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# Tools of Gender Analysis

A Guide to Field Methods for  
Bringing Gender into Sustainable  
Resource Management

## Using Information about Gender Effectively

The structure of gender roles and relationships affects development programs and projects, and shapes opportunities for building local-level capacities. Increasingly, planners and project managers recognize this simple fact: in order to assure successful development projects, they must understand the impact of gender within the household and community.

There are no easy answers as NGOs, national governments, and local communities struggle with important issues of resource decline, poverty, and insecure livelihoods. National and international, as well as local contributions are essential to the definition and solution of these problems. Incorporating gender analysis into data gathering, community mobilization, and project design and implementation is critical.

The ECOGEN framework contributes to this endeavor. Tools of gender analysis clarify critical changes in men's and women's responsibilities in the context of increasing poverty and ecological decline. These tools can assist the process of program and project design

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**for the ECOGEN Research project  
International Development Program  
Clark University  
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*Cover photo:  
Kenyan woman  
carries thatch-  
ing material to  
her home in  
Mbusyani  
Sublocation,  
Machakos  
District, Kenya*





# I. Gender, Resources, and Development

## Why Gender Analysis

In many developing countries, women are the primary managers and users of natural resources. Yet, gender is an often overlooked element in agriculture, water, and forestry programs and projects. Gender analysis increases our understanding of the gender-based division of labor, indigenous knowledge, resource access and control, and participation in community institutions with respect to natural resource management.

Gender analysis helps practitioners to:

- design more effective resource management programs
- create more equitable projects
- work more effectively with both women and men in development projects
- explore new and indigenous community resource management techniques
- strengthen village institutions

Effective program and project planning is based on good information and sound analysis. This *Guide* presents an overview of gender considerations in development and suggests analytical tools for development professionals in government, bilateral, international organizations, and NGOs to increase the effectiveness and sustainability of project activities. The primary goal is to make policy, program, and

project specialists aware of simple and inexpensive tools to incorporate gender concerns directly into development action.

This *Guide* grows out of the activities of Ecology, Community Organization and Gender (ECOGEN), a joint research project of Clark University and Virginia Polytechnic Institute and State University. ECOGEN explores alternative approaches to resource management, identifies changing forms of community organization, and clarifies the important gender-based variables arising in community-level management of resources. To this end, ECOGEN utilizes gender-sensitive techniques in data gathering and analysis and links these techniques with participatory methodologies.

ECOGEN teams conducted research between 1990 and 1993 in Kenya, Honduras, the Philippines, the Dominican Republic, and Nepal. In each case, the research has involved collaboration with a host country institution and the teams have consisted of colleagues from that institution, as well as Clark and Virginia Polytechnic. The teams have explored the role of gender in managing resources in rural livelihood systems, and have developed case studies and policy papers to substantiate their findings.

This research supports the assertion that the fundamental elements of effective resource management - sustainability, productivity, and equitability - are strengthened through explicit attention to gender. A better understanding of gender as a variable in rural livelihood systems can be gained by using a variety of analytical tools that fall loosely under the rubric of gender analysis. Because a *Guide* can only suggest possibilities, we include a list of references for more information on gender, resources, and development.

### **Women Farmers Around the World**

Women constitute half the world's population, perform nearly two-thirds of its work hours, receive one-tenth of the world's income and own less than one hundredth of the world's property (United Nations Report, 1980). As more men in developing countries migrate to cities and towns to seek employment, women's workload further increases. Women become the sole managers and laborers on the land.

(USAID-Women in Development Report to Congress, 1990:30)

# The Problem: Changing Gender Roles, Transforming Economies, and Environmental Crisis

Around the world, women's and men's responsibilities differ according to the specific situations in which they live. These circumstances are shaped by:

- environment
- economic conditions
- occupation
- class
- culture
- national history
- household circumstances
- legal structures
- religion

In much of the developing world, resource productivity is declining (Leonard, 1989). In order to survive in a cash economy under conditions of a declining resource base, men and women, even in the remotest parts of the world, increasingly seek local wage labor in both rural and urban areas. They are also planting and selling more cash crops, often at the expense of subsistence crops.

Global conditions cause the following phenomena in rural communities:

- extensive out-migration
- more time-intensive work for those left behind
- growing numbers of women-managed households
- new responsibilities for women without increased access to resources
- new norms and expectations as families become fragmented
- changes in gender and generational perspectives
- shifts from exchange work groups to wage labor

Changing conditions in rural livelihood systems lead to changes in gender-based responsibilities. While such transformations can be observed around the world, they manifest themselves differently according to region. Mbusyani and Kyevaluki Sublocations, Machakos District, Kenya, offer an illustration.

### **Global Conditions and Local Trends in Mbusyani and Kyevaluki, Machakos District, Kenya**

The most noticeable trend for both Mbusyani and Kyevaluki Sublocations is the inexorable way in which their linkages with the broader political and economic systems are growing. Increasingly, more residents rely on cash. The returns on their most significant cash crop, coffee, vary according to events taking place beyond their borders and control. The price of coffee per kilo is determined, not by local markets, or even in Nairobi, but in London or Washington.

Another trend is that of population pressure on already degraded landscapes. Population in these communities has been increasing steadily since Kenya became independent. The natural growth rate is nearly 4% per year, and promises to continue at this rate in the immediate future. Indeed, families are large, often with six to eight surviving children.

In addition, these communities face a depressed economy. Returns from coffee have not been good in recent years. Costs escalate as families remove land from food production to put it into coffee or another cash crop. With few other sources of income, land sales become a last resort in order to obtain the education for their children which local residents believe is vitally important. Job opportunities are few in the area. Many are able to get only casual work within the farming community. Given the gender-based division of labor that designates the production of food crops for household consumption as a female responsibility, and the lack of cash for labor inputs, there is a shortage of labor at critical times in food crop production.

These factors are causing real changes in the generational and gender assumptions and expectations for the future. Older women in Mbusyani and Kyevaluki are beginning to take on the responsibilities concomitant with having their own coffee shares, including selling the coffee and controlling the proceeds. Young women, particularly those with secondary education, are questioning traditional roles such as early marriage, early pregnancies, and a life of hard physical work. Instead, they search for other options and have new expectations.

Source: Asamba and Thomas-Slayter, 1991.

# Linkages: Gender, Ecological Deterioration, And Poverty

Approximately 80% of the world's poor live in rural areas. The majority are in regions of low agricultural potential and high ecological vulnerability (Leonard, 1989).

Natural resources constitute the basis of rural livelihood systems around the world and hold the key to increased food production, and effective, equitable, sustainable development. The scarcity and deterioration of resources results in the increased cultivation of fragile lands. Poverty forces people to cultivate such land, often forfeiting the future to meet present needs.

Two issues are critical. First, pressures of commercialization, in which the best land is owned by private interests, adversely affect land use by the poorest households. Forced onto marginal land, these households face increased vulnerability and poverty. Second, privatization of common lands deprives poor households of access to forest and grassland products necessary for survival.

The vast majority of women in developing regions depend upon the land for survival (Dankelman and Davidson, 1989). Evidence from ECOGEN case studies in Africa, Asia, and Latin America suggests that the burdens of natural resource destruction fall most heavily on women in poor households, who must struggle simply to survive. Given the strong connection between changing gender roles, poverty, and ecological decline, it is imperative to examine the role of gender in matters of access to and control over natural resources.

Findings from ECOGEN case studies show that continuing ecological degradation:

- transforms gender roles
- leads to out-migration
- increases the hours women work
- pushes rural men and women to find new methods for protecting and stretching their livelihoods
- leads to declining production
- precipitates further decline of the resource base

## Deforestation in Nepal

Deforestation in certain areas of Nepal has forced women to spend an additional 1.13 hours daily collecting fuelwood, leaf fodder, and grass (Kumar and Hotchkiss, 1988:9).

## Sandmining, Women, and Water in Kenya

In Katheka Sublocation in Kenya's Machakos District, women used to get water from the sands of the nearby Kalala River during the dry season. Now much of the sand has been mined by Nairobi builders for construction purposes, and women must travel by foot to the Athi River during the dry season. Many women perform this task daily, over a two month period, spending 5 hours round trip (Thomas-Slayter and Ford, 1989).

*Women in the Mazvihwa Communal Area, Zvishavane District, Zimbabwe, seek water from the sands of a river bed during the dry season.*



## II. Tools for Gender Analysis

Tools for gender analysis are essential building blocks for effective projects and programs. They reveal how gender differences define people's rights, responsibilities, and opportunities in resource management. Recognizing the ways that development plans affect men and women differently allows planners to incorporate this information in the successful implementation, monitoring and evaluation of development projects and programs.

The tools discussed in this section offer ways of gathering data and analyzing gender as a variable in household and community organization for natural resource management. Individually, each method gives new insights into the local situation. Used together, these methods permit a more comprehensive understanding of the community's situation and facilitate the creation of a more effective and equitable development program. Each tool is illustrated with an application from ECOGEN research.



*Nina Bhatt, Indira Koirala, and Munni Gautam, members of the ECOGEN research team in Nepal, getting ready for the day's interviews, with host family, the Ghimeres, looking on.*

# Improving Problem Identification: Refocusing Traditional Tools

## Wealth Ranking\*

Definition	A card sorting exercise to elicit information from key informants about local socioeconomic distinctions.
Purpose	To devise a sample of households which is representative of the community's different socioeconomic groups.
Materials	Cards, each with the name of a household of the community. If all households are not included, then a random sample should be used.
Approach	Interview both male and female informants independently; about four or five in total should suffice. Ask each to separate cards with family names into piles according to the informant's notion of the household's relative level of well-being. Following the card sorting, the researcher and informant discuss the characteristics associated with each pile the informant has made, and the reasons for assigning a household to a particular cluster.
Value	<p>Important indicators about socioeconomic strata within the community are determined by both male and female residents, and not by the researchers. Analysis of the results assures that the households selected for household and confirmation surveys represent the range of socioeconomic circumstances found in the study site. Researchers may also control for ecological circumstances by dividing families into agro-ecological zones to ensure representation from each zone.</p> <p>Wealth ranking helps the researcher as well as the project officer begin to see the ways gender roles and socioeconomic class interact in rural communities. Evidence from ECOGEN case studies reveals that changing economies and environmental crises have significant implications for both women's and men's work. Control over resources varies greatly according to both class and family structure.</p>

\*This technique was pioneered by Barbara Grandin (1988) and adapted for use by the ECOGEN research teams.

The following household descriptions, derived from a wealth-ranking activity, illustrate both the subtle and dramatic differences among households within a small community. They suggest why community members themselves can best define and interpret patterns of local socioeconomic stratification.

#### **Two Kenyan Households: The Mongotes and the Ndonyes**

Mr. and Mrs. Mongote saved money from Mr. Mongote's shop to buy the eight acres on which they now live. Between the shop and their 1300 coffee trees, the Mongotes are able to generate enough cash to meet important household needs. Mr. Mongote manages the shop and the trees. Mrs. Mongote cultivates the food crops, and together they share management of their farm. Recently the family sold a small piece of land in order to provide schooling for their children.

Theresa Ndonye, a neighbor of the Mongotes, is a widow. She supports her three children by farming her quarter acre farm, seeking off-farm labor, and weaving baskets. Theresa's daughter is a single mother; her older son is in Nairobi seeking employment; and the younger son is in primary school. They grow some food and have 100 coffee trees, but the food they grow lasts only one month. To buy the rest, Mrs. Ndonye cultivates other people's land, picks coffee, mulches, and weeds. Her average earnings for a day's work are less than \$1.00. Mrs. Ndonye is typical of a growing class of households functioning virtually as landless agricultural laborers, vulnerable to the vicissitudes of casual employment opportunities (Asamba and Thomas-Slayter, 1991).

Because of their relative wealth, families like the Mongotes are easily identified and usually accessible to researchers or project officers to discuss the community's situation and needs. The Ndonyes are struggling to survive and are often too busy to attend community meetings where development issues are discussed. Such families (particularly female-headed households) may remain invisible with their needs unrecognized. Thus, their concerns are not readily included in development projects. The wealth ranking process assures that information about all types of households is incorporated into problem identification and project design.



## In-depth Household Interviews

<b>Definition</b>	A discussion with the adult male and/or female in charge of the household.
<b>Purpose</b>	To uncover how gender is a variable in the livelihood strategies of individual households, particularly in terms of natural resource management, and to permit respondents to explore the household's linkages with the broader social, economic and ecological systems in which it resides. It is important to hear both men's and women's perspectives. In general, it has been much easier to interview men and to obtain their viewpoints. Household interviews should address this disparity by assuring that at least half the interviews are with women.
<b>Materials</b>	Notebook and pen. In some instances a tape recorder might be useful.
<b>Approach</b>	<p>Informal interviews or discussions of 45 minutes to one hour. Researchers may include a wide range of topics depending on the circumstances in the study site: household composition; socioeconomic status; gender division of labor and decision-making in the household; gender basis of use, access, management, and control over family resources. If the male respondent is dominating the discussion, suggest that there are topics related to women's perspectives on environmental issues, health, and child care which you would like to discuss with the woman alone. If this approach is not successful, schedule a follow-up meeting with the wife, ideally outside the home, in a work site. See page 16 for a discussion of participant observation, a time for informal discussions.</p> <p>Households may be selected randomly from the categories generated by the Wealth Ranking exercise. They may be identified by key informants and selected according to the researcher's criteria; or a planner may select them on the basis of points raised during general community meetings.</p>
<b>Value</b>	In-depth understanding of a household with opportunity for follow-up discussion and analysis of important issues.

The following chart provides examples of the kinds of information obtained through household interviews in several of the ECOGEN research sites.

### **Gender-Sensitive Information about Resource Management Gained Through Household Interviews**

#### **In South Kamwango, South Nyanza District, Kenya**

- changing patterns of allocation of labor among women in polygamous households including agriculture, water and firewood collection
- attitudes on public health issues including construction and use of latrines, childhood diseases, infant mortality

#### **In Napo, Siquijor, Philippines**

- details on the different uses of Napo's small remaining forest by both men and women to supplement their incomes
- complex land tenure and inheritance patterns involving both male and female siblings which under some socio-economic circumstances undermine sustainable management of land resources

#### **In Ghusel, Lalitpur District, Nepal**

- changing responsibilities and labor allocation for women with the introduction of water buffalo for milk production approximately ten years ago
- differences in men's and women's attitudes toward resource availability

#### **In Linaca Region, Choluteca, Honduras**

- impact of male seasonal and permanent migration on the women and children remaining behind
- the wide range of medicinal plants used traditionally and the changing gender-based knowledge and use patterns regarding these plants



## Focus Group Discussions and Other Group Interviews

Definition	A small group meeting to discuss a specific topic in an informal setting in which all present are encouraged to offer ideas and opinions.
Purpose	To provide an opportunity to explore gender roles in various aspects of community life, and to understand the diversity of perceptions and opinions about this topic. Focus groups may also be used to generate history timelines for communities, to diagram men's and women's perceptions of community institutions, and to make trend lines for resource issues such as rainfall, crop production, population, deforestation, and health.
Materials	Notebook and pen, occasionally a tape recorder. Large paper for charts and colored markers are necessary for making time lines, diagrams, and trend lines; circles of various sizes are needed for the community institution perception exercise. It is useful to have two people so that one can facilitate the discussion and the other can record information.
Approach	Researchers or project officers become facilitators and participant observers. Time, place, and topic for discussion are established a few days to a week ahead of time. Participation in a focus group can be based on political boundaries (neighborhoods), formal or informal community organizations, and government or community-sponsored projects. Facilitators must be adept at including people in the discussion and assuring that the full range of voices is heard. Meeting with men and women in separate groups may bring out issues obscured in joint meetings. It is also useful to listen to residents from different age groups, ethnic groups, or classes. Focus group discussions conducted throughout the data collection process allow the development practitioner to build upon discoveries and deepen his/her understanding of gender-based responsibilities in managing resources.

## Value

Focus group discussions provide a forum for in-depth discussions of issues which arise in household interviews as well as clarification of the diversity of perceptions and opinions found in the community. As indicated by the illustrations which follow, focus group discussions can be useful to show:

- gender-based priorities for community action
- the level and nature of resource awareness of both men and women
- perceptions of women and men on institutional effectiveness.

### **Gender-based Priorities for Community Action in Kenya**

In Pwani sublocation, Nakuru District, Kenya, a Participatory Rural Appraisal exercise did not reveal the scope and severity of the fuelwood problem until women had an opportunity to meet separately in a focus group to examine that issue. The "important problems" identified by male leaders in the community included roads and access to health care. Women's issues, such as access to fuelwood, were not considered germane to the process until the focus group discussion brought them to the forefront (Rocheleau et al., 1991).



*Village residents of Kyevaluki Sublocation assemble for a focus group discussion.*

## **Gender, Resource Awareness, and Mangroves in the Philippines**

Focus group discussions can clarify the community's level of awareness in regard to resource degradation and can provide a means for gathering baseline data on existing resource management practices. Discussions also help community members to understand their own roles in resource degradation, to recognize alternatives, and to consider collectively the opportunities and constraints for changing current behavior patterns. Because of the potential sensitivity of topics, it is crucial that the facilitator be knowledgeable about community resource issues and cultural contexts as well as adept at working with a group. A conversation between a group facilitator and community members on the use of mangroves is illustrative.

Facilitator (F): What is your source of fuel for cooking?

Community Member (CM): Mostly mangroves; some brush.

F: Who gathers the mangroves?

CM: Mostly women and children.

F: Why do you use mostly mangroves?

CM: Because the mangroves are nearby and the fuel burns hot and long.

F: How is your supply?

CM: Dwindling. (Stories may come out about how there used to be plenty of wood, but now there is little.)

F: Why is this so?

CM: Because there are more people in the community now. But we need to cook our food.

F: Has the diminishing supply of mangroves increased the time women spend collecting fuelwood?

CM: Not yet, but we are worried that this may happen soon.

F: What will happen when there aren't any more mangroves?

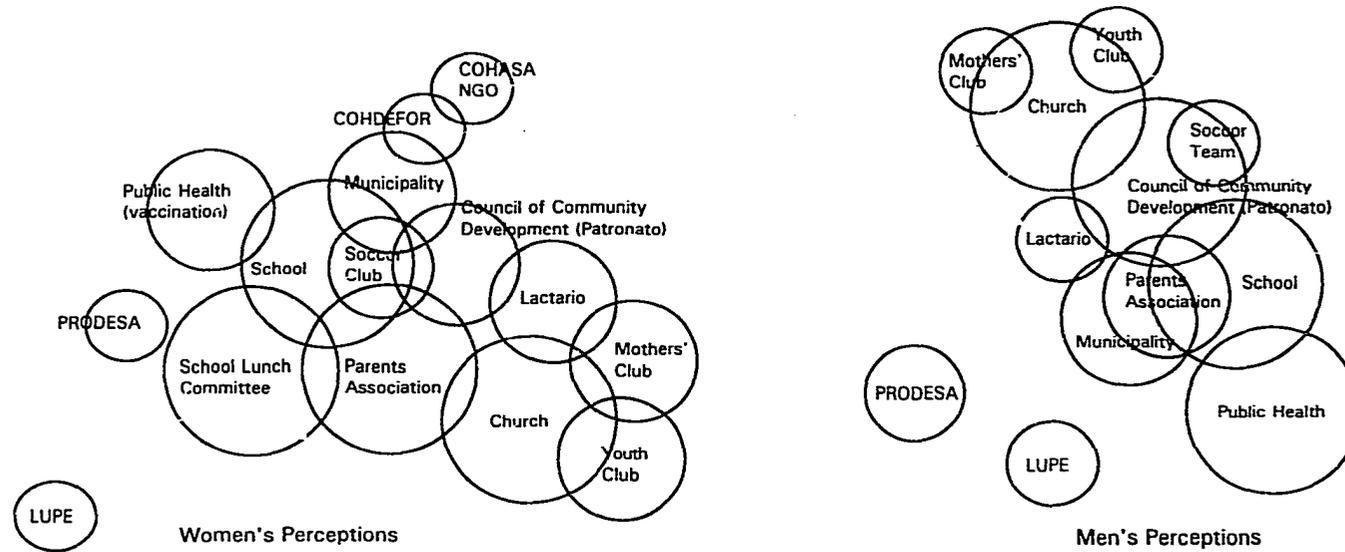
CM: We need the mangroves. (Discussion will probably lead to the other benefits of mangroves besides fuelwood including their role as the nurseries for small sea life and the protection they offer from storms.)

F: What can we do? What should be done?

CM: There are other mangroves but they are more than 10 kilometers away. Maybe we could use more coconut fronds, or we could replant our mangrove area so there is enough for all.

In this way, the researcher/facilitator gathers information about how the community perceives the resources, and also generates valuable discussion among the participants. Meeting separately with men and women is likely to yield a more comprehensive discussion of the issues. (Ututalum, 1993)

**Figure 1. Men's and Women's Perceptions of Institutions in El Zapote, Honduras**



An illustration from Honduras demonstrates the importance of gathering information from both men and women about existing institutions and organizations from the beginning of involvement with a community. Groups of residents are asked to rank community institutions in order of importance (represented by the size of circle) and to construct diagrams that indicate the relationships between and among different community groups. Focus group discussions, which generated the diagram above,

showed that men and women ranked the relevance of community groups for local welfare very differently. For details on how to conduct focus group discussions on community perceptions of institutions, see NES et al., *Participatory Rural Appraisal Handbook*, 1990. The exercise has been modified here to include gender differences. Further differentiation is possible across socioeconomic lines.

Source: Urban and Rojas (1993).



## Participant Observation

<b>Definition</b>	This activity involves accompanying respondents as they carry out daily responsibilities.
<b>Purpose</b>	To observe and gather data about men, women, and children in their daily lives. Observing respondents "on the job" allows an understanding of the constraints and opportunities for resource use at the household level, and illuminates intra-household relations (Rocheleau, et al., 1988).
<b>Approach</b>	Arrange to join a respondent for part of the day to help, observe, and talk as he or she works. Follow-up visits based on need to observe different activities or seasonal responsibilities are useful.
<b>Materials</b>	Vary according to the task at hand and how useful you think you can be. Otherwise, notebook and pencil.
<b>Value</b>	Participant observation enables the researcher to gain insights into matters which arise, not on the basis of an interview or survey schedule, but because of the specific circumstances of the respondent. It can uncover activities which might have remained hidden to researchers relying on surveys. It also facilitates the gender mapping exercise discussed next.

### Participant Observation and the "Pakho" System in Nepal

In Ghusel VDC, Nepal participant observation led researchers to a more complete understanding of household and community arrangements for fodder collection. "Pakho" is an informal system of managing forest and fodder on government "wastelands" (once forested, now barren). Villagers plant the "wasteland" with species to meet household fuelwood and fodder requirements, thereby converting it to private property. This system became apparent to the researchers only after spending time collecting fodder with women from Ghusel's households .

Over the past ten years, milk production using stall-fed water buffalo has become a key livelihood strategy for most households in Ghusel. Women have primary responsibility for gathering fodder for these animals. The emergence of the "pakho" system is central to the gender-basis of resource management in Ghusel. Direct observation of "pakho" helped clarify size, fodder density, and collection time, as well as marked differences in "ownership" and size of "pakho" land based on caste, ethnicity and economic status (Koirala, et al. 1993).



*Tamang woman without access to "pakho" lands carries fodder from the forest to her household for the family's water buffalo, in Ghusel VDC, Nepal.*

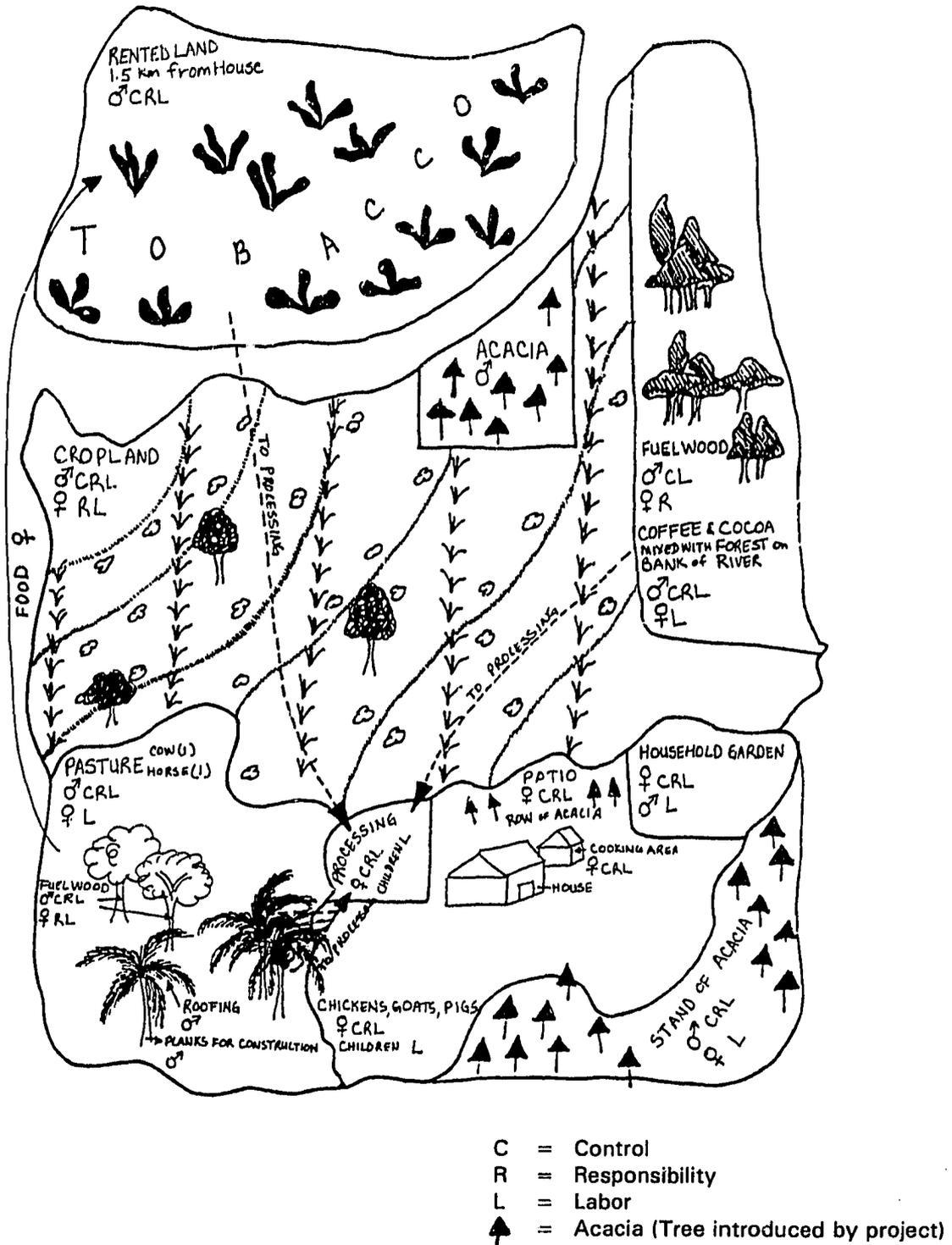
# Improving Project Design and Implementation: New Techniques Specific to Gender

## Gender Resource Mapping\*

Definition	The 'gender map' represents men, women, and children as distinct land user groups and thereby clarifies the intra-household division of control (C), responsibility (R), and labor (L) of resources and related activities.
Purpose	To present the rural landscape as an arena of complementary and/or conflicting relationships between men, women, and children in regard to natural resources.
Materials	Poster-size paper and markers to draw a map of the household and its resource base.
Approach	Work closely with individuals representative of major household types, socioeconomic strata, and agro-ecological zones in a community in order to understand the division of C, R, and L of resources and activities both within a household and also between households of different socioeconomic circumstances. By mapping the major socioeconomic strata one learns how the gender divisions and land use change according to class.
Value	Women and men make very different use of resources - even, in some cases, of a single species of tree. Therefore, it is essential for development planners and researchers to understand the "domestication" of the rural landscape. Gender mapping is also valuable because it offers a tangible representation of the landscape (in terms of C, R, & L) which can be presented to community members for their feedback.

\*Adapted from: Rocheleau, 1987.

**Figure 2.** Gender Resources Map from Zambrana, Dominican Republic



Source: Rocheleau and Ross, 1993.



## Confirmation Survey

<b>Definition</b>	A short survey to confirm the findings from other methods used and to ascertain the breadth of the findings within the community.
<b>Purpose</b>	To determine the variety and concurrence of the opinions and conditions among residents as revealed through the household interviews and focus group discussions, and other tools. Surveys can also be used to probe further on a particular topic, such as water problems.
<b>Materials</b>	A form that can easily be duplicated to facilitate administering the questionnaire.
<b>Approach</b>	The survey is administered to a random sample of respondents from the community. Questions are structured to capture differing responses with particular attention to differences based on the gender variable. The box below illustrates some of the questions used in the Philippines to obtain information on the range of gender and age based economic responsibilities and on gender in relation to land inheritance.
<b>Value</b>	Assures validity of findings. Provides statistical data to support and lend legitimacy to findings. May also refute or shed doubt on some findings.

**Figure 3.** Sample Questions from a Confirmation Survey used on Siquijor Island, The Philippines

1. Are you now engaged in the following income generating activities based on the use of local natural resources, such as making or selling:

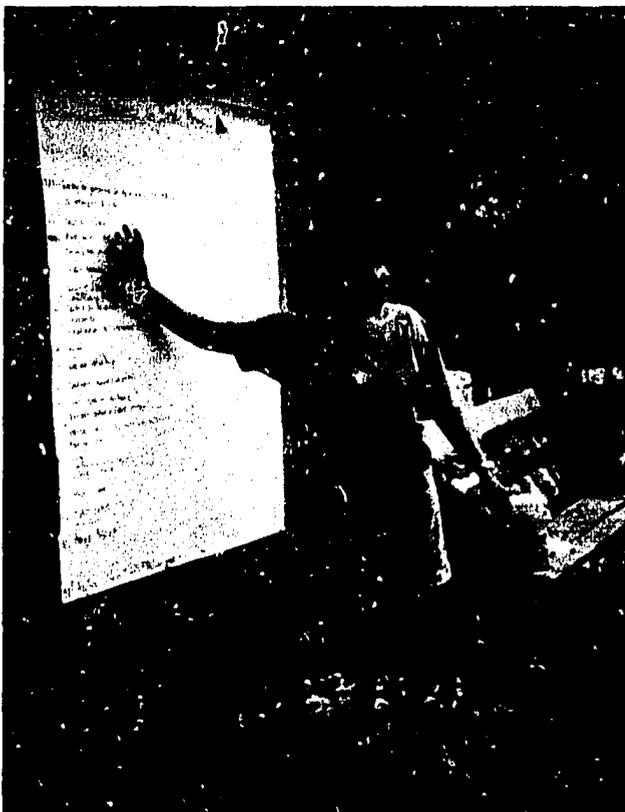
Husband:	_____	a. roofing	e. fish
Wife:	_____	b. foodstuffs	f. seaweed
Male Child:	_____	c. mats	g. sea shells
Female Child:	_____	d. coconut wine	h. livestock
Other HH Memb:	_____		i. other _____

2. Do you work on other people's farms:

Husband:	Y___ N___	Wife:	Y___ N___
Male Child:	Y___ N___	Female Child:	Y___ N___
Other ___:	Y___ N___		

3. Do you own land? Y\_\_\_ N\_\_\_  
 How was it acquired? Sale\_\_\_ Gov't land\_\_\_ Inheritance\_\_\_  
 Under whose name is the land? Husband\_\_\_ Wife\_\_\_ Other\_\_\_

Source: Shields and Thomas-Slayter, 1993.



*Bibet Sumagong, research assistant from Napo, Siquijor, leads focus group discussion.*



## Gender-Disaggregated Seasonal Activities Calendar \*

Definition	A calendar that identifies livelihood tasks and categorizes responsibilities by season, gender, age, and intensity of activity. It highlights community constraints such as drought or flood seasons, hungry periods, or even local cultural events, which should be factored into project planning.
Purpose	To generate information on the gender-based division of labor and responsibilities in livelihood systems and resource management.
Materials	Poster board or large roll of brown paper, magic markers.
Approach	Input is elicited from both men and women in focus groups or from key informants. Calendars specify the usual activities and responsibilities of household and community members, including children, throughout the year. Calendars will vary according to socioeconomic status; researchers need to be attentive to this variation.
Value	Assists project planners and managers in anticipating the best timing for work with a local community. The seasonal calendar helps planners analyze various local indicators and both men's and women's changing responsibilities.

### Seasonal Responsibilities for the Pabalays on Siquijor Island, The Philippines

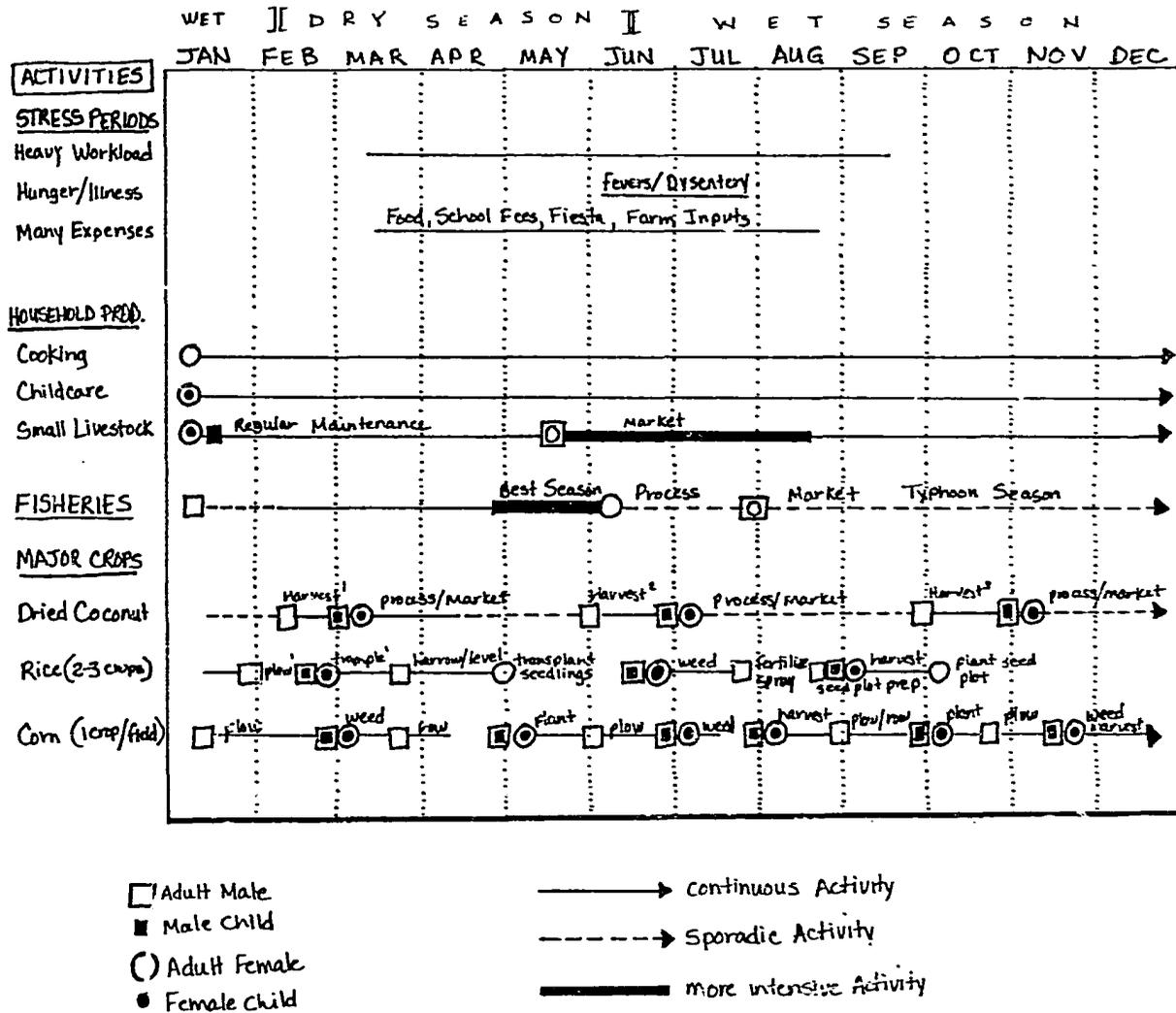
The seasonal calendar clarifies the best times of year to work with families who, like the Pabalays in the Philippines, have multiple demands on their time, varying according to the season.

Eugenia and Tirso Pabalay have nine children. Their marginally productive land provides vegetables for only seven months. To purchase food for the remaining five months, Tirso fishes while Eugenia and the children raise small livestock and sell the extra fish. Eugenia and the children also collect seaweed which they sell to middlemen. Their fishing and seaweed gathering activities, however, are limited by variations in weather throughout the year.

During the heavy weeding season, community members assist each other by weeding farms for wage or a share of the crop. Despite scarce resources, the Pabalays have purchased a cow which Tirso uses to plow the neighbor's fields for cash or payment in kind. All resources are carefully managed to help with food and education expenditures (Shields and Thomas-Slayter, 1993).

\*Adapted from Feldstein and Poats, 1989.

Figure 4. Seasonal Calendar for the Pabalays on Siquijor Island, Philippines



Source: Shields and Thomas-Slayter, 1993.



## Activities, Resource, and Benefits Analyses\*

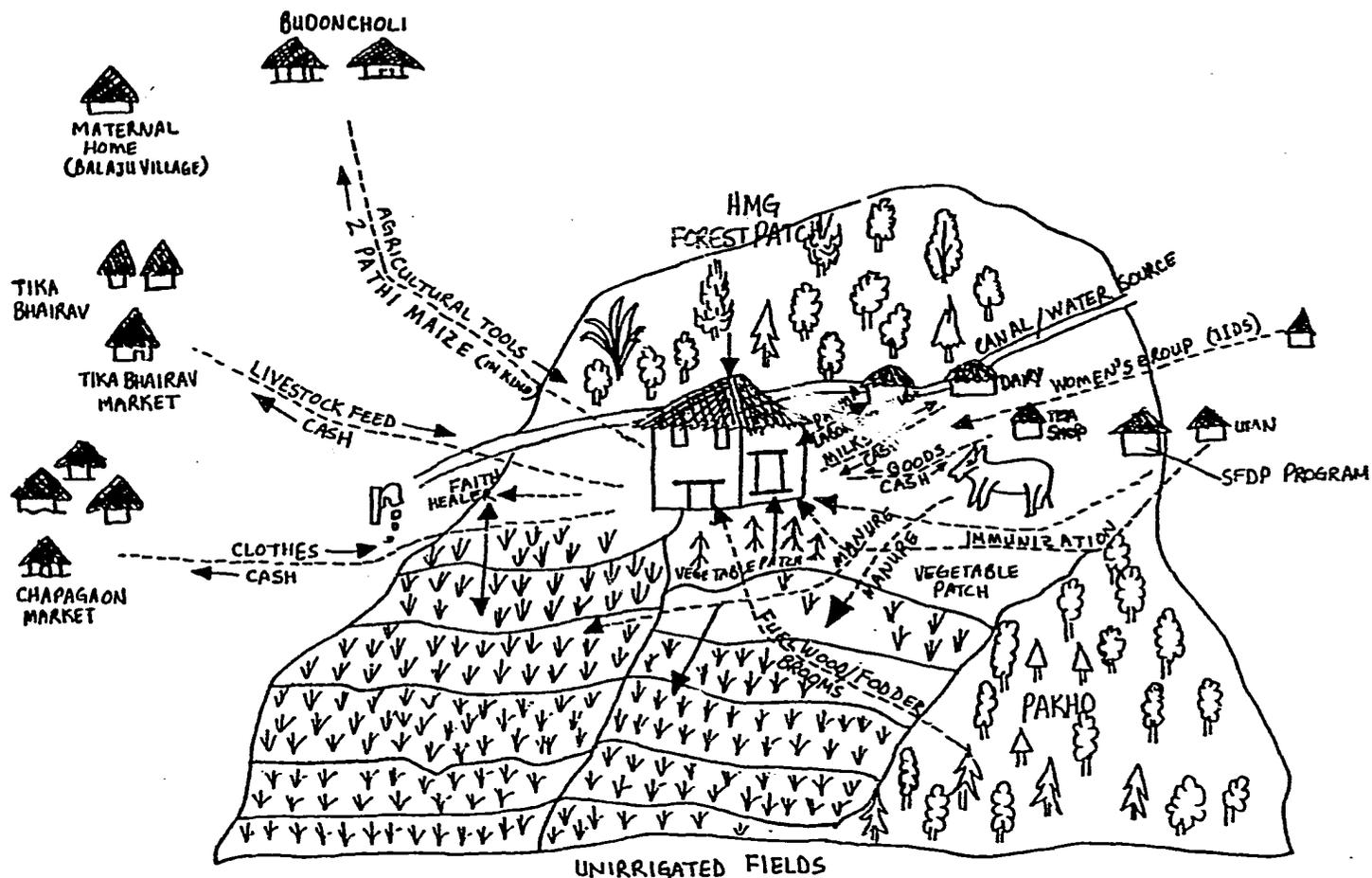
Definition	An in-depth analysis of the activities, resources, and benefits of a handful of households representative of the various socioeconomic categories established through wealth ranking.
Purpose	To obtain detailed information about livelihood strategies and resource management activities of households representative of the key socioeconomic clusters within the community.
Materials	Poster board and magic markers for making diagrammatic and pictorial representations of the household and community, and a notebook to record additional information.
Approach	Arrange three visits with two or three households representing each of the socioeconomic categories established. Each visit lasts about an hour and should involve as many family members as are available to participate. Discussion about activities, resources, and benefits among the family members can be useful for the participants as well as for the researcher.

For the **Activities Analysis** a seasonal activities calendar is drawn for each family (see pages 22 and 23).

The **Resource Analysis** is generated in a second discussion and builds on information collected through the seasonal activities calendar exercise. Researchers provide a sketch map of the community on large paper or poster board. The researcher and family members draw in the household and the physical resources upon which it depends. Natural, as well as economic resources, are included. Less tangible social resources and networks are then drawn as an overlay, usually represented with a different color set of arrows. The house is used as the reference point. Arrows are drawn to show the flow of these resources to and from the household. Questions include: Who has access to the particular resource? What are the terms of access? Who owns it? What are the family's formal and informal credit sources? Where are products sold? What inputs are used? What are their sources? Answers to these questions are drawn on the map where possible.

\*Methods for activities, resource, and benefits analyses were first introduced by Overholt et al. (1985) and have been adapted for use by the ECOGEN project.

Figure 5. Resources Map of a Tamang Household in Ghusel, Lalitpur District, Nepal



Pakho: Informal management system in which village households plant species suitable for fuelwood and fodder on government "wasteland" (once forested, now barren), thereby converting that land to private property. Access to "Pakho" land varies widely by class, caste, and ethnicity.

UMN: United Mission to Nepal  
 SFDP: Small Farmers Development Program  
 HMG: His Majesty's Government

The **Benefits Analysis** is the last of the three activities with a given household. Index cards are used to facilitate a discussion with family members about who has access to the products of a household's labor and who decides how products should be used. A different set of index cards is made for each family interviewed, based on information from their completed activities and resource analyses. A representative set of products and by-products of the family's various livelihood activities is written on the cards. For example, the products and by-products of a tree may include fruit, fodder, fuelwood, lumber, bark, and poles. The cards are dealt to adult family members who take turns reading the cards and describing who in the family or community uses the product or by-product, how it is used, who decides how it should be used, and who controls the money if sold. If the member does not have knowledge of the product/by-product, the card is passed to the member who does. Additional input is sought from other household members (Flora, 1992).

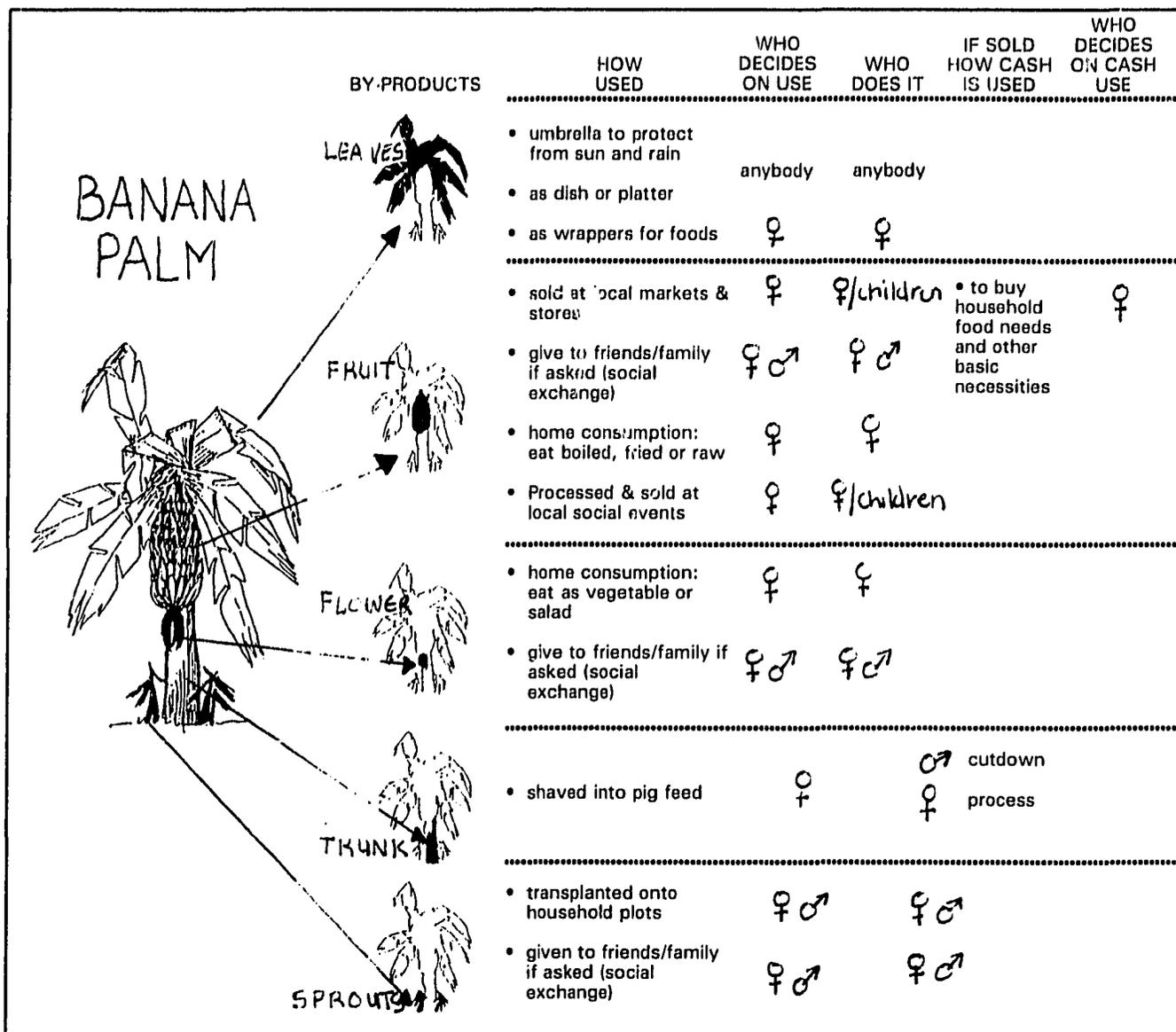
### Value

These procedures can be an important learning process for the household, as well as for the researcher who has an opportunity to explore in a lively, yet detailed manner, the fundamental resource and economic issues of these households. Questions arising can be examined further through participant observation. They can also be discussed in focus group meetings.

*Munni Gautam  
and Laju  
Shrestha  
conducting  
resource  
analysis  
interviews with  
household  
members in  
Ghusel, Nepal*



Figure 6. Benefits Analysis Flow Chart from Agbanga, Leyte, The Philippines



Source: Buenavista and Flora, 1993.

# Improving Project Management: Integrating Gender

## Communities in Action on Resource Issues

The definition of development, in its broadest sense, involves empowerment and capacity-building. It is a process of enabling disadvantaged people to manage the changes they seek in their own lives. These attributes occur on an individual level and also within the community as solidarity and empowerment emerge.

Ultimately, the capacities of local groups are central to improving community welfare and livelihood systems. Rural households are affected by conditions beyond the borders of their farms. Access to water, fuelwood, grazing lands, and forest resources for materials or small scale enterprises are among their concerns in managing community resources. Community institutions must be able to respond to challenges within these ecosystems. Their effectiveness is linked to the roles of both women and men within the community. Project managers need to ensure that the perspectives, interests, knowledge, and needs of both men and women are incorporated into community management efforts.

Following are three examples of community action on resource problems in Kenya, the Philippines, and the Dominican Republic. Gender sensitive tools can uncover the fundamental roles women play in resource management at the community level.

### Women's Groups in Kenya

In Mbusyani Sublocation, Machakos District, thirteen women's groups engage in a wide variety of activities. They include agricultural income-generating activities such as growing and selling beans, onions, potatoes, cabbages, and greens, as well as commercial activities like making and selling honey, paraffin, bricks, and baskets. Some manage a maize mill; others have built a social hall. Almost all groups undertake natural resource management activities including bench terracing and tree planting on the farms of members and on public land. There are rotating credit-loan activities as well. The women leaders in these groups play a vital role in the community. They are supported by the vigorous leadership style and commitment of the Assistant Chief, who is the Government's administrative officer for the Sublocation (Asamba and Thomas-Slayter, 1991).



*Women in Mbusyani construct a bench terrace on a degraded hillside in their community.*

### **An Irrigation Association in the Philippines**

Complementary roles and responsibilities for men and women in rice production give an Irrigator's Association on Siquijor Island added flexibility and strength to overcome adversity. In the 1970s, rice farmers in the village of Tubod organized themselves into an association in response to a proposal by the National Irrigator's Administration (NIA) to build an irrigation system for their fields. Women were mobilized to negotiate with local families for the rights of way for the system. Using materials provided by the NIA, men built the long irrigation canals. The Association was promised a system which would irrigate 25 hectares, profits from which would be used to pay back the NIA for the construction materials. Unfortunately, when the system was finished, it irrigated only 6.5 hectares and Association members found it difficult to pay their debt.

Both male and female members of the Association have taken responsibility for overcoming this setback and increasing the productivity of the system. Over the years, male leadership has successfully lowered the terms of the Association's debt to the NIA and continually reconciles conflicts over water use between Association members and the Association and neighboring communities. Male labor is also used to repair the system. Women, in turn, have increased the productivity of the paddies by growing a green leafy plant they can sell or exchange as a vegetable, fodder, or keep for household use. Women also sell surplus rice straw as fodder (Shields and Thomas-Slayter, 1993).

*A poor woman on Siquijor Island sells rice straw to her more prosperous neighbor for use as fodder.*



### **The Role of Women's Groups in Resource Management in Zambrana-Chacuey, Dominican Republic**

In the Rural Federation of Zambrana-Chacuey, small landholders, in an area of increasing land concentration, face declining access to land and resources. Women's groups, farmers groups, and youth groups, which make up the rural federation, with the help of ENDA-Caribe, an international NGO, participate in a wide range of resource management activities. Women's groups are often a vehicle for introducing resource management technologies.

When ENDA-Caribe introduced a well project to the federation, women, recognizing the worsening quality of water from the rivers, carried out a census to determine their communities' water needs. Then, they mobilized the men to contribute their labor to well construction. When ENDA presented the agroforestry project, again women responded. They encouraged the men to attend a 'field day' at an experimental plot in order to see first hand the project's possible benefits.

In addition to this mobilization role in their communities, women's groups in Zambrana-Chacuey are beginning to empower their members. Working together in group gardens, tree nurseries, animal raising projects, crafts, and sewing projects strengthens the women and gives them a collective voice which the women and men alike recognize is stronger than any individual's (Rocheleau and Ross, 1993).



*A mother and daughter in Zambrana-Chacuey cultivate tomatoes in their group's garden.*

## Gender-Sensitive Monitoring and Evaluation

Incorporating gender in project monitoring and evaluation requires both quantitative and qualitative techniques. Tools, such as the confirmation survey can be useful for providing numerical data regarding gender-based responsibilities and access to resources for purposes of project monitoring and evaluation. Resource and benefits analyses carried out among project participants can yield in-depth information for project redesign.

Gender-based involvement in group activities can be discerned through focus group discussions, participant observation, or more formal techniques. Obtaining information about gender roles, rights and responsibilities is only the beginning of gender-sensitive analysis and evaluation. Whether using informal approaches, such as participant observation and focus group discussions, or more formal interview schedules and questionnaires, the next step is to take this information and incorporate the ideas, perspectives, and concerns of both women and men into project implementation.

### Using Scales to Build a Gender-Sensitive Questionnaire

One monitoring device is to employ questions using scales to determine variation in responses. For example, a project manager might want to review the activities of the Philippine irrigation group noted above asking about women's involvement in the management of the group. A donor agency, inquiring about the benefits from bench terracing and tree planting received by the women's group in Kenya might ask a question showing the degree to which participants received benefits.

In both cases, the project manager or evaluator can obtain key information relative to the functioning of the project. This in itself is not adequate. Further qualitative and investigative analyses are necessary to find out why a project is functioning in a particular way. Why are women involved in the irrigators' group the way they are? Why are some women benefitting from the Kenyan project while others are not?

**Figure 7. Sample Questions using Scales**

1. Which statement best characterizes the the way in which women are involved in decision making of the Irrigators' group.

- a. Decisions of the Irrigators' group are **always** made with the knowledge and participation of women
- b. Decisions of the Irrigators' group are **usually** made with the knowledge and participation of women
- c. Decisions of the Irrigators' group are **sometimes** made with the knowledge and participation of women
- d. Decisions of the Irrigators' group are **never** made with the knowledge and participation of women

a.                       b.                       c.                       d.

2. Which statement most closely fits the level of benefits you think your household has received from the bench terracing and tree planting project?

- a. My household has benefitted **greatly** from the bench terracing and tree planting project
- b. My household has benefitted **quite a bit** from the bench terracing and tree planting project
- c. My household has benefitted **only a little** from the bench terracing and tree planting project
- d. My household has **not** benefitted from the bench terracing and tree planting project

a.                       b.                       c.                       d.



## Gender-Sensitive Monitoring of Project Progress (The GMPP) \*

Definition	A chart which records the changes that occur during project life as registered by progress from the baseline data towards project goals using gender-based criteria.
Purpose	To engage community members in collective discussions of progress toward goals for the project which have been established by the community. The baseline data include information related to gender-based responsibilities, access, and control of resources relevant to the project.
Materials	A large poster board, markers, and a central location to display the chart.
Approach	In a series of meetings with key informants, focus groups, and community groups, preliminary findings are discussed and community members provide feedback to correct misperceptions and errors. Next, the identification of major problems, their prioritization, ways in which to meet goals, and schedule are discussed. In creating the chart, special consideration is given to seasonal calendars and identifying community groups that can carry out the tasks. Periodic meetings monitor progress.
Value	Creates a gender sensitive development strategy that is designed to take into account the local situation and improve men's and women's livelihoods.

\*Adapted from: Philippine Development NGOs for International Concerns, 1992.

**Figure 8. Gender-Sensitive Monitoring and Progress (GMPP) and its Potential Application in Zambrana-Chacuey, Dominican Republic**

Baseline Data	Project Duration (in months)				Targets
	6	12	18	24	
11% of the women are members of the wood producers association					Double the # of women associates every year for 2 years in order to achieve nearly 50% female involvement
Tree species mostly selected by project designers					Tree species identified by men and women in the community are incorporated into agroforestry project designs
One woman promoter of the wood producers group out of the federation (consisting of 25 communities) (1 woman)					One woman promoter/representative to the wood producers group from each of the 25 women's groups (25 women)

# New Initiatives

Two methods described below launch a process of sensitizing community members to issues of gender. In Kenya, facilitators are adapting these two approaches for engaging both men and women in analyzing project impact on gender roles at the community level.

## The GAAP

The **Gender Analysis Activity Profile (GAAP)** is being tested in Western Kenya in focus group discussions with both women and men. By discussing community activities and the underlying reasons for them, participants clarify the factors which determine the gender-based division of labor and gender-related control over resources. Discussing these issues in a public forum raises community-wide awareness of gender-based inequities in resource access and control. With this knowledge community action to address these inequities is possible.

## The GAM\*

The **Gender Analysis Matrix (GAM)** has been developed by Rani Parker (1990) to facilitate community discussion about project impacts for women, men, household and community in regard to labor, time, resources, and culture. The GAM can be used both to test and to generate awareness of the impact of specific projects on gender roles and responsibilities. The matrix has been proposed for use sequentially at several points during project implementation. It enables members of a community to think through the implications of project development for both men and women.

\*Source: R. Parker, 1990. adapted for use in Kenya.

**Figure 9.** Gender Analysis Activity Profile (GAPP) for Community Discussion

## GENDER ANALYSIS ACTIVITY PROFILE

*Who Does It?*

*Why (Determinants)*

ACTIVITY	FC	MC	FA	MA	FE	ME	LEG	CUL	ED	ECO	POL	REL
School Maintenance												
School Fundraising												
Church Activities												
Public Works												
Bazaras (Public Meetings)												
Harambee (Community Fundraisers)												

**FC = Female Child**  
**MC = Male Child**  
**FA = Female Adult**  
**MA = Male Adult**  
**FE = Female Elder**  
**ME = Male Elder**

**LEG = Legal**  
**REL = Religion**  
**CUL = Culture**  
**ED = Education**  
**ECO = Economics**  
**POL = Politics**

Adapted from: L. Wanjama, 1992.

**Figure 10. Gender Analysis Matrix (GAM)**

**Potential Impact of Small-Scale Dam Rehabilitation Project, Mbusyani,  
Machakos District, Kenya**

**Construction Phase**

	<b>Labor</b>	<b>Time</b>	<b>Resources*</b>	<b>Attitudes</b>
<b>Women</b>	1. gather stone for ballast 2. plant trees 3. construct terraces	10-15 days labor at dam site (one woman per household)	tools shovels hoes baskets	appreciate the benefits of water supply/ willing to work in groups
<b>Men</b>	1. scooping 2. dig fence hole/posts 3. string wire	5 days labor at dam site (one man per household if available)	shovels	individual effort  recognize value to home and livestock
<b>Household</b>	unskilled female/male labor per household	approximately 20 days	contribute poles, financial contribution Ksh50 per household	small-scale financial contribution acceptable not amenable to larger financial responsibility
<b>Community</b>	1. hold fundraising  2. school children maintain seedlings	2 weeks planning 1 day event  three times weekly through year as necessary	  buckets carry water hoes	school master, Teachers' cooperative, children will learn from project

\*Project donor to provide funds to purchase goods such as wire and nails.

# III. Conclusions and Next Steps

## ECOGEN Assumptions, and Framework,

Gender affects development and shapes opportunities for building local-level capacities across cultural, political, and ecological settings. Project experience shows that information about gender, while difficult to incorporate in development planning, is vital for effective and sustainable outcomes. Interest in gender analysis has been spurred largely by those concerned about women's roles and their desire to transform gender relations across many dimension of activities. In reality, all people interested in effective and equitable resource management and in long-term capacity-building for local communities must address issues of gender as they pertain to the development process.

Underlying ECOGEN's research activities are the following assumptions:

- specific ecosystems require locally crafted solutions to social, ecological, and technical problems.
- site-specific ecological and livelihood systems are linked to national and global environmental, economic and political systems which shape the opportunities and constraints within which they exist.

The ECOGEN framework (Thomas-Slayter et al., 1991) for understanding gender in natural resource management emphasizes:

- Interactive processes in gender, resource and environmental issues.

- **Linkage of micro and macro structures in social and ecological systems.**
- **Diversity of ecosystems and communities, with distinct analyses and options for a variety of particular sites, circumstances, and land-user groups.**
- **The relevance of strong viable local institutions and organizations to effective resource management, increased agricultural productivity, and improved livelihood systems.**
- **Ways in which local organizations and their resource management activities are structured by gender.**

## Next Steps for Gender Analysis

Increasingly ECOGEN seeks to integrate gender analysis with the growing set of participatory methodologies created as alternatives to centrally planned and externally managed development. Its next steps are to link gender analysis with Participatory Rural Appraisal (PRA), an approach to community-based rural development which enables rural communities to participate in designing and implementing more effective paths to sustainable resource management (NES et al., 1990). PRA strengthens local leadership and institutions, integrates sectors at the community level related to natural resource management, and helps to build collaboration among development agents external to the community.

PRA, and other similar approaches to community organization, cannot fully accomplish any of these objectives without:

- assuring that they employ gender-sensitive, data-gathering techniques for design, implementation, and evaluation of development programs and projects; and
- developing approaches and methodologies for effectively integrating both men and women into community decision-making, organization, and mobilization.

The next steps for ECOGEN include efforts to integrate approaches and tools of gender analysis with participatory methodologies for data-gathering and community mobilization. Pilot projects are under discussion for Nepal, Kenya, India, and the Philippines to test a new level of synthesis. An integration of gender analysis and participatory methodologies is key to long-term capacity-building and empowerment for both women and men in local communities.



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