PRA TOOLS
FOR STUDYING
URBAN AGRICULTURE AND GENDER

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INTRODUCTION
This document has been prepared to facilitate the gender case studies to be undertaken by the Regional RUAF centres as a training exercise and an input to the gender expert consultation.

PRA
In the late seventies, a growing awareness of the failure of conventional methods to generate social information for rural development projects led to a search for alternative approaches and methods. One of the new approaches that emerged was Rapid Rural Appraisal (RRA). Chambers (1992), one of the intellectual parents of RRA, mentions three main reasons for its development. The first was dissatisfaction with the biases, especially the anti-poverty biases, of rural development tourism - the phenomenon of brief rural visits by urban-based professionals. The second reason was disillusion with the normal processes of questionnaire surveys and their results. The experience was that questionnaire surveys tended to be tedious, relatively staff-intensive and time consuming, and that the results frequently failed to meet the acute decision-making needs of projects. The third reason for the development of RRA was the growing recognition by development professionals that rural people are themselves knowledgeable about many subjects that touch their lives and that this knowledge should be tapped.

Rapid Rural Appraisal can be described as "a semi-structured activity carried out in the field by a multidisciplinary team and designed to acquire quickly new information on, and new hypotheses about, rural life" (McCracken et al. 1988). An RRA study aims at generating information on rural life and conditions that is relevant, timely, accurate and usable in a cost-effective way. It is based on a number of principles (see below) and offers a range of methods, both existing ones and adapted and new ones. The common elements in RRAs are semi-structured interviews and methods that give visual form to information through mapping, diagramming and ranking. In the mid-eighties participation of local people became a central theme in the discussions on RRA. A new term was introduced to stress that the people who are actually affected should assume an active role in conducting and analysing their own living conditions and evaluating the results: Participatory Rural Appraisal (PRA). PRA is intended to enable people to conduct and share their own investigations and analysis.

RRA and PRA are not clearly defined. They have evolved from, drawn on, and resonate with several other approaches such as Farming Systems Research, Participatory Action Research and Agro-ecosystem Analysis. Recently, the term Participatory Learning and Action (PLA) has been adopted to refer to the whole group of participatory approaches and methodologies. One could say that the difference between RRA and PRA is that RRA is intended to provide information to outsiders, while PRA seeks to empower resource-poor people. The role of the outsider is in RRA that of the investigator, and in PRA that of the convenor, catalyst and facilitator of processes within a community which is prepared to change its situation. In practice, though, there is a continuum between 'an RRA' and 'a PRA'. The same methods can be used in RRA and PRA.

RRA and PRA are based on certain shared principles. The main principles can be identified as:
- The research team can learn from local people: local people have a detailed and day-today knowledge of their physical and social world, which is greater than that of the outsider.
- RRA/PRA are carried out in the 'field' and formality is avoided.
- The approach is semi-structured, with room for flexibility and innovation. Any team using RRA/PRA should invent and adapt their own methods, and they should determine the best sequence and combination of methods rather than adopt a ready-made manual.

- It is important to optimise trade-offs between quantity, relevance, accuracy and timeliness. This includes the principle of optimal ignorance (knowing what is not worth knowing) and of appropriate imprecision (not measuring more than is needed).
- Issues are investigated in varying ways (using different sources, alternative methods and starting from different angles / working hypothesis)
- Diversity is sought (variability and differences are investigated, rather than averages). Possible biases (urban, professional, class, gender, seasonal, etc.) have to be acknowledged and offset.
- One can learn better in teams, with people from different backgrounds and with different areas of expertise (interdisciplinary).
- Triangulation: It is advisable to use different methods and consult people from different disciplines, and different informants while seeking data on the same problem. This strategy is known as triangulation. The use of a variety of data collection methods means different kinds of information can be obtained. By triangulation, validity or trustworthiness of the data is sought by intense and prolonged engagement with the local people, systematic cross checking of information (by use of multiple sources of information, use of varying techniques and alternative working hypothesis) and periodic meetings of the research group in which reality is viewed from varying angles or disciplines and alternative working hypothesis are developed, analysed and compared and/or integrated. For example, surveys are good at obtaining factual information from respondents while participant observation could reveal other information about the actual behaviour of certain groups. The two sets of information can then be analysed to try to build up a more comprehensive picture of a complex situation. The use of different methods raises the possibility that conflicting data is acquired. There are a number of possible explanations for this, for example, bias within the research team or sample, a weakness in one of the tools (which strengthens the case for using more than one tool). Discrepancies should not been seen a fault but as a means of gaining further insight into the problem (6).

To these shared principles, PRA adds others:
- The team should facilitate investigation, analysis, presentation and learning by the local (rural or urban) people themselves. The researcher has to establishing good rapport with the local population and functions first and for all as a facilitator of the local diagnosis and action planning process.
- Group learning processes are central; Group inquiry, sharing information and interaction between outsiders (professionals) and insiders (local people);
- PRA should aim at awareness raising, capacity building and empowerment of local people.
- PRA should lead to debate about change needed, action planning and implementation

Most experience with RRA/PRA is in a rural setting, but the techniques can also be applied in an urban situation. The major sectors in which RRA/PRA has been applied are: agriculture, natural resources management, health and nutrition, poverty alleviation programmes (e.g. for identification of the poor and for ranking of priorities) and village-level and urban planning. RRA/PRA has been used to identify the needs and priorities of local people, to study specific topics and for (participatory) appraisal, planning, implementation and monitoring of development programmes. In some cases RRA/PRA has also been used to analyse gender differences in a community. In general, however, differences in power and interests within communities have not received much attention. RRA/PRA can be used for (participatory) gender analysis, but in that case the gender focus should be brought in systematically, e.g. through the selection of the respondents and the choice of research topics.
**Gender and PRA**

The tools and techniques presented in this document have been chosen for their utility in gender-differentiated assessment of farm households and farming systems. However, the techniques itself will not do the trick. It is important that:

- all team members – including support staff like local extension workers and translators that will be involved in the field work- are sensitised in gender issues and are familiar with the gender analysis framework (see the RUAF Paper on Gender and Urban Agriculture and the Annex 1 to that paper that breaks down the key issues into questions to be dealt with in the case studies)
- a gender specialist (female or male) participates in or advises the team
- That the objectives of the case study (see the Guidelines for the case studies) determine the selection of techniques and not the other way around.

Men and women have different views on reality based on the differentiation of tasks, roles, responsibilities, problems and constraints, interests and perspectives. Hence, in order to arrive at a thorough understanding of the local situations, we will have to ensure equal involvement of women and men in the PRA process, which is not always easy to achieve.

In many situations equal participation is difficult to obtain due to the low participation of women in (public) discussions and decision-making, their low level of literacy and education, cultural restrictions or isolation, etc. Elders are at times reluctant to name women as key-informant, men do not value the contribution of women while women themselves are not always convinced about the usefulness to express their views and ideas.

Therefore, special attention needs to be paid to involve women, by taken the following measures:

- Include female research and local staff in the team (who probably have more easy access to and rapport with local women, than male team members)
- Preferably interview women and men separately, individually or in groups (or first separately and subsequently in mixed groups)
- Make sure that all data collected differentiate between men and women (but often also for age group, socio economic status, etcetera, since not all men respectively women are equal in their conditions and interests)
- Consider the language used: women often do not speak the official language (use translators)
- Make observations of actual behaviour and social relations, differentiated according to gender (which can be different from what people say they do)
- Choose time and place convenient for both men and women
- Use adequate techniques that appeal to women and encourage their participation
- Ensure the inclusion of items which are of primary interest of women to start discussions
- Combine a variety of techniques so that you get insight in each of the main gender aspects (see table on page 5). Pay also attention to the historical perspective and trends to get more insight

Keeping these conditions in mind RRA/PRA can be a powerful methodology to get information on gender issues, giving more in-depth data and insight in a shorter span of time than by more conventional methods (3).

**Overview of the tools**

In this document, 2 types of tools are dealt with: general tools and more specific tools. The general tools can be applied to do research in all of the main themes and issues within the field of urban agriculture and gender. The more specific tools are generally more applicable to certain issues and less appropriate for other issues. Figure 1 gives an overview of the most important issues when looking at the field of urban agriculture and gender and appropriate tools to collect data on these specific issues.
These issues, and the complexity of their interrelationships are explained in more detail in the RUAF Paper on Gender and Urban Agriculture and the Annex 1, which provides key questions related to each of the main gender issues.

The techniques mentioned for each issue are recommendations and should not be viewed as obligatory. The list of tools in this document is not exhaustive and other techniques might be used (see the end of this document for some recommended sources of more information on Gender and PRA tools). Nor is it necessary to apply all these techniques. It is recommended to use at least one or two techniques for each main issue during the case study.

One has to bear in mind that the tools provided in this document may have to be adjusted to the local needs and conditions. One is encouraged to be creative and invent new techniques or variations on existing ones.

Some of the techniques can be applied most meaningfully in the diagnosis stage of a project. Others are also or more meaningful in other stages of the project cycle: project design / planning, implementation, monitoring and evaluation. This document mainly concentrates on the diagnosis stage. However, in the description of the tools its potential for use in other stages has been indicated briefly.
Figure 1: Overview of key issues and suggested tools

<table>
<thead>
<tr>
<th>Main issues</th>
<th>Specific tools</th>
<th>General tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division of UA related labour, tasks and</td>
<td>5.1 - daily activity profile</td>
<td>1 - review of secondary data</td>
</tr>
<tr>
<td>responsibilities</td>
<td>5.2 - seasonal calendar</td>
<td>2 - direct observation</td>
</tr>
<tr>
<td>Decision-making power</td>
<td>6 - decision-making matrix</td>
<td>3 - semi-structured Interviews</td>
</tr>
<tr>
<td>Access to and control over resources</td>
<td>7 - household budget *</td>
<td>3.1 - individual or key informant interviews</td>
</tr>
<tr>
<td></td>
<td>8 - transect walk</td>
<td>3.2 - household interviews</td>
</tr>
<tr>
<td></td>
<td>9 - household resource flow diagram *</td>
<td>3.3 - (focus) group interviews</td>
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<td></td>
<td>10 - benefits chart</td>
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<tr>
<td></td>
<td>11 - mobility map</td>
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<tr>
<td></td>
<td>12 - organisational linkages diagram</td>
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<tr>
<td>External factors</td>
<td>12 - organisational linkages diagram (Venn diagram) *</td>
<td></td>
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<tr>
<td></td>
<td>13 - trend line *</td>
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<tr>
<td></td>
<td>14 - critical incident analysis</td>
<td></td>
</tr>
<tr>
<td>Constraints, problems and opportunities</td>
<td>15 - problem drawing *</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 - ranking *</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17 - problem tree – objective tree</td>
<td></td>
</tr>
</tbody>
</table>

NB: Where more than two techniques are included for one studying a main issue, an asterix indicates the suggested options to be applied in the case studies.
General tools

1. Review of Secondary data
This concerns the collection and review of existing data and information relevant to the area or topic (published and unpublished), like reports, census data, research findings, municipal and hospital statistics, aerial photographs (for example on land use patterns), etc. Review of secondary data is useful to get an initial picture of the situation of the target group and socio-economic and institutional context as well as to determine gaps and possible contradictions in the available data. This will help to formulate alternative working hypothesis for the field study and to design the fieldwork. With regard to gender, it is important to take note of a possible male bias of the data and to look for data differentiated according to gender as much as possible.

The data review is usually done by the team by visiting libraries, government offices, universities, research centres, marketing bodies, etc. Secondary information can be processed in two stages: first, the identification and compilation of the material, and then the analysis of the collected information, which is often started by grouping the information gathered according to the main themes of the study followed by the analysis and finally the formulation of the working hypotheses for the field study during which collected secondary data will be cross checked and gaps will be filled in (3) (5).

2. Direct observation
This concerns getting information by noting down the things one sees happening at the time they happen, e.g. objects, conditions, events, processes, relationships of people, etc. In most cases use is made of a list of key items or indicators related to the issue under investigation (e.g.: how women participate in community discussions, on the activities men and women perform, on the decision making on use of the resources, etc.). If it is difficult to take notes at the time of observation, they can be written down later. Observations are analysed afterwards for patterns and trends. The hypothesis arising from direct observation should be cross checked, e.g. with key informants or group interviews. And -vice versa- direct observation can be used to check verbal information.

Direct observation is a useful to obtain a better picture of the situation, more specifically of things that are difficult to verbalise or about which one tends to tell what is the social norm rather than how one behaves in reality. Observation can enrich insight into various gender aspects, e.g. the activities that women and men perform (does the reality match the information given by them?), the daily workload of women and men, women's role in decision making in the household, women's participation in community meetings, the self-confidence of women, the behaviour of men vis-à-vis women, etc. This tool can be used in any phase of the project cycle (3) (5).

3. Semi-structured interviews
These are discussions in an informal and conversational way, structured by using a list of key issues that is prepared in advance. Semi-structured interviews are often used in combination with other PRA exercises. They can be useful to obtain information in general or about a specific topic, to analyse problems and opportunities or to discuss plans as well as to elicit perceptions (e.g. on gender relations). It can be done by a team of 2-4 people of different backgrounds during or directly after PRA exercises or on other moments. It is advisable to take not more than an hour for an individual interview and not more than two hours for a group interview.

Structured interviews are not dealt with in this document, as they are less relevant in the PRA perspective.
How to conduct semi-structures interviews:

1. Prepare in advance an interview guideline. This is not a questionnaire but a list of topics that you want to discuss with them (grouped in such a way that the sequence of the discussion will be easy to manage for the respondents). Also prepare for each topic initial questions (to introduce the topic and make the respondent think and talk about it) and probing questions for each topic (to dig deeper, to get more details: what, why, who, when, how, do you mean, anything else, but why, etc.).

2. Select one person to lead/control the interview. Preferable another person records the questions, answers and discussion. Make notes in a discrete way.

3. Deal with the topics one by one. Begin questioning by referring to something or someone visible. Ask your questions in an open-ended and probing way. Intersperse with probing questions and discussions; ask for concrete information, examples. Ask new (lines of) questions arising from the answers given. Allow the interviewed person also to raise her/his questions and discuss these too. Involve other people in the discussion, if present. Pay attention to group dynamics.

With regard to the gender aspect, it is important to include women as respondents, to encourage women to express themselves and to look for situations and places where women can express themselves freely. Depending on the purpose of the interview and the degree to which women can express themselves freely in the presence of men, group interviews can or cannot be carried out with mixed groups. Interviews with small homogeneous groups of women can provide valuable information on their position in that society or on sensitive issues. Interviews can be conducted in any stage of the project cycle (3) (5).

Semi-structured interviews can be conducted at the individual level, the household level or the community level. Below a short description of the content and the use of these specific interview forms is given. Which interview to select depends on the issues studied and the level on which these issues take place.

3.1 Individual or key informant interviews
These are interviews with specially selected individuals who have long experience in a certain community or specialised knowledge or skills in a certain topic. One should be aware of possible biases of the persons interviewed information should be crosschecked with information from other sources. Key informants should be carefully selected. The informants might be members of the target group e.g. local leaders or staff of support organisations and development programmes in the sector concerned (male and female) (3) (5).

3.2 Household interviews
These are interviews with specially selected households. When interviewing households, one will interview adult male and female members of the household separately, eventually followed by a discussion on certain issues with the whole household. Sometimes it is also interesting to interview older and younger women separately since this might indicate a/o ongoing changes in the position of women. If possible let a male member of the team interview the male member of the household and the female team member the female in the household (1).

Households may be selected from each of the socio-economic categories in the population or from each of dominant types of farming systems in that location. One technique of identifying the criteria to select the households to be interviewed, is the following:
- Bring together a small group of locally well informed people (for example the local health officer, a school teacher and the leader of a local women’s group)
- Ask them to draw a picture of a poor farming household, an intermediate and a rich farming household. The drawing should reflect the main characteristics of such a family: composition and size of the household, resources available to such a household (land, water, animals, etc.), their farming activities, their non-farming activities, location, position in the community, origin, etcetera.
- Discuss the drawings with the respondents in order to detect the main differences between the three types of households (e.g. recent migrant/not recent migrant, land holding/not land holding, with cattle/without cattle, family with older children/family with young children, male headed/female headed, ethnicity/class, type of job next to farming).
- The identified factors will be taken into account when selecting the households to be interviewed.

3.3 (Focus) group interviews
These are interviews with a specially selected (focus) group of 6 to 10 people who have certain factors in common. In these sessions, specific topics are discussed under the guidance of a moderator, in order to get their views and perspectives on a certain issue, to get a better insight in the position and problems of this specific (sub-) category of the population, to get to know their specific views and interests and/or to tap their specialist knowledge regarding a certain topic or problem. This might be specific gender or age groups, households with similar wealth status, owners of specific resources, people with a specific problem or disadvantage, people involved in a specific role or activity (e.g. women leader, people involved in marketing of a certain product), etc.(3).

Focus groups are often a good follow-up to household interviews in order to get more insight in certain topics and to check whether patterns found in the households are validated in the whole group. Focus group meetings are also very suitable to analyse a certain situation or problem in more detail and to identify and evaluate potential solutions to these problems.

Organize group interviews (4-6 persons) preferably with men and women in separate sub-groups (each with a team member as facilitator; a female interviewing the women, a male interviewing the men). (5) (1).
Specific tools

5. Activity calendars

A gender-disaggregated activity calendar is a visualisation of the gender (and age) division of labour during a day, month, season or year. Use of activity calendars will support you to get insights in the type of activities (productive, reproductive, social) implemented by various members of the household during a day, month, season or year and the relative importance of each of these activities (duration): what is done by whom, when, how long does it take, how often is it done, where, problems related?

The research team should decide on the type of activities and the desired level of detail. The following categories of activities can be included:

- Agricultural or vegetable production (per crop; from land preparation to marketing and consumption)
- Livestock production (per type of animal; including feeding and health care, marketing).
- Fishing (for consumption or for the market)
- Non-agricultural income earning activities (on farm and off farm)
- Household production (including cooking, fetching water and fuel wood, caring for children, the elderly and sick persons, house construction and repair, mat making).
- Communal activities (activities on behalf the community and its organisations; social and cultural obligations)

With regard to gender, the activity calendar enables you to obtain data on women's responsibilities and the identification of problems related to these activities and/or specific periods during the day, season or year. This also helps to identify possibilities and constraints for involvement of women in future project activities. If compared with records on earlier periods it may also provide information on changes in patterns and trends. An activity calendar can also be compiled by the researcher using information from other sources (e.g. secondary data, interviews, direct observation). Activity calendars can be made for any period of time that is relevant for the topics and situation under study. The most useful are the daily activity pattern and the seasonal activity calendar.

5.1. Daily activity profile

Male and female persons in groups with a maximum of 8-10 persons are asked (in separate sessions) to explain in chronological order their usual activities during a day, the duration of these activities (differentiate between week and weekend days) and the location of the activities. Activities should include productive (involvement in production, processing, storage and marketing), reproductive activities (household chores like fetching water, cooking, maintenance of the house, looking after children, sick and elderly people) as well as socio-cultural activities (religious activities, networking, participation in meetings and committees, other social obligations). Sometimes it is important to collect data on a working day versus a weekend day or a day in the dry season and in the wet season. It is also possible to ask participants to what extent the recorded day is representative or special.

During and after the making of the activity calendar, a discussion is held on the division of labour between men and women, the peaks of their workload and other problems related to the activities they implement during the day; this discussion is as important as the making of the calendar itself.

Figure 2 provides an example of an activity profile made by women. This exercise can be repeated with men, after which the profiles can be compared to capture the gender dimension. Figure 3 provides another tool for capturing daily activities: the daily activity clock.
Figure 2: Example of a daily activity profile by women in a village in India

A group of women (mainly labourers, some had a little land) summarised their daily activity programme. The profile shows that women have to combine a large number of activities during the periods when they are at home, before and after going to the field. The work at home in the evening is similar to that done in the morning, but women consider it to be heavier because at that time they are very tired.

Livelihood Analysis Tool 3
Daily Activity Clocks
Example: Seasonal Daily activities of women and men in Dzinavene, Chivi District, Zimbabwe


A variation
Provide a male and female farmer with a video camera and ask them to make a picture (with explaining text) of their role in -and contributions to- the farm household or provide them with a cassette recorder and ask them to interview other male respectively female persons in their community on their daily activity routine.

5.2 Seasonal activity calendar

The gender-disaggregated seasonal activity calendar puts into visual form the seasonal patterns of household labour and hired labour, grouped by gender and age.
Conform homogenous sub-groups of max 8-10 male respectively female persons and:
- Let the participants describe their classification of months/seasons. This can be done by referring to festivals or to the food production cycle. Use symbols for the various seasons and place them along the upper side of a square.
- Let the participants identify their main lines of farming (main crops, main types of animals, etc) which are listed vertically.
- Explain, for each of their main lines of farming separately, in chronological order which activities they implement throughout the seasons and the character of involvement of men, women and children (family labour resp. hired labour) in each of these period/activities and the amount of time involved. The data are filled in the rows of the square using simple easy to understand codes and symbols
- The results are discussed (who is doing what, gender differentiated labour peaks, etc)
- Next to the analysis of the division of labour in the various farming activities throughout the seasons, one can use the calendar also to analyse other seasonal fluctuations like food shortages, incidence of illness, need for credit, saleable surpluses, income flows, migration, water shortages, etcetera and discuss their differential consequences for men respectively women. After analysing when such phenomena occur, one may ask questions like: Why are there shortages of food or water during certain months? Who are most affected by these shortages? What can be done to guard them against such shortages? One may also discuss how certain problems are related to each other.

Since the making of such seasonal calendars is quite labour intensive, the researchers have to reflect on the question which type of activities to include (and why) and which not. Figures 4 and 5 give examples of what gender-disaggregated seasonal calendars can look like.
Figure 4: Example of a gender-disaggregated seasonal calendar (Mkushi District)

<table>
<thead>
<tr>
<th>Climatic Pattern Month</th>
<th>HOT / DRY</th>
<th>WARM / WET</th>
<th>COOL / DRY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SEPT</td>
<td>OCT</td>
<td>NOV</td>
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<tr>
<td>FOOD SHORTAGES</td>
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<tr>
<td>STUMPING</td>
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<tr>
<td>HYBRID MAIZE</td>
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<tr>
<td>TRADITIONAL MAIZE</td>
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<tr>
<td>SORGHUM</td>
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<tr>
<td>BEER BREWING</td>
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<tr>
<td>FINGER MILLET</td>
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<td></td>
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<tr>
<td>BEANS</td>
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<td></td>
<td></td>
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<tr>
<td>GROUNDNUTS</td>
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<tr>
<td>SWEET POTATOES</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>COLLECTING FIREWOOD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CARRYING WATER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEEDING SMALL LIVESTOCK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COOKING</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHILDCARE</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>FENCE AND HOUSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION AND REPAIR</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CATTLE HERDING</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

![Calendar Diagram]

Legend:
- **Female adult**
- **Female child**
- **Male adult**
- **Male child**
- **Continuous activity**
- **Intermittent activity**
- **Transporting**

Figure 5: Example of a gender-disaggregated seasonal calendar

6. Decision-making matrix

A decision-making matrix can be created to get a better idea of who takes the decisions on which issues within the household, and therefore how the decision-making power is distributed between the members of the household. It is created by listing the different issues on which decisions have to be taken vertically, and by stating the decision makers horizontally. Below you will find an example of this kind of matrix. If participants differentiate their answer this may be included in the comments column or directly in the columns of the decision makers (e.g. - if that applies one- may write in the “male” column “for male labour” and in the “female” column “for female labour”)

Figure 6: Example of a decision-making matrix

<table>
<thead>
<tr>
<th>Decisions</th>
<th>Male</th>
<th>Male/female member jointly</th>
<th>Female</th>
<th>Comments/explanations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male dominates the decision</td>
<td>Equal influence</td>
<td>Female dominates the decision</td>
<td></td>
</tr>
<tr>
<td>* Inputs:</td>
<td>- who decide(s) how the available family labour will be used?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) what inputs to buy?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) to hire additional labour?</td>
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</tr>
<tr>
<td></td>
<td>- ...?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Production:</td>
<td>- who decide(s) which food crops to grow?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) which cash crops to grow?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) where to plant what?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) when to harvest?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) whether certain products will be processed or stored?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- ...?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Marketing:</td>
<td>- who decide(s) what part of the harvest is sold and how?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) what animals or animal products are sold and how?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- ...?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Investments:</td>
<td>- who decide(s) to buy equipment and tools?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) to take a loan?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) to buy or rent additional land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) to buy more animals?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- ...?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Reproduction</td>
<td>- who decide(s) whether a child goes to school or not?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- who decide(s) on going</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. Household budget mapping

In this exercise the income and expenditures flows of selected households are mapped in order to understand how men respectively women participate in the management of the household budget.

The households to be interviewed may be selected applying the same procedure as described in 3.2 in order to get insight in differences and commonalities between various types of households. Groups should have 2-8 participants (but also can be done on a household to household basis and later aggregated).

Team members first ask the male and female members of selected households (separately) to make a list of all the sources of income of the household. Subsequently, a matrix is drawn on the ground, or on a large piece of paper, with all sources of income along the vertical axis (the participants may select pictures or symbols to represent each income category) and the names of the participants along the horizontal axis (see the example below). Collect 50 stones (or sticks). Explain that these items represent the total income for the whole household for the year. Each participant is asked one by one: a. to take out of the 50 the amount of pebbles that corresponds with their contribution to the total household income (income that they personally generate), and b. to distribute these stones in the matrix over their sources of income (putting a lot of stones under major sources of income, few stones under minor sources of income, and no stones at all if they make no money from that particular source). Once all partners have had their turn, the scores for each income source is counted and ranked according to importance and participants are asked to comment on the results.

The same procedure is repeated for expenditures, including savings. Change the vertical axis of the matrix to represent each category of expense. Again pictures or symbols may be desirable. Ask the participants one by one to collect that part of the fifty stones that they personally spent and to distribute these stones over the expense categories as they would normally spend their money. Count all the stones for each type of expenditure and identify the ranking order. Ask the participants to comment on the results.

Finally, divide the columns for each participant in two sub columns, with all stones in the left sub column, and tell the participants that a severe problem has arisen (e.g. a drought, or being evicted from the land); Ask each participant to remove several stones from the matrix to show how they would save money to cope with this crisis situation and place these in the right sub column for this participant. Count the scores of savings per expenditure category and discuss with the participants the impacts of such crisis situations and the ways the different participants cope with such crisis.

Finally, the results of male and females groups can be compared and discussed in a joint meeting of both groups.

The gender-disaggregated household budget provides an indication of the division of responsibilities between women and men in the household, which part of income is attributed to male resp. female members of the household and who controls which type of expenditures.
The results may also be used to discuss the way men and women participate in decision-making on household expenditures.

Figure 7 provides an example of a matrix resulting from the exercise described above (nb in this case one male and one female distributed 50 pebbles each). In this specific example, the exercise was done for the income and expenditure of a whole community instead of a household.

**Figure 7: Example of a gender-disaggregated household budget**

<table>
<thead>
<tr>
<th>Tool: Income &amp; Expenditure Matrices by Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Yabrang Village, Phongmey Gewog, Trashigang</td>
</tr>
<tr>
<td>Participants: 8 women, 2 men</td>
</tr>
<tr>
<td>Date: 16 November 1996</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sources of Income</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buckwheat</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Potatoes</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Sugar cane</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Bananas</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Horses</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Pigs</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Cloth sales</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Road Construction</td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

Note: Women and men were each given 50 sticks to represent their total annual income. After selecting picture cards of relevant resources and activities, they allocated their sticks accordingly.
Figure 7 continued

<table>
<thead>
<tr>
<th>Sources of Expenditure</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious Expenses</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Basics (soap, salt)</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>School fees</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Clothing</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Jewellery</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Seeds &amp; Inputs</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cattle</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Horses</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Pigs</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Poultry</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Butter &amp; Cheese</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Farm implements</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Radio and watch</td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

8. Transect walk
This is a systematic walk along one line (transect) across the community area together with the people involved to explore the spatial differences by observing, asking, listening, looking and producing a transect diagram.

The transect walk is normally done during the initial phase of the fieldwork. It is best to choose a route, which will cover the greatest diversity in resources, land use, geographical conditions, etc. The transect walk is conducted by the research team and representatives of the female and male community members.
The walk may take two to three hours. If the walk is likely to take longer, the transect may be divided into segments, each assigned to a small team. More than one transect might be walked in order to get a good representation of all resources used by the community.

During the walk, members of the group discuss everything encountered or noticed. The team members facilitate these exchanges by asking questions and making observations. They also record the discussions. Furthermore, the team members informally interview any people met during the walk to get their views on the resources and land use visible at that spot.

The transect walk introduces the research team to the community and its inhabitants and is a way to collect (spatial) information about resources, cropping patterns, farming practices, etc. The walk can also be used to identify problems and opportunities e.g. regarding resource use and access to resources in the various parts of the transect visited.

The transect walks preferably are undertaken in separate gender homogeneous groups. This makes it possible to obtain the opinions of women on various resource related issues. The transect walk may create an atmosphere of privacy in which sensitive issues, e.g. access to and use of resources and related conflicts, can be discussed more freely than would be the case in mixed groups.

Walking in homogenous groups will not always be possible since people cannot be forbidden to join a group. In a mixed group the male members of the research team can 'lure' the male participants to a place at some distance from the female participants, or the female team members can lag slightly behind with the female participants. In this way, an element of 'privacy' can be created in which the female members of the research team might be able to discuss sensitive issues more freely with the women of the village. A local female community worker may facilitate the communication with the target group women.

The gender dimension can easily be brought in, e.g. during the discussions about the control and use of resources. In addition, the route of the walk can be chosen with an emphasis on women's activities and living conditions. The field notes are used to develop a diagram of the transect walk, which can be used in subsequent group discussions (in gender homogenous or mixed groups) (3) (5). Figure 8 gives an example of a transect diagram.
**Figure 8: Example of a transect diagram (The Gambia)**

### Young Men's Transect, Mira

<table>
<thead>
<tr>
<th>Zone</th>
<th>Backyard crops such as melons</th>
<th>Agricultural production, gardening, cash crops and trees</th>
<th>Community shops</th>
<th>Garden</th>
<th>Arable land</th>
<th>Residences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land use</td>
<td>Backyard crops such as melons</td>
<td>Agricultural production, gardening, cash crops and trees</td>
<td>Community shops</td>
<td>Garden</td>
<td>Arable land</td>
<td>Residences</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Mango, yam, banana</td>
<td>Agriculture production, gardening, cash crops and trees</td>
<td>Community shops</td>
<td>Garden</td>
<td>Arable land</td>
<td>Residences</td>
</tr>
<tr>
<td>Intervention</td>
<td>EEC/FAO</td>
<td>Agriculture production, gardening, cash crops and trees</td>
<td>Community shops</td>
<td>Garden</td>
<td>Arable land</td>
<td>Residences</td>
</tr>
</tbody>
</table>

### Young Women's Transect, Mira

<table>
<thead>
<tr>
<th>Zone</th>
<th>Backyard crops such as melons</th>
<th>Agricultural production, gardening, cash crops and trees</th>
<th>Community shops</th>
<th>Garden</th>
<th>Arable land</th>
<th>Residences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land use</td>
<td>Backyard crops such as melons</td>
<td>Agricultural production, gardening, cash crops and trees</td>
<td>Community shops</td>
<td>Garden</td>
<td>Arable land</td>
<td>Residences</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Mango, yam, banana</td>
<td>Agriculture production, gardening, cash crops and trees</td>
<td>Community shops</td>
<td>Garden</td>
<td>Arable land</td>
<td>Residences</td>
</tr>
<tr>
<td>Intervention</td>
<td>EEC/FAO</td>
<td>Agriculture production, gardening, cash crops and trees</td>
<td>Community shops</td>
<td>Garden</td>
<td>Arable land</td>
<td>Residences</td>
</tr>
</tbody>
</table>

9. Household resource flow diagram

The household resource flow diagram is a schematic drawing of the farm household and all its productive resources and the flows of resources on the farm and between the farm, the household and its environment. The diagram shows the flow of resources from the original source to the final output and visualizes the use and control of the resources. The selection of households to be interviewed may be done in the same way as applied in 3.2, allowing comparison between different types of households.

The making of the household flow diagram is as follows:
- The team members first walk the farm with the main household members (male and female) in order to get acquainted with their farming activities. During this walk they try to understand the main components of the farm household (composition of the household, main crops and livestock, jobs and income earning activities out of the farm, etc.).
- Subsequently the team members sit with the male and female members of the household and ask them to make a drawing of their farm, indicating the location of their most important farming activities and including all the household's resources. The map takes the home as a starting point. All resources used and/or produced by the active household members in all their activities are included schematically on the map. They encompass: resources in the home compound (e.g. animals, stable or chicken scoop, fruit trees, home garden), different types of cropland (wherever located) managed by the household, grazing areas, private woodlot or public forest used by the household, water sources, money from a son outside the country, animal traction unit, hired labour, income from off farm job, bought inputs, by products, market.
- The team member asks for each resource included in the drawing: a. "What are the product and by-products of this resource?" and b. "What are these used for?"
Arrows are drawn representing the flows of the various resources (products, by products, water, nutrients, income, hired labour) between the various parts of the farm (e.g. fodder and crop by products to animals in stable), from and to the home (e.g. food crops for home consumption, fuel wood for the kitchen, household wastes to the chickens, etcetera), from and to the market and other destinies of products and sources of inputs and income, etc. The flow is not necessarily in a straight line because there might be intermediary stages, e.g. the resource can be transformed or stored first before being sold at the market.
- Once the resource flows are identified, the team member asks for each resource flow: "Who uses this resource? Who owns it? Who sells it?" The answers are written alongside the arrows representing the resource flows using symbols for the male and female members of the household. Probing is necessary to go beyond the simple question of "Who uses the resources?" in order to understand access to and control over the resource.
- The result is a schematic drawing of the resources flowing in and out of the household, specified either in the form of notes or in the drawing itself who has access to the household resources.

The production of the resource diagram is labour intensive and therefore often is done with male and female members of the household in one session. If the diagram is produced by male respectively female members of the household separately, one can contrast between men's and women's perceptions of their respective power and compare the interference of men in the female domain and that of women in the male domain. Although the technique has been designed for individual households, it can also be used with focus groups, resulting in a more general picture.

Often the household resource map is made after the activity analysis since the latter provides a first insight into the type of activities found in the households being studied.
The mapping exercise can be combined with benefits analysis by putting all products and by-products identified in a table form and to discuss systematically what benefits accrue to which members of the household from these products (see technique 10 below).

Figure 9: Example of a gender disaggregated household resource diagram

10. Benefits chart

This technique is applied to analyse the distribution of benefits derived from the products and by-products produced by a household, including the money earned from their sale, and the making of decisions on their use.

The exercise can be done with the members of selected households or in a focus group. One can work with a mixed group, which may lead to lively discussion on household decision-making. But, if women do not speak up in a mixed group, one may choose for doing this exercise with the male respectively female members of the household or focus group separately.

The procedure for the benefits analysis is as follows:
- Products and by-products derived from the resources of the household are written down on index cards (one card for each [by-] product).
- For each card, the following questions are asked:
  - How is this used?
  - By whom is it used?
  - Who decides on the use?
  - Who carries out the activity?
  - Who controls the money if the product is sold?
  - How is the money from the sale of the product spent?
  - Who decides how the money is spent?
- The information obtained in this way is summarised in a table (for an example, see figure 10).

The team should ensure that the discussion is systematic and focused on the information being sought.

Figure 10: Example of a benefits chart

<table>
<thead>
<tr>
<th>(By-)product</th>
<th>How used?</th>
<th>Who decides on its use (f/m)</th>
<th>Who carries out the activity (f/m)</th>
<th>How is cash used if sold</th>
<th>Who decides on cash use (f/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palm tree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palm leaf</td>
<td>Leaf veins made into brooms</td>
<td>f</td>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Leaves wrapped around boiled rice</td>
<td>f</td>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sticks</td>
<td>anybody</td>
<td>anybody</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruit</td>
<td>Eaten at home</td>
<td>f+m</td>
<td>f+m</td>
<td>to buy household food needs and other basic necessities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sold at market</td>
<td>f</td>
<td>f + children</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dried and sold for production of coconut oil</td>
<td>f</td>
<td>f + children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Husk</td>
<td>Made into charcoal for home use or sale</td>
<td>m</td>
<td>m</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fibre used to stuff pillows and mattresses</td>
<td>m</td>
<td>m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trunk</td>
<td>Used as fuel wood</td>
<td>m</td>
<td>f+m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tree</td>
<td>Shade</td>
<td>f+m</td>
<td>f+m</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ornamental use</td>
<td>f+m</td>
<td>f+m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Mobility map

This is a schematic presentation of the movements of men and women within and outside their community. Male and female members of the community are asked (separately) to draw a map of all locations within and outside the community that they visit now and then and to indicate how many times a month they go there for what purpose(s). The mobility map can be useful in order to identify and discuss issues and problems related to gender differentiated access to land and water, capital, information, education, decision making, etcetera, the consequences of such differences for men, women and their households and livelihoods and to facilitate the exchange of views and how to keep such differences into account when planning the project and/or to discuss ways to reduce such differences.

Figure 11 provides an example of a mobility map, made by women. The same map can be made for men as well, where after a comparison can be made and differences between movements of men and women can be shown.

Figure 11: Example of a mobility map

Source: Participatory Methods and Rural Knowledge
12. Organisational linkages diagram (or Venn diagram)

The production and discussion of a linkages diagram generates insights on the relative importance that local and external institutions have for (or influence on) the lives of men respectively women in a giving community. The diagram helps the team to understand how the male and female members of the community perceive:
- the community's own institutions (in terms of decision-making, accessibility and services), and
- the institutions outside the community (in terms of participation, accessibility and services).

The diagram clearly shows the linkages and degree of exposure of men respectively women to contacts with governmental and nongovernmental organisations and hence provides an indication of their differential access to services (health, credit, extension, education, etc.) and their degree of participation in decision making at community and higher levels.

The team members meet with sub-groups of male respectively female farmers separately. First, the group is asked to list all groups/organisations/institutions within their location and outside the location with which they maintain contact in one way or another. Subsequently, the group discusses for each organisation on the list: a. how frequent they have contact with each organisation (or the organisation with them), b. the importance of that contact for the well-being of their family and/or c. the importance of that organisation for themselves personally as a man or woman (their personal well being, self-esteem, social status, income, knowledge, education and personal development).

The results regarding each organisation can be visualised by making a circle of paper with a size relative to its importance and at a distance from the centre of the paper relative to their degree of accessibility. The putting together of the diagram takes one to one-and-a-half hours (depending on the complexity of the situation). It’s analysis and discussion make take equal amount of time.

The relevance of the gender dimension to the analysis of internal and external institutions lies in the fact that women and men may attribute different degrees of importance to institutions and that they have different access to decision-making bodies, activities and services. Since organisations are the channel for development activities, information about their functioning and accessibility is indispensable. The comparison of male and female diagrams will yield rich insights (and is a good starting point for discussions on) their relative access to sources of information, capital, technology and the degree of participation in decision making and resource allocating for a in the community and can be used as a basis for discussions on these issues as well as a help for project design. The circles are labelled with the name of the organisation it represents.

For the analysis of the diagrams it is important to have insight into the composition of the groups of participants (membership of organisations, position in the community, residence, occupation). This information is easy to obtain before starting the exercise (3) (5).
Figure 12: Example of a gender-disaggregated organisational diagram

13. Trend line

A trend analysis can be useful to get an insight in (participants' perceptions of) significant changes in certain fields that are occurring, the external factors that affect such changes and the consequences of such changes at individual household or community level. Trends can be visualised in terms of quantity (more or less, amounts, prices) and quality (positive, negative).

Regarding urban agriculture and gender examples of trends that might be analysed are for example: changes in cropping patterns, changes in access to land and water, changes in land and water prices, changes in the participation of men and women in agriculture or in off farm jobs, evolution of the workload in urban agriculture for men resp. women, changes in the services supplied by external organisations to male and female farmers respectively, etcetera. Figure 13 gives examples of trend lines, which can be made for all of the above-mentioned subjects, and more.

One may analyse several trends one after each other and subsequently combine them in one chart in order to analyse the correlation between the various time lines over the same time period.

A trend line can be constructed with a small group or with individual informants who have been selected on the basis of pre-determined criteria (5). The selection of respondents depends on the subject. Generally, respondents are gathered in small groups. However, information on life histories and marital and pregnancy histories is compiled with individual respondents. With regard to gender, it is important to do these exercises with men and women separately since in this way the differences in conditions of life of men and women become visible (as well as the different perceptions of these conditions that are held by men and women) (5).
Figure 13: Example of trend lines

A. Population

Observations:
1973-1940 - Sharp drop in population due to the 1994 "Long Tail" (Habashan) Drought
1950-1994 - Gradual increase in population, with a special rise in early 1990s because of disruptions and displacements from the present Somali civil wars

B. Employment

Observations:
1970-1975 - Good employment because of conservation of water resources
1975-1980 - Habashan drought reduced jobs
1985-1990 - House and major construction brought jobs
1990-1994 - Many displaced (unemployed) people have moved from the South due to civil wars

C. Livestock

Observations:
1975-1980 - Animal population increasing due to good rains following the 1975-76 drought
1980-1982 - Many animals died due to drought
1982-1990 - More animal deaths due to continued drought
1990-1994 - Good rains increase animal numbers
Figure 13 continued

**D. Vegetation**

OBSERVATIONS:
1971-1994: Establishment of the village, new water sources, and irrigating have greatly reduced evaporation in Lido and its surrounding area, leading to strong seasonal growth and dues.

**E. Education**

OBSERVATIONS:
1970-1975 - Government literacy campaign had helped some people learn to read
1976-1980 - Primary school opened and closed during the same year
1990-1994 - Koranie School has opened

**F. Human Health**

OBSERVATIONS:
1970-1975 - Good rains and no epidemics contributed to overall good health.
1976-1980 - Droughts caused health problems due to famine.
1981-1984 - Droughts and malaria due to heavy rains; infant mortality due to influx of displaced people from South; otherwise improving health due to PNC programme (MLB) and better nutrition.

14. Critical incident analysis

This is the in-depth analysis of specific "critical" incidents: events that changed the course of activities or processes positively or negatively.

The team member first asks the participants to mention examples of events that influenced strongly the process of change one wants to analyse (e.g. the management of a land conflict; or the realisation of a breakthrough of a small enterprise, or more female members in leadership positions) and one such a case is taken for in depth analysis. The team member asks the person(s) involved in that case: what happened, who were involved, what are the causes that it happened, what are the effects of this incident, what can we learn from this example. Analysis of a number of such critical incidents strongly enhances the insight in the factors at play and how to influence such factors in the desired direction.

15. Problem drawing

Problem mapping is a technique to get people's views on the main problems encountered by men resp. women in urban agriculture (or a special sub activity) and to identify and discuss alternative potential solutions. It can also be used to enhance awareness of gender issues in the community. The technique is especially effective in communities with low literacy.

In problem drawing, men and women (in small gender homogeneous groups) express their views on the problems and risks they encounter in urban agriculture. Subsequently they are asked to draw pictures of each of the main problems and risks mentioned (each picture on a separate card). The pictures can be used as a starting point for a more detailed analysis of each main problem or risk, their causes and possible ways to solve these problems or reduce these risks. The pictures can also be used to present the problems and risks identified to groups of the opposite sex as a start of a joint reflection on these problems, their causes and potential solutions. The exercise will raise awareness of how and which problems are associated with involvement in urban agriculture and which of these problems (and suggested solutions) are gender-bound (2). The exercise can be enriched by providing feedback to the groups on the problems or constraints experienced by men and/or women as detected in other PRA-exercises earlier implemented in this community. For those problems that are recognised by the group members as important problems experienced by them, additional drawings will be made and discussed.

The group discussion in each problem can be guided by asking:
- What are the causes of this problem?
- Who are most affected by the problem?
- How are they affected? What consequences?
- What solutions have been tried so far for each of these problems? What else can participants do themselves and how?
- What are the advantages and disadvantages of each solution?

A systematic way of working is achieved by using a chart (with a column for every question) and the cards with the pictures (representing a problem raised by the participants). Discussion and analysis of problems, causes and solutions separately with men and women is guaranteed to clarify gender-related interests. The arguments put forward in analysing the causes and setting priorities may clarify the short-term and long-term needs of men and women. Researchers should be careful not to raise expectations about the solutions that are being discussed. It is necessary to emphasise strongly the analysis of the causes and solutions in order to weigh the urgency felt by the people and to avoid raising expectations of easy solutions.
16. Priority or preference ranking

Ranking is a technique to help the participants define priorities or preferences (be it of problems, solutions, innovations, projects or other) and/or to get insight in the criteria/arguments applied when doing so. Ranking exercises must be carried out with separate groups of men and women, preferably from similar socio-economic backgrounds.

There are several techniques for ranking (see the resources section) but we mention here just one (preference ranking):
- The participants make a list of the items they want to prioritise
- The group members vote which they consider the most important ones. Each participant might be given one vote or several votes, which can be distributed over the various items in the list according to the individual preference. The voting might be done with help of small stickers or pebbles (if the matrix is on a table or the floor). For example, each participant receives 5 stones. When asked to rank 5 constraints to agricultural production, a participant divides these 5 stones among the 5 constraints according to his/her own preference. Figure 14 provides an example.
- Once the ranking has been defined, the facilitator asks the participants to put forward their arguments for the order of priority.

One might even apply two rounds of ranking: in the first round (similar to the ranking exercise mentioned above) one identifies the criteria or arguments used in the ranking by the various participants. These criteria then are listed vertically in a matrix and the items to be prioritised horizontally. Each option can be discussed and evaluated now systematically, applying the combined set of criteria of the group members.

Figure 14: Example of preference ranking

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Respondents</th>
<th>Total score</th>
<th>Ranking</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Drought</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Pests</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Weeds</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Costs of inputs</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Labour shortage</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
17. Problem tree – objective tree

The problem tree is used to analyse relationships between problems, including their causes and effects. The objective tree is derived from the problem tree; it gives visual form to the solutions to the problems.

The problem tree and the objective tree help the research team to make an inventory of problems and their solutions as perceived by the target group or other stakeholders in the project. It can thus be used in the analysis of the target group and in the organisational analysis and the analysis of the project proposal. It is mostly known as a technique to design or to analyse project proposals.

Both the problem and the objective tree are 'built' with the help of index cards. They can be constructed in the following way:

- The participants are asked to enumerate the problems faced with reference to urban agriculture or a specific element of it. Each problem cited or listed is written down on a card (one problem per card). When the participants are illiterate, symbols should be used instead of descriptions.
- The cards are ranked for priority. The key question for ranking is: which of these problems is the core problem, the problem that creates many other problems and has the most important effects on the lives of the participants. The core problem is placed central on the board.
- Subsequently, the participants are asked for each pair of cards with problems: 1. Are these two cards causes of the core problem or consequences of the core problem or independent issues? And 2. Is problem A the cause of problem B or is problem B the cause of problem A?
- By doing so, the problem cards are arranged in the form of a tree, with the consequences of the core problem at the top and the factors underlying the core problem below it. Secondary trees may have formed around other key problems unrelated with the selected core problem.
- The participants are asked to focus on the core problem and requested to see whether all important causes of the core problem are included in the tree. Additional causes mentioned are added. The procedure is repeated for the consequences of the core problem.

The result gives an overall image of the problems listed by the participants in relation to one another. Figure 15 gives an example.

The construction of a problem tree is useful because it shows cause-effect relationships and provides a basis for discussion on which problems have to be dealt with in order to solve the core problems and to which extend these can be influenced by the participants themselves. Comparison of problems trees by subgroups of female respectively male participants may reveal substantial differences in perspectives if men and women regarding the core problems, their causes and their consequences and form a basis for further reflection.

In the design stage the problem tree(s) can be converted into an objective tree. To this effect, each card in the problem tree is reformulated in terms of an improvement desired. The desired improvements or changes are written down on cards (one change per card) and arranged in a form similar to the problem tree. The result is the objective tree, showing how solutions to the problems are related to each other.

The gender dimension of problem or objective trees can only be ensured if the problems have been put forward by men and women separately and if male and female participants have the same space to argue in the mixed sessions. It may be helpful to ensure that the problem or the desired improvement is formulated or explained in such a manner that it becomes clear who is affected most by it: men or
women. This makes the discussion more concrete for both male and female participants. If the problem tree and the objective tree are used, materials and discussions have to be well prepared. Good facilitation is indispensable; leading questions or manipulation by dominant participants should be avoided.

*Figure 15: Example of a problem tree*

![Problem Tree Diagram](image)

References
(4) Matata et al. Farming systems approach to technology development and transfer.
(8) Participatory Methods and Rural Knowledge

Recommended sources

Websites
ELDIS: www.eldis.org/manuals/toolspart.htm
IIED: www.iied.org/sarl/pla_notes/index.html
IDS: www.ids.ac.uk/ids/particip/index.html
BRIDGE: www.ids.ac.uk/bridge/reports_gend_CEP.html (see the Gender and Participation Section)
FAO: www.fao.org/Participation/ft_find.jsp
ADB: www.adb.org/gender

Other documents on CD ROM (to follow):
