

Online Resources for Integrating Gender into Energy Operations

Step 1: Gender Assessment Resources | Data Collection

Available on www.ESMAP.org

MODULE FOR DISAGGREGATED ENERGY BASE LINE SURVEY¹

The baseline data collected will help to assess which energy services are being used for a number of common household activities and income generating activities. The example of productive activities is based on agriculture in a rural setting. However, productive activities can be tailored to fit the local context. The later impacts survey aims to measure trends in transition to modern energy services and more efficient conversion technologies rather than absolutes.

There are five tables:

- Table 1: identifies what the main household and productive activities are for a rural household, who does them and what energy technologies and services are used.
- Table 2: identifies who takes the decisions. Who decides about acquisition and use is important in determining energy transitions and the improvements in intra-household well-being, as well as to who benefits.
- Table 3: identifies who benefits and who decides about introducing a new energy service.
- Table 4: gathers standard data about the type(s) of energy used in a community service, what it is used for and who uses it.
- Table 5: identifies who uses and who has control over the public services in the community.

Indications of changes in gender relations, linked to women's empowerment, can be seen if men become involved in household tasks (there is evidence for this in the World Bank EnPoGen study which showed this transition when electric equipment, such as irons, were bought). Women having control over income and opting to purchase modern energy carriers would not only result in impacts on well-being but can be interpreted as signs of their empowerment.

Asking men and women about their perceptions of change brought about by energy carriers is useful to cross-reference interpretations of data. In compiling the data a number of assumptions are made about the use of energy services:

Household activities

- The use of biomass for cooking (unless in an improved stove or used outside) will be assumed to be bad for women and children's health.
- The use of kerosene for cooking and lighting will be assumed to be bad for women and children's health but less so than biomass
- The use of modern energy carriers for cooking and lighting (LPG, biogas, electricity) will be assumed to be good for women and children's health
- Health improvements for the household are assumed to accrue from reduction in drudgery, reduction in time poverty, increased time for rest, improved quality of food & drinking water.

Household income

- Income improvements through irrigation, mechanisation, electricity use
- Income threats through transition to modern energy carriers

Productive activities

- Household incomes will be assumed to increase if irrigation or mechanisation is introduced into the farming system

¹ Based on World Bank (2007) Working Paper No. 90: Energy Policies and Multi-topic Household Surveys: Guidelines for Questionnaire Design in Living Standards Measurement Studies.

Online Resources for Integrating Gender into Energy Operations

Step 1: Gender Assessment Resources | Data Collection

Available on www.ESMAP.org

- Electricity or LPG will be assumed to enable new income generating activities or in existing activities improve productivity (increased output or quality improvements).
- Household income based on marketing of traditional energy carriers being threatened by transition to modern energy carriers.

Changes in gender relations:

- Women buying modern energy carriers
- Men participating in household activities

Adapting the tables

The categories need to be adjusted to reflect the energy carriers available in the country as well as the types of activities to be surveyed.

Tips on data collection

- The data collection team should have good gender balance and should receive gender-sensitive training.
- Qualitative data should be used to complement quantitative data.
- Developing partnerships with different groups, women's groups, NGOs, research institutes can be useful for data collection, particularly related to monitoring and evaluation. Such an approach also helps to build local capacity.
- Tool 7 describes some standard participatory data gathering tools. The list is not exhaustive.

Online Resources for Integrating Gender into Energy Operations

Step 1: Gender Assessment Resources | Data Collection

Available on www.ESMAP.org

Table 1: What are the main household activities

	Who does this activity?			Form of energy			Indicate which is the main form of energy for an activity & which is supplementary (M/S)							Electricity				
	Men	Women	Children	Technology used T2	Human or Animal ² T3	Fire-wood T4	Charcoal T5	Agro waste T6	Biogas T7	LPG T8	Kerosene T9	Petrol T10	Diesel T11	Grid 12	Solar Home System &/or solar lantern T13	Gene rator T14	Batteries Dry cell T15 Car T16	
Household activities																		
<i>Food preparation:</i>																		
Cooking																		
Storing food																		
<i>Other</i>																		
Heating																		
Lighting																		
Ironing																		
Study/Homework																		
Watching TV/films; listening to radio																		
Reading																		
Entertaining																		

² Human and animals means work done by their physical effort (known respectively as metabolic and animate energy)

Online Resources for Integrating Gender into Energy Operations

Step 1: Gender Assessment Resources | Data Collection

Available on www.ESMAP.org

Table 1 continued: What are the main productive activities

	Who does this activity?			Form of energy			Indicate which is the main form of energy for an activity & which is supplementary (M/S)							Electricity			
	Men	Women	Children	Technology used T2	Human or Animal ³ T3	Fire-wood T4	Charcoal T5	Agro waste T6	Biogas T7	LPG T8	Kerosene T9	Petrol T10	Diesel T11	Grid 12	Solar Home System &/or solar lantern T13	Generator T14	Batteries
Productive activities																	
<i>Agriculture</i>																	
Field work																	
Irrigation																	
Transport of crops																	
Processing of crops																	
<i>Livestock</i>																	
Preparation of food																	
Milking																	
<i>Non-agricultural production</i>																	
Products made for sale, e.g. beer, food, clothes																	
Production of charcoal for sale																	
Collecting of firewood/ agrowastes for sale																	

³ Human and animals means work done by their physical effort (known respectively as metabolic and animate energy)

Online Resources for Integrating Gender into Energy Operations

Step 1: Gender Assessment Resources | Data Collection

Available on www.ESMAP.org

Table 2: Decision making

	For the <u>main</u> energy type <u>only</u> for each activity												
Energy services	W1 Who decides on energy type & technology?	W2 What is the typical price your household pays per unit?	W3 How many units did your household buy in the last 30 days?	W4 Who pays?	W5 Who decides how much & when to purchase?	W6 Where is energy obtained from?	W7 Who is responsible for its collection?	W8 What form of transport is used?	W9 What is the one-way distance travelled to collect it?	W10 How long does the one-way journey take?	W11 Has the main energy type for the activity changed in the last 3 years?	W12 Why did you change?	W13 Has the change brought improvements to your life or your family's life?
Household activities													
<i>Food preparation</i>													
Cooking													
Boiling water													
Storing food													
<i>Other</i>													
Heating													
Lighting													
Ironing													
Study/Homework													
Watching TV/films; listening radio													
Reading													
Entertaining													

Online Resources for Integrating Gender into Energy Operations

Step 1: Gender Assessment Resources | Data Collection

Available on www.ESMAP.org

	For the <u>main</u> energy type <u>only</u> for each activity												
Energy services	W1 Who decides on energy type & technology?	W2 What is the typical price your household pays per unit?	W3 How many units did your household buy in the last 30 days?	W4 Who pays?	W5 Who decides how much & when to purchase?	W6 Where is energy obtained from?	W7 Who is responsible for its collection?	W8 What form of transport is used?	W9 What is the one-way distance travelled to collect it?	W10 How long does the one-way journey take?	W11 Has the main energy type for the activity changed in the last 3 years?	W12 Why did you change?	W13 Has the change brought improvements to your life or your family's life?
Productive activities													
<i>Agriculture</i>													
Field work													
Irrigation													
Transport of crops													
Processing of crops													
<i>Livestock</i>													
Preparation of food													
Milking													
<i>Non-agricultural production</i>													
Products made for sale, e.g. beer, crafts													
Production of charcoal for sale													
Collecting of firewood/ agrowastes for sale													

Online Resources for Integrating Gender into Energy Operations

Step 1: Gender Assessment Resources | Data Collection

Available on www.ESMAP.org

Table 3: Who benefits and who makes decisions about introducing a new energy service

	Men	Women
Access		
▪ Whose (men's or women's) problems does the energy technology or service solve?		
▪ Who (men or women) will benefit the most from it?		
▪ If there is to be a charge for the facility, who (men or women) will be able to afford to use it?		
Control		
▪ Who decides whether to adopt the technology (men or women)		
▪ Who will be the 'owner' of the technology/service (man or woman)		
▪ Who decides which model or type (men or women)		
▪ Who decides where it will be located?		
▪ Who chooses (and pays for) any ancillary equipment or appliances?		
▪ Who is in contact with the supplier?		
Knowledge and skills		
Who (men or women) has the knowledge and skills to:		
▪ Use the equipment		
▪ Manage the system		
▪ Install the equipment		
▪ Maintain the equipment		
▪ Understand and explain the safety aspects of the equipment		
Who (men or women) is going to be trained to:		
▪ Use the equipment		
▪ Manage the system		
▪ Install the equipment		
▪ Maintain the equipment		
▪ Understand the safety aspects of the equipment		

Community Facilities Energy Use

This component complements the household data survey.

The purpose of this component is to make an inventory of community services, which may be publically or privately owned and the type of energy used. The availability of a particular energy form may be the determining factor in the quality of operation of a service (eg electricity for lighting the clinic to enable safe deliveries) or its very existence (eg water pumps). Community services affect quality of life, in particular creating opportunities for time saving and reduction in drudgery (eg grain mills).

Table 4 gathers standard data about the type(s) of energy used in a community service, what it is used for and who uses it. It is possible that the type of energy affects who uses it, for example, community centres after dark – does the lack of street lighting stop women from using this facility?

Table 5 then brings into consideration who uses and who has control over the public services in the community. Control means having the power to make decisions about the use of the facility both over the device itself, for example, the hours and timing the facility is available and its location, and over the energy form that is used, which can have implications for safety, time saving and drudgery reduction. The composition of committees that run public services can therefore be important in the choices that are made. The lack of women's representation can mean that women's priorities are not always reflection in the decisions taken. Who is responsible for maintenance is an important question in relation to skills acquisition and paid employment. This work is usually allocated to men because it is assumed that they either have the skills or it is not appropriate work for women. The consequence can be that men leave for better paid work in town or they do not make repair of equipment that is not required for their gender role a priority (hand water pumps is a well-known example).

The content of the matrices is indicative only and it should be modified to fit the local situation.

Data for this component can be obtained in focus groups, together with data from interview with key informants.

Online Resources for Integrating Gender into Energy Operations

Step 1: Gender Assessment Resources | Data Collection

Available on www.ESMAP.org

Table 4 Energy and community services

Facilities	Does the community have this facility?	Who uses this facility? For what purpose?			Form of energy: What is the main form of energy (M) in the facility & which is supplementary (S)										
					Electricity				Biomass				Petroleum based		
		Men	Women	Children	Grid	Solar Home System &/or solar lantern	Generator	Batteries: Dry Cell / Car	Firewood	Charcoal	Agro waste	Biogas	LPG	Kerosene	Candles
Health Clinic															
Post Office															
School															
Community Center															
Local Government Office															
Grain Mill															
Bakery															
Grocery Shop															
Barber/hairdresser															
Church/mosque/temple															
Street lighting															
Water pump (may be hand or animal operated)															
Telephone															
Other															

Online Resources for Integrating Gender into Energy Operations

Step 1: Gender Assessment Resources | Data Collection

Available on www.ESMAP.org

Table 5 Benefits from existing community facilities

This table should be completed for each existing public facility.

Control	Men	Women
<i>Acquisition</i>		
▪ Who was the driving force behind the facility (e.g. community members, NGOs, government)?		
▪ Who was involved in setting up / design of the facility?		
▪ Who has paid/is paying for the facility?		
▪ What energy technologies were available, and why was this one chosen?		
<i>Access and benefits</i>		
▪ Who owns the facility (private, community, government)?		
▪ Is there a management committee and if so who is represented on it?		
▪ Who appoints or elects the management committee/board?		
▪ What benefits does it bring and for whom?		
▪ Who decides on location?		
▪ Are there any negative aspects?		
<i>Maintenance</i>		
▪ Who is responsible for maintenance?		
▪ Who has access to resources necessary for maintenance?		