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

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.
### Table 1: What are the main household activities

<table>
<thead>
<tr>
<th>Who does this activity?</th>
<th>Form of energy</th>
<th>Indicate which is the main form of energy for an activity &amp; which is supplementary (M/S)</th>
<th>Electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Technology used</td>
<td>Human or Animal⁴</td>
<td>Fire-wood</td>
</tr>
<tr>
<td>Energy services</td>
<td>Men</td>
<td>Women</td>
<td>Children</td>
</tr>
<tr>
<td></td>
<td>Household activities</td>
<td>Food preparation:</td>
<td>Cooking</td>
</tr>
</tbody>
</table>

---

⁴ Human and animals means work done by their physical effort (known respectively as metabolic and animate energy)
### Table 1 continued: What are the main productive activities

<table>
<thead>
<tr>
<th>Productive activities</th>
<th>Who does this activity?</th>
<th>Form of energy</th>
<th>Indicate which is the main form of energy for an activity &amp; which is supplementary (M/S)</th>
<th>Electricity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Children</td>
<td>Technology used</td>
</tr>
<tr>
<td>Energy services</td>
<td></td>
<td></td>
<td></td>
<td>T2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrigation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport of crops</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing of crops</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Livestock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation of food</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-agricultural production</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Products made for sale, e.g. beer, food, clothes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production of charcoal for sale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collecting of firewood/ agrowastes for sale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

3 Human and animals means work done by their physical effort (known respectively as metabolic and animate energy)
Table 2: Decision making

<table>
<thead>
<tr>
<th>Household activities</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
<th>W9</th>
<th>W10</th>
<th>W11</th>
<th>W12</th>
<th>W13</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W1 Who decides on energy type &amp; technology?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W2 What is the typical price your household pays per unit?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W3 How many units did your household buy in the last 30 days?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W4 Who pays?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W5 Who decides how much &amp; when to purchase?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W6 Where is energy obtained from?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W7 Who is responsible for its collection?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W8 What form of transport is used?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W9 What is the one-way distance travelled to collect it?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W10 How long does the one-way journey take?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W11 Has the main energy type for the activity changed in the last 3 years?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W12 Why did you change?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W13 Has the change brought improvements to your life or your family’s life?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Energy services**
- **Household activities**
  - **Food preparation**
    - Cooking
    - Boiling water
    - Storing food
  - **Other**
    - 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 main energy type only for each activity**

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

---

**Productive activities**

- **Agriculture**
  - Field work
  - Irrigation
  - Transport of crops
  - Processing of crops

- **Livestock**
  - Preparation of food
  - Milking

- **Non-agricultural production**
  - Products made for sale, e.g. beer, crafts
  - Production of charcoal for sale
  - Collecting of firewood/agrowastes for sale
Table 3: Who benefits and who makes decisions about introducing a new energy service

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Whose (men’s or women’s) problems does the energy technology or service solve?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Who (men or women) will benefit the most from it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ If there is to be a charge for the facility, who (men or women) will be able to afford to use it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Who decides whether to adopt the technology (men or women)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Who will be the ‘owner’ of the technology/service (man or woman)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Who decides which model or type (men or women)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Who decides where it will be located?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Who chooses (and pays for) any ancillary equipment or appliances?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Who is in contact with the supplier?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Knowledge and skills</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who (men or women) has the knowledge and skills to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Use the equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Manage the system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Install the equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Maintain the equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Understand and explain the safety aspects of the equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Who (men or women) is going to be trained to:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Use the equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Manage the system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Install the equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Maintain the equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Understand the safety aspects of the equipment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.
### Table 4: Energy and Community Services

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Does the community have this facility?</th>
<th>Who uses this facility?</th>
<th>Form of energy: What is the main form of energy (M) in the facility &amp; which is supplementary (S)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Grid</td>
</tr>
<tr>
<td>Health Clinic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Center</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Government Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grain Mill</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bakery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grocery Shop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barber/hairdresser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Church/mosque/temple</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Street lighting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water pump (may be hand or animal operated)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other ...</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5 Benefits from existing community facilities

This table should be completed for each existing public facility.

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