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**Gender Issues in Agriculture
and Natural Resource Management**

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PREFACE

This is the fourth document in the Gender Manual Series produced by the Women in Development Office. The authors were asked to address the needs of A.I.D. staff to incorporate gender considerations into their agriculture and natural resource assistance work. The manual examines issues in these sectors that arise from differences between men and women in their access to and control of resources. It explores the gender implications of these differences, and suggests strategies to ensure that gender is considered in an appropriate manner. Although the manual was developed for A.I.D., we hope that others in the development community find it useful as well, and we encourage others to adapt this manual to meet the needs of their organization.

The *Gender Issues in Agriculture and Natural Resource Management* manual was developed concurrently with a handbook that will soon be distributed by the Office of Women in Development, the *Gender Information Framework* (GIF). The GIF was originally designed as a training tool to increase awareness of and skills to deal with gender issues in A.I.D. It provides planners with a set of tools that can be applied to any sector to help build gender considerations into programs and projects.

Gender Issues in Agriculture and Natural Resource Management is meant to be a practical, "hands-on" manual, thus one constantly subject to revision and updating. Its fluid status is deliberate as the gender consideration process is constantly evolving and being revised to reflect research and results from field applications. We welcome your comments as you use this handbook and have provided a response tear sheet in the back for your convenience.

ACKNOWLEDGMENTS

This manual has been a long time in the making, and has evolved through the efforts of many people. Helen Henderson identified the major issues in a background paper that contributed greatly to this present version. The team that produced this manual, the authors and staff of the Women in Development Office, brings together diverse technical skills and extensive experience with A.I.D. Special thanks to Kathleen Moran (PPC/WID) who assisted in the final editing and prepared the report for publication, and to Jeffery Franklin (PPC/WID) who battled with the incompatibilities between the various word processing programs and printers with his usual good spirits.

CHAPTER 1

Introduction

Women in development (WID) has become an increasingly important development issue in recent years, in large part due to the shift of emphasis away from equity concerns to recognition of the productive roles played by women and the contribution they can make to economic growth and development. Efficiently designed and managed projects are better able to deliver resources to women, and projects that deliver appropriate resources to women generally have been shown to be more successful.¹⁰

In most agricultural and natural resource projects, "the household" is taken as the basic unit of analysis; males are assumed to be heads-of-households and, thus, the principal decision makers and sources of information. The roles of other household members are frequently ignored—to the detriment of the project and to those it is meant to serve. Yet, in every society women and men have different roles, have access to different resources and benefits, and have different responsibilities. Adult women, the elderly, and children bring specific skills, resources, and priorities to farm production; to ignore these is to ignore half or more of the system in which decisions about farming and use of natural resources are made. With this in mind, the authors of this manual have called upon the techniques associated with Farming Systems Research (FSR) (see next page). While there are numerous factions that can be considered under the FSR rubric, most practitioners agree that the approach relies heavily on farmer input throughout the research cycle, from diagnosing needs through to dissemination of results. The principles embodied in FSR comprise an essential component of any strategy to improve the well being of farmers, be they male or female.

Gender has proven to be the most useful category to disaggregate the farm household and analyze intra-household behavior.^{10, 47} This handbook explores the ways by which gender analysis can be used as a tool for better understanding the relationship among social, economic, and technical factors at work in the agriculture and natural resource sectors (see Figure 1).

1.1 The A.I.D. Women in Development Policy

The policy of A.I.D. on women in development derives from the Percy Amendment to the Foreign Assistance Act, which directs that the United States government's bilateral assistance programs should be administered

so as to give particular attention to those programs, projects and activities which tend to integrate women into the national economies of foreign countries, thus improving their status and assisting the total development effort.²

Farming Systems Research³⁴

Farming Systems Research (FSR) refers to an approach to agricultural research and extension that emphasizes social and economic factors in addition to technical factors, including those that operate on the farm and those that are outside of, but affect the farm. FSR is an approach to, and not a substitute for, conventional agricultural research. It developed and continues to evolve in order to enhance the effectiveness of agricultural research, particularly in reaching resource-poor farmers. Numerous factions exist that can be considered under the FSR rubric, but most practitioners agree that the approach relies heavily on farmer input into four stages of technology development and diffusion:

1. an iterative process for diagnosing needs, problems, and constraints in the farming system;
2. identifying priority problems, analyzing proposed solutions, and developing field trials to test proposals;
3. farm-level experimentation, including monitoring, modification, and verification of proposed solutions; supportive on-station research; and evaluation of adoptability; and
4. dissemination of farmer-approved results to relevant groups of farmers.

Agricultural research and extension is more effective when an FSR component is included, but there is a cost to using FSR to support conventional research. Sociological data, for example, on intra-household dynamics and gender issues, must be collected. Anthropologists, sociologists, and economists are hired to complement the agronomists, plant breeders, and others to form multi-disciplinary teams. Some of this expense may be reduced in the future as agronomists and other natural scientists receive training to incorporate social science perspectives more effectively into their research methodologies. There are also expenses associated with farmer participation and on-farm trials. Meaningful cost/benefit analyses do not exist yet for FSR. This is not unusual for a relatively new discipline, especially given the time-lag for the effects of agricultural research. More problematic is that as an adjunct to conventional research, FSR is difficult to evaluate independently. Many of the benefits, such as greater sensitivity on the part of researchers to the disadvantaged members of a target group, are not easily quantified.

The principles embodied in FSR will be an essential component of any strategy to improve food security. This is especially true in Africa, where failure to take into account non-technical factors, such as labor bottlenecks and shortages, has repeatedly thwarted attempts to introduce technologies. An approach like that of FSR will be a valuable tool in helping to mitigate such factors, as well as in identifying gender, age, ethnic, and class differences that affect development assistance.

FIGURE 1**From Gender Blindness to Gender Adaptation:
Useful Definitions**

<i>Women versus gender:</i>	Gender is a socioeconomic variable to analyze roles, responsibilities, constraints, and opportunities of the people involved in the development effort. It considers both men and women, and thus should not be confused as being an equity issue.
<i>Gender blindness:</i>	The inability to perceive that there are different gender roles and responsibilities; the perception that farmers and technology are male (or neuter); and the failure to realize that project activities can have different effects on men and women.
<i>Gender analysis:</i>	The analysis of the intersection of male and female roles and responsibilities with project goals, strategies, and outcomes at any stage of the project cycle.
<i>Gender adaptation:</i>	The application of gender analysis to development assistance activities to ensure that both men and women will be involved appropriately.

The 1982 A.I.D.'s Women in Development Policy Paper stresses that gender roles constitute a key variable in the socioeconomic condition of any country—one that can be decisive in the success of development plans. Failure to include women in the development process has consistently led to failure in achieving project goals. Thus the strong economic argument in the Women in Development policy:

Misunderstanding of gender differences, leading to inadequate planning and design of projects, results in diminished returns on investment.²

1.2 Women in Agriculture and Natural Resource Management

The roles women play in agricultural production and natural resource management are critical to the economies of developing countries, yet the value of these roles has often been ignored or dismissed. Among the factors leading to the invisibility of women's contributions are: women commonly work in family enterprises or are self-employed rather than work as wage earners; their work is seasonal rather than year-round; they tend to be informally rather than formally employed; and women engage in diverse and shifting economic activities.¹³ In addition, there is rarely a clear-cut distinction between domestic production for household consumption and for economic agricultural activities; between economically active and inactive persons; and between agricultural and non-agricultural tasks.

The majority of the world's food producers are women. Recent United Nations estimates indicate that they provide 60 to 80 percent of the agricultural labor in Africa and Asia and 40 percent in Latin America.³³ National statistics on women's roles in agricultural production vary widely, yet analyses by several agencies indicate that women participate in the entire food system to a much greater degree than is routinely reported. Women contribute as producers, distributors, processors, storers, and marketers. They are involved in every type of agricultural activity, putting in as many or more hours than men, and participate in crop production activities ranging from land clearing and preparation through harvesting and processing. They tend to all types of livestock; process foods for home consumption and for the market; manage natural resources through their use of fuel and water and their crop and animal activities; and market their products at the local, regional, and national level.

Despite women's significant contributions to agricultural production and to rural households, generally they have less access to land, capital, credit, technology, and training than men in that same system. The constraints women face in gaining access to these resources significantly reduce the productivity of both the rural sector and the entire national economy. Some researchers believe that until women's agricultural participation is targeted to appropriately reflect the work they do, food crop production is destined to remain at current stagnant levels.

Development activities in the past have focused on women's reproductive, health care, and nurturing roles. While women will always have these roles, they are concurrent with their roles as agricultural producers in most developing countries. Development activities must take into account these multiple roles of women. A.I.D.'s Women in Development Policy Paper recognizes these concerns as follows:

1. The gender- and age-linked division of labor by crop and ethnic group must be fully comprehended as a basis for all project planning.
2. Male and female differentials in access to and control of key productive resources must be understood and planned for in projects. These resources include land, capital, labor, credit, information, seeds, tools, fertilizers, water, and fuel.
3. The specific farming responsibilities which are uniquely and particularly assigned to female members of the household or society must receive an appropriate share of attention in project identification, design, and implementation. These responsibilities may include "women's animals," "women's crops," weeding, transporting, marketing, preserving, processing, and storage.
4. Explicit strategies to address gender-role aspects of farming must be built into all projects in which outreach to farmers is attempted (extension, training, research). In particular, integrated services to address females' multiple responsibilities in farm households are required. These responsibilities would include human nutrition/ health, animal nutrition/health, farm management, family resource management, and time/labor-saving technologies.

An extensive review conducted by the Center for Development Information and Evaluation (CDIE) examined more than 100 A.I.D. projects to document how A.I.D. has interpreted its WID mandate over the years and how A.I.D. policy in this area is being implemented.⁷ It found that in agricultural projects, attention to gender issues can result in the:

- o Elimination of bottlenecks to production;
- o Successful transfer of technology;
- o Willingness to adopt new practices.

The CDIE review and subsequent experience indicate that there are three main approaches for promoting and using women's contributions: women-only projects, women's components within larger projects, and mainstreaming (or integrating women into projects) (see Figure 2). While each of the approaches has unique advantages, integrated projects usually are the most effective.⁷ Furthermore, integrated projects minimize two major risks: first, that the project will translate their productive goals into a welfare approach to women; and second, that the project will further marginalize women from access to resources by creating mechanisms that separate them from mainstream activities.⁶

1.3 Organization of this Manual

This manual provides methods, guidelines, and examples that will facilitate the integration of women into agriculture and natural resource development projects. Throughout, extensive use has been made of lists and question sheets to highlight important points. Chapter 2 begins the discussion of incorporating gender issues in agriculture and natural resources into A.I.D.'s programs, projects, and non-project assistance. This discussion continues in Chapter 3 with a focus on project design. The final chapter focuses on integrating gender concerns into the implementation, monitoring, and evaluation stages of projects. Appendix A contains information about related women in development documents available from the PPC/WID office. Appendix B contains information on several methodologies that lend themselves to gathering gender-disaggregated data.

FIGURE 2

Advantages and Disadvantages of Three Methods of Including Women in Projects

Type of Project	Advantages	Disadvantages
Women-only	Women receive all of the project's benefits. Beneficiaries may acquire leadership skills and greater self-confidence in gender-segregated environment. Skills training in nontraditional areas may be much easier without male competition.	These projects tend to be small scale and resources and underfunded. Implementing agencies often lack technical expertise in raising productivity or income. WID-specific income-generating projects rarely take marketability of services into account and thus fail to generate income. Women beneficiaries may be required to contribute their time and labor with no compensation. Women become further marginalized or isolated from mainstream development.
Women's Component	These projects as a whole enjoy more resources and higher priority than WID-specific projects, which can benefit the WID component. Women are ensured of receiving at least part of the projects resources. Women can "catch up" to men through WID components.	The WID component usually receives far less funding and priority than do the other components. These components have tended to respond to women's social roles; thus, domestic activities may be emphasized to the exclusion of any others. Awareness of the importance of gender in the project's other components may be missing.
Integrated	Women can take full advantage of the resources and high priority that integrated projects receive. If women form a large proportion of the pool of eligibles, their benefits will probably be high even without detailed attention given WID issues.	Unless information on women's activity and time use is introduced at the design stage, projects may inadvertently exclude women through promotion mechanisms, location, and timing of project resources, etc. If women form only a small proportion of the eligibles, they may not be included in the project. Women may be competing with men for scarce project resources and lose out because of their lack of experience in integrated group settings and their relatively low status in the family and community.

CHAPTER 2

Integrating Gender Issues into A.I.D.'s Programs, Projects, and Non-project Assistance

This chapter provides an overview of how gender concerns should be incorporated into the range of assistance activities undertaken by A.I.D. Although the manual is not intended to provide in-depth guidance on all these activities, suggestions are given as to where and when gender issues should be addressed in the Country Development Strategy Statement (CDSS), Action Plans, project documents, and in non-project assistance.

As the above documents are discussed, the reader may want to refer to the GIF for additional information and insight regarding the tools and techniques used by the WID Office in guiding A.I.D. Missions and bureaus in the integration of gender considerations into their programs and projects (see Appendix A, Item A).

2.1 Incorporating Gender Concerns into the CDSS and Action Plan

Comprehensive information and analysis of gender issues can be used to strengthen the CDSS and Action Plan program documents. The CDSS typically includes three areas:

- 1. Analysis:** A review of recent economic performance in the country, including macroeconomic policy changes and structural adjustment as well as growth performance of the major sectors, to identify the main constraints on national development.
- 2. Strategy:** A discussion of the mission's strategy for overcoming these constraints, laying out a set of goals or targets relevant to the mission's proposed strategy.
- 3. Resources:** A review of the mission's portfolio strategy for overcoming these constraints, emphasizing the relationship between the proposed strategy and the planned mix of assistance vehicles.

Gender-relevant information can be introduced into each section of the CDSS. Figure 3 and the subsequent discussion examine methods for the integration process based upon a recently submitted CDSS for an unnamed African country.

2.1.1 THE CDSS DOCUMENT

2.1.1.1 Review of Recent Performance

The analysis section should identify the development problems the country is facing with an emphasis on the conditions and problems of the poor, including the position of women in society. Impediments to women and an assessment of women's participation, e.g., a description of the role

FIGURE 3

Incorporating Gender Concerns into the CDSS

ASSESSMENT OF RECENT PERFORMANCE:

- o Discuss how policies have affected men and women, including those in low-resource groups
- o Discuss whether difficulties in reaching women as well as men in low-resource groups have affected government and donor project success

DEFINITION OF MISSION ASSISTANCE STRATEGY:

- o Identify strategy areas where women's participation is important
- o Describe how women's participation will contribute to implementing the strategy
- o Describe how women as well as men will benefit from this strategy

DESCRIPTION OF PROJECT PORTFOLIO:

- o Identify women's participation in and benefits from projects
- o Identify constraints and opportunities to full involvement of women as well as men
- o Summarize actions taken or planned that will remove these constraints or take advantage of these opportunities, thereby ensuring the full involvement of the men and women targeted for assistance

of women in small farmer productivity, should be included. This section should be supported by relevant statistical data that has been disaggregated by gender wherever possible.

Examination of the CDSS of the African country selected for this example reveals that there is an indepth discussion of recent developments in the country's agricultural sector, both in the text and in annex materials. The impact of ongoing reforms is also discussed, noting that rural areas are no longer self-sufficient in food, despite large investments in expanding support services to the agriculture sector.

Women's labor in the rural sector and their management of cereal plots for home consumption are very important to this country's economic well-being. Therefore, it is appropriate to question how this issue could have been strengthened in the CDSS by observing that development efforts in this sector have failed, in part, because they have not reached women farmers. An appropriate question from the gender perspective is:

Are current policies or economic conditions a major barrier to more rapid growth or higher income in sectors where women's activities are concentrated?

According to a study conducted in the country, past policies have, in fact, discouraged food production by women. For example, policies that subsidize peanut production for the export market have increased demands for women's labor on cash crop plots. Moreover, the policies have channeled assistance to the rural sector through institutions that generally do not provide inputs, credit, or technical advice to women. The study also found that development of private sector channels, encouraged by economic reforms, was beginning to make an improvement in women's access to inputs, but that the transition was far from complete.

In response to these issues, the CDSS discussion could be strengthened by examining whether low-resource food producers, including women, have benefitted from the economic reforms; and if not, what additional steps would be needed to assure they become beneficiaries of the reform as well.

2.1.1.2 The Mission Assistance Strategy

The strategy section of the CDSS should describe how each of the proposed problem-specific strategies will address women's as well as men's issues. This section should specify which groups in the population are expected to make progress toward the benchmarks, specifically addressing the impact on demographic categories such as the poor and women.

The assistance strategy for the agricultural sector of the African country example, emphasizes improvements in grain marketing, promotion of income-generating activities, and support to forestry activities such as village woodlots. The appropriate gender question relative to these emphases is:

What roles do women play in the sectors and sub-sectors identified by A.I.D. as priorities for assistance?

Women in this country, according to recent studies, take a leading role in establishing private sector grain trading systems; they constitute the majority of participants in such important income-generating activities as vegetable production and fish processing; and their responsibility for firewood supply suggests that they would be the most logical targets for efforts to establish village woodlots.

By recognizing the importance of women in A.I.D.'s priority subsectors, the CDSS could both demonstrate the mission's understanding of those aspects of the local economy that it seeks to influence, and pave the way for the design of project activities that respond to gender differences in roles and resources.

2.1.1.3 The Mission Portfolio Strategy

The CDSS discussion of the mission portfolio of this country emphasizes the role of women in family planning and rural health activities, but overlooks their activities in the agricultural sector. Two questions from the gender perspective are appropriate to this part of the CDSS:

1. *Which projects will directly affect women's economic activities and what will that effect be on women as well as on men?*
2. *How will women's activities and women's capacity to respond to new opportunities affect the success of A.I.D.'s strategy?*

With regard to the first question, it is evident that several projects in the portfolio will affect grain production and input markets—two activities performed by women in this country. A.I.D.'s primary project in the country promotes the development of privately organized farmers' groups for purchasing inputs and assists private sector input distribution channels with credit and technical advice.

Treatment of gender issues in this CDSS could be strengthened by:

- o Recognizing that women in the country frequently form women's farmer groups for the cultivation of millet and other crops;
- o Committing the mission to promote favorable conditions so that women's as well as men's groups can participate in project activities;
- o Recognizing that women are already taking an active role in establishing private marketing systems, but that their ability to benefit from new opportunities will be limited by barriers to credit for small entrepreneurs, many of whom are female.
- o Identifying access to credit as a target for A.I.D. policy or program assistance.

With regard to how failure to reach women will affect project success, the CDSS sets a target of five percent annual increase in millet production from the use of improved seed and fertilizer. Women produce a significant portion of the millet, in addition to working on family plots, and are

likely to be responsible for applying fertilizer on the majority of the millet plots as well as for making decisions regarding fertilizer purchases for their own plots. In many countries, the percentage of national millet production derived from women's plots is not known, but a study conducted in Burkina Faso estimated that Burkina women produce 13 percent of the nation's dryland food grains on their own plots.²³

The CDSS discussion of a five percent annual increase in millet production and the feasibility of reaching it could be strengthened by:

- o Recognizing that low-resource farmers, including women, do not now have access to fertilizer for grain production.
- o Including a discussion of how mission projects will ensure that these farmers have access to fertilizer and knowledge of its use in the future.

2.1.2 THE ACTION PLAN

The preceding discussion illustrates how an understanding of women's participation in African agriculture could improve the development of A.I.D. strategies for the agricultural sector. Unfortunately, this type of information may not exist in many countries. The annual Action Plan provides an appropriate forum for reporting on and updating the mission's understanding of gender roles in agriculture and rural activities.

An Action Plan is basically a scaled-down version of a CDSS; it emphasizes mission actions to be taken during the coming year to further the strategy developed in the CDSS. Because this plan emphasizes project and program development and implementation, the incorporation of gender issues into the Action Plan should be based on an examination of how modifications in the project and program assistance strategies will negatively and/or positively affect women.

A delay in implementing reforms in the agricultural input system in the African country reviewed above, would be expected to result in a delay in improving access to inputs for women. This delay should be identified in the Action Plan as part of the discussion of policy reform implementation.

The Action Plan should also discuss progress in implementing the gender strategy identified in the CDSS. If, for example, the CDSS proposed a strategy for assessing project impacts on women through the collection of gender-disaggregated data, the Action Plan would be an appropriate place for an update of mission information on gender and a discussion of how this information affects project implementation.

If mainstream projects were identified as expected sources of benefits for women farmers or entrepreneurs, the Action Plan should include an assessment of whether women are participating in these activities. Therefore, projects should be required to gather gender-disaggregated data in their baseline and monitoring.

2.2 Incorporating Gender into A.I.D. Projects

The CDIE review suggests a ten-step sequence to follow when doing gender analysis (see Figure 4).⁷ These steps are not intended as a checklist requiring that each issue be resolved before moving on to the next. Nor is it suggested that a design team always must conduct in-depth baseline surveys. This manual can serve as a tool for ensuring that gender concerns are raised and addressed appropriately. In many cases, questions such as the ones raised in this manual can be used by team members without requiring the addition of a "WID specialist." In other cases, rapid appraisal of the proposed project areas by a gender-focused team may be needed to answer questions such as who will undertake particular activities, and with what degree of access and control. Addressing gender issues from the onset will lay a sound foundation that will support project design, implementation, and evaluation activities, and systematize the inclusion of gender concerns into project documentation.

2.2.1 PROJECT IDENTIFICATION DOCUMENT

The Project Identification Document (PID) presents a short, concise proposal for a project. It outlines the description, rationale and estimated cost for a new project; it should reflect both A.I.D. and host country development strategies. The PID describes the perceived problems and presents ways in which the project will address the problems.

Development projects need to be responsive to the social, economic, and political factors of their environment. As pointed out in the *A.I.D. Handbook 3*, consideration of these factors, including the definition and examination of project participants and intended beneficiaries, is expected to begin with the earliest stages of project identification.¹ It should continue throughout project development so that relevant knowledge about beneficiary populations can be applied to the project design, and that future feasibility and implementation problems can be minimized.

In identifying problems and constraints, and in explaining how the project will contribute to the overall goal of meeting human needs, the PID should show the differential impact of development on women and men. In describing the characteristics of the beneficiaries, direct and indirect, care must be taken to delineate gender differences. What are the factors that will facilitate or constrain the progress of the project and are these factors gender-related?

2.2.2 PROJECT PAPER

After a PID has been approved, the mission, in collaboration with host country counterparts, prepares the Project Paper (PP). The PP presents the rationale, a thorough analysis, and the plan, schedule, cost estimate, and recommendations for the new project along with other supporting documents. The PP summarizes the analyses carried out during project development and represents the final proposed design.

FIGURE 4**Steps in the Gender Analysis Process⁷****1. CLARIFY GENDER ROLES AND THEIR IMPLICATIONS FOR PROJECT STRATEGIES**

Examine project objectives in terms of anticipated participation of and benefits to men and women. What activities will be affected by project interventions? What is the existing division of labor in these activities? How do these activities conform to the overall pattern of household productive and domestic activities? What innovations are being proposed? What are their behavioral implications for different household members?

2. ANALYZE ELIGIBILITY TO RECEIVE PROJECT INPUTS

Examine the inputs provided by the project. Identify which household member should receive them in light of the existing division of labor. If women are responsible for an activity slated for project intervention, can they qualify to receive inputs in their own name? What are the prerequisites for eligibility, and how many households in the target group can meet those criteria?

3. DEFINE PREREQUISITES FOR PARTICIPATION IN PROJECT ACTIVITIES

Considering the division of labor, which household member should participate in activities such as soil conservation, water user groups, training, and extension? Regardless the lack of formal discrimination against women, how will the location and timing of activities affect their participation? Does the proportion of women in the pool of eligible participants correspond to the division of labor?

4. EXAMINE OUTREACH CAPABILITIES OF INSTITUTIONS AND DELIVERY SYSTEMS

If analysis of the division of labor shows that an activity slated for project intervention is women's responsibility among smallholders, to what extent do existing institutions and delivery systems have direct contact with female smallholders, or with any women?

5. ASSESS THE APPROPRIATENESS OF PROPOSED TECHNICAL PACKAGES

Are the technical packages applicable to all households or only to those with certain types of resources, such as irrigated land, several head of cattle, or a labor surplus? How many households in the target group have the right kind of land? How many, given the gender-typing of tasks and male migration, can meet the additional labor requirements? How many can raise the necessary cash? What implications do gender differences have for the spread of technical innovations to poor households?

6. EXAMINE THE DISTRIBUTION OF BENEFITS AND ITS EFFECT ON INCENTIVES

Given the gender division of labor and the control over income from different crops by men and women in some regions, what interest would women have in intensifying production? Do the direct returns to women outweigh the additional effort? If the project affects marketing, are women likely to lose an independent source of income?

7. CONSIDER THE RELIABILITY OF FEEDBACK MECHANISMS

If women play a major role in project-related activities such as farming vegetables, how will the project find out whether the proposed technical innovations are acceptable to them? What provisions are made for local women and men's participation in selecting and testing technologies and in evaluating results? Do monitoring and reporting systems distinguish male and female participants?

8. ANTICIPATE PROBABLE CHANGES IN THE ROLES AND STATUS OF WOMEN

How will the project affect women's access to and control over land, labor, capital, and expertise? Will women's workload increase or decrease? What will happen to their independent income, to their control of crops and the income from their sale, or to their voice in household decision making on expenditures and other issues?

9. LINK CHANGES IN THE ROLES AND STATUS OF WOMEN WITH THE EXPECTED PROJECT IMPACT

How will changes in women's access to and control of land and productive resources affect food availability? How will changes in women's ability to earn an independent income affect household cash flow? How will it affect their ability to provide for their families? How will changes in women's workload affect such things as child care and family nutrition?

10. IDENTIFY NEEDED ADAPTATIONS

Using the previous steps as a guide, specify what changes are needed in institutions, delivery systems, technical packages, and feedback mechanisms to overcome the barriers to women's access to project inputs and their ability and incentive to participate. evaluation activities, as well as provide guidelines in preparing the necessary documentation of gender inclusion activities.

The PP should establish criteria against which the project's performance and success in involving women as well as men as participants and beneficiaries can be evaluated. It should outline activities planned to ensure that women will be involved, and set target dates and goals to indicate that activities have been achieved. Finally, the PP must be flexible to allow for adjustments as changes that affect women occur in a country. Chapter 3 discusses how to integrate gender considerations into agricultural and natural resource initiatives at the design stage, and provides a more thorough analysis of how the project paper reflects this integration process.

2.3 Incorporating Gender into Non-Project Assistance

2.3.1 IS GENDER AN ISSUE IN NON-PROJECT ASSISTANCE?

Gender concerns have rarely been addressed in non-project assistance, but growing recognition of the importance of considering gender issues argues for its inclusion (see Figure 5). There are two questions to ask when deciding whether gender concerns are relevant to non-project assistance:

1. *To what extent do women participate in activities that are likely to be affected directly or indirectly by this assistance?*
2. *To what extent is the impact on women likely to differ significantly from that in the sector, given gender differences in roles, resources, and other factors?*

2.3.2 POLICY REFORM AND BUDGET SUPPORT

Programs to support policy reform generally target macroeconomic and agricultural policies that are believed to restrain growth in the agricultural sector and to reduce rural incomes. Many of these policies affecting the agricultural sector, including macroeconomic policies, clearly do not affect all parts of the sector in the same way. Much of the recent attention given to the impact of macroeconomic policies on the agricultural sector has concentrated on the distorting impact of over valued exchange rates. This analysis has generally focused on the distortion of individual and collective decisions engendered by these policies and the consequent loss of economic efficiency. Recognition of the importance of policies has rarely extended to the differential impact that policies may have on the various groups within the agricultural or rural sector.

The existence of differential impacts does not imply that the policies are designed to affect women or other low-resource groups differently from others, or even that those responsible for the policy are aware of the differences in impact. On the contrary, the separate roles of women in the agricultural sector are rarely mentioned in policy documents relating to market interventions. Nor do all policy impacts work to the disadvantage of women. For example, women may be helped as well as hurt by an over valued exchange rate. One of the main effects of government policies that maintain an over valued exchange rate is to discourage production of crops for export and crops

FIGURE 5

Issues for Gender Considerations in Non-Project Assistance (NPA)

1. WHEN ARE GENDER CONCERNS AN ISSUE IN NON-PROJECT ASSISTANCE?

Gender concerns may be an issue in non-project assistance if it is used to support government activities or policy reforms that are likely to have significant impacts on activities in which women participate; and gender-based differences in roles and resources result in impacts that are different for women than for men.

2. WHY WOULD THE EFFECT OF POLICY REFORMS DIFFER BY GENDER?

The impact of policy reforms may differ by gender if there are significant gender-based differences in roles and access to resources in those parts of the agricultural sector affected by the policy reform. If women grow food crops while men grow cash crops, for example, policies affecting the relative profitability of these two activities will have differential impacts. If women have less access to formal credit than men, policy reforms affecting formal credit also will have differential impacts.

3. WHY IS GENDER AN ISSUE IN BUDGET SUPPORT TO AGRICULTURE?

A.I.D. budget support is generally aimed at encouraging activities identified as important in achieving sectoral goals such as increased rural incomes, improved nutrition, etc. Women's contributions to the agricultural sector are important determinants of whether these goals are reached, yet women farmers generally benefit less than men farmers from government services such as extension and support to cooperatives, and assistance to women often receives low priority in the allocation of funds, because of under-estimation of the importance of their role. Funding to improve government outreach to women farmers therefore may be expected to increase the effectiveness of government agricultural support programs.

4. SHOULD A.I.D. EMPHASIZE SUPPORT TO WOMEN FARMERS IF THE HOST GOVERNMENT IS UNRECEPTIVE?

This decision depends on two factors: (1) the priority assigned to gender concerns in the mission's total development strategy; and (2) the effect on achievement of the program's goals if gender concerns are not addressed effectively. It may be more productive to emphasize the negative impact on production and rural incomes of failing to extend program benefits to women, than to emphasize equity concerns or WID issues.

that directly substitute for imports, by making such production relatively less competitive with goods produced in other countries. Agriculture in Africa is widely believed to have suffered seriously from this policy in the past. In Africa, however, it is men farmers and state farms that are primarily responsible for production of cash crops and food grains that directly compete with imports such as rice (this generalization does not, of course, apply to every case). Consequently, to the extent that women's agricultural activities emphasize production of local food grains for home consumption and the non-cash economy, women's activities may have been harmed less by this policy than men's activities. On the other hand, women farmers have generally not been as well-positioned as men farmers, corporations, and state farms to benefit from the implicit subsidy on fertilizer, machinery, and other imported materials provided by an over valued exchange rate.

Recent examination of differential policy impacts on women suggest two general hypotheses regarding policy impacts on women and other low-resource groups. These findings, while general, provide a point of departure for the analysis of any particular case:

The direct impacts of government agricultural policies on women are generally lower than those on other groups, because women are less involved in the market and therefore less likely to benefit directly from, or be directly harmed by, government taxes, subsidies, and other market interventions.

The indirect impacts on demand for women's labor, on the income received for their labor, on the competitiveness of their crops, and on other women's activities may be very significant and often run counter to the government's stated intention in introducing the market intervention.

Figure 6 summarizes the gender-related issues and strategies for consideration for policy analysis and reform activities. Because women farmers produce a significant portion of the total agricultural output in most countries and because they are among the poorest farmers, special consideration of how policies and policy reform affect them is consistent with the goals of A.I.D. The low priority accorded women's agricultural activities has often kept resources allocated to women to a level well below that which is consistent with their contributions to agricultural production and resource management.

Factors leading to this inequity include:

1. The low level of attention women farmers receive from many host governments;
2. The difficulty of reaching women farmers—they are often illiterate or may not speak the official language;
3. Women are less likely to belong to formal groups such as government-sponsored cooperatives;
4. The emphasis governments put on cash and export crops that are less likely to be grown by women;

5. A lack of information on how to design credit programs and other economic devices to serve women clientele;
6. A poor understanding of the role women play in decision making about agriculture and household matters.

A reallocation of resources that would increase extension and other support services to women farmers would improve the overall effectiveness of many policy programs, even where it might be more costly to reach women. This issue has been explored through two research activities funded by the Office of Women in Development, the Agriculture Policy Analysis Project and the Gender Resource Awareness in National Development project (see Appendix A for more details.)

FIGURE 6**Designing Policy Analysis and Reform Components
in Agricultural Projects****ISSUES**

- o Women farmers often differ from men in their roles and access to resources. Will the analysis of current policies and alternative reforms examine potential differences in policy impact by gender?
- o Are women farmers more or less likely to grow and market crops targeted for government assistance?
- o Are women farmers more or less likely to grow and market crops that are taxed by the government?
- o Are women farmers more or less likely to participate in programs such as government-subsidized credit, provision of inputs, etc.?
- o Will the analysis of alternative reforms examine and disaggregate effects on different groups within society, including women-headed households, or will it focus only at the macro-economic level?
- o Will the analysis examine indirect impacts of possible reforms on such factors relevant to women as demand for and return to family labor, profitability of traditional crops (especially food crops), relative return to livestock and crop-growing activities, small-scale marketing, etc.?
- o Is there sufficient information on women's participation in the agricultural sector to examine this issue in the context of policy analyses?

STRATEGIES

- ◆ Design analytic activities to examine disaggregated impacts as well as aggregated impacts of policy reform.
- ◆ Include analysis of women's role in the agricultural sector in the proposed analytic agenda if existing data are inadequate.
- ◆ Consider a target funding component in appropriate ministries such as Agriculture and Social Services.

FIGURE 7**Patterns of Gender Responsibilities in Agriculture****1. SEPARATE CROPS:**

Men and women are responsible for production and disposal of different crops. Women are often responsible for the livestock, vegetables, and tree crops near their dwellings.

2. SEPARATE FIELDS:

Women and men produce the same crops, but in different fields. This pattern is common in West Africa, where private fields are part of a larger system in which both men and women also contribute their labor to communal fields. In such cases, there may be three interlocking systems: fields worked by each wife, fields worked by the husband, and fields worked by the extended family.

3. SEPARATE TASKS:

In this pattern, some or all of the tasks within a cropping cycle are assigned by gender. For example, rice transplanting is often carried out by women, plowing by men.

4. SHARED TASKS:

In this pattern, which overlaps other patterns, men and women undertake the same tasks on the same crops. In some systems, most tasks are shared; in others, only labor-intensive tasks, such as weeding and harvesting, are shared.

5. WOMEN-MANAGED FARMS:

There are two types of women-managed farms, *de facto* and *de jure*. In *de facto* systems, even though men legally own the land, they work away from the farm for days, months, or even years, leaving the women to manage the farm. *De jure* systems in which women have legal ownership of the farm, appear to be increasing worldwide. They tend to be among the poorest farming households, yet many people depend on them for survival.

CHAPTER 3

Integration of Gender Issues into the Design of Agricultural and Natural Resource Management Projects

3.1 Agricultural Project Design Issues

As discussed in Chapter 1, the importance of considering gender in agricultural projects goes beyond the equity issue; it is an economic issue as well. Throughout the world, women's work and contributions to the economy have been underestimated. It is important to understand not only who is doing the work, but who is making the decisions about cropping patterns, seed selection, use of purchased inputs and family labor, and crop disposal.¹⁰ It is also important to know who is implementing these decisions, with what resources, and at what level of skills. Five general patterns of gender responsibilities in agriculture have been identified as shown in Figure 7. In addition to these agricultural responsibilities, women typically have the main responsibility for child rearing and household maintenance. In this context, women usually are responsible for providing for water and fuel wood needs, thus they are the primary managers of the natural resources in an area. The key design issues at different levels to be considered during the planning stage are presented in Figures 8 and 9.

Incorporation of the identified strategies may or may not require a project budget reallocation for effective implementation. In the majority of cases, however, a serious effort to incorporate women into agricultural projects will have implications for the project budget. Where additional expenditures are required (bringing in social scientists, reaching out to women's organizations; organizing additional field days for women farmers), these expenditures should be planned as integral components of the project budget.

3.2 Gender Analysis in the Project Paper

In general, project design and analysis are concurrent activities. Analysis tests the feasibility and effectiveness of the design, possibly leading to modifications, which are then re-analyzed. Gender analysis should be an integral part of all aspects of the project paper, as shown in Figure 10. The incorporation of gender into the social soundness analysis, the technical analysis, and the economic analysis is discussed below.

FIGURE 8

What Should Be Included in the Design Team Scope of Work to Address Gender Issues?

BASIC DESIGN ISSUES FOR ALL PROJECTS

Project Background and Problem Statement: Analyze the extent to which gender differences and the roles of women affect the basic problem (e.g., inadequate transmission of technologies to farmers).

Project Strategy and Feasibility Analyses: Identify the extent to which effective incorporation of gender concerns (e.g., involving both men and women in an afforestation project) will be necessary for project success. What is the impact on the project of failing to incorporate such concerns effectively?

Choice of Host Country Institutions: Determine the effectiveness of the primary implementing institutions (e.g., the extension service) in addressing gender concerns and identify measures needed to improve their performance in this area.

Project Budget and Financial and Implementation Plans: Include the cost of measures necessary to reach women farmers or otherwise address gender concerns effectively. Describe measures to ensure that gender concerns are adequately addressed in the selection of the technical assistance team, participant training programs, and project activities.

1. Sector-Level Projects Design Issues

Project Background and Problem Statement: Describe the extent to which sectoral institutions are currently addressing gender concerns (e.g., in collection of data on the agricultural sector) and determine the impact of their performance in this area on overall effectiveness.

Project Activities (Outputs): Identify activities necessary to improve institutional performance in addressing gender concerns (e.g., gender disaggregation of farm management data) and include such activities in project input planning.

2. Field-Level Projects Design Issues

Project Background and Problem Statement: Determine the role of women in agricultural and natural resource activities in the project area relevant to the project's focus; analyze gender differences in constraints, problems, and resources at the farm level (e.g., differences in credit access, technologies used, and economic strategies).

Project Activities (Outputs and Inputs): Identify measures necessary to reach women effectively and include such activities in project input planning; if sufficient information to design such measures is not available during design, specify additional data needed, how it will be gathered during project implementation, and how findings will be incorporated.

FIGURE 9

Incorporating Gender Concerns into Project Design: Issues and Answers

1. IS IT NECESSARY TO HAVE A WOMEN-IN-DEVELOPMENT SPECIALIST ON THE TEAM?

No, not if gender concerns are adequately covered in the design team's scope of work. A WID specialist may, however, be necessary on design teams for projects with a heavy field orientation, where information on women's roles in the project area is scarce. This will ensure that team resources and expertise are sufficient to collect information, analyze constraints and opportunities, and to identify appropriate design actions despite data limitations.

2. SHOULD RESPONSIBILITY FOR ADDRESSING GENDER CONCERNS BE GIVEN TO THE DESIGN TEAM MEMBER RESPONSIBLE FOR THE SOCIAL SOUNDNESS ANALYSIS?

No. Responsibility for addressing gender concerns should usually be assigned to the team leader. Discussion of gender issues in the social soundness analysis rarely constitutes an adequate approach to addressing gender concerns. Too often the social soundness analysis only emphasizes women as indirect beneficiaries, and in many of these cases the project would have benefited if gender analysis had addressed women as participants. Gender issues should be reflected in the design of the project's activities, in the implementation plan, and when necessary, in the budget.

3. WHAT IF THE HOST GOVERNMENT COUNTERPART INSTITUTION IS INDIFFERENT OR EVEN HOSTILE TO GENDER ISSUES?

The primary reason for incorporating gender concerns into A.I.D. projects is to increase project effectiveness. Host government participation in the project design team and project negotiations should be used as opportunities to help decisionmakers understand the need to address gender concerns (e.g., reaching women as well as men farmers with improved technologies) in order to achieve the purpose of the project.

4. IS IT NECESSARY TO HAVE A "WID COMPONENT" TO ADDRESS GENDER ISSUES EFFECTIVELY?

No. On the contrary, experience indicates that integrating efforts to reach women farmers and entrepreneurs into the project's central activities is generally more effective than a separate effort directed at women.

FIGURE 10

Addressing Gender Issues in the Project Paper

SECTION	TREATMENT
Introduction and Problem Statement	Briefly identifies role of women in agricultural, livestock, and resource management activities to be addressed by the project and relates their role to the problem the project will tackle (e.g., role of women in grain storage in a project to reduce post-harvest losses).
Project Strategy and Rationale	Discusses how incorporating women in project activities will help solve the identified problems.
Project Description	Describes how project activities will involve women farmers and traders, relates their involvement to achievement of the project's purpose, and describes how project inputs have been adjusted to ensure women's participation (e.g., inclusion of gender expertise on the technical assistance team).
Project Implementation Plan	<p><i>Financial Plan</i> explicitly identifies costs associated with reaching women (e.g., special training programs for women, additional technical assistance).</p> <p><i>Implementation Plan</i> includes benchmarks for developing and implementing activities to reach women, as appropriate, and discusses responsibilities for addressing gender issues (A.I.D., host government, and contractor).</p> <p><i>Evaluation Plan</i> describes how project data collection and evaluation activities will generate and make use of gender-disaggregated data.</p>
Project Analyses	<p><i>Social Soundness Analysis</i> discusses social constraints on involving women and how they are addressed in the project design.</p> <p><i>Technical Analysis</i> discusses applicability of project approach and project-supported technologies for women.</p> <p><i>Economic Analysis</i> identifies costs and benefits to women and <i>Sensitivity Analysis</i> reviews impact on project returns of failing to incorporate women in project activities.</p> <p><i>Institutional Analysis</i> describes capabilities of implementing institutions to reach women in their target groups, and discusses measures to enhance this capability.</p>

3.2.1 THE SOCIAL SOUNDNESS ANALYSIS

As discussed in detail in *A.I.D. Handbook 3*, the Social Soundness Analysis is used to shape the design, to strengthen and provide information for other analyses, and to confirm the socio-cultural feasibility of the overall activity. There is a growing recognition in the development community, however, that "Social Soundness" must be an integral part of the design of any project, not restricted to a few pages in a document.³⁴ Rather than listing questions to answer in a separate section of the Project Paper, systematic consideration of gender, as suggested by this manual, will greatly enhance the social soundness of agricultural and natural resource management projects.

3.2.2 THE TECHNICAL ANALYSIS

Although it may be argued that "technical" is a gender-neutral term, it is unlikely that there are any technical aspects of a project that do not affect people. For example, if construction of physical facilities is the only project element, the question to be asked is "Who will be using these facilities?" If it is a school, is it coed? Is it for boys only? Is it a girls' school? Is only for adult education? In many cultures, a school that does not provide separate facilities for girls and women will automatically exclude them. If an agricultural technical package provides seeds, what are the eligibility requirements for receiving seeds? A list of gender issues to be addressed in the technical analysis section is presented in Figure 11.

3.2.3 THE ECONOMIC ANALYSIS

An economic analysis determines whether a project is a worthwhile investment for the country and usually compares real benefits with real costs. A.I.D. has not identified a single methodology for economic analyses since the application of even standard methodologies varies in different sectors and projects. Regardless of the methodology, the information gathered (e.g., wages, income distribution) should be disaggregated by gender and the effects of the proposed project on women should be considered. Gender issues to be addressed in the economic analysis section of the Project Paper are summarized in Figure 12.

3.3 Incorporating Gender Concerns into Project Components

There is considerable overlap in the types of gender concerns that need to be addressed in the various components of an agricultural project. Thus, the figures that follow in this chapter contain some redundant material. This adds to the length of the manual, but should make it more useful by providing stand-alone sets of issues and strategies that can be easily used. Neither the issues nor the strategies shown are comprehensive; they merely represent a point of departure for project designers to build upon.

FIGURE 11**Gender Issues to be Addressed in the
Project Technical Analysis****ISSUES RELATED TO TECHNICAL FEASIBILITY AND APPROPRIATENESS OF
OVERALL APPROACH**

1. What barriers to reaching or including women in project activities are present in the project's technical environment (for example, higher illiteracy or lower education among women farmers)?
2. What technical measures are incorporated in the project design to overcome these barriers and what is their expected effectiveness?
3. What will be the impact on project success if women do not participate in project activities?
4. Will the technical assistance team include gender expertise?
5. Will women have access to project-funded facilities, e.g., has the proposed design and location of training facilities been adjusted to make them consistent with local norms for women's participation?

**ISSUES RELATED TO PRODUCTIVE TECHNOLOGIES TO BE DISSEMINATED OR
DEVELOPED**

1. Does sufficient information exist regarding women's participation in the agricultural sector to determine how project-supported technologies are likely to affect women? If not, how does the project design ensure that this information will be made available during implementation to ensure that the project is technically relevant to women as well as to men.
2. Do project-supported technologies favor high-resource or low-resource farmers (including women)?
3. Are the technologies applicable to women's productive activities (e.g., for a seed multiplication project, will seeds for women's crops be produced as well)?
4. Does the technology increase demand for women's labor or displace women from existing sources of income? If the technologies will cause a change in labor patterns, what measures are included in the project to ensure that women are adequately compensated and are able to make the change in their labor patterns required to adjust to project-supported technologies?
5. Does the technology require inputs and/or expertise that women farmers do not have? If so, how will the project ensure that women farmers gain access to inputs and expertise needed to adopt project-supported technologies?
6. How will women be informed about project-supported technologies and what measures are included in the project to ensure that this process is effective?

FIGURE 12**Gender Issues to be Addressed in the Project
Economic Analysis****BENEFITS TO WOMEN PARTICIPANTS IN THE PROJECT**

- ◆ What benefits will the project provide to women farmers, entrepreneurs, and others who participate in the project? Can these benefits be quantified?

ECONOMIC FEASIBILITY OF PARTICIPATING IN THE PROJECT

- ◆ Will participation in the project require economic resources, such as land or capital, that women do not have? If so, how has the project design been adjusted to ensure that women are able to participate? Will participation in project activities be economically attractive to women, compared to alternative uses of their time and financial resources? Will participation be as attractive for women farmers (entrepreneurs, etc.) as for men in these same groups? Is participation in project activities riskier or costlier for women than for men and, if so, how has the project design been adjusted to balance this difference?

OTHER IMPACTS ON WOMEN

- ◆ Will the project create new economic opportunities for women? Will it displace women from functions they currently perform? Will the project increase women's productivity? Will the project increase their earnings? Will the project increase the demand for women's labor and, if so, does it appear that women will receive appropriate compensation for their additional inputs? Will the project increase the earning potential or profitability of those who compete with women (e.g., large-scale male and corporate poultry producers versus small-scale women producers) in ways that reduce the competitiveness of women-managed activities?

IMPACT ON PROJECT BENEFITS IF WOMEN DO NOT PARTICIPATE

- ◆ How would project benefits and economic return be affected if women did not participate as expected, either directly as decision-makers or as members of participating families (e.g., how would project benefits be reduced if women do not provide increased labor for family production)? What additional costs (e.g., additional staff) are associated with reaching women and what is the expected return on these costs?

DISTRIBUTION OF PROJECT BENEFITS

- ◆ Will women in the agricultural sector participate in and benefit from the project in proportion to their role in the economic activities and subsectors targeted by the project (e.g., poultry production, credit use)? How does the mechanism for providing benefits to women differ from that for men (e.g., will women benefit primarily as wage earners in processing plants while men benefit as producers of the goods processed)?

FIGURE 13**Primary Agricultural and Natural Resource Management
Project Components**

- o Agricultural Education (3.3.1)
- o Agroforestry and Natural Resource Management (3.3.2)
- o Capital (3.3.3)
- o Credit (3.3.4)
- o Data Collection and Planning (3.3.5)
- o Extension (3.3.6)
- o Farmer Organizations (3.3.7)
- o Input Supply Systems (3.3.8)
- o Irrigation Infrastructure (3.3.9)
- o Labor (3.3.10)
- o Labor Reform and Tenure (3.3.11)
- o Livestock Systems (3.3.12)
- o Management Development (3.3.13)
- o Marketing (3.3.14)
- o Research (3.3.15)
- o Roads and Other Infra-structures (3.3.16)
- o Storage and Processing (3.3.17)
- o Technical Assistance (3.3.18)

3.3.1 AGRICULTURAL EDUCATION AND TRAINING

FIGURE 14

Designing Agricultural or Natural Resource Management Training Components

ISSUES

- o What percentage of the current student population is female?
- o What percentage of the population from which students are drawn (e.g., graduates of secondary technical schools) is female?
- o Will a targeted effort be made to identify and encourage women applicants?
- o Do formal entry requirements make it difficult for women to qualify (e.g., literacy, knowledge of official language)?
- o Are requirements that tend to decrease women's participation, such as a secondary school degree necessary to the training?
- o Will the design of in-country training program (location, selection criteria, etc.) facilitate women's participation?
- o Does training cover traditional, low-resource technologies used by women farmers (and low-income men farmers) or does it assume a high-input orientation?

STRATEGIES

- ◆ Monitor women's participation in training and, where inadequate, identify and remove limiting factors.
- ◆ Where there are not enough qualified women applicants consider designing programs to prepare women so they can qualify.
- ◆ If an inadequate pool of women for participant training exists, broaden the program to include undergraduate training for women.
- ◆ Eliminate entry requirements that are not job-relevant.
- ◆ Provide training in local languages.
- ◆ Add part-time or other non-degree training for women candidates who cannot meet formal requirements.
- ◆ Provide training at times and in places that fit into women's existing workload and ability to travel.

- ◆ Provide training on how to reach women farmers and traders, and include information on the role of women in the agricultural sector and the technologies used by women in the training curriculum.
- ◆ Consider establishing training pyramids where a small number of women are trained, return to their villages and train other women.
- ◆ Decentralize training and substitute several shorter courses for one longer one to facilitate women's participation.
- ◆ Include on-farm, post-harvest management in the curriculum.
- ◆ Include instruction on low-resource technologies, traditional crops, and livestock in the curriculum.

3.3.2 AGROFORESTRY AND NATURAL RESOURCE MANAGEMENT

Agroforestry is any system of land use that deliberately combines, in space or over time, woody plants with crops and animals. This definition applies to a variety of land use systems ranging from very intensive farming to extensive pastoral systems, including bush fallow farming; managing fodder trees in private or communal grazing land; planting trees and shrubs along farm boundaries for fuel wood or timber; intercropping tree cash crops with food, fodder, and soil-improving crops; intercropping hedges with grain crops for leaf mulch; home gardening of all types in which trees and annual crops are mixed. In many of these systems, women are primarily responsible for planting, tending, gathering, harvesting, processing, and using woody plants, in addition to performing their roles in crop and animal production within the larger farming system.⁴⁷

Agroforestry systems reflect the prevailing gender division of labor, skill, responsibility, and control. The problems and opportunities inherent in the gender division of access to land, labor, cultivated and wild plants, and products present a special challenge to planners. Gender-based differences in legal status, use of and access to land, type of activities, and control over labor and resources all have a direct bearing on what type of plants can be planted, managed, used, and harvested.

Although these differences may limit the scope and nature of agroforestry technology and project design, they may also offer opportunities. Women's knowledge of wild plants used for food and medicine is generally much wider than men's knowledge. Since wild food may form a significant percentage of children's diets, development planners should try to enhance this resource when possible. Reforestation and revegetation schemes should use local plants when possible.

3.3.3 CAPITAL

Women's access to funds with which to invest in agriculture is a major constraint in their efforts to purchase inputs, to hire labor, or to invest in labor-saving technology. One development approach to assist women has been through income-generating projects. These projects focus on handicrafts, sewing, tailoring, and other domestic activities or on small-scale agricultural production such as vegetable gardening. But, there are problems associated with this type of project. Rural women usually have limited leisure time; the market for the handicrafts or vegetables may be very limited because of distance from urban areas; transportation may be a problem; and there is a tendency to flood the market with the same products at the same time; and if the project seems profitable, men tend to step in.

Women may be culturally constrained from earning their own income. In India and Bangladesh, for example, having "idle" women in the family confers a high status. Women may be forced to hide their income-earning activities by working only in their homes or in homes of

FIGURE 15

Designing Natural Resource Management and Conservation Components⁴⁵

ISSUES

- o What roles do women play in natural resource management decisions?
- o How does women's use of renewable resources differ from men's (e.g., women may use wood for firewood while men use wood for construction, crafts, or sale)?
- o How is women's role a factor in the management of livestock that are depleting natural resources?
- o Do women's plots tend to be located on land more subject to erosion or to other environmental damage than plots owned and managed by men?
- o How are women's household maintenance activities, such as firewood collection and maintaining the water supply, affected by environmental degradation, and what impact do these changes have on women's income-generating activities (e.g., reduced time for farming)?
- o Is women's status in the land tenure system a factor in poor resource management?

STRATEGIES

- ◆ Include women farmers in conservation programs in proportion to their role in managing fragile lands, as farmers, as livestock users, and as resource managers.
- ◆ Analyze interactions between women-managed activities and men-managed activities before devising conservation solutions.
- ◆ Analyze potential impacts on women's income and labor use, including household requirements, as part of the design of resource management interventions.
- ◆ Consider both ownership-based and use-based rights (e.g., grazing rights, gathering of wild plants) in designing resource management strategies for land designated for multiple use.
- ◆ Include components to improve women's land tenure security to encourage sound long-term land management practices.

friends, or by working early in the morning and late at night. Despite the surreptitiousness of their labor, low-income women may work as many hours for wages as do men. That these activities may be hidden from both the husbands and the interviewers does not mean they do not occur. Women are often able to produce surplus of some sort from their kitchen gardens, from gathering wild foods, or eggs from chickens, providing them with the proverbial "egg money." Agricultural wage labor is another source of income for women. As Case Study 1 illustrates, the ability of women to control the income they earn can be critical to project success.

3.3.4 CREDIT

Access to formal credit services is often an insurmountable barrier to women. Most lending activity is focused on larger, male-dominated firms, not on microenterprises where most female farmers and entrepreneurs are found. The minimum size loan is often larger than what is needed by women, given the smaller scale enterprises they pursue. Furthermore, banks are often unwilling to service smaller loans because of their high overhead costs and women often lack adequate collateral such as land, houses, or vehicles. Reduced collateral requirements can be achieved through greater reliance on the repayment capacity of the borrower or by broadening the concept of collateral to include group lending or guarantees by members of the borrower's community. Group lending will also help reduce a project's unit cost of lending. When tangible collateral is required, it need not be restricted to formal titles to land and business registrations, but could include jewelry and other resources available to women.

There are also hidden costs to borrowing. Few banks operate in rural areas, so women must take time from their day to travel to the bank or credit outlet to apply for and then regularly repay the loan. Illiterate women in particular hesitate to approach large institutions, knowing that most loan officers are male.

Little wonder that most women prefer informal credit sources. Informal loaning institutions—called contribution clubs, savings clubs, lending groups, women's clubs, or cooperatives—are usually found in every village and are operated by local residents. While each club has its unique features, it is their similarities that makes them popular among women. They can borrow small amounts and repay the loan in similarly small increments, sometimes in kind rather than in cash. For instance, borrowing money to purchase seed or fertilizer would be repaid with seed, or a cash loan to purchase a cow would be repaid by turning over the first calf. Although flexible repayment schemes may be costly to administer, they tend to dramatically reduce the rate of default on loans. When terms of lending are conducive to women's participation, they will comprise a high proportion of loans granted. Conversely, when lending terms are adverse, few women will apply for or receive loans, regardless of efforts to target them.³⁵

FIGURE 16**Designing Capital Components in Agricultural
and Natural Resource Projects****ISSUES**

- o What local cultural constraints might prevent women from earning their own income?
- o What type of "hidden" income-generating activities are already present among local women?
- o If wage labor in agriculture is a potential income source, what constraints keep women from participating (e.g., childcare, domestic duties)?
- o What benefits and job amenities, if any, are available to women if they can participate in wage labor jobs?
- o If women bring home wage earnings, do they maintain some or all control over how it is spent?
- o If special income-generating projects are being considered, have all the potential pitfalls been identified and considered?
- o Have the primary participants and beneficiaries been consulted throughout the project planning process?

STRATEGIES

- ◆ Identify all hidden sources of income for women before launching projects to ensure this source of income is not affected by introduction of a project.
- ◆ Promote childcare facilities or arrangements in the workplace.
- ◆ Promote part-time employment by women which would allow for more women to participate in wage earning activities.
- ◆ Promote benefits and amenities on the job for females whether full or part-time employees.
- ◆ Establish training programs for women to help improve their occupational security and mobility.
- ◆ Consult with local women while designing any income-generating projects.

CASE STUDY 1

Increasing Women's Involvement in Agribusiness

The goal of the ALCOSA Agribusiness Employment/Investment Promotion project in Guatemala was to improve the standard of living and stimulate the economy in rural areas by expanding private agribusiness investments. Villagers produced the labor-intensive products of broccoli, cauliflower, and snowpeas on contract for the agribusiness firm. Three villages involved in the project have been selected as cause-effect models of what happens when women's involvement in a project ranges from low to high.

In Village 1, women neither worked in the fields nor were beneficiaries of the project, causing the project to flounder due to a labor shortage.

In Village 2, women participated two to three days per week in field work when the husbands could not be there. This cut into the women's market vending and decreased their only independently controlled source of income. Women's checks from the firm were made out to the husband only. Project results were intermediate.

In Village 3, a cooperative had been formed where women worked as partners, rather than helpers, in the fields. Either spouse could deliver produce and get paid in cash. Women cut down on their market vending in favor of more field work. The average farmer in Village 3 had lower costs, higher yields, higher quality produce, and higher net income per unit of land compared with the other villages. Other factors contributed to this success story but the fact that women provided more labor (three to four days per week) and received at least some direct benefits appears to have been a positive element in the project's success.

[Blumberg⁴]

Thus gender analysis and restructuring eligibility criteria and delivery systems are central to increasing women's participation in credit programs, and to the productive activities that those programs support. (See Figure 17).

FIGURE 17**Designing Credit Components in Agricultural
and Natural Resource Projects****ISSUES**

- o To what extent do women have access to formal credit in cash and inputs?
- o To what extent do women currently make use of informal credit, and how do services compare to those in the formal system (interest rate, waiting time, location, and other requirements)?
- o Do formal credit requirements restrict women's access by requiring title to land, literacy, or club membership?
- o Is credit equally available for women's and men's income-generating activities?
- o Can women receive credit as individuals or only as a member of a group?
- o Are the rules different for men than for women (e.g., do loans to women require husband's approval, but not the reverse)?
- o If loans are made to multiple family members, is liability limited to loans in one's own name?
- o Is credit available to small women traders; if so, under what conditions?
- o Does access to credit require travel outside the village?

STRATEGIES

- ◆ Provide several repayment options to reduce the rate of loan defaults.
- ◆ Design non-collateralized credit programs, or consider accepting substitutes for land collateral.
- ◆ Organize group lending or other semi-formal intermediation systems to permit low-income women to participate.
- ◆ Simplify credit application procedures and locate the credit service as close to the borrower as possible.
- ◆ Make loans on an individual, not household, basis.
- ◆ Channel credit to women through informal as well as formal systems.

3.3.5 DATA COLLECTION AND PLANNING

FIGURE 18

Designing Data Collection and Planning Components in Agricultural and Natural Resource Projects

A well-designed project needs to develop monitoring and evaluation systems.¹ It may not be cost effective to collect detailed baseline information during the design stage. However, mechanisms to collect this information must be built into the design of the project. Without baseline data it is difficult to adequately measure women's progress and participation in projects. The data can be collected in conjunction with monitoring activities; data collected during these activities will provide the information necessary for evaluation during the life of the project. Techniques that will allow adequate gender analysis are discussed in detail in Chapter 4.

ISSUES

- o Is data collection at the farm household level currently disaggregated by gender to distinguish women-headed from men-headed farm households?
- o Does the proposed definition of the "farm household" as the unit of analysis provide sufficient information on the different responsibilities, incentives, and disincentives of men and women comprising the household to allow project success; i.e., is intra-household data necessary?
- o Can male enumerators collect data from women or must this information be collected by women or through intermediaries?
- o Will data collection and planning include activities traditionally managed by women in this society; (e.g., poultry, vegetable production, local marketing)?
- o Will participation by women in project activities (e.g., identification of employees for training) be monitored?
- o Will the project include improved understanding of the contribution of women to the agricultural and natural resource sectors among the sectoral issues to receive project assistance.

STRATEGIES

- ◆ Train female as well as male enumerators.
- ◆ Disaggregate household-level farm management data by gender.
- ◆ Collect data directly from women as well as from men.
- ◆ Include women's as well as men's activities in data collection.
- ◆ Design the analysis and planning of activities to highlight women's participation in the agricultural and natural resource sectors to improve decision-maker understanding of gender.

3.3.6 EXTENSION

FIGURE 19

Designing Extension Components in Agricultural and Natural Resource Projects

ISSUES

- o What percentage of the current extension staff is female?
- o Do local social customs make it difficult for men extension agents to communicate directly with women farmers?
- o Are resources provided to women extension agents (e.g., transportation allowances, vehicles, housing) so they can function in the field?
- o Is the current extension program designed to encourage participation of women farmers (location of demonstrations, timing of field days, etc.)?
- o What percentage of extension agents' time is spent with male in relation to female farmers?
- o Does the extension program primarily target heads of household?
- o How much emphasis is on traditional food crops, cash crops, livestock production, etc., in ongoing extension programs?. Does this emphasis reflect their importance to women as well as to men farmers?
- o In what format will extension messages be delivered (written, radio, training, radio, etc.)?

STRATEGIES

- ◆ Train male and female agents in how to reach women farmers and farm wives.
- ◆ Provide additional travel or housing resources for women agents so they can function effectively in the field and overcome social constraints.
- ◆ Use group-oriented extension methods to facilitate participation by women where one-to-one contact between men and women is acceptable.
- ◆ Organize separate field days and other dissemination activities for women if this is needed to encourage them to actively participate.
- ◆ Monitor projects' success in reaching women and revise it if necessary in order to ensure women's participation in extension programs and their adoption of recommendations.
- ◆ Include traditional crops in the extension program in proportion to their importance in the village economy.
- ◆ Include in the extension program post-harvest management and other on-farm activities.

3.3.7 FARMER ORGANIZATIONS

FIGURE 20

Designing Farmer Organization Components in Agricultural Projects

ISSUES

- o What is the current participation of women in farmers' organizations that this project will be concentrating on?
- o Is membership limited to heads of household; can both male and female farmers from the same household join, and can single, widowed, and divorced female farmers also participate?
- o Are there membership requirements (e.g., land ownership) that may inhibit women's membership?
- o What informal organizations currently exist that might be brought into the program, whether or not they are oriented towards agriculture (e.g., savings clubs), and what is the role of women in these groups?
- o Will the groups' activities be focused on particular products or activities (e.g., marketing of grain) and, if so, what are the roles of women in these areas?
- o Will the groups build on or replace women's current role in the agricultural economy?
- o What special efforts or design features are needed to encourage women to join the groups and participate actively?

STRATEGIES

- ◆ Allow more than one family member to belong to the farm organization.
- ◆ Direct organizational activities toward those in which women currently perform special functions, such as in vegetable marketing.
- ◆ Incorporate traditional women's groups, as well as government-sponsored groups into the project.
- ◆ If cultural norms prevent women and men from belonging to the same group, consider organizing separate women's groups.

3.3.8 INPUT SUPPLY SYSTEMS

FIGURE 21

Designing Input Supply System Components in Agricultural Projects

ISSUES

- o What role do women currently play in the informal or private sector input supply system (including on-farm systems such as selection and storage of seed)?
- o How will the proposed changes affect informal and private sector systems?
- o Will the proposed system displace women's income-earning activities, such as small trade?
- o Will the proposed changes in the system limit women's access to inputs (e.g., by linking purchase to membership in government-sponsored groups that generally exclude women, by linking purchase to formal credit systems with requirements that women cannot meet, etc.)?
- o In selecting inputs for the supply system, will the needs of women farmers be met as well as those of men (e.g., will poultry breeds include traditional as well as hybrid breeds)?
- o Will the smaller holding size of women be accounted for by "mini" input packages or other marketing features?

STRATEGIES

- ◆ Investigate assistance to informal and private sector input supply systems before considering establishment of a new government supply system or assistance to an existing one.
- ◆ Reform existing public systems to allocate supplies by price, without additional requirements such as use of government credit or membership in specific groups.
- ◆ Provide assistance to informal on-farm systems, such as seed selection and storage, to the extent feasible.
- ◆ Carefully consider negative impacts on traditional systems before introducing new systems, particularly if the latter are not to operate on a fully commercial basis.
- ◆ Involve women farmers in seed production, production of breeding stock, nursery operation, and other input supply support systems, either as contract farmers or as employees.

3.3.9 IRRIGATION INFRASTRUCTURE AND MANAGEMENT

FIGURE 22

Designing Irrigation Infrastructure and Management in Agricultural Projects

ISSUES

- o What percentage of irrigated land is currently managed by women?
- o How do women's family labor inputs and women's income per hectare compare on irrigated and non-irrigated land?
- o To what extent do women currently participate in irrigation management, including allocation of irrigation water?
- o Will high-value women's crops (e.g., vegetables) be irrigated or will it be limited to cash crops or cereal crops managed by men?
- o How will irrigation affect the relative profitability of production for home consumption and for sale?
- o Will user charges be assessed against households or individuals?
- o If gatekeepers and other irrigation system employees are to be drawn from the local farm population, will women be eligible for these jobs and will they be encouraged to enter the necessary training programs, etc.?
- o How will changes in the irrigation or natural watercourse system affect women's household activities, such as access to water for clothes-washing, food preparation and clean-up, watering household animals, etc.?

STRATEGIES

- ◆ Analyze the potential impact of irrigation system changes on women's labor inputs, income, production, and household activities to identify problems and solutions as early as possible.
- ◆ Organize water user groups in ways that give women farmers a voice in the allocation of irrigated land and irrigation water.
- ◆ Consider household water use carefully in designing water system changes.
- ◆ Actively recruit women for water management and maintenance positions.
- ◆ Organize water user groups so that both male and female farm managers can participate.

3.3.10 LABOR

Division of labor sometimes is determined by the physical differences between the sexes. More often, however, the division is gender-based; i.e., based on the social definitions of proper interaction between men and women⁴⁶ (see Case Study 2). Research shows that women work longer hours than men in developing countries, low-income women work longer hours than wealthier women, and rural women work longer hours than urban women. Fetching water is generally a task allotted to women and children; it can consume a significant portion of their waking hours, limiting the time they can spend on other agricultural and natural resource activities. A study by Shubh Kumar and David Hotchkiss entitled "Consequences of Deforestation for Women's Time Allocation, Agricultural Production, and Nutrition in Hill Areas of Nepal," (Research Report 69, International Food Policy Research Institute, Oct. 1988) revealed that deforestation has led to women having less time and this is the chief constraint to agricultural production. A study carried out in Burkina Faso by UNESCO/UNDP, Project for Equal Access of Women and Girls to Education, showed that girls as young as seven worked 5.3 per day hours compared with 0.7 hours for boys.³⁷ This same study revealed women had only 1.3 hours of free time in the first 14 waking hours. Using these data, this project introduced technologies to lighten the food processing and portage tasks of females.

Male out-migration from rural areas results in *de facto* women-headed households, which now form an average of 20-25 percent of all rural households except in strongly Islamic societies. In countries such as Lesotho, female-headed households constitute as much as 70 percent. Shortage of male labor for land preparation can cause serious production problems, such as delays in planting, resulting in lower yields. Women sometimes have access to the labor of men other than their husbands or sons, draft animals, or the help of other women *if* they can arrange payment in cash, in kind, or through exchange. If women do not have these options, they have difficulty participating in any activity that requires added labor from them.

The intensification of women's workloads occurs not only because of male out-migration but also because new technologies may increase women's labor while decreasing men's. The increase in women's weeding labor due to expanded cultivation possible because of the introduction of animal traction is a typical example. An Office of Technology Assessment (OTA) analysis suggests that failure to take into account non-technical factors, such as labor bottlenecks and shortages, has repeatedly thwarted attempts to introduce technologies.³⁴ There are many instances where the introduction of a new grain or pulse required women to spend much more time processing the product. Ultimately, they rejected the crop for this reason. Women will not accept intensification of their workload unless they receive some benefit from that intensification, i.e., control of the income or product. In addition, when agriculture is commercialized men may call upon women to supply labor for cash cropping, yet women will still have their subsistence crop activities.

CASE STUDY 2

Incorporation of Women and Gender Analysis in a Rice-Based Farming Systems Project in The Philippines

The IRRI-sponsored Asian Rice Farming Systems Network (ARFSN) operates a project to improve existing farming systems by integrating suitable crop and animal production technologies. The project is developing ways of increasing the use of crop by-products and residues for animal feed through crop-livestock research. The Women in Rice Farming Systems (WIRFS) effort within this project aims to institutionalize women's concerns within research and extension agencies dealing with rice farming systems.

WIRFS representatives began by acting as observers in a project site workshop. This allowed them to learn about the goals and nature of the project without being responsible for any actions initially. They discovered that despite a multidisciplinary project team, no social scientists participated, and existing socioeconomic profiles for the area did not include information on the participation of women. WIRFS initiated several diagnostic surveys to identify farming practices and decision making by gender, complemented by a three-day visit after the surveys to observe activities first-hand.

WIRFS found a gender division of labor in rice production; women are responsible for pulling seedlings but not for transplanting, as is true in other provinces. Women sell products and by-products. For mungbeans, cowpeas, and vegetables, women harvest, thresh, and make marketing decisions. Men are responsible for large animals (cattle, carabao) but women help with feeding, gathering forage, cleaning shelters and animals, herding, and collecting and disposing wastes. Swine and poultry are women's responsibilities. Women process glutinous rice, a major income-generating activity that consumes much fuel and labor. Available agricultural training is gender-specific with courses on farming for men and on nutrition and food preservation for women. No training existed for vegetable production, swine or poultry production, or rice processing. Women do not have access to formal credit since they are not formally organized and do not have collateral such as land titles.

WIRFS provided this information to the ARFSN team and was asked to participate in a workshop to design future research. Subsequently, several changes occurred in the research agenda. The use of mungbean residue for fodder in rice-mungbean cropping patterns was introduced, and women were included in demonstrations on how to use the fodder, and how to use better pest management techniques in mungbean production. The focus of research shifted from large livestock only to include swine and poultry. Women were invited to attend research meetings and a special class was held to consider women's participation in crop and livestock activities. A female livestock nutritionist was engaged to explain the nutritive values of different crop residues and fodders to women. Varietal and processing research on glutinous rice was initiated to improve production as a source of income for women. Gradual inclusion of WIRFS team members in the project and provision of useful analysis of farm production constraints by gender facilitated the incorporation of women's concerns into the research and extension efforts and led to a broader understanding of the farming systems of the area.

[Adapted from Thelma Paris⁴⁴]

FIGURE 23**Designing Labor Components in Agriculture
and Natural Resource Projects****ISSUES**

- o What is the anticipated effect on women of proposed interventions; in particular, will it add to women's work loads and conflict with existing responsibilities?
- o What changes in labor requirements have occurred due to male out-migration?
- o What resources (credit, other family members, payment in kind) do women have access to in order to pay for tasks performed for them?

STRATEGIES

- ◆ Analyze current division of labor and tailor proposed interventions to fit into the farming system.
- ◆ Consider introducing labor-saving devices.
- ◆ Consider providing childcare, allowing children to accompany their mothers to work, having flexible hours so women can work part-time, and paying by the task, piece, or kilo so women can work part of the day.
- ◆ Establish access to credit for women and payment-in-kind arrangements to broaden women's options in paying for agricultural labor.

3.3.11 LAND REFORM AND TENURE

Women's access to land varies throughout the world, its ownership and control being a crucial variable in agricultural production and natural resource management. Ownership, use of the land (usufruct), and control are determined by tradition or by law, or a combination of the two. The control of and access to land within a country, culture, ethnic group, village, and household are variables that must be known in order to understand the incentives and disincentives, opportunities and constraints of the men and women who will determine the success of the project. Agricultural and natural resource projects planned without an understanding of the land tenure system tend to overlook, ignore, or discourage women's participation (see Figure 24).

Land tenure systems vary from region to region. The first design consideration is how land is acquired (inherited, held jointly by a group or village, held by the state), and what the status of women is in the acquisition process. Is land passed from mother to daughter or from father to son? Do only men have usufruct rights, or can women own or purchase land as well? If only men have access rights, how do women gain access and can they retain control of those fields once they start using them? Women often lose out when land tenure systems change from usufruct to state-controlled because in most countries men have been the usual recipients of such land rights. This same pattern is found in resettlement schemes, which tend to favor men over women as the "primary" farmers and recipients of aid. The assumptions appear to be that heads of households are always men and that they will organize family members' labor and assets equitably. In many instances, neither is the case.

Research has shown that privatization of land and commercialization of agriculture tend to decrease women's access to land. In Kenya, for example, land adjudication ignored female farmers, their traditional usufruct and managerial rights, and their rights to the sale of produce.⁴³ In Kenya, as in many other countries, holding title to land is essential to gaining access to agricultural services, credit, loans, and technical assistance, and to joining producer cooperatives. When access to services is restricted or cut off to women, their productivity and efficiency as farmers declines along with their incentive to continue to farm.

The commercialization of agriculture, moving from subsistence farming to cash cropping, can greatly affect women's access to land. As land is lost to cash crops, women may be forced onto farm marginal lands or may even lose access to the land. For example, in the traditional swamp rice production systems of West Africa, women produced rice for home consumption and sell the surplus for cash. As subsequent projects introduced irrigation, double cropping, and new rice varieties to male farmers, women lost control and access to these productive swamplands. Women are now left with less productive lands on which to produce their domestic rice crops, while at the same time are expected to assist their husbands with the new cash crop.

FIGURE 24

Designing Land Reform and Tenure Components in Agricultural and Natural Resource Projects

ISSUES

- o How do women gain access to land under current, informal tenure systems (e.g., through husbands, families, or directly)?
- o Do current tenure laws allow women to hold title in their own names?
- o How does widowhood or divorce affect women's access to land under the current and proposed systems?
- o Will the proposed tenure reform or titling result in assignment of land going only to male heads of households?
- o Must women get permission from male relatives to sell or rent land?
- o Will registration fees be low enough so women can gain title to land?
- o Does a minimum farm size titling requirement restrict women's participation?
- o Will the adjudication process facilitate women's participation when ownership is disputed?
- o Will formalization of title reduce access to land by low-resource women farmers. If this possibility exists, how can it be avoided?
- o Will a coordinated effort be made to inform women farmers as well as men of new land tenure policies?

STRATEGIES

- ◆ Undertake an analysis of traditional land tenure and land access systems before proposing changes in the formal system and consider how the two systems will interact after the reform.
- ◆ Monitor impact of land reform and tenure reform on women's access to land and provide for redesign and adjustment during implementation.
- ◆ Strive toward tenure laws that give greater security to women, regardless of marital status.
- ◆ Provide titles to both men and women, not just heads of household.
- ◆ Eliminate minimum size restrictions for formal titling.
- ◆ Lower fees and simplify procedures for formal titling.

Land Ownership and Food Production

Henn²⁴ compared the productivity of Tanzanian Haya women who were landowners with other Haya women who farmed but did not own their land. Landowners displayed impressive entrepreneurial and agricultural skills, had a higher standard of living, received income from cash crops, and hired male laborers. The ability of women farmers to produce and earn income if given the necessary access to land is well documented. As argues, "the improvement and expansion of the traditional women's food sector is likely to be both the cheapest and most reliable method of increasing domestic food supply."

If single and married women's access to and control of land is hampered by land ownership patterns, the position of divorced, separated, or abandoned women is even worse. Women whose husbands have migrated may face the same constraints if land is in their husbands' names only. Frequently, these women have limited access to land for growing domestic crops, much less for produce to sell in the market.

3.3.12 LIVESTOCK SYSTEMS

Women's ownership and control of livestock and their byproducts varies from culture to culture. It should not be assumed that women care for only small stock, that dairying is a woman's domain, or that only men are involved in cattle or camel production. In some cultures women are responsible for milking or caring for young or ill animals. In mixed crop and livestock systems where cattle do not migrate for grazing, women may be responsible to feed animals. In some African societies, herd management is turned over to a hired herder.

In a project to improve cattle production, then, the question becomes who should be contacted—the herder, the male owner, or the female milkers? Questions to determine respective roles of this nature include:

- o Who owns livestock? If women do not, do they have access to dairy or other byproducts from their husbands' or families' livestock?
- o What is the gender division in caring for animals—feeding, watering, herding, care of sick animals?
- o What is the gender division of labor in processing animal products—meat, milk, wool, hides, eggs?
- o What is the gender division of control over livestock production?

Small ruminants tend to be "women's animals," that is, under women's care and control, in many sub-Saharan African countries and the altiplano region of Latin America. Small ruminants

have been used, as have cattle, as a form of savings and investment by women. Recent projects have introduced the idea that goat milk is an equally valuable by-product of goat production—thus introducing another potential income earner for women. Where small ruminants are promoted as an income-generating activity, planners will need to integrate women into the marketing sector. It is rare for women to be livestock traders but it is important for them to be able to control their income from byproduct sales (see Case Study 3).

Small animals such as chickens, turkeys, ducks, guinea fowl, rabbits, and guinea pigs are important sources of income which are commonly found under women's control. Despite the recognition that such animals are women's responsibility, it has not necessarily resulted in the delivery of inputs for them.

Commercialization of dairying can adversely affect women by creating more work while depriving them of their income. The creation of dairying cooperatives does not necessarily ensure that women will automatically benefit from them, particularly if only men own cattle and only men continue to be the official cooperative members. Enabling the direct purchase of dairy products from women is one way to help them retain an income from this traditional source.

Livestock and veterinary services must be targeted to women as well as men. There is scant assurance that when livestock information is made available only to men, that it is passed on to women. Women's animals often have not been brought to vaccination point because they have not been notified of the activity. As veterinary and livestock technicians are usually male, the usual constraints on interaction occur in this situation as well. The issues that women face in livestock projects, and possible strategies are elaborated upon in Figure 25.

CASE STUDY 3

Dairy Goat Production: Women's Projects vs. Integrated Projects

Several projects have attempted to introduce dairy goat production in Western Kenya, an area of high population and decreasing farm size. A majority of these projects were targeted to women through rural women's goat raising organizations. Women's labor was to be used for general animal care and they were to receive training in goat management. Women participants were eventually to receive a goat of their own to take home. In fact, it was men who held the wage labor jobs at project sites and who received the training. When and if any women took goats home, the males made economic decisions about their ownership. While project sponsors assumed that any increased income would benefit the entire family, a majority of the participating women reported increased workloads and interference with their other work. Women only continued to participate out of loyalty to the sponsor (a woman Assistant Minister of Education from the area) and to *maendeleo*, a Kiswahili term for progress or development.

In contrast, the Small Ruminant Collaborative Research Support Program did not isolate women in its dual purpose goat project. Instead, all participating farmers were treated equally, whether male or female. A majority of farmers were female at project villages in Western Kenya. Farmers received training in goat care and management, veterinary care, feed production, and milk and cheese production. Farmers were brought to the research station to participate in training and to teach staff about their farming practices. Enumerators lived in each area and contacted farmers daily, forming close relationships with the families. The tendency for male farmers to claim knowledge of livestock care and responsibility, thus receiving all project inputs, was prevented if enumerators found it not to be true. Project inputs and training went to the farmer who was actually responsible for the goat.

Project success has been outstanding; both goats and their products are in high demand in the area. It is widely recognized in Kenya that women farm, so when project staff worked with the farmer, whoever he or she was, conflicts did not occur. Another likely contribution to the equitable treatment of all farmers was the composition of the technical staff, both expatriate and Kenyan. Moreover, the forage agronomist, food scientist, rural sociologist, agricultural economist, and animal technician were all female at different times during the project.

[from Noble⁴⁰ and Russo⁵⁰]

FIGURE 25**Designing Livestock Components
in Agricultural Projects****ISSUES**

- o If livestock ownership is predominantly by males, will women accept added responsibility of animal care?
- o Will increased livestock care conflict with maintaining other household responsibilities and lead women to neglect the project?
- o If the project is oriented toward commercialism, has there been adequate consideration of livestock/dairy products needed for home consumption?
- o Can women participate in livestock/dairy cooperatives beside men?
- o Do women have access to commercial markets (e.g., roads and transportation)?
- o What forms of credit are available to women?
- o Are women included in livestock extension programs?

STRATEGIES

- ◆ Include animals associated with women in livestock projects.
- ◆ Design women's livestock components that fit into women's work schedules.
- ◆ Reserve a portion of animal byproducts for family use if they are needed for family consumption.
- ◆ Include women as participants in cooperatives or consider developing women's cooperatives.
- ◆ Provide project marketing inputs to make commercial markets accessible to women—perhaps through a women's cooperative.
- ◆ Provide credit for women's livestock investment.
- ◆ Recruit women livestock extension agents and train male agents for women's outreach.

3.3.13 MANAGEMENT DEVELOPMENT

FIGURE 26

Designing Management Development Components in Agricultural and Natural Resource Projects

ISSUES

- o What role do women currently play in management of the institutions to be assisted (c.g., district extension offices)?
- o What constraints exist to expanding the role of women in management: low numbers of women in management positions; low numbers of women in positions from which management cadres usually drawn; lesser degree of formal preparation among women employees; attitudes of senior personnel, etc.?
- o Are women managers more common in public or private sector institutions and would broadening the training to reach private sector firms increase the number of women eligible?
- o In private firms, do social practices conceal the importance of women's role in management?
- o Will the procedures to be used to identify candidates for management training ensure that women are chosen at least in proportion to the share of employees they represent?
- o If personnel from private firms are to receive training, will the size of firm be small enough to reach women entrepreneurs, who tend to run smaller firms?

STRATEGIES

- ◆ Track women's participation in training to identify problems in reaching women at an early stage in the project.
- ◆ Include training modules aimed at personnel with less formal preparation.
- ◆ Expand training eligibility to include female personnel in mid-level positions from which future managers will be drawn.
- ◆ Develop procedures for identifying candidates actively, rather than relying solely on nomination by more senior personnel, who may not view women as managers.

3.3.14 MARKETING

FIGURE 27

Designing Marketing Components in Agricultural Projects

ISSUES

- o What is the role of women farmers and traders in the current marketing system?
- o Do women traders have access to formal credit and other assistance?
- o What use do they make of informal credit and other support systems?
- o Are women traders adequately represented in the organization(s) chosen for project implementation.
- o Do formal or informal organizations of women traders exist?
- o What problems do women traders and farmers face in marketing activities?
- o How will the proposed changes in the marketing system affect women traders and farmers?
- o What measures are necessary to ensure that women traders participate fully in any assistance programs provided for traders?

STRATEGIES

- ◆ Include a full analysis of private trading, including activity by women traders and informal marketing by women farmers, in project start-up activities. Allow sufficient flexibility in the design to incorporate the findings of the analysis.
- ◆ Broaden market information programs and other assistance to traders to reach small women traders as well as larger traders.
- ◆ Design marketers' credit programs with low minimum loan size and limited collateral or non-collateral requirements to encourage women to participate.
- ◆ Analyze the impact of formal marketing systems on the traditional systems operated by women traders and farmers.
- ◆ Monitor program impact on women traders and their relations with other parts of the system.

3.3.15 RESEARCH

FIGURE 28

Designing Research Components in Agricultural and Natural Resource Projects

ISSUES

- o Will on-farm trials, if any, include women as well as men cooperators?
- o What is the role of women in the production of the crops, livestock activities, etc., selected for research?
- o Will research consider the economic and technical feasibility of proposed solutions for farmers with limited resources and access to inputs as well as for high resource farmers?
- o Will analysis of the demand for and return to family labor be examined in comparing alternative technologies?
- o Will women as well as men be asked to evaluate proposed technologies (e.g., improved varieties, agroforestry practices)?
- o Will a special effort be made to ensure that women participate in field days and other technology dissemination activities?
- o Will social scientists be represented among expatriate and national researchers on the research team?

STRATEGIES

- ◆ Include women farmers in surveys and other preliminary activities to define the research agenda, and include women in on-farm trials.
- ◆ Disaggregate analysis of proposed technologies to examine their feasibility for low-resource farmers, such as women, as well as high resource farmers.
- ◆ Include efforts to develop technologies suitable for low-resource farmers as well as high-input technologies.
- ◆ Conduct separate field days for women with local language translation, if necessary, or incorporate specific efforts to ensure women's participation in general field days and other dissemination efforts.
- ◆ Conduct research on traditional food crops, traditional livestock varieties, and other agricultural activities managed by women as well as by men.
- ◆ Include social scientists on the national research team and the expatriate technical assistance team.

CASE STUDY 4

Incorporating Gender as a Variable in Agricultural Research in Ecuador

In Latin America, it is often assumed that women do not play an active role in farm production. Through its smallholder production research program, (PIP) the *Instituto Nacional de Investigaciones Agropecuarias (INIAP)* in Ecuador has discovered that the reality of smallholder farming systems dictates that gender be included among the key variables considered in the development and dissemination of agricultural innovations. Several examples from PIP activities illustrate how sensitivity to gender helped benefit smallholders.

In many areas, males are typically absent from the household because of temporary or seasonal migration for wage labor. Men return on holidays that coincide with planting times, but may be absent for most of the agricultural cycle. If research teams interview only males about farming practices, the men will "forget" the answers to some agricultural practices because the women are responsible for them. Good research techniques require that both men and women be interviewed, but in practice, this is difficult when research teams are composed of men only. Women are reluctant to speak freely with men, especially in groups, or may be discouraged by their husbands from participating in discussions when other men are present. In Indian communities women may not be able to communicate well with researchers in Spanish. A PIP solution has been to hire and train female paraprofessional interviewers who can talk to women about their work and obtain information about production, storage, and consumption practices. These male and female multidisciplinary teams have been successful in obtaining information about the production systems that enables them to design appropriate research activities.

Gender is important in the selection of farmers for on-farm trials. If only men participate in the negotiations, researchers are likely to find on subsequent visits that the men are absent, and the women may not allow them to come onto their farm. INIAP researchers now negotiate with both members of a couple whenever appropriate.

Development of a particular variety of maize demonstrates the importance of women's input. Plant breeders had regarded multiple shoots on a plant as a negative characteristic. However, women tending animals preferred these extra shoots because they provided additional fodder. As a result, breeders no longer considered this characteristic a research problem.

At one time INIAP invited only men to their field days and to tours to observe crop trials. PIP program technicians began to realize that it would be desirable to invite women as well. When women were invited, however, they would separate themselves from men and not participate. When language was found to be one reason for their reluctance to join in, INIAP incorporated a Quechua/Spanish speaker with a megaphone into their presentations. Thus technicians served as translators and brokers between the community and the researchers, facilitating both feedback and technology transfer.

[Adapted from Garrett and Espinosa²²]

CASE STUDY 5

Integration of Farmers' Criteria in Bean Variety Testing

CIAT and IFDC are working in Colombia to develop appropriate bean varieties and fertilizers for small farm systems. A participatory research approach is used to provide better information to breeders earlier in the project cycle and to minimize non-adoption.

Farms in the area are small, family operations that grow cash crops of coffee and cassava, and beans for selling in the local markets. Initial on-farm interviews indicated that men were responsible for crop production while women were in charge of processing foods and household maintenance. Two management systems were identified—typical and innovative. Typical management involves low inputs to disease and pest control and high fertilizer application; innovative management involves higher inputs to pest control including labor, use of higher producing varieties, and a desire to keep down fertilizer costs.

The type of beans grown for the market are usually large, opaque, and red. Breeders had 10 varieties available for on-farm testing and had ranked them for presumed farmer preference. Farmers were then asked to rank the varieties. Four of the varieties included:

<u>Bean variety</u>	<u>Grain size and color</u>	<u>Breeders Rank</u>	<u>Farmers Rank</u>
A-36	Medium, red opaque	1	3
A-486	Large, pink opaque	2	2
AFR-205	Large, purple mottled	3	1
BAT-1297	Very small, red opaque	10	6

When women were included in the interview and were asked to rank the beans, it was found that BAT-1297 was preferred by women because of its better cooking qualities. Notably, it would swell considerably, providing more food from fewer beans.

After on-farm testing of the ten varieties under typical and innovative management systems, only two varieties, one of them BAT-1297, showed significant response to fertilizer under typical management.

More in-depth interviews with the women also revealed that they had more input into agricultural production than was previously thought. Women's evaluation of the ten varieties placed three varieties, including BAT-1297, above A-36. Given the results of the exploratory trial and these two sets of preferences, researchers decided to continue work on both the larger beans and the very small beans since both have a place in local farming systems.

[Ashby³]

3.3.16 ROADS AND OTHER INFRASTRUCTURES

FIGURE 29

Designing Road and Other Infrastructure Components in Agricultural and Natural Resource Projects

ISSUES

- o Based on experience elsewhere in the country, will expansion of the road network tend to expand marketing activities carried out by women or will small women traders be displaced by male traders?
- o If women traders tend to be displaced when roads improve, can the program be expanded to include credit for women traders or other measures to prevent this effect?
- o How will the roads affect the relative profitability of production for home consumption and for sale and how will this affect women farmers?

STRATEGIES

- ◆ Analyze negative as well as positive effects on women traders and design appropriate counter-measures, if needed.
- ◆ Women should be eligible for credit for vehicles on the same basis as men.

3.3.17 STORAGE AND PROCESSING

FIGURE 30

Designing Storage and Processing Components in Agricultural Projects

ISSUES

- o What roles do women play in storage and processing of crop, livestock, and forest products?
- o What technical problems do women face in storage and processing?
- o Can these problems be more easily overcome by improving the traditional storage system or by shifting to acceptable levels of spoilage?
- o What role does on-farm storage and processing play in the overall system for various agricultural commodities?
- o How do on-farm and off-farm storage and processing systems interact?
- o Will proposed changes to the system compete with women-operated systems, displace such systems, or support them?
- o Do existing regulations make it difficult or impossible to conduct processing on-farm without violating such regulations and, if so, are the regulations actually necessary for public health or other reasons?

STRATEGIES

- ◆ Monitor the impact of project storage and processing activities on traditional on-farm systems.
- ◆ Incorporate assistance to on-farm systems to the extent compatible with the project's overall strategy.
- ◆ Provide financing for on-farm storage and processing.
- ◆ Revise food regulations and eliminate unworkable standards that discourage small entrepreneurs or deny them credit.

3.3.18 TECHNICAL ASSISTANCE

FIGURE 31

Designing Technical Assistance Components in Agricultural and Natural Resource Projects

ISSUES

- o Do the scopes of work reflect gender concerns and incorporate project design features to address such concerns?
- o Will the team include social science as well as production expertise?
- o Will the proposed technical assistance team structure include expertise in women in development issues?
- o Does the institution (or type of institution) identified as the source of technical assistance generally have expertise in addressing gender concerns?

STRATEGIES

- ◆ Include gender concerns in the scope of work.
- ◆ Include social scientists as full-time members of the technical assistance team where appropriate.
- ◆ Include experience with gender issues as a criterion for evaluating technical assistance team and institutional qualifications for contract award.

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CHAPTER 4

Project Implementation, Monitoring, and Evaluation

4.1 Implementation

The best designed projects can still go awry. This chapter discusses issues to consider during implementation to increase the likelihood that the project will achieve its desired objectives. Subsequently, monitoring and evaluation are discussed as tools that provide feedback to ensure that projects stay on track or indicate when there is a need for changes.

Project revision should be considered as a relevant option because it is an opportunity to modify project objectives to reflect changing priorities and to revise implementation plans to best realize these objectives.

Gender-related issues addressed during project implementation and monitoring are summarized in Figure 32.

4.1.1 SELECTION OF INSTITUTIONS, TECHNICAL EXPERTS, AND DELIVERY SERVICES

The best designed and most well-intentioned projects may fail because of poor selection of institutions, technical expertise, and delivery services.

4.1.1.1 Criteria for Selecting Institutions

o U.S. Institutions

When selecting a U.S. institution to design or implement a project, ask the following questions:

- Does the institution have a WID program, office, and/or policy?
- Does the institution have successful prior experience in addressing gender issues?
- Does the group show signs of a strong commitment to WID, e.g., have staff been trained in this area?
- Are female professionals available for technical staff positions?

o Local Institutions

The local institutional situation may be more complicated given that there may be only one agriculture ministry to work with, or the agency designated to work with women may lack technical

FIGURE 32**Ensuring Gender Adaptation in Agricultural Projects:
Project Officer Responsibilities for Project
Implementation and Monitoring****PROJECT START-UP**

1. Determine counterpart attitudes toward inclusion of women as participants and beneficiaries of project activities and provide information to increase their awareness of the importance to project success of including women.
2. Ensure that WID skills and gender awareness are adequately represented in scope of work and RFP evaluation criteria for technical assistance.
3. Once TA team is fielded, determine which member(s) have WID-relevant skills and which will have responsibility for ensuring women's participation.
4. Require targets for reaching and including women, and methods for doing so, to be included in the start-up work plan.
5. Review project data collection systems to ensure that data collected will be gender-disaggregated.
6. Review project implementation monitoring and reporting systems to ensure that data collected will be gender-disaggregated.

MONITORING AND SUPPORT TO CONTINUING PROJECTS

1. Ensure that gender issues are adequately covered in quarterly reports and other progress reports, including problems encountered in reaching women, proposed solutions, reporting on numbers of women participating in various project activities and the impact of the project on women in the project area.
2. Ensure that gender issues and, where appropriate, targets for reaching women are included in annual work plans and other project planning documents.
3. Assist in identifying needs for short-term assistance in gender analysis or adaptation that arise during implementation and help to identify in-country or expatriate sources of assistance.
4. Monitor participation of women in project activities (e.g., percent of participant trainees that are women) against targets established in annual work plans, determine reasons for shortfalls. Determine solutions with counterparts and technical assistance team.

expertise in agriculture. Figure 31 will help in asking the right questions when selecting local institutions. In addition, the following factors should be considered:

- Does the institution have a WID program, office, bureau, and/or policy?
- Is there a designated ministry or bureau of women's affairs: is it structured differently from other ministries and bureaus?
- What are the strengths and weaknesses of the ministry involved in the project in terms of women farmers? Do they make specific attempts to reach women farmers?
- Are there female professional staff in administrative, research, and extension positions? Where are they based?
- Can this project strengthen the local institution's interest in and capacity to involve women, including in training and networking with other institutions?

4.1.1.2 Criteria for Selecting Technical Experts

The selection of qualified personnel should be based on both technical expertise and gender sensitivity. There may be situations where it will be easier for female professionals to reach women farmers. However, there is no evidence that technical staff must be female in order to understand gender issues, or that being female guarantees gender sensitivity. With these precautions in mind, the following questions should help in the selection of technical staff:

- What is the level of WID training among project staff?
- Is WID training for staff mandated in the project cycle?
- Are there mechanisms to identify, consider, and select women (U.S. and local) as project staff?
- Are technically skilled people available to implement the productive aspects of the project?
- Is attention to women farmers included in technical specialists' terms of reference?

4.1.1.3 Criteria for Selecting Delivery Systems

Delivery systems include extension, training, and the provision of equipment, supplies, and technology to be used by the project. These systems are vital links that enable a project to reach and assist women. In many societies, male extension agents and teachers do not have direct contact with women farmers. In addition to cultural taboos, there are other, more subtle factors preventing this interaction. Males may only feel comfortable with other males or believe that only men can understand or adopt a new technology. These attitudes are commonly shared by expatriate workers as well.⁴²

o Extension

Male extension staff usually will be accepted by women if measures are taken to introduce them in an appropriate manner to the community. For example, female extension staff can introduce male staff members to village women after discussions with village leaders. In Malawi, where female extension agents were scarce, male extension agents were trained successfully to work with female farmers in a livestock feeding effort that resulted in increased income for the participants.⁵¹ Questions to consider when planning work that includes extension personnel (see also Figure 19):

- What proportion of extension staff are female and where are they concentrated?
- Are women entering agricultural schools for advanced training? Are there barriers to such training? Are there different criteria for acceptance? Are curricula for men and women different?
- Do women agricultural staff experience constraints in implementing programs in the field; if so, where do these constraints originate?
- How will agricultural information be delivered to women?
- Are there cultural constraints facing male extension staff who must work with women farmers?
- How are participating farmers selected?

o Training

Project activities, especially training, are often inconveniently located for women. Some strategies to promote greater participation among women include: changing the activity site; providing transportation; assisting with child care; providing separate sleeping facilities; scheduling training during women's off-peak labor hours and seasons; and shortening the length of training. Day-long training away from the village usually curbs the attendance of most women but the wealthiest. Often the language in which training is given can be a barrier to women's participation. Questions regarding training to consider include (see also Figure 15):

- What are the qualifications to participate in training programs for both the staff and for farmers?
- Will the training requirements encourage or discourage the participation of women as staff? As beneficiaries?
- Will the location, hours, and length of training program facilitate the participation of women farmers?
- Will the content of the training be relevant to the needs and priorities of women farmers?

o Equipment, Supplies, and Technology

Eligibility criteria for receiving credit often prevent women from receiving credit which very likely will excluded them from participating in a project. Typical loans are often larger than women feel they can afford, repayment schedules (monthly versus weekly) and repayment facilities are inconvenient, and collateral requirements of land title or fixed assets discriminate against women. Restructuring eligibility criteria and increasing accessibility will encourage women to participate more fully in credit programs. Questions to consider include (see also Figure 17):

- What is the cost of the proposed technology for intended users and how will they pay for it?
- How much training is needed to use and understand the technology?
- Is the equipment and/or technology appropriate to the agricultural system? Will it require high levels of maintenance or inputs?
- Do women have equal access to the equipment, supplies, and technology?

4.2 Monitoring and Evaluation

Conceptually, there is nothing complicated about the gender issues associated with monitoring and evaluation—data must be disaggregated by gender to the extent possible. Data need to be disaggregated by gender to allow analyses of male and female participation in project decisionmaking, direct access to project benefits, and immediate and long-term effects of projects on men and women. Disaggregation by age and social class is also helpful in determining people's ability to participate in project activities. For example, in situations of high male out-migration for wage labor, only older men and women may be able to participate in projects because of the absence of younger men and the childcare responsibilities of younger women. Even though disaggregation does not stop with gender, it has proven most effective to start with this category.

Nevertheless, concentrating solely on numbers ignores the larger issue of how the project affects the lives of the beneficiaries. Numbers may indicate participation but do not reveal much about the *quality* of the impact. Collection of data relating to impact, such as higher aspirations, more self-awareness, improved problem solving capability, ability to work in groups, can be gathered in less quantitative ways such as with focus group discussions or informal interviews.

If women and girls are not consciously identified as both participants and intended beneficiaries, they will remain invisible during the implementation and planning processes.²⁵ This deliberate call for gender disaggregated data as a reminder to examine the distribution of project benefits, including possible negative consequences. For example, the introduction of animal traction for plowing may allow more land to be planted and more food to be grown, but it could also greatly

increase the labor required from women for weeding, harvesting, and processing. Even if men perform the tasks directly associated with the new animal traction technology, women should also be monitored in order to evaluate the larger implications of the intervention.

4.2.1 OVERALL INDICATORS OF WOMEN'S PARTICIPATION

National population censuses and socioeconomic surveys are usually available but often are flawed because they are not routinely disaggregated by gender, age, or marital status. Special interest surveys may offer additional data on nutritional status, prevalence of particular diseases, labor conditions, and other items of interest. These, as well as public records (e.g., school attendance registers) are often disaggregated by gender.²⁵ Such sources of information can give overall indications of women's roles and responsibilities in the region under study but may not be specific enough for project evaluations.

While the best indicators of progress come from gender-disaggregated data, overall indicators, often the simplest and easiest to obtain, can be used for evaluation but only measure the potential of a project to reach women. Assessing whether a strategy focuses on areas likely to benefit women can be done using three main indicators:

1. The percentage of project activities focused on areas where women have primary responsibility and control of decisionmaking
2. The budgetary allocations to areas likely to benefit women
3. The relative numbers of consultants' and contractors' scopes of work that explicitly require the consideration of gender roles in the areas of concern.⁴⁵

4.2.2 TECHNIQUES FOR EVALUATING WOMEN'S PARTICIPATION IN AGRICULTURAL DEVELOPMENT

In many cases the adage "the simpler the better" is the best guideline. Current thinking on monitoring and evaluation favors the use of multiple data collection approaches instead of relying on a single data collection method.⁹

Flexible, rapid techniques for appraisal are needed, given the time constraints faced by most project evaluators. A monitoring system cannot be so cumbersome that it requires an inordinate amount of staff time.

4.2.2.1 Direct Observation

This is a useful method when information is needed to assess project functions, meetings, and training sessions. Observations can help reveal who project personnel contact, who attends meetings, and what is the proportion of males and females.

Two of the best and ultimately most useful mechanisms for monitoring gender inclusion in projects are trip reports and quarterly reports. These could include a standardized checklist eliciting the following data:

How many people were contacted?	men_____	women_____
Whose farms/fields were visited?	men_____	women_____
Who was trained?	men_____	women_____
Was this a first or follow-up visit?		

Gathering data in this manner is much more reliable than either a one-time, extensive survey that consumes a great deal of time and energy or relying on recall months later. It facilitates the sometimes tedious documentation process, decreasing the likelihood of passing on this responsibility to someone else.

Direct observation will indicate the actual, rather than reported, participation of women in project activities. For example, it may be reported that a certain percentage of women are involved in a crop variety trial, yet observations of staff interactions with farmers show that no women were contacted. A disadvantage of this method is that the evaluators may arrive at a time when no significant agricultural activities are taking place, such as during the dry season. Single visits can also result in biased information. Replicable, simple monitoring systems that project staff can follow and that external advisers and evaluators can understand are essential.

4.2.2.2 Community Interviews

Group interviews are less threatening and cause less suspicion, but may not elicit accurate information regarding women's participation if men are present and are allowed to dominate the discussion, or if interviews occur at an inconvenient time or location for women. Interviews held at mid-day in the village may miss many women who are still working in the field, for example. Sometimes it may be useful to have two interviewers, one male and one female—beginning with a mixed group interview, then separating the groups by sex for follow-on questions and discussion. Since women in many societies have had less experience and exposure to researchers and interviews, several interviews may have to be conducted before they gain the confidence to openly discuss farming issues. Also, a series of shorter interviews may provide better information than can be gathered in a single long interview. Selecting a few key informants is useful if they typify project participants. While it may be necessary to interview the village chief or elder for political purposes, a more typical cross-section of the population should also be included. Households may be sampled for interviews, provided that rich and poor, and male- and female-headed households are included in the sample.

More detailed discussions of evaluation methods can be found in Dixon¹² and Hermann.²⁵

4.2.2.3 Informal Surveys

Informal surveys, (also called reconnaissance surveys, rapid rural appraisals, sondeos) are quick, informal, cost-effective gathering devices that attempt to characterize the farming systems found within a region.²⁰ They can be very effective in presenting, at least initially, the gender dimensions of agricultural and natural resource issues. Use of informal survey tools have increased dramatically in recent years and there is a growing list of publications to guide researchers and development workers in their application.^{8, 9, 11, 14, 16, 20, 41, 48, 50}

Informal surveys are usually done at the beginning of a project to allow researchers to familiarize themselves with the key constraints facing farmers in a given area. Five distinguishing characteristics of informal surveys have been identified by Franzel.²¹

1. Interviews are conducted by researchers themselves, not by enumerators.
2. Interviews are unstructured and semi-directed, with emphasis on dialogue and probing for information. Questionnaires are not used; however, many researchers use topical guidelines to ensure that all relevant topics on a given subject are covered.
3. Informal, random, and purposive sampling procedures are used instead of formal random sampling from a sampling frame.
4. The data collection process is dynamic; that is, researchers evaluate the data collected and reformulate data needs daily.
5. Generally, informal surveys are conducted over a period of one week to two months during the growing season.

Additionally, informal surveys are usually conducted by interdisciplinary teams representing both the natural and social sciences. Although most often used as a project begins, informal surveys can also be used to define the parameters of more formal, focused surveys, especially those involving more complex areas of farming systems. Informal surveys can also be used to solicit farmer opinion and reaction as part of an evaluation strategy or to gather information quickly on specific questions as they arise in the course of project activities.

If informal surveys are to elicit gender relationships and issues effectively, then care must be taken to include women and their concerns consistently. Male and female heads of either joint or separate households should be interviewed concerning farming and natural resource management practices and decision making. Even if it initially appears that women are not directly involved in field production, they should still be included because they may exert a strong influence over field production decisions through their post-harvest, processing, storage, or other roles. Interviewers should question women directly about their production roles, rather than asking men to describe women's activities. Questioning women directly may entail special interview procedures, such as having translators or interviewers with special language capabilities, but this is the only way to ensure the validity of the information. Special training may be needed to sensitize male researchers and development workers to the needs of women and methods for eliciting information from them.

4.2.2.4 Consumption-Focused Surveys

Most diagnostic and analytical methods used in agricultural research and extension are focused on production, that is, they begin with what is grown in the fields or gardens and follow the system through to marketing and other post-harvest activities. Frankenberger²⁰ and others have argued that a consumption-focused survey can be used to track the food system back to production and in the process reveal different, often ignored issues, that are obscured by production-focused methods. Since women most often are responsible for post-harvest and consumption tasks in the household, a consumption focus will automatically direct researchers toward these areas. This approach also reveals important gender aspects of the linkages between consumption and production in farming systems including:

1. Women are most often responsible for the food crop production of the household, and women's income is more important in determining the nutritional status of children than is men's income.
2. Children of working women are less likely to be malnourished than children of non-working women.
3. Changes in crop production that increase women's labor time may result in changes in cooking and consumption habits. Fewer meals may be prepared, less nutritious but faster to cook foods may be substituted, and food may be prepared too long in advance, incurring the risk of spoilage. These changes may have a negative impact on the general nutrition of the household and in particular on children.
4. Increased labor demands may require women to plant less nutritious but less labor-intensive crops, leading to diminished nutritional value of the food consumed in the household.
5. Increased labor or changes in labor patterns in agriculture may result in less time for child care and the quality of care may decrease (less breastfeeding, for example) resulting in diminished nutritional status.²⁰

4.2.2.5 Household Record Keeping

Household record keeping is a tool used to gather more detailed information on activities and decisionmaking in farming systems. Usually, fewer households are included and thus must be selected carefully to represent the larger farming community. This method can be quite useful in determining the actual labor contributions of household members and can accurately determine the differences between male and female labor allocation. Records can be kept by interviewers or enumerators who regularly visit the households and record activities, or, household members themselves may be trained to keep the records. In non-literate societies, records have often been kept successfully using pictures to represent various activities and the days on which they are done.

Although household record keeping is a commonly used technique, researchers often have faced difficulties in processing the large data sets they generate. As a result, in performing data analysis, the tendency has been to aggregate the data from households and to report total labor rather than retaining gender disaggregated figures. Care should be taken to retain the disaggregated data in

order to determine gender biases or impacts when changes are introduced into the agricultural system.

4.2.2.6 Purposive Sampling

Purposive sampling is another useful technique for gathering gender related information. It can be used in conjunction with many of the methods discussed in this manual (see also Figure 33). Purposive sampling occurs when the set of individuals or households selected for interviews, record keeping, on-farm trials, or other research or project activities are selected based on a set of predetermined criteria. For example, since we know that farming practices differ according to the resources or cash available to a household, purposive sampling can be used to select a determined number of households from each economic group represented in the project community.

likewise, we know that in households headed by men, women often perform different agricultural activities and face different problems than women who head their own households.

By using the purposive sampling method during an informal survey or project activity, both types of women can be included. The advantage of purposive sampling is that it can ensure that particular groups of people are included, rather than assuming their representation through random selection techniques. A disadvantage of purposive sampling is that it requires a more thorough understanding of the gender situation in the project community in order to determine the criteria for making representative selections. Nevertheless, purposive sampling can be an excellent tool to ensure that various groups of women traditionally omitted from agricultural projects will be included.

FIGURE 33**Sampling Strategies**

TYPE	PURPOSE
Random Sampling:	Avoids systematic bias in the sample; large sample size is important for making generalizations.
• Simple random sample	Achieve a representative sample that permits generalizations to the whole population.
• Stratified random cluster samples	Increase confidence in making generalizations to particular subgroups or areas.
Purposeful Sampling:	Increases the utility of information obtained from small samples; sampling criteria based on the reputation of programs among key decision makers and on previous data collected from programs.
• Sampling extreme or deviant cases	Provides decision makers with information about unusual cases that may be particularly troublesome or enlightening, e.g., outstanding successes or notable failures; programs with long waiting lists compared with programs that have recruitment problems; unusually high morale and low moral problems.
• Sampling typical case(s)	Avoids studying a program where the results would be dismissed outright because that program is known to be special, deviant, unusual, or extreme.
• Maximum variation of four cases that represent a range on some dimension (size, location, budget)	Increases confidence in common patterns; document unique program variations that have emerged in adapting to different conditions.
• Sampling critical cases	Permits logical generalization and maximum application of information to other cases because if it's true of this one case, it's likely to be true of all other cases.
• Sampling politically	Attracts attention to the study (or avoids attracting undesired attention by eliminating politically sensitive cases from the sample).
• Convenience sampling	Saves time, money, and effort.

[Patton⁴⁶]

CASE STUDY 6

A Successful Project Adaptation to Gender Concerns

The Arid and Semi-Arid Lands project in Kenya intended to improve production and preserve the agricultural resources base in the semi-arid highlands by popularizing bench terracing and water conservation. The Social Soundness Analysis pointed out that women are the principal farmers and, because of high male out-migration, women's self-help groups would be the main source of labor for project works such as construction of terraces and water catchments. The SSA warned that if women were expected to supply free labor for soil and water conservation during the peak agricultural seasons, targets would not be met. The recommendation was for the project to pay for the labor or suspend the work during the peak season.

The original project design ignored the recommendation. Targets were set on the assumption that work would be carried on throughout the entire year. Ultimately, project management recognized that the original targets were not feasible and suspended work during the peak season so that women could finish the plowing and planting. The economic responsibilities and time constraints of women were a critical factor in securing their unpaid labor. Women were willing to work on terracing and water catchments *when they could*. Gender analysis facilitated project adaptation which resulted in achievement of project objectives. The Government of Kenya assessed the value of the women's unpaid labor contribution to the project at \$US1.8 million.⁷

APPENDIX A

PPC/WID Resources

PPC/WID has funded two projects that have enhanced our information about the role of women at the micro-economic level. These activities and their major accompanying documents are briefly described below.

A. GENDER INFORMATION FRAMEWORK (GIF)

The Gender Information Framework (GIF) presents a process of gender analysis for A.I.D. project officers, mission staff, and other design team members involved in programming design, monitoring, evaluation, and review. This handbook provides an introduction to recent findings from A.I.D. projects and guidelines for collecting gender-disaggregated data and for integrating them into programming documents. The GIF is based on A.I.D.'s programming cycle from the Country Development Strategy Statement through the Project Paper; presents guidelines for program documents that follow A.I.D. handbook and guidance cable instructions wherever possible; and provides the basis for a common understanding between program designers and reviewers on one hand, and among those responsible for program and project implementation, monitoring, and evaluation on the other.

B. THE GENDER MANUAL SERIES

This series of publications was prepared by the Office of Women in Development to provide development practitioners with practical guidelines and information on how to integrate developing country women into assistance efforts. Although keyed to the A.I.D. project development cycle and documentation process, the procedures and methodologies presented in these workbooks are similarly useful to the broader development community. Other manuals in this series include:

- Gender Issues in Latin America and the Caribbean
- Gender Issues in Basic Education and Vocational Training
- Gender Issues in Small Scale Enterprise

[The document described below has a more specific function for A.I.D. project personnel than do the two above. While the indicators referred to in this document may have been developed with a special purpose in mind, they may also be helpful to others who must develop similar

measurement tools to serve as barometers of success in the gender consideration integration process.]

C. INDICATORS FOR ASSESSING INTEGRATION OF GENDER CONSIDERATIONS INTO A.I.D. ACTIVITIES

A.I.D./Washington has developed a set of indicators to be used to monitor the integration of women into the Agency's activities. There are three categories of indicators: 1) those relating to program, project, and reporting documents; 2) those relating to training of USAID staff; and 3) those relating to participant training. When it is not possible to achieve these indicators, A.I.D. "will ensure that there is a substantive analysis as to the obstacles preventing completion of such efforts and an explanation of how these obstacles will be overcome."

a. Program, Project, and Reporting Document Indicators:

Documents developed in the future for new and on-going activities should include the indicators given below.

1. Document includes sex-disaggregated data in all references to participants and beneficiaries.
2. Document identifies constraints to women's participation in all development activities.
3. Document identifies opportunities for enhancing women's participation.
4. Document describes strategies to overcome these constraints or make use of these opportunities.
5. Document identifies benchmarks to measure progress in implementing these strategies.

b. Training of USAID Staff Indicators:

Bureau WID action plan should include initiatives that have been, or will be, taken to provide WID training to A.I.D. staff. Indicators used by PPC/WID include description of the training activity, number, and job titles of staff trained.

c. Participant Training Indicators:

Bureau WID Action Plan should include initiatives that have been, or will be taken to increase the number of females in participant training programs. Indicators used by PPC/WID include information on the:

1. Number of men and women included in participant training programs.
2. Constraints to women's participation.
3. Opportunities for enhancing women's participation.

4. Strategies to overcome these constraints or to make use of these opportunities.
5. Benchmarks to measure progress in implementing these strategies.

D. "MAKING THE CASE FOR THE GENDER VARIABLE: WOMEN AND THE WEALTH AND WELL-BEING OF NATIONS"

This document makes the case for gender as an essential and critical variable in the "development equation." Empirical evidence is given that demonstrates that: a) women worldwide make major contributions to the wealth of nations; and b) the use and expansion of women's productive capacities is a necessary condition for social and economic progress. The discussion focuses on two intertwined ways in which women contribute to the economic and human resource "wealth" of nations. These are: a) women's productive activities, which, in many developing countries, contribute significantly to the food supply, the large informal sector, service and farm labor forces, and, in some, to the export manufacturing labor force; and b) women's education, which can lead to lower fertility, better family health, reduced infant and child mortality, higher formal labor force participation, and greater economic growth.

Copies of all of the above publications can be obtained from:

Office of Women in Development
 Agency for International Development
 Room 3725-A NS
 Washington, DC 20523-0041

[The following activities are exemplary techniques used to gather information that will better indicate the extent to which gender is a factor in the performance and outcome of identified activities.]

E. THE POLICY INVENTORY

The Policy Inventory belongs to a growing family of methodologies generally referred to as rapid appraisal techniques. These methodologies permit experienced analysts to assemble and organize readily available data so that they are of maximum utility for policymaking and project design. The policy inventory can be used to generate the information needed to determine whether policy reform should be a priority, to identify interactions between policies and the agricultural sector, and to explore potential impacts of policies on women.

The Policy Inventory approach consists of a three-step process to modify and expand on analysis of policy impacts on the agricultural sector as a whole.

1. Describe the role of women producers, laborers, consumers, and entrepreneurs in the agricultural sector, including the crops they grow, the other products they produce, the technologies they use, and how they generate income from these productive activities.

2. Define the policies that affect the activities in which women are primarily engaged (if the analysis of policy impacts on women is being carried out as part of an inventory of policies sector-wide, this step is not necessary as a separate analysis).
3. Determine how existing policies affect the activities in which women are engaged and how the effects may have shifted as a result of recent policy reforms.

Experience to date has underscored the importance of presenting inventory findings in a form that is concise, well-organized, and readily understandable by decision makers. A simple format has been developed that permits the key policies affecting the agricultural sector to be presented in a few pages. This format:

- Sorts existing policies into macroeconomic, sectoral, and subsectoral policies;
- Identifies the institutions responsible for setting and implementing each policy;
- Cites the government's avowed purpose in implementing the policy (e.g., to keep consumer prices low; to protect local producers);
- Indicates the main impacts of each policy on selected variables of concern to policy makers (generally including production, consumption, imports, exports, and government revenues) and assesses their importance by ranking each policy on a simple scale; and
- Lists the main alternatives to each policy as an aid to discussion and further analysis.

F. THE GENDER RESOURCE AWARENESS IN NATIONAL DEVELOPMENT (GRAND) PROJECT

The Gender Resource Awareness in National Development (GRAND) project is an A.I.D.-funded project designed to assist developing countries to integrate women and girls more fully into their national economic development efforts. GRAND designs and implements microcomputer-based analyses and models which demonstrate the economic impact of effective participation of women and girls in different economic sectors. These models offer tools for assessing the implications of alternative policies and evaluating the benefits and costs of associated interventions. They also provide an effective way to present the results of such analyses to a variety of audiences from high-level policy and decision makers to mid-level technical personnel. To assure continuation of GRAND methods of analysis and presentation, GRAND staff provide training and microcomputer technology to host country collaborating institutions.

APPENDIX B

Bibliography

All references cited in this manual are available through the A.I.D. Library. A.I.D. research reports, including project documentation, and policy papers are available in paper or microfiche format through the A.I.D. Library's Reference Service. (There are no charges for documents for A.I.D. staff.) To request A.I.D. document searches and copies contact:

A.I.D. Library
 Room 105, SA-18
 Agency for International Development
 Washington, DC 20523-1801
 703/875-4818

The A.I.D. Library conducts online database searches or can provide a menu-driven Development Information System (DIS) for users to conduct their own searches. The Research Services staff will respond to requests within two weeks. USAID Missions can cable PPC/CDIE/DI or telephone (703) 875-4807. Contractors or consultants working with A.I.D.-funded projects may also request the services described above. Independent researchers are welcome to visit the Library and can reproduce materials on site. Mail requests from the general public take approximately one month to fill.

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RESPONSE SHEET

This manual has been designed as a "hands on" publication to assist project staff in integrating gender considerations throughout the project cycle and to help in the preparation of project documents that will systematize this process. We would like to keep the information in this manual as useful and representative of current thinking in the field as possible. You, as practitioners, can help ensure the manual's continued usefulness by sharing with us your field experiences and comments. We have included this tear sheet for this purpose and look forward to receiving your comments, updates, and observations. Please send them to:

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