind should complement activities to mainstream gender throughout the policy/project.* Benefit for women as well as men should be considered as an aspect of *each output*. It is important to include gender in *output indicators and associated activities*.
- Activities

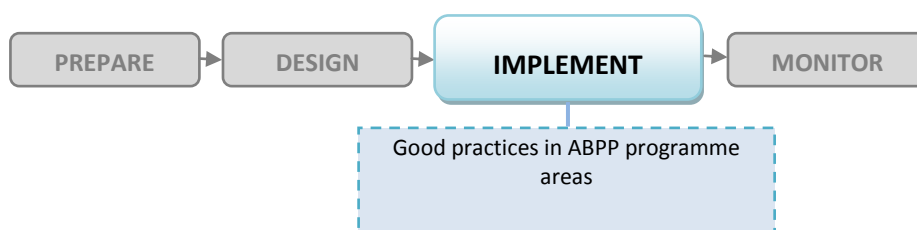
The promotion of benefit for women as well as men requires *targeted activities*, backed up with *human and financial resources*. Resource allocation is directly linked to the *activity line* of a logical framework. See section 6 for an idea of activities.

5.4 Putting it all Together: the Gender Action Plan

Once the above steps are completed, you are in a position to document it. Even though you may integrate the various gender focused activities within the overall implementation documents, it is advisable to document it separately in the form of a ‘Gender Action Plan’. This can be appended to the main programme documents. The Gender Action Plan needs to identify where, why and how specific gender mainstreaming activities need to be undertaken. The elements of a GAP are as follows:

Gender goal	What do we want to achieve in the project in terms of gender
Expected outcome	What specific outcomes are expected
Activities	What activities are proposed in order to achieve the above. These would include Programme level activities as well as organizational level activities (such as gender training for field staff, hiring women at management level etc.)
Monitoring indicators and plan	Targets and measurable indicators for the outcomes expected, how they will be tracked (discussed in detail in Section 7)
A timeline for implementation	
Budget	

6. IMPLEMENT: Implementing Gender Focused Activities



In the previous sections, we have walked you through how to identify the gender issues in your biogas programme, how to fix gender goals based on it, and how to design gender focused activities that help the programme achieve the gender goals. ABPP has clustered its programme activities under a number of functions, as shown in the figure below.

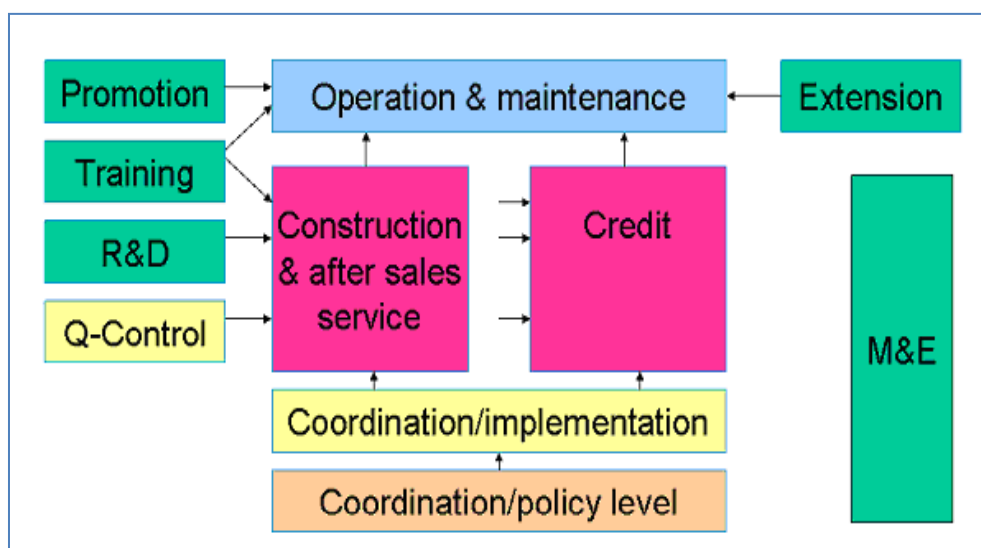


Figure 4. ABPP Programme Functions

The following table presents a compilation of gender issues to be addressed in the programme functions, some of which are further detailed out in the subsequent sections.

Table 4. Gender Issues in ABPP Programme Functions

ABPP Programme function	Gender issues to be considered
Promotion (reaching the potential users)	<ul style="list-style-type: none"> • Distinction between 'men-users- and 'women-users' in promotional activities (a clear focus on target group in promotion strategies) • Emphasis on benefits from health; reduction of drudgery, time saved and opportunities for education and income generation pertinent to men and women
Training (o&m training for users, training for masons, supervisors, staff of sub-national offices, extension personnel)	<ul style="list-style-type: none"> • Ensure that the user training targets women and are tailor made to meet their requirements • Encourage and train women to become entrepreneurs – masons, supervisors • Provide incentives for women at the beginning (start up stage) • Encourage and train women as extension personals with ensured personal and job security
Extension (activities after installation, especially bio-slurry use)	<ul style="list-style-type: none"> • Increase the awareness of men and women on the benefits of bio-slurry use for crop production and applications such as vegetable farming, which can enhance the nutritional intake of families • Engage women in producing and selling bio-slurry as a commercial activity. • Increase the awareness of women and men on the possibility to connect

	latrine to the digester and hence improve sanitation of the household
Quality management & after sales services	<ul style="list-style-type: none"> • Ensure that quality control team involves all family members
Credit	<ul style="list-style-type: none"> • Ensure that women & men can access and control appropriate credit for biogas
R&D and standardization	<p>Ensure (through meaningful participation of users – women in design etc) that the biodigesters and appliances are in line with women’s needs and priorities as users</p> <ul style="list-style-type: none"> • Safety • Quality • Ease in use of appliance
Institutional development & implementing partner structure	<ul style="list-style-type: none"> • Training and consensus building to develop staff capacity on GM approach • Ensure that end users specifically women are represented in the institutional set-up (steering committee, partners), e.g. Tanzania • Build capacities of end users to perform these roles effectively • Ensure that the programme staff receive adequate training other capacity building support for GM actions • Ensure that gender concerns are reflected in key programme documents, as well as routine procedures such as TORs, staff appraisals etc.
Private Sector Development (creating & supporting biogas companies)	<ul style="list-style-type: none"> • Ensure equal access to business and technical training for women and men • Incentives and other support systems for women entrepreneurs
Finance (subsidy)	<ul style="list-style-type: none"> • Ensure that system for disbursing subsidy is non-discriminatory • Disadvantaged sections such as women headed households may need additional support
Monitoring and evaluation	<ul style="list-style-type: none"> • Use of gender-disaggregated data • Baseline study & annual biogas user surveys and evaluations must examine gender & socio-economic aspects

6.1 Promotion: Reaching Potential Users

The gender issues to consider in designing a promotion strategy within ABPP are as follows.

Men and women may have different ‘expectations from the biodigester. The promotion strategy must ‘package’ the product information in line with this.

What do people look for, in a biodigester? Product promotion markets the benefits or the services built into the biogas technology (easy cooking/ smoke removal) and not its features (cement dome/ cu.m of gas production). And oftentimes, men and women perceive the benefits of biodigesters differently from each other. A survey of biodigesters in India revealed that while women appreciated benefits of time saved in fuelwood collection and cleaner kitchens from use of biogas, men appreciated the fact that food can be cooked quickly, and that they don’t have to wait long for their meals! Similarly, in Lao PDR, while the men are interested in making use of bio slurry as fertilizer while women enjoy cooking with biogas. Hence, the promotion strategy for biodigesters needs to start from understanding who the ‘customer’ is and what the customer is looking for. It may be argued that since women are the primary users of biodigesters, they should be the intended customers, however in reality, the decision on whether to invest in a biodigester depends not just on *who uses the technology*, but a range of other factors, including the gender relations within families and the community.

Table 5. A Creative Way of Positioning Biodigesters to Potential Clients: Men and Women

	Positioning for men (what men want)	Positioning for women (what women want)
Specific Product Features	Biodigesters provide excellent bio-fertilizer for crops (increase incomes)	Biodigesters save fuelwood (make fewer trips to fetch fuelwood, and spend more time with your family).

Benefits, problem-solutions or needs	Chemical fertilizers are expensive, and their continued usage can damage the soil nutrients. Switch to organic manure No running costs Status symbol	Save time and reduce drudgery Cook in a smoke and soot-free kitchen No running costs Status symbol
Specific Usage Occasions	Quick cooking	Quick lighting up, when you need to cook large meals or for guests
Against another Product	The biodigester does not produce smoke and costs lesser to operate.	Convenient and easy to use, as compared to firewood and kerosene.

Box 8. Aligning Biogas Loan Repayment to Milk Sales: a Promotion Strategy

In the Nepal Biogas programme⁸, a 6 m³ biodigester needs a loan of around NPR 16,000 (USD 211). The repayment of a loan taken for 2 years at 13% interest rate requires that the household has to pay a monthly instalment of NPR 761 (USD 10). The BSP promotion strategy involves presenting to the farmers, the monthly instalment in terms of daily milk sales. Loan repayment translates to the sale of 1 litre of milk per day or replacing 9.5 litres of kerosene per month. If the loan is for 5 years, the milk required to be sold per day is half a litre and the kerosene replaced per month is 6 litres, which gives a good indication of its affordability. Thus, each week, the women agree to allocate a fixed amount to a collection fund kept by the village women's group. This amount is paid to the biogas company who comes to the village to collect the amount on a monthly basis based on a contract signed with the women groups.

Ensure that women as primary users of biodigesters get correct and complete information on the biogas package

In Lao PDR in Asia, women manage household finance and take purchase decisions, including those on acquisition of biodigesters. However, as revealed by the gender baseline survey conducted in 2009⁹, it is the men who have been participating in biogas promotion meetings and many of them are unable to convince their wives about biodigesters. Women do not participate in biogas promotion activities, and hence have only a partial understanding of its benefits: most women view fetching firewood as a routine activity, and wood as being available *for free* and do not see any value if paying hard-earned cash for biodigesters. This issue is compounded by the fact that the programme has just a few women extension workers and more often than not, promotion staff is men, who prefer to talk with men. Women get information either indirectly from their husbands/ other men members of the family, which is often incomplete or do not get it at all.

Some practical measures to ensure that women get complete and correct information on biodigesters before purchase decisions are made are:

- Include women in biogas promotion teams. Encourage teams with both men and women members. In BSP Nepal, women social mobilizers are responsible for promoting biodigesters. The biogas construction companies themselves play a large part in promoting the technology; and their women liaise with potential women users/household members for promotion. This helps in reaching out to women even in conservative communities without hurting their traditional/cultural inhibitions.

⁸ Launched in 1992, Biogas Support Programme (BSP Nepal) has constructed around 204,490 biodigesters until July 2009 in Nepal, using a market-based approach.

⁹ BPP and SNV (2008) *Gender and Social Inclusion Biogas Baseline Survey at Community Level: "A Voice from Local Women"*. Final report, Oct-Nov 2008, Vientiane and Savannakhet, Lao PDR

- Decentralize biogas information dissemination: It is easier for women to come to a neighbour's house rather than a centralized location such as a community hall in the village. Organize biogas awareness campaigns at cluster of houses level.
- The promotion package must provide complete information on the technology:

Table 6. What men and women need to know in order to make a purchase decision on biogas

	General	What men need to know	What women need to know
Technical issues	Necessary raw material to operate the system, operation specific details on repair and maintenance and related services available	Access to technology, Operation, repair and maintenance, possibilities of linking to income generation	Operation, ease in use, raw material feeding rate and quantity, potential problems and solutions - that can be handled without external help; periodic maintenance requirements
Financial issues	Cost of the system, funds if available and means of accessing it	Cost of the system, accessing finance – loans and repayment details	Cost of the system, accessing to finance – loans and repayment details
Benefits	Social, economic and environment	Benefits other than for cooking, potential of income generation opportunities; savings	Ease in cooking; health improvements; drudgery reduction; time saving; potential of income generation opportunities; savings.

Use appropriate promotion tools and agents

The selection of promotion method depends firstly on the characteristics of the target group, and secondly, on the resources available. Normally, printed information in the form of books and booklets are useful for literate groups; while mass media such as radio, newspapers and audio video work well for others. In Africa, trade fairs are also an important means to disseminate information. When approaching it from a gender lens, here are some tips:

- Be 100% sure that women do understand the promotion material, and hence, field test biogas promotion material extensively. These days, most biogas programmes use pictorial depiction of benefits of biodigesters. We cannot however assume *a priori* that these are understood correctly by women and men. Can the women read and understand the text on the poster? Is the overall concept of biogas clear to her? Does she understand the linkages shown in the poster? Does she understand what guidance is being provided for repair and maintenance through the poster?
- Engage local leaders in promotion. Local women leaders, such as leaders of self help groups, mother's groups etc. are prominent people in the community and can encourage adoption of biogas technology. Political leaders, teachers, agricultural extension officers, social workers, elders, progressive farmers, entrepreneurs and high ranking officials are also respected and can be helpful.
- Promotion for women must take into consideration that they may have limited mobility. Besides they can be influenced by persons, groups, organizations that they have confidence in. This calls for using appropriate channels through which the promotion should be done. Time and location of the promotion is important, women may be found at markets or health centres for example.

In BSP Nepal, PRA exercises are conducted separately for men and women during the feasibility stage. Venn diagrams are used to assess women's familiarity with different local organizations, which are roped in for conducting promotional activities. Similarly, in Rwanda and in Burkina Faso, women's councils and women's associations are involved in biodigester promotion. Tanzania actively uses dairy farmers in promotion work.

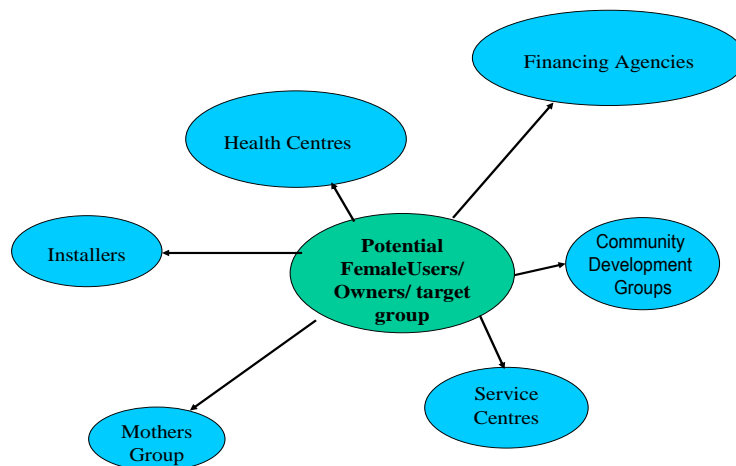


Figure 5. Venn Diagram For Selecting Appropriate Local Institution for Promotional Activities

Box 9. Using women headed households as promotion agents

In the Kenya biogas programme, the work in a new district starts with the construction of demonstration plants. These plants are located strategically in the houses of opinion leaders. The programme has found women headed households to be active promotion agents. Many of these households are already active farmers, respected in their localities. As the gender focal point puts it, a convinced woman is the best promotion agent for biodigesters.

6.2 Training Users, Masons, Supervisors, Staff and Extension Personnel

In order to construct and maintain biogas digesters, the national level programmes planned for capacity building of masons and technicians. Almost all ABPP country PIDs have included involvement of women as masons as a programme activity. There are however several challenges that are encountered in doing so: firstly, technically skilled women in rural areas are difficult to find. The few women who are trained find it difficult to cope with physical challenges including relocating to another place, should the biogas programme need it. Finally retaining young women who are trained as masons is a big challenge: many get married and leave the programme, those who want to continue find it difficult to operate as masons on a long term.

In this section, we deal with three gender aspects of training in ABPP: (a) gender mainstreaming in national level training for programme staff and masons, (b) practical on-the-ground strategies on how to encourage/ support women to take up masonry related functions (masons/ supervisors), and (c) training women as users of biodigesters.

6.2.1 Gender mainstreaming in ABPP training

Some gender mainstreaming interventions are suggested below that can be integrated in on-going training at national level:

- Planning
 - Include gender focused needs in the training needs assessment.
 - Use gender analysis to assess the technical capacity of men and women as masons, supervisors, staff of sub-national offices, and extension personnel
 - *For mason's training*, use gender disaggregated data to show the potential for including women in activities like brick making and construction
- Imparting specific skills

- Ensure that the skills provided to masons, their supervisors, staff of sub-national offices, extension personnel takes into consideration the differences between the roles, needs, time allocation of labour for women and men trainees. Specifically,
 - Site selection: Location of the digester should be in a position that makes it convenient for women and men in the household to feed the digester daily.
 - Incorporating skills for entrepreneurship: Include skills training on utilization of biogas for productive use/income earning by women and men
 - Training on operation and maintenance: Provide skills that enable masons to train women users, in operation and maintenance of biodigesters at household level
 - Training on after sale services: Pay attention to the differences in the uses of biogas by women and men
 - Training on benefits of Biogas: Include explanation of benefits which respond to women’s and men’s roles, needs, division of labour.

6.2.2 Encouraging women to work as biogas masons, supervisors and social mobilizers

- Identify potential women masons through local institutions. In Tanzania, potential women masons are identified through local institutions such as the Village Commercial Bank Association, and vocational training institutes.
- Ensure necessary enabling systems for women masons, supervisors and social mobilizers: It is important to remember that it is relatively easy to teach women to build biogas digesters, but they will need to be self- confident enough to start a biogas business, go to the market and sell their skill and product; and also to convince the clients that women can be good biogas entrepreneurs. Some mechanism that have worked well to provide such support systems include:
 - In Tanzania, women are paired with men during mason construction courses to learn how to construct the biogas digesters. So far, 10 women have been trained and are operating as biodigester masons, and two are working as supervisors as well.
 - In addition to providing technical training, the programme needs to be in touch with women masons, getting from them regular feedback on what problems they face and how to strengthen them further.
 - The Rwandan biogas programmes encourages women to put up their own construction companies. Currently, Rwanda has one construction company owned by a woman.

Box 10. Encouraging women to become biogas masons: the Nepal way

Commonly held perception is that women are not strong enough and not technically inclined to do the physical work associated with masonry. In many cultures, it is also not accepted that women do this kind of work. Women masons in the Nepal Biogas programme have gone through this very phase, and have, over time, managed to gain confidence in the market as well as respect from their families. This achievement has taken many years but today, the biogas programme has not only women masons but women operating as supervisors as well as proprietors of biogas companies. Strategies that worked well include:

- A visible commitment to gender issues at the programme level, and articulated at the highest levels
- Conducting special women focused masons training programmes
- Additional affirmative action to encourage women as masons
 - Conducting special training for women masons to build their confidence and skills, and following this up with

combined (men and women together) refresher training,

- A special incentive of NRs 1000 is provided to women masons¹⁰
- Women masons are allowed to take up the job as per their convenience with respect to geographical area they want to operate in, the company they want to work for and staying overnight at the site
- Ensuring conducive atmosphere for women masons through provision of personal security while attending the train (provision for companion while attending trainings), organizing child care, holding trainings close to women's homes
- A continuous process of encouraging men counterparts, especially the owners of biogas companies. With support from BSP, many biogas companies conduct Extension Orientation Training for personnel from the banks and 1/NGOs, and in all of these, participation of women is highly emphasized. Some of the training on O&M include women users only.
- Encouraging rural women to become masons through women mobilizers. Today women farmers themselves, on hearing about the trainings via friends and women mobilizers, approach BSP that they wish to join, as it gives them a good new job opportunity.

6.2.3 Training biogas users

In a gender baseline survey in Lao PDR, women informed that even though they use the biogas digesters, it is usually the men who participate in the user trainings. Construction and O&M works are *assigned to men*, and women take support from men when something goes wrong or breaks down. Many women expressed that in practice, they share half the O&M tasks, especially those in the kitchen where the biogas stove is located. They face difficulties with O&M when men are away from home for either employment or socializing. Therefore, there was a strong suggestion that it would be better if user training is reorganized specifically for village women.

Proper training of especially women users on operation and maintenance does not only benefit the users but also the biogas masons in reducing their workload in after sales.

- Women members of the family are the primary users of the biogas system thus they need to be trained for regular operation of the system.
- With the men folk often away from the house for farm or other works, minor repairs of the system calls for training women on repair and maintenance.
- In case of major repairs, women members must have information about available services. Since it is not always possible for women to move very far from their homes, the need for local service centres cannot be over-emphasized.

Conducting user training for women includes making sure that they are physically present at training, but that they are given tailored and relevant training.

- Conducting user training for women: In Ethiopia, a man and a woman from each biogas family receives user training, and so far, 70 percent of the trainees have been women. In Nepal the users training is an inherent part of the project completion report. It is mandatory for the construction companies to train each and every household, and ensure that the women of the households attend these trainings. Each household is given a user-manual which provides necessary information in text as well as pictorial form.
- After Sales Service: All biogas companies are mandated to provide after sales service in BSP Nepal. This service is available free of charge for three years, and works as a follow up of the users training.

¹⁰ During the initial years, this was provided to all participants (men and women), but now only women participants are provided this incentive

- Tailor training to the needs of women: The timing and location (e.g at the owners own plant) for the trainings is fixed in consultation with the women of households that have newly installed biogas. Training is usually delivered in the local languages, and does not use text-based training materials.
- Use wall hangers: In Nepal, wall hangers have been developed to demonstrate how to identify problems and their immediate solutions. These are placed in the kitchen.
- Use women trainers and trainers with local language skills: Trainers who can directly relate to trainees can increase the comfort level of participants and the likelihood of disadvantaged groups participating, along with delivering the message in a more efficient way.

6.3 Extension

Where promotion relates to activities to be undertaken before the construction of a biodigester, extension is focused on activities - apart from after sales - after installation. Some good practices in extension are as follows:

- Identify the best possible persons to deliver extension services. These could be self help group members or agriculture extension workers. In the Ethiopia biogas programme for instance, extension work is undertaken by health extension workers, mostly women.
- Some tools to educate users about the use of biodigesters are as follows:
 - Door-to-Door Visits: BSP in Nepal, especially in its early days, relied highly on this method of extension. It requires a knowledgeable person to visit potential users to inform them about the technology and its benefits. This is an effective, though not the most efficient, method for awareness building. It works well through agencies that have local extension networks. Visits should be planned when women are at home and not in the fields or market and during off/low planting seasons.
 - Use women extension workers: As with training, extension workers who can relate directly to village men and women can increase the comfort level of farmers and make the message more relevant.
 - Use agriculture extension services: These extension services are well networked in rural areas and with farmers. Promoting the benefits of slurry use, and use of bio-slurry for vegetable cropping can be undertaken through them.

6.4 Credit, Finance and Subsidy Provision

Given the fact that poor households may not be able to bear the upfront cost of biodigesters, there is a need for providing a range of financing options to households. The ABPP country programmes offer subsidy to the consumers to meet part of the cost, several also offer credit schemes. Gender dimensions in developing gender sensitive financing mechanisms for biodigesters are as follows:

- Ensure that the financing mechanisms offered are appropriate to the purported customers (men and women) in terms of aligning repayment amounts and schedules with their incomes and expenditure cycles, alternative collateral requirements and simple loan application procedures.
- Explore partner institutions that can offer credit facilities for biodigesters. It is not always necessary for the biogas programme to undertake credit provision by itself, and it can tie up with other institutions that are specialized in this function. In Tanzania and Ethiopia, the programme has tied up with specialized microcredit institutions that favour women. Similarly, the Ugandan biogas programme has partnered with financial institutions which have an existing relationship with local women groups and is currently negotiating for a favourable interest rate to offer for biogas loans.

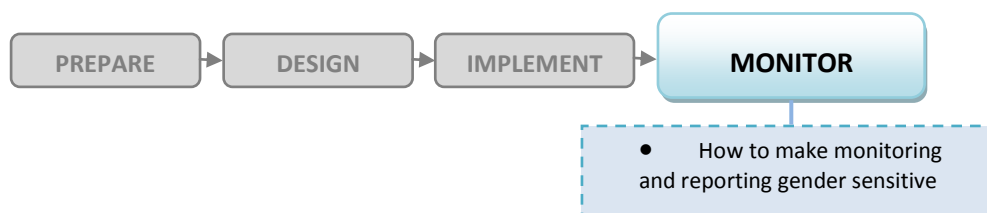
- Use group collateral. In obtaining loans, organizing collateral is often the biggest challenge for poor households, especially women headed households. In Nepal, women self help groups have been mobilized to provide biogas loans. These use a variety of innovative measures such as linking repayments to monthly saving, comfortable instalments, intra-group loans, group collaterals which make it possible for even the poorest women to cut across the cost barrier. In Uganda too, MFIs that depend on group collateral for biodigesters are common.

6.5 R&D and Standardization

The basic requirement from R&D in biogas is that the digester, the stove and other components must be fully aligned with the precise needs of the users. Some good practices are:

- Incorporate mapping of cooking practices in the baseline survey. Ensuring a perfect fit between the needs of the user and the biodigester requires knowing what the customer wants, needs, believes and can pay. In practical terms, this means that the baseline survey must include careful questioning on what are the current cooking practices and preferences (family size, amount of food cooked, type of food cooked, vessels used, fuel used etc), and basing the design of the biodigester on this information. In Ethiopia for example, *injera*, a thin, flat pancake made of fermented millets, is the staple diet. The *injera* is cooked on a large, flat girdle and needs a flame that is spread out, rather than being concentrated in the centre (like most biogas stoves). The Ethiopian biogas programme is currently working on a design for the biodigester stove that meets this requirement.
- Involve women in design process and field test new designs extensively. Product development necessitates an interactive process which takes the user seriously as customers and tries to understand his/her needs and constraints. In the case of biodigesters, you need to ensure that firstly, the model introduced must be tested extensively by users (women) before it is introduced, and secondly, there is a system of regular feedback from the users on how it is performing.
- Provide product feedback to biogas companies and appliance manufacturers. It is necessary that the companies receive feedback on their products, which can be built into the annual biogas user surveys, and secondly, have the flexibility to make modifications to their designs in compliance to the suggestions received from users.

7. MONITOR AND REPORT



As mentioned before, monitoring is an integral part of the project cycle, and in fact, begins even before the project has reached the implementation stage, when baseline studies at the start collect baseline information against which the project performance is to be tracked later. Monitoring is an ongoing process during project implementation, whereas evaluation occurs periodically, typically once a project has been completed. Both should incorporate measurable targets and gender-sensitive indicators. Monitoring considers the question 'Are we doing the project correctly?' Its purpose is to alert project managers to any problems that arise during implementation. It ensures that inputs are made available on time and are properly utilized. Monitoring should take place at two different levels: Monitoring impacts or progress towards goals and objectives; and monitoring the implementation process.

Indicators map progress towards achieving targets. They are signals, prompting the management to ask questions about a projects' success or failure, why a project is succeeding or failing and calls for a much wider level of analysis. The indicators we choose should provide answers to questions we have about substantive progress or the implementation process. Indicators should be linked to the gender goals developed earlier, and at a minimum, should capture:

- Changes in women's and men's welfare, such as time use or independent income,
- Changes in women's and men's participation in project activities both on the supply and demand side, and
- Progress towards other goals specific to the overall project, such as achieving MDGs or meeting targets for numbers of installations.

These indicators need to be selected early in the gender mainstreaming planning, in connection with goals, since a baseline for monitoring indicators of impact needs to be established through the initial field work. To the extent possible, it is advisable to integrate gender sensitive targets and indicators within the project's overall monitoring plan. The monitoring plan will include

- Gender sensitive indicators (these may be quantitative or qualitative), and
- A plan of how and when these indicators will be captured (annual biogas surveys, quarterly and annual progress reports), who is responsible for data collection and analysis, and how will the management be appraised on these (periodic appraisal or review sessions)

Table 7. Project Goals and Indicators for a Biogas Programme

Project Goal	Examples of indicators
Project goal: Improving men's and women's health status through energy interventions	<ul style="list-style-type: none"> • Reduction in indoor air pollution • Improvement in children's health • Reduction in child mortality rates to reduction in ARIs • Improvement in women's health as a result of technologies like smokeless cookstoves and bio-gas plants • Improvement in family health and nutrition • Increased time availability for women for rest and leisure • Reduction in health hazards and drudgery associated with fuelwood and water

	collection
Project goal: Empowering women through biogas	<ul style="list-style-type: none"> • Increased incomes for men and women • Number and frequency of community meetings • Number of women attendants in community meetings • Men and women's perceptions on women's participation in public affairs • (Self) image of women (e.g. self-esteem, capacities in development activities, knowledge and skills) • Number of men and women committee members • Responsibilities and performance of men and women committee members • Number of men and women community members trained (technical, financial and management aspects) • New, more visible, and more effective women's organizations • Decreases in wage inequalities between women and men

Typically, some of the above indicators can be quantified which would include some element of *target setting*¹¹. For example:

- Women form atleast 10 % of masons
- 50 % of women reached in users' training
- 20% of women owning biogas digester
- Women form atleast x% of female staff in national biogas development programme
- Women form atleast % of promoters
- Women form at least 33% of energy committee members by the end of Year 2

In order that all the above steps are institutionalized within the system, and the monitoring process is gender responsive, the programme needs to undertake some additional measures. These include:

- Add gender expertise to the terms of reference for the monitoring team, and include at least one member with gender expertise.
- Consider gender briefings or training for the monitoring team, including specific tools and techniques for gathering information from women and girls.
- Assemble mixed assessment teams of men and women, from different social, ethnic, religious and minority groups.
- All data gathered should at the minimum be disaggregated by sex and age.
- In fieldwork and data collection, stipulate that a minimum proportion of questionnaires are addressed to women
- Measure and report on gender-sensitive indicators in user surveys and progress reports

¹¹ Figures would depend on the prevalent baseline situation.

III. AVAILABLE RESOURCES

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