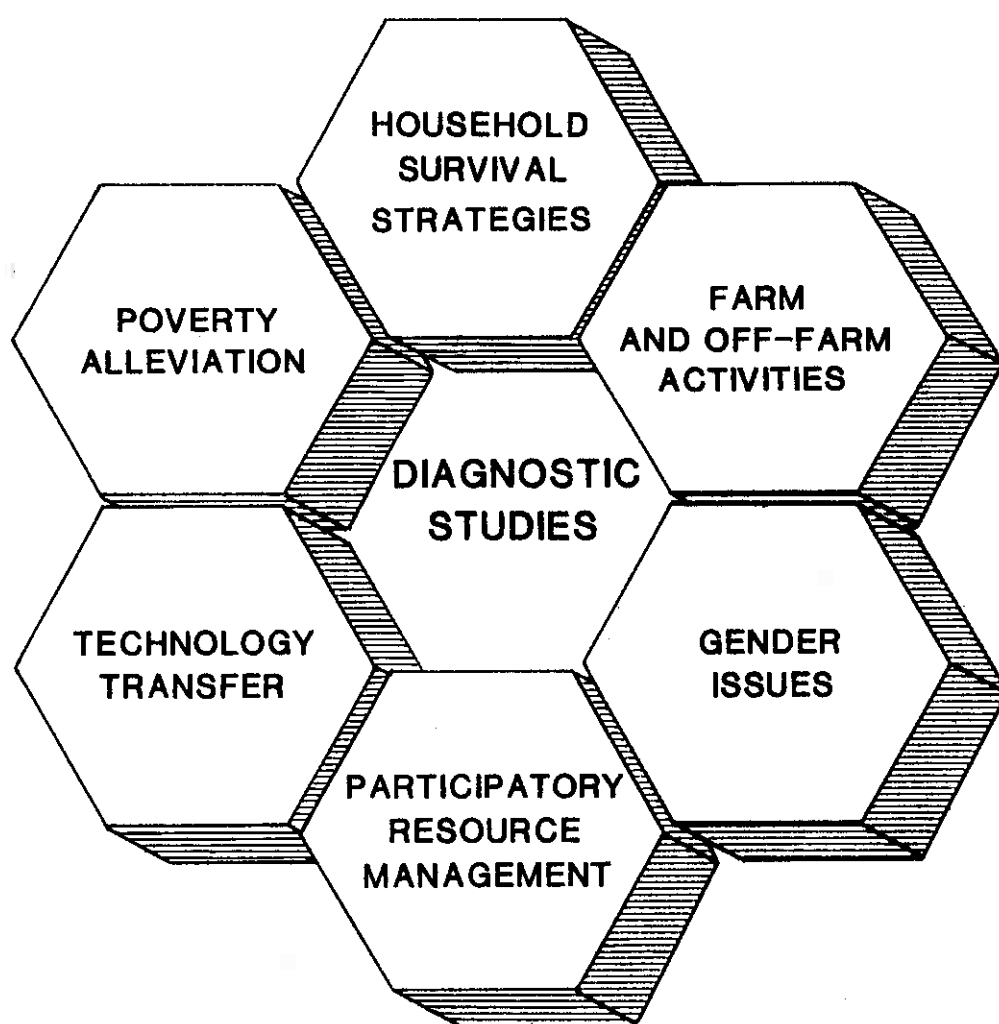


# Sociological analysis in agricultural investment project design



# GUIDELINES ON SOCIOLOGICAL ANALYSIS IN AGRICULTURAL INVESTMENT PROJECT DESIGN



FOOD AND AGRICULTURE  
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**(Editor's Note:** To create this PDF it was necessary to change the layout and page numbering from the printed version. The technical content remains the same except for minor editorial changes.)

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## PREFACE

*The purpose of this paper is to outline the role of sociological analysis<sup>1/</sup> in the design of agricultural investment projects. It is intended mainly to assist mission leaders as well as sociologists, anthropologists and socio-economists working for the Investment Centre (IC). Some of the observations and recommendations will, however, also be relevant to Governments, lending agencies and consulting firms engaged in agricultural investment project preparation.*

*This guideline is intended as a step in an ongoing process, which began in the 1970s with the inclusion of the first sociologists on missions undertaken by the Investment Centre. It builds upon and complements the previous Investment Centre "Briefing Paper on Sociological Analysis" (hereafter referred to as the Briefing Paper),<sup>2/</sup> which was concerned primarily with project work for IFAD and reflected that Agency's special concern with poverty alleviation. The present paper differs from the Briefing Paper in its audience and in its substance. It is intended for use in the preparation of projects for funding by the World Bank, the Regional Development Banks, the UN Capital Development Fund and UNDP, in addition to IFAD, and it focuses on aspects of sociological analysis which apply to all agricultural investment projects, including those which do not emphasize poverty alleviation.*

*The Guideline is intended as a working document which will be revised periodically as the Division's experience with sociological analysis expands. The number of Investment Centre missions which have used sociologists or anthropologists has increased from 2-3 per year until 1985, to 23 in 1989 and 30 in 1990. During this time, the percentage of IFAD projects incorporating contributions of sociologists or anthropologists reached 90-95%, whereas for the other lending agencies the percentage has risen to around 20%.*

*The Investment Centre's experience with sociological analysis has evolved through 3 distinct phases. During the first phase, starting in the 1970s, socio-economic surveys were often carried out as a background for the preparation of rural development projects. Much of the pioneering work in sociological analysis was undertaken directly by World Bank staff and consultants in collaboration with national institutions, and with some important exceptions, remained largely independent of project design work. Although IC missions drew on socio-economic surveys in their reports, lending institutions rarely requested the IC to incorporate sociologists and anthropologists on project design teams, except in special cases, such as for projects involving social conflict or little-known tribal peoples and pastoralists. Sociologists' main contribution to these missions was to provide descriptive background for project preparation.*

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<sup>1/</sup> For the purpose of this paper, the term "sociological analysis" also refers to anthropological analysis, gender analysis, beneficiary analysis and social impact assessment.

<sup>2/</sup> Briefing Paper on the Role of Sociological Analysis in Investment Centre Work for IFAD. FAO Investment Centre, July, 1989.

*During the second phase (1986-1988), IFAD requested the systematic inclusion of rural sociologists and women-in-development experts on project design missions to identify target groups and to design community development and income-generating components. As the number of consultants increased, the need to ensure proper technical supervision was recognized. This was addressed by creating two posts for rural sociologists within the Investment Centre in 1987. Sociological analysis was linked with gender analysis and farming systems approaches; more emphasis was put on diagnosis and design as opposed to description. At this time, the limitations of previous approaches became apparent. It was increasingly recognized that conventional project design missions did not leave enough time for sociological field work, whereas formal socio-economic surveys were too time-consuming and their findings were of limited use in project decision-making.*

*During the third phase (1988 to time of writing - 1992), the Investment Centre began to search for methods which would permit deeper diagnostic work earlier in the project cycle, without unduly lengthening the total time required from identification to appraisal or aggravating costs, and which would ensure that the sociologist's findings were incorporated throughout the project design. An effort was made to build up a core group of consultant sociologists familiar with Investment Centre work, and to encourage them to exchange their experience with one another.*

*The present paper builds upon the experience of over 100 Investment Centre missions, including 20 diagnostic studies undertaken since 1988 using Rapid Rural Appraisal techniques. Roughly 60% of the diagnostic studies have been undertaken on behalf of IFAD and the rest on behalf of the World Bank, UNCDF and the African Development Bank.*

*The paper is divided into four chapters: the first introduces basic concepts and principles; the second examines the type of sociological analysis required for different types of projects; the third examines the range of options for its integration in the investment project cycle, and the fourth is a practical guideline for design and implementation of diagnostic studies of target groups and their farming systems.*

*The paper is eclectic in that it deals with rural sociology, anthropology, farming systems diagnosis, "recherche/développement", poverty alleviation, people's participation, gender analysis, common property resources, rapid rural appraisal and social soundness analysis. However, it is not intended as a state-of-the art paper on sociological analysis, methods of social research or any other subject.*

*The paper is intended to assist managers to make informed choices between different types of sociological surveys and data-gathering methods. It is not a manual on design and implementation of formal socio-economic surveys. It recommends Rapid Rural Appraisal, but it only provides guidelines for the use of RRA in diagnostic work. It does not deal with other potential uses of RRA techniques and it refers managers to other RRA manuals for detailed description of how to do mapping exercises, wealth rankings and transects. It integrates sociological analysis with the perspective of farming systems and "recherche/développement", but it does not go into detail about agronomic aspects of farming systems diagnosis. It outlines the sociologist's contribution to the design of community-based land management and environmental projects, but it does not elaborate a*

*comprehensive methodology for the implementation of such projects. Although it explores the linkage between diagnostic studies and M & E, it is concerned primarily with diagnosis and project design. Therefore it does not attempt to elaborate guidelines for design of socio-economic baseline surveys or management information systems.*

*Appendices to the main text include: (i) prototype terms of reference for a diagnostic study of target groups and farming systems; (ii) an outline for a typical sociological annex, (iii) a checklist of topics for agronomists to consider when undertaking diagnostic studies with a sociologist; (iv) rapid methodologies for resource inventories in land management project design and implementation; (v) a guideline for design of community development and income-generating components, (vi) an outline for a typical WID annex; (vii) a list of diagnostic studies undertaken by the FAO Investment Centre and (viii) a selected bibliography.*



## **PART I: CONCEPTS AND PRINCIPLES**

### **1. BASIC CONCEPTS**

*In recent years a number of conceptual refinements have deepened our understanding of the context in which rural households operate. These concepts have far-reaching implications for the design of agricultural investment projects. They suggest that the farm enterprise, which is the basic building block of investment project analysis, is not a self-contained system, but a part of a larger system, and that a proper understanding of the interaction between the farm and these other systems is one of the keys to sustainable development.*

#### **Rural Systems**

All rural households operate within a larger historical, socio-cultural, economic and institutional policy environment. It is precisely the linkage between households and this larger environment which is important for project design. The starting point for sociological analysis of rural areas should be to understand the origins of the present *agrarian system*<sup>3/</sup> by placing it in an historical context. This entails an understanding of the origins of the existing class and power structure, the country's place in the changing international economy, the influence of colonization or internal political change, the effects of urbanization, the implications of shifts in national policy and the impact of structural adjustment.

French sociologists have developed a comprehensive framework for analysis of agrarian systems: it works from the general to the particular, starting from the identification of broad agro-ecological zones and production systems within a region; then proceeding to analyze village level phenomena and ending with households and individuals. It focuses on understanding the dynamic aspects of agrarian change: the social and economic history of the region and its impact on land tenure, evolution of production techniques, changes in cropping patterns in relation to external markets, and the process of socio-economic differentiation, impoverishment and accumulation of wealth. The French approach also gives particular attention to the organization of physical space and its subdivision into territories claimed by particular tribes, villages and kinship groups.

What Anglophone farming systems experts refer to as the *agricultural system* is a subset of the rural system, which includes the local production and consumption processes of farm households, and the physical, socio-cultural, institutional and economic policy environment in which they operate. This approach recognizes that farm households are in a state of continual adjustment to internal changes (e.g. in household composition and labour availability) and external changes in the physical environment (e.g. the weather), the economic policy environment (prices, subsidies, shifts in world markets) and supporting services (input supply, credit, research, extension)<sup>4/</sup>.

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<sup>3/</sup> Marcel Mazoyer, *Dynamique des systèmes agraires*. Paris, Nov. 1987. Also see P. Jouve, *Quelques réflexions sur la spécificité et l'identification des systèmes agraires*. Les Cahiers de la Recherche Développement n°20 - Décembre 1988.

<sup>4/</sup> FAO, *Farming Systems Development - Guidelines for the Conduct of a Training Course in Farming Systems Development*, Rome, 1990.

## **Community versus Household Systems**

*Community level systems*<sup>5/</sup> include land tenure, social organization, stratification and indigenous political institutions. The rules governing the use of common property resources are enforced by the community social control. Leaders may have the right to impose taxes and to mobilize households to participate in collective or self-help labour. Community leaders also act as power-brokers who mediate between individuals and outside institutions (private and public). Each leader may have a network of patron-client links to individual farm households. These asymmetrical, vertical linkages between patrons and clients are much more common in rural villages than horizontal ties between households on the same socio-economic level, and may militate against the establishment of the latter.

*Household systems* of production, consumption and exchange are embedded within this larger community system. In many West African and Sahelian countries, nuclear families are less important as a locus of farm decision-making than in other parts of the world, because they are embedded in and conditioned by the extended family. The wealth and poverty of individual men, women and youths depend on their position within the larger village and household system. There may be strong social pressures which prevent individual households from adopting farm practices which differ from those of other community members.

## **The Household Economy**

The term *household economy* refers to the total pattern of productive, household maintenance and reproductive activities of a group of people who eat from a common pot, and share a common stake in perpetuating and improving their socio-economic position from one generation to the next. The economy of the farm is only one part, which is embedded in and interacts with other elements of the household economy. Within the household system, farm activities interact with off-farm and domestic activities. Farm income may be only one of several income sources including off-farm employment, non-farm production, petty trading and remittances. Time available for crop and livestock production is influenced by migration, off-farm employment and time allocation for fetching water and fuel, processing food, preparing meals and a host of other household maintenance and reproductive activities. Cross-subsidization between farm and non-farm activities is common, and the main source of dynamism in agriculture may come from outside sources.

## **Household Objectives and Survival Strategies**

Farmers' behaviour is a function of household members' *objectives*. In view of the interaction between farm, non-farm and domestic activities within the household economy, it should never be taken for granted that a farm household's primary objective is to maximize farm output or profits from sale of farm products. Often the first priority is food security; small farmers may be interested in generating cash from sale of crops only after their annual food and household maintenance requirements have been ensured. However, in some cases a household may have no interest in selling crops because it is easier to earn cash from off-farm sources. In such cases, farmers' objectives may be to minimize exposure to risks of

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<sup>5/</sup> Dixon, John. "Ways Forward for the Farming Systems Approach", Agricultural Services Division, FAO. Paper presented at the 1990 Asian Farming Systems Research and Extension Symposium, Bangkok, Thailand, 19-22 November, 1990.

crop failure. Farming decisions are also conditioned by a household's long-term objectives, such as providing for their children's education and marriage and the parents' old age.

Sociologists and anthropologists use the concept of *survival strategies* to refer to the way households minimize the risk of falling into poverty in case of crop failure, natural calamities, wars or external economic shocks. It may be applied to all small farm households - not just those on the borderline of survival. One strategy for reducing vulnerability is to intercrop upland fields, in the hope that if one crop fails, at least there will be some harvest. Another common strategy is to diversify income sources, relying on off-farm income as a buffer against crop failure and market risks associated with cash crops. The main purpose of livestock keeping may not be meat and milk production, but rather as a form of savings and insurance which the family can fall back on in emergencies. A proper understanding of the objectives and survival strategies of different types of households can improve project designers' ability to predict farmers' economic behaviour.

### **Intra-Household Dynamics and Gender Relations**

Farm models used in investment project analysis treat the family farm as a unified production and consumption unit which pools labour and earnings in common. However, in developing countries, most small farm households have multiple enterprises and multiple earners, whose labour and earnings are only partly pooled. Each enterprise can be a separate accounting unit and cash transactions between husband and wife are not uncommon.

For instance, in West Africa and the Sahel, the choice of the proper unit of analysis can be very important, since there may be several overlapping units of production and consumption within the same compound. Part of the arable land may be allocated to an extended family unit to ensure the subsistence of all member households and the reproduction of the unit over future generations. In some cases the extended family fields can only be used to grow subsistence crops, and if there is a surplus, it must be stored as a buffer stock, or if sold, the earnings must be used to accumulate cattle for sons' marriages. The rest of the land may be allocated to nuclear families for their own subsistence and reproduction. If the household head is polygamous, each wife will be allocated some land to support herself and her children. In addition, some land can be allocated to individual men and women as personal plots for own-account activities. The income and produce from the household fields are controlled by the household head and pooled, whereas the crops and earnings from own-account production on personal plots are retained by the individual family members.

Thus a family member may be a member of up to three overlapping production units. The wife has an obligation to provide labour for the extended family and for the household plot, but may have no obligation to assist on her husband's personal plot, unless he compensates her for the work. Wives may be required to work 3-4 days a week on the household fields, leaving only a few days for their personal plots. The produce from each type of field may be stored separately and earmarked for different consumption units. The extended family head may supply the whole compound with grain for the evening meals, whereas grain for midday meals may come from the nuclear family's production.

*Gender relations* refer to socially-defined differences between males and females in the division of labour, access and control over land, labour and capital, control of crops and income from their sale, and in the responsibilities of husband and wife as family providers.

Due to the sex-typing of tasks, separate peaks occur for male and female labour and labour bottlenecks cannot be overcome by substituting one for the other. Certain types of land, livestock and crops may be controlled by men and others by women. Women have more incentive to provide labour for crops which they control than those controlled by their husbands.

In many parts of West Africa, husbands and wives keep separate purses and have distinct responsibilities as family providers. In some ethnic groups the wife is expected to provide all of the food for herself and her children and to feed the husband whenever he sleeps at her hut. In other ethnic groups, the husband provides the staple grains and the wife provides the sauce. In East Africa, separate purses are common and women are the main food providers (except in Swahili areas along the coast). In the Near East, husbands are expected to provide for all of their families' needs, but wives may own and inherit land<sup>6/</sup> and livestock in their own name. In Asia, poor households commonly have several independent cash-earning or sideline activities: part of the earnings is pooled and often managed by the wife, and the rest is retained by individual earners. In Latin America, the family farm sometimes comes closer to the North American model, but men keep a large share of their earnings for personal expenses and women retain earnings from their own-account activities.

### **The Domestic Cycle**

Farmers' objectives are also influenced by changes in family composition and ownership of assets, which vary over the life cycle. At the beginning of the domestic cycle, when a young couple gets married and sets up its own family, the family labour force is limited and assets are few. There are dependent children to feed and the wife may have little time for farming. Then, as the children grow old enough to contribute to farm labour, the food supply improves, but school fees make a large demand on family cash resources. When children finish their schooling and are available full time for farming, households may be in a good position to accumulate assets. If the family is large, one or more members may seek off-farm employment, greatly increasing the household's access to cash. After children marry and set up independent households, the parents' resource base gradually declines, until, in their old age, they become dependent on their children. Newly married sons of rich peasants start out the cycle with more assets and are better-protected against the risks of impoverishment in their old age, whereas sons of poor families may have difficulty marrying and starting up an independent household due to lack of economic means.

Where patriarchal extended family households still exist, as in parts of West Africa and the Sahel, sons may not be in a position to emancipate themselves or to accumulate wealth on their own account until the inheritance is divided upon the death of the head of household. In this case, a nuclear household's wealth is determined by its position in the extended family. In primogeniture systems, the elder son and his family are in a relatively secure economic position, whereas cadet sons and their families are vulnerable to impoverishment. Women are disadvantaged because most of the fruits of their labour are controlled by their father or their husband or their husband's father.

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<sup>6/</sup> However, when land is scarce, their brothers may prevent them from taking up their inheritance.

### **Production, Reproduction and Inheritance**

The reproduction of the family and the maintenance of its social status in the community over the course of generations depends on the ability of parents to ensure that their children are in a good competitive position on the marriage market. This involves accumulation of wealth from farm and off-farm production and its investment in children's education, bridewealth and dowries. Parents need to invest in children to care for them in their old age. Expenditure which might seem irrational from a strictly economic point of view may be perfectly rational when reproductive needs are taken into account. For example, a household may incur serious debts to pay for a son's marriage or forego on-farm development opportunities to accumulate cattle for bridewealth payments.

### **Identifying the Locus of Decision-Making**

The locus of authority over decisions regarding agricultural production and land use differs between societies. In some societies, the authority over pastures, forests and water bodies continues to be invested in a tribal leader, the head of a kinship group or a council of elders, whereas in other parts of the world, common property has disappeared. Likewise certain decisions regarding the use of arable land may be communal whereas others are individual. For instance, under customary land tenure systems in Africa, formal control over land allocation may be vested in a traditional leader, and any young married man who wants to clear land to establish his own household needs permission from the chief. But decisions regarding land use, crop production and animal husbandry are taken at household level. These considerations do not apply exclusively to traditional societies. In centrally planned economies it is equally important to identify which production decisions are taken by central authorities, which are taken by collective production units, and which are left to households.

The type of sociological analysis which is appropriate for a given development project depends on its focus. For projects concerned primarily with promotion of investment on individual farms, the focus should be on household systems and intra-household relations, whereas for projects concerned with development and conservation of common property resources, it would be important to emphasize community institutions.

## **2. IMPLICATIONS FOR PROJECT DESIGN**

### **The Need for Better Diagnostic Work**

A review of the experience of 75 projects designed by the Investment Centre during the past 25 years ("The *Design Study*"), <sup>7/</sup> concluded that many of the problems encountered could be traced to errors or misjudgements in the course of project identification and preparation. Many of the design-related problems could be attributed to a poor diagnosis of problems and to a pervasive optimism over possible solutions. The designs frequently ignored or passed lightly over crucial technical constraints and opportunities, limitations in institutional capacities or factors likely to affect farmers' responses to the opportunities provided by the project. Too often designs included excessively ambitious targets, time schedules and productivity projections, and placed unrealistically heavy burdens on weak institutions. These faults were compounded by a tendency to underestimate the impact of unfavourable policy environments and by the uncritical acceptance of conventional wisdom or development fashions, without giving sufficient thought to their relevance to the particular setting for which the project was being designed.

The most important point is that the implementation problems which the study reported occurred *despite the adoption of conventional procedures and project analysis techniques at the preparation stage*. For instance, technical innovations were not taken up on the anticipated scale in spite of the fact that cost/benefit analysis of farm budgets demonstrated their profitability. This suggests that conventional project analysis techniques, although necessary, may be *insufficient* to predict the behaviour of small farm households, and that designers may have failed to recognize flaws in the underlying concepts on which the projects were based.

In the light of this conclusion, the IC Guidelines <sup>8/</sup> recommend that more thorough and systematic diagnostic work should be undertaken as a basis for project identification. This involves careful consideration of the problems which the project was designed to address and alternative options for addressing them. In most cases it is essential to consult the intended beneficiaries before diagnosis can be considered complete. Although field trips to the intended project area have always been a feature of project formulation, the findings of the *Design Study* imply that in the past they did not generate a sufficiently reliable picture of rural life: hence the frequent failure of farmers to respond to the technical strategies proposed.

### **Convergence/Divergence between Priorities**

Most project proposals are formulated by Government in response to a national development plan, with the objective of increasing production, reducing dependence on food imports, supplying urban populations, earning foreign exchange or reducing regional disparities. However, the success of these projects depends on the motivation of private producers to increase production of the commodities which Government seeks to promote.

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<sup>7/</sup> The Design of Agricultural Investment Projects, Lessons from Experience, FAO Investment Centre Technical Paper No. 6, 1990.

<sup>8/</sup> Guidelines for the Design of Agricultural Investment Projects, FAO Investment Centre Technical Paper No. 7, FAO, Rome, 1995.

Therefore it is important to examine whether the priorities of private producers converge with those of Government.

Until recently, the Investment Centre and most financing agencies approached the problem of motivation largely from a financial and economic point of view. The analysis of cash flows of farm budgets aims at demonstrating that the adoption of project proposals brings about attractive returns to the producers, either through an increase in total returns to labour (and sometimes labour days) and/or (in the more elaborated applications) in terms of financial rates of return. These returns have been declared sufficient evidence that farmers will participate in the project, on the basis of the sole consideration that they would profit from it.

This approach rests on the underlying assumption that rational decisions by individual agricultural producers are exclusively determined by the economics of their farming activity.<sup>9/</sup> Only when this assumption is justified would the methodology be an adequate tool for decision making. The point is that this condition is fully satisfied only in the case of commercial enterprises, which have the single objective of maximizing returns to equity investment, either in the form of dividends for shareholders or in the form of capital appreciation and growth. In all other cases, the function representing the objectives of the farmers needs to take into account many factors apart from the maximization of farm profits. For individual producers, the welfare of the household is more important than the economics of the farm. Achieving Food Security and hedging against risk is more important than maximising net returns. Cash returns from off-farm activities may have a very important value. If this is recognized, what may appear at first sight irrational reactions could very well be explained as a rational response to challenges originating in a different set of conditions from those examined by the farm budgets.

Experience suggests that relatively high financial rates of return on investment may not be sufficient to motivate households to respond to new technologies. Conversely, activities with lower returns may be preferred for other reasons, such as more even distribution of labour inputs, lower risk or better reliability of yields in bad years. The definition of the area of convergence is an empirical question which cannot be answered by conventional cost/benefit analysis. For this reason, as a basis for project identification, diagnostic work is needed at grassroots level to understand the objectives, problems and priorities of the intended beneficiaries, to define areas of convergence with Government priorities.

The problem of convergence between the priorities of private producers and those of Government is illustrated in Figure 1. The area feasible for a project is limited to the area where private and public priorities converge and technology is available. Many Government priorities may be of no interest to beneficiaries and vice-versa. Even where convergence is substantial, economically viable solutions may be lacking. Although - for simplicity - the diagram treats the household as if all members shared the same objectives, there are cases where it would be preferable to examine the priorities of farm women separately from those of men. Another refinement of the diagram would be to distinguish, within the area of Government priorities which are not shared by households, between *areas*

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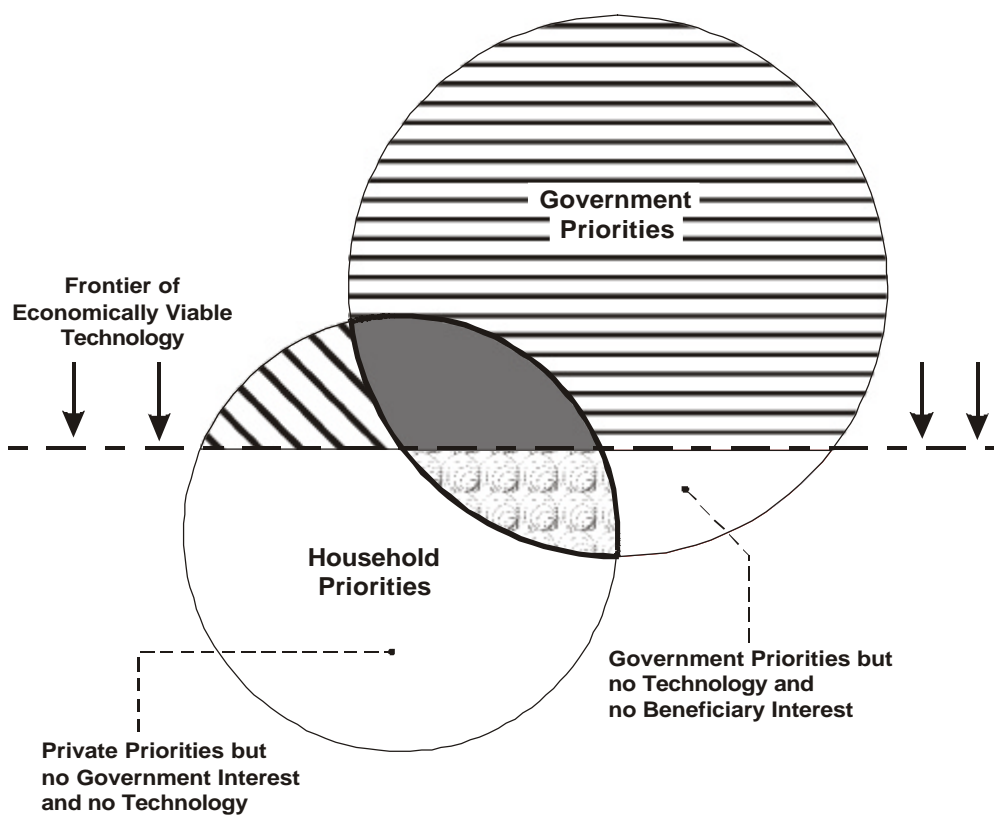
<sup>9/</sup> This does not imply that profit is the only factor that influences farmers' behaviour; it only says that profits are important enough that assuming profits to be their sole objective will produce predictions of farmer behaviour that are substantially correct.

*of opposition* - where Government action is likely to provoke social conflict - and *areas of indifference*. In this latter area, a project may still be feasible, although financial or other incentives may be required to motivate participation.

**FIGURE 1**

Guidelines on Sociological Analysis in Agricultural Investment Project Design

**Areas of Convergence/Implications for Project Design**



- Area of Convergence between Public and Private Producer's Priorities
- Area Feasibility for a Project
- Area not Feasible for a Project in Spite of Government Commitment and Existence of a Technology, Due to Lack of Interest on the Part of Producers
- Area not Feasible for a Project Due to Lack of Government Interest, in Spite of Beneficiary Demand and Existence of Technology
- Not Suitable for a Project in Spite of Convergence of Priorities Due to Lack of Technology



## **People's Participation**

There is a growing consensus among international financing institutions that public sector investment in agriculture based on top-down approaches has failed to achieve sustainable development. This has led them to seek the involvement of rural people in project design and implementation. In response to these requests, the Investment Centre has made a start on integrating mechanisms for people's participation in its projects. At one extreme, people's participation may refer exclusively to *cost recovery*: mobilization of free labour and materials for community projects; cost sharing by villagers; establishment of mechanisms for collecting water charges; ensuring that water users' fees cover the full cost of operation, maintenance and repair of irrigation equipment; or introducing payment for veterinary treatment and cattle dipping services. At the opposite extreme, people's participation may refer to an open-ended process, in which beneficiaries are encouraged to diagnose their own problems and to identify and implement their own solutions.<sup>10/</sup> A good example of the latter are some projects which the Investment Centre has prepared in the Sahel on behalf of the World Bank using the so-called *terroir* approach.

Although participatory approaches are of great interest for Investment Centre work, open-ended project designs may be difficult to reconcile with the need to justify investments in terms of seemingly accurate estimates of costs and economic returns. For instance, if participatory projects leave the choice of economic activities entirely open (income-generating activities are not selected in advance by the project design team, but are selected by the beneficiaries during project implementation), prior specification of the items to be financed and their cost is impossible. This is more appropriate for projects financed on a grant basis than for loans which the Government must repay.

Many participatory projects supported by NGOs are hampered by small budgets. They concentrate all of their resources on community mobilization, group organization and "animation", which act as a catalyst to improve the access of target groups to existing inputs, supporting services and markets. However, when supporting services are inadequate or lacking, larger scale investment is needed to improve the efficiency of extension services or to remove bottlenecks upstream or downstream from group activities. This limitation could be overcome by abandoning a strategy based on small, free-standing participatory projects in favour of integrating participatory components in larger agricultural investment projects.

## **Sustainability**

The issue of sustainability is closely linked to that of areas of convergence and people's participation. Two conceptually distinct sets of problems have cropped up in connection with agricultural investment projects: the first problem is to sustain the benefits of

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<sup>10/</sup> One example is the FAO People's Participation Programme (PPP) launched in 1980 with programme support from the Swedish International Development Authority (SIDA) and the Netherlands. Its key elements include: process instead of project approach; organization of target group (rural poor) by group promoters; formation of homogeneous groups of poor men or women; participatory training; income generating activities; savings mobilization as a pre-requisite for credit; group loans with collective liability; maximization of self-reliance; and participatory monitoring and evaluation. During the first decade (1980-90), pilot PPP projects were implemented in 12 countries in order to develop replicable models for participatory development. During the second decade, the aim is to build on successful models, replicating them on larger scale.

project actions; the second is to sustain the Government services established in support of those actions.

As noted above, Government initiatives which have been undertaken without the involvement of local communities have been difficult to sustain. Failure to consult rural communities about their own objectives and priorities has led Governments to waste resources on promotion of inappropriate technologies which were not taken up by farmers and on infrastructure and conservation works which were not maintained.

The next sections of the Guidelines explore the implications of these problems with regard to different types of investment projects. Evidence is cited which shows that sustainable resource management is facilitated by community participation and incorporation of indigenous ecological knowledge. There is also some evidence that soil erosion control is more sustainable when it is part of a land management package which offers attractive benefits to farm households such as better plant moisture utilization and greater yield stability. Likewise, the benefits of infrastructure and community development works are easier to sustain beyond the end of the project when the end-users are involved in planning the projects from the outset, and see them as their own; this is facilitated by stipulating written contracts with local communities which must assume responsibility for maintaining the works as a condition for receiving project finance.

In the past, Governments provided many support services to small farmers through externally-financed Agricultural Development Projects (ADPs). However, the operation of the services entailed heavy recurrent costs which make them difficult for Governments to sustain. Therefore, most lending agencies advocate the transfer of ADP credit, input supply and supporting services such as tractor hire, well-digging and road building from the public to the private sector. However, in marginal areas where private initiative has not stepped in to fill the gap, the problem remains. In response to this challenge, some lending agencies such as IFAD are attempting to solve the problem by establishing community and farmer-managed support services. With assistance from NGOs, farmer groups are being involved in input supply, credit and marketing. Small self-managed community banks are being established to mobilize savings and harness them for the benefit of members.

## PART II. THE USES OF SOCIOLOGICAL ANALYSIS

### 1. INTRODUCTION

*The purpose of this chapter is to assist Investment Centre management and mission leaders to determine which projects need a sociological input and to illustrate its application to different types of projects. To assist readers with special interests, the issues which crop up in connection with on-farm production, poverty alleviation and common property resources have been grouped under separate headings.*

Type of Project	Need for Sociological Analysis
Area Development	Where targeting or adoption issues exist
Agric. Research/Extension	Small-farmer oriented projects; rainfed areas
Irrigation	Small-scale irrigation; water management; dam impact
Livestock	Traditional multi-purpose production systems;
Forestry	Community/social and agro-forestry; watershed management
Fisheries	Small scale artisanal fisheries
Credit	Savings mobilization; targeted credit
Poverty Alleviation	All projects
Conservation	Participatory resource management;
Settlement/Resettlement	All projects

**Area Development/Technology Transfer Projects.** Sociological diagnostic work is potentially relevant for all area development projects concerned with small farmers. However, it is particularly important under the following circumstances:

- when the aim is to improve traditional rainfed farming systems, especially in marginal areas where farming involves high risks;
- when the project is concerned with technology transfer to resource- poor households;
- when the project is concerned with shifting cultivators, hunting and gathering people or tribal areas;
- whenever little is known about the people and their farming systems;
- in areas affected by guerrilla warfare, insecurity, refugee problems, and other forms of social conflict;
- when the project implies major changes in existing farming systems, such as taking land out of food crop production in favour of cash crops or introduction of double-cropping where constraints are known to exist;
- when there are doubts about the Government's diagnosis of farmers' problems or there is reason to suspect that certain technical proposals

may be inappropriate, unattractive or unacceptable to the intended beneficiaries;

- when preparing a second phase of a project which has encountered problems due to lack of farmer response, feeble participation, non-adoption of technical packages or collapse of farmer groups;
- when sharecropping, tenancy and landlessness are important factors;
- when remittances and off-farm activities have important implications for on-farm development;
- and whenever the aim is to transfer responsibility for input supply, credit guarantee and recovery or marketing from the public sector to cooperatives or informal farmer groups.

**Irrigation.**<sup>11/</sup> Sociological analysis is particularly useful for projects concerned with farmer participation in construction, operation, maintenance and repair of shared irrigation structures and equipment; farm water management; organization of scheme committees and users' groups; collection of water users' fees; and irrigation in connection with settlement projects. It is essential for all projects involving social issues such as relocation of households affected by dam construction, impact of irrigation on pastoralists' access to dry season grazing areas, or equitable distribution of benefits between landlords and tenants. Also in the case of rehabilitation of projects that have failed to achieve expected developments.

**Livestock.** Sociological analysis is useful for projects aimed at transforming traditional mixed farming and pastoral production systems to increase milk production or offtake rates. The only production projects which do not need sociological analysis are simple input-output production systems such as commercial fattening operations, dairies, and medium to large-scale poultry and egg production. In multipurpose systems, where animals are kept for draught power, manure, reproduction and social purposes such as savings, insurance, accumulation, ceremonies and bridewealth, diagnostic work is needed for any project which would increase output of meat or milk at the expense of other outputs. The advice of an anthropologist is essential for projects concerned with transfer of technology to traditional pastoralists and nomadic herders.

**Forestry.** Sociologists and anthropologists who are familiar with forestry issues and techniques such as Participatory Rural Appraisal can make a major contribution to projects concerned with: (i) development and conservation of common property forest resources; (ii) community participation in tree planting and management of forests and woodlots; and (iii) efforts to control tree cutting by shifting cultivators. The advice of a sociologist or anthropologist is essential whenever projects face social issues such as eviction of squatters or traditional forest dwellers from classified forests. Diagnostic work is also useful for projects concerned with promoting on-farm tree planting whenever trees compete with food crops.

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<sup>11/</sup> The contribution of sociological analysis to irrigation, livestock, fisheries, forestry and settlement projects will not be treated in depth in the present paper, because an excellent discussion already exists in Michael Cernea, ed., *Putting People First*, New York/London, Oxford Univ. Press, 1985.

**Fisheries.** Socio-economic diagnostic work is important for projects aimed at raising the productivity of small-scale artisanal fisherfolk. It is essential for all projects concerned with harnessing community participation for development and conservation of common property resources such as coastal fishing grounds, lakes, rivers, lagoon ecosystems and oxbow lakes. Special attention should be given to grassroots institution building in connection with pond fish-farming, when the investment is to be shared by more than one household.

**Credit.** All projects which seek to utilize savings mobilization and credit as a vehicle for poverty alleviation need to examine the beneficiaries' demand for formal credit, their use of informal credit, their absorptive capacity and ability to repay. Studies of indigenous savings groups (*esusu*, *adashi*) and informal financial intermediaries (moneylenders) can also be useful as a background for projects concerned with establishing small-scale self-managed savings and credit banks at village level.

**Poverty Alleviation Projects.** All poverty alleviation projects require diagnostic studies to define target groups, analyze the causes of poverty, target project components and design community participation mechanisms.

**Resource Management Projects.** Sociological analysis should be an integral part of the design of most projects which involve rural communities in land management, territorial planning or conservation and management of common property resources such as watersheds, forests, pastures and water bodies.

**Settlement Projects.** Projects which involve the relocation of people and resettlement require the input of a social planner at the project identification stage to define settler selection criteria, propose appropriate layout of settlements and assist in planning social services such as water supply, schools and dispensaries. At project preparation a sociologist will be needed for design of social services and components for grassroots institution building.

The following sections deal in some details with the sociologists' contribution in the design of production-oriented, poverty alleviation and natural resource management projects.

## **2. PRODUCTION-ORIENTED PROJECTS**

For the purpose of analysis, agricultural projects can be divided into two major categories: those which involve development of individual holdings and those involving development of common property resources. In the first case, the locus of decision making is primarily the household, whereas in the second, authority over the resource may rest with the community. The present section deals with on-farm aspects of technology generation and transfer. Development of common property resources is discussed under the heading of natural resource management projects (Chapter 4).

### **The Farming Systems Approach**

The farming systems approach is characterized by: (i) a holistic view of farm households which comprise separate but interacting crop, animal, off-farm and household components; (ii) concern with understanding the rationality behind farm practices from the perspective of the farm household; (iii) careful analysis of constraints and opportunities at farm level, taking into consideration both internal factors (goals, resource endowment) and external environments (physical, socio-cultural and policy-institutional); and (iv) the significant participation of farmers in the design, implementation and evaluation of agricultural research and development.<sup>12/</sup> Proper integration of sociological analysis is crucial for each of these items.

Farming systems *diagnosis* is the first of several stages in the process of technology generation and transfer. Diagnosis aims at generating useful information for design of on-farm trials, which if successful will be replicated on a wider scale and eventually incorporated in extension advice. The process of diagnosis has three main stages: (i) zoning; (ii) identification of homogeneous recommendation domains; and (iii) analysis of bottlenecks, constraints and opportunities at household and farm level. This information is used as input for generation of technology and design of on-farm trials.

**Zoning.** This involves sub-dividing a particular region into relatively homogeneous zones from a geographic, agro-ecological and ethnic point of view. An understanding of the social and economic history of a region can help to explain relations of dominance, subordination and conflict between different ethnic groups, and their control of different types of resources such as valleys, river crossings and water points.

**Identification of Recommendation Domains.** A farming community within a given agro-ecological zone still constitutes a very heterogeneous group: farmers differ in their endowment of land, labour and capital, as well as in gender, age and stage in the household development cycle. This affects their access to technology and their ability and incentive to adopt it. Sociological analysis has shown that the diffusion of a well-adapted technology is rapid within the sub-group of farmers who have the right resource endowment and is slow in percolating to groups with a less favourable resource endowment. In farming systems research terminology, each homogeneous recipient group with its own farming system is referred to as a "recommendation domain". Rural sociologists are used in farming systems

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<sup>12/</sup> Dixon, John, "Ways Forward for the Farming Systems Approach", FAO, Agricultural Division, November 1990.

diagnostic work: (i) to develop a typology of rural households, which is used to identify homogeneous socio-economic sub-groups or "recommendation domains" and (ii) to identify which factors act as barriers to the diffusion of technologies between groups.

**Household Level Diagnosis.** A farming system in the broad sense refers to the total pattern of activities of a production unit including crops, livestock, forestry, fishing, off-farm employment, non-farm production and household maintenance activities. The advantage of including a rural sociologist in a multi-disciplinary farming systems team is that this would bring about a better understanding of the interaction between off-farm and domestic activities and crop and livestock systems. Sociologists and economic anthropologists can contribute to our understanding of the rationality of farmers' actions, by investigating the objectives of different types of farmers and placing farm decision-making in the context of household survival strategies. Sociologists can also contribute to understanding the origins of a region's class and power structure and its impact on access to land, livestock and capital. Stratification of the farming community can be useful for identifying the constraints of households with different types of resource endowment and for identifying socio-cultural factors which condition the opportunities open to each category.

**Technology Generation.** The assistance of a sociologist is useful for designing systems to incorporate farmer participation in on-farm technology generation and testing.

### **Social Stratification and Barriers to Adoption**

Ten years ago it was commonly believed that technologies accepted by so-called "early adopters" would gradually spread, with a time lag of several years, to other farmers who tend to be more "risk adverse". This approach assumed that the barriers to adoption were predominantly psychological: risk aversion was thought to be linked to "conservative attitudes" deriving from farmers' age and lack of formal education. Reluctance to innovate was expected to diminish gradually as conservative farmers were able to observe successful adoption by their more progressive neighbours. However, a growing body of sociological research shows that this view is an over-simplification. Barriers to diffusion of technical innovation across the boundaries of ethnic groups or socio-economic strata are not "attitudinal", but tend to have a physical and economic basis.

Studies show that technologies spread rapidly among socio-economic strata with the appropriate resource endowment, but they fail to penetrate to farmers who do not have the required land, labour or capital at their disposal. Therefore, even if a technology has been successfully adopted by a few progressive farmers, this is no guarantee that it will eventually trickle down to resource poor farmers. If technologies which prove attractive to the "better" farmers are fundamentally beyond the reach of the rest of the population, costly extension efforts aimed at demonstrating their benefits will be a waste of money.

### **"Fit" between Proposed Innovations and Household Survival Strategies**

Projects work best when the technical innovations proposed by Government make sense from the point of view of private producers and their priorities. Conversely, projects can fail when planners' priorities differ from those of the intended beneficiaries. Technical innovations which "fit" with household survival strategies, by reducing vulnerability to crop failure or improving resilience in the face of external economic shocks, have a good

chance of spreading. Those which increase vulnerability are unlikely to be taken up. Prospects for better returns are obviously important provided they are not at the expense of increasing risk and instability.

### **Spontaneous Diffusion of Innovations**

A paper by C.H. Antholt,<sup>13/</sup> which reviews the experience of the T&V extension system in selected parts of India, concludes that:

- farmers learn from other farmers;
- appropriate technology spreads in spite of Governments and extension efforts;
- costly and unsustainable investments in extension should be avoided unless we are certain that the technologies proposed "fit" the resource endowment and priorities of a large cross-section of the producers.

If appropriate technologies diffuse rapidly from farmer to farmer in the absence of extension services, more attention should be given in future to identifying promising technologies which are spreading spontaneously, analyzing the mechanisms behind their spontaneous diffusion and determining whether a development project could accelerate the process or enable a broader spectrum of the population to take them up. Sociological analysis can contribute to our understanding of spontaneous diffusion by working with farming systems experts to identify the social characteristics of early adopters, the reasons for adoption, and the informal communication networks between farmers which underpin spontaneous diffusion.

### **Identification of Successful Capital Accumulation Strategies**

As a basis for understanding spontaneous diffusion of innovations, it is useful to document the history of technological change in a given community. This involves reconstructing the date when certain innovations were introduced, the circumstances under which they were taken up, the characteristics of early adopters and the degree of penetration throughout the community. It is useful to complement this information with individual case histories to investigate the process which prosperous farm households have used to capitalize their farm enterprises. Case histories are useful for shedding light on the dynamic of capital accumulation and the role of inheritance, savings, credit and off-farm earnings in the process.

For instance, a study of farming systems and socio-economic differentiation completed by a joint IC/Government team in Brazil as a basis for the design of a project for smallholders in the *cerrado*<sup>14/</sup>, used case histories to complement and interpret the findings of a formal socio-economic survey. The survey identified four production systems: rainfed food crops, food crops and cattle, food crops/sugar cane/dairy cattle and food crops/intensive irrigated vegetables, but the relationship between the types was unclear. The case histories

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<sup>13/</sup> Antholt, Charles H., *Agriculture Extension in the 21st Century: Lessons from South Asia and the Winds of Change*, ASTAG, World Bank, 1990.

<sup>14/</sup> Brazil Smallholder Technological Project in the Cerrado, Preparation Report, Volume 2, Annexes 1 & 3, FAO Investment Centre, 1989.



revealed that most households started with food crops; as they acquired some money, they invested in cattle; as cattle numbers increased, they started converting part of the food crop area to sugarcane as a dual purpose crop (for animal feed and extraction of raw sugar for cash sale); at this point, some sold most of their herd to invest in irrigation or to buy additional land; others converted to dairy cattle and began to process cheese for sale. All of this was financed through accumulation and reinvestment of savings, practically without recourse to credit. It was the analysis of the case histories which led to the identification of "successful accumulation strategies" which the project could propose as models to other farmers who were at the beginning or midway in the accumulation process.

### **The Household Economy Versus the Economy of the Farm**

The importance of the household economy for investment project design is illustrated by a case from the south of Niger. The general identification report (prepared by another agency) focussed exclusively on the economy of the farm. This led to the conclusion that animal traction was the key to wealth. It was taken for granted that if credit were provided for animal traction, the majority of farmers would extend the cultivated area, expand production of cash crops and thereby get rid of poverty.

A socio-economic and farming systems study carried out by the Investment Centre in the same area as a basis for project preparation <sup>15/</sup> came to the conclusion that the previous diagnosis was mistaken and would have led to inappropriate project design decisions. The study revealed that there are two distinct types of households: large extended families with a food and labour surplus and several off-farm earners, and small, nuclear families with a food deficit, a labour shortage and a lack of off-farm income. All of the ox-drawn equipment was owned by the former. However, the driving force behind socio-economic differentiation was not farm production but off-farm earnings. The better-off households invested their earnings from off-farm sources to buy carts for hauling goods to and from town for a profit. They had no interest in using animal traction for ploughing. A few households which received credit for ploughs under a pilot project had sold the equipment to repay their loans. Among the upper stratum, income from crop sales represents only a small share of total household income.

The fact that households with animal traction have larger farms than those without animal traction is attributable to family size and numbers of active workers - not to differences in technology. The large extended families work the same amount of land per capita as the small ones. Although the better-off households achieved double the yields achieved by the average household, the root causes are socio-economic rather than technical. The difference in yields is attributable to differences in the labour input for weeding and its timeliness - not the level of input use or the mode of land preparation. The small households are forced to neglect their own crops during the rainy season because they have nothing to eat (their food stocks having run out before the onset of the rains). The only way they can get food is to do farm labour for the large, food-surplus households in exchange for meals.

The large extended families do not need credit because they can finance their own animal traction from off-farm earnings. The poor households could potentially benefit

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<sup>15/</sup> Niger - Étude Socio-Economique sur les Systèmes de Production l'Arrondissement d'Aguié, Mission de Préparation, FAO Investment Centre, 1991.

from loans for carts to earn cash from hauling. If line sowing could also be introduced, the use of animal-drawn cultivators could also help them to weed their own fields more quickly, improving yields and releasing time for casual employment.

## **Farm Models Versus Household Models**

Conventionally the IC uses farm models to illustrate changes in farm size, cropping patterns, input use, labour use, yields, output, production costs and net returns between the "with" and "without" project situations. These models may also consider the interaction between crops and livestock. However, over the past few years, a growing number of studies have shown that the interaction between farm, off-farm and domestic activities can have important consequences for agricultural development. These findings suggest that there are circumstances when household models would be better than farm models.

The benefits of using household models instead of farm models are illustrated by a project preparation mission undertaken by the Investment Centre in Guinea.<sup>16/</sup> In this case, agricultural production was strongly influenced by dry season gold panning. The socio-economic study identified two broad categories of households - large extended families and small nuclear families. The former tended to be economically secure while the latter were highly vulnerable. Both engaged in gold panning, but the former used it as a source of capital accumulation while the latter did it out of sheer desperation, to get money when they ran out of food. In the former case, gold panning is not only compatible with farming, but serves as a source of capital for large-scale mechanized production on irrigation schemes; whereas in the latter case it interferes with farming, because the husband is forced to prolong his stay in the gold fields until late in the planting season in order to earn his target income. To allow for the interaction between on-farm development and gold panning, the agricultural economist used household models to illustrate the project's impact on labour allocation between the farm and the gold fields, earnings from gold panning, and the level of dependency on gold earnings to make up the food deficit, for different types of households.

## **Time Use and Labour Availability**

Labour availability is often handled in an unsatisfactory way in project preparation. There is heavy reliance on abstract deductive reasoning rather than empirical evidence. The total population of the project area may for instance be divided by the number of households to derive an average household size; then a series of assumptions are made about the number of adult males, females and children under 15; coefficients are arbitrarily assigned (usually one labour unit per adult male; 0.5-0.75 labour unit per adult female and 0.5 for children aged 12-15). This procedure frequently leads to over-estimation of actual labour availability, because it overlooks variation in household size as well as constraints on the labour supply deriving from the gender division of labour, migration and off-farm employment, children's school attendance and time required for domestic tasks.

An example of a household labour profile which takes into account the total labour requirements for farm labour, off-farm employment, non-farm production and household maintenance and reproductive activities is shown in Figure 2 (next page). It is evident from the first graph that in this example from Myanmar crop and livestock production account for less than half of total labour requirements. When the identification mission focussed exclusively on labour inputs for farming, this led them to conclude that there was enough underutilized labour to permit the introduction of double cropping. However, data on

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<sup>16/</sup> Republique de Guinée - Projet de Developpement Rural de Siguiri, Mission de Preparation, Annexe 2, "Contexte economique, exploitations familiales et analyse socio-economique du projet".

actual time allocation gathered by the diagnostic study suggests that there was little underutilized labour. The second graph illustrates the difference between the conventional estimate of labour availability - based exclusively on farm labour requirements - and the more realistic picture which emerges from interview data on total production (farming and off-farm activities) and household maintenance requirements.

By now it is widely recognized that disregard of the gender division of labour can lead to mistaken assumptions about labour availability. For instance, if a project calls for intensification of labour inputs for weeding, which is typically a female task, and women are already overburdened with domestic and other work, the weeding may not get done and yields will not reach the estimated levels. For this reason, most WID experts recommend separate monthly labour profiles comparing male and female labour inputs in the "with" and "without" project situations. In the early 1980s this was attempted by a number of investment projects prepared on behalf of IFAD, but it proved to be very time-consuming. Moreover the disaggregated labour profiles were often of little value because they were based on theoretical crop labour requirements rather than empirical studies.

Another limitation was that the gender-disaggregated profiles focussed exclusively on labour inputs for crop production, overlooking post-harvest and domestic activities. New crops can have far-reaching repercussions on labour requirements for threshing, hulling, grinding and cooking food, or water and fuel consumption. In the future, some of the most glaring oversights could be overcome by preparing simple line graphs to examine the seasonality of crop labour requirements, animal-husbandry related tasks, off-farm work, non-farm and handicraft production, water fetching, fuel gathering and complementary activities such as hunting and fishing. (For details on how to collect the necessary information and prepare line graphs, see manuals on Rapid Rural Appraisal in the bibliography).

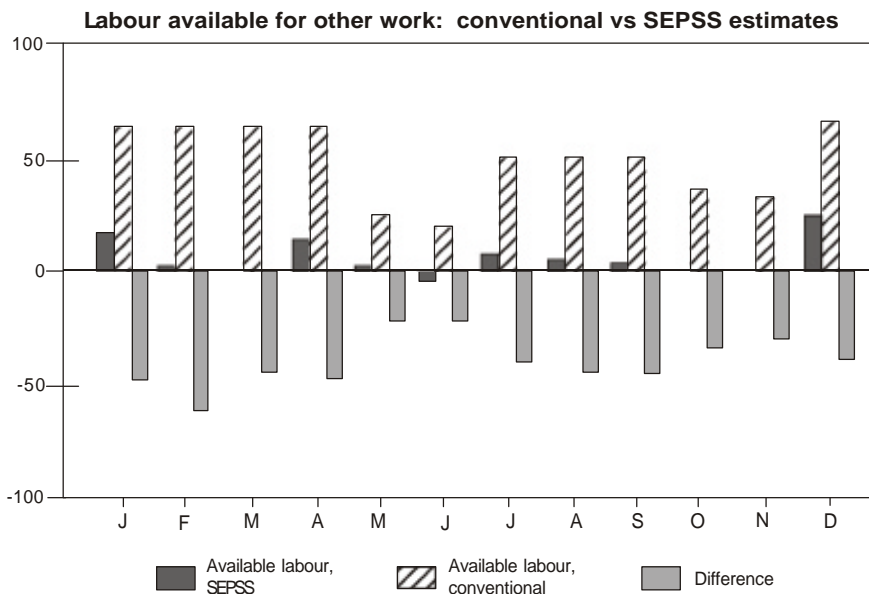
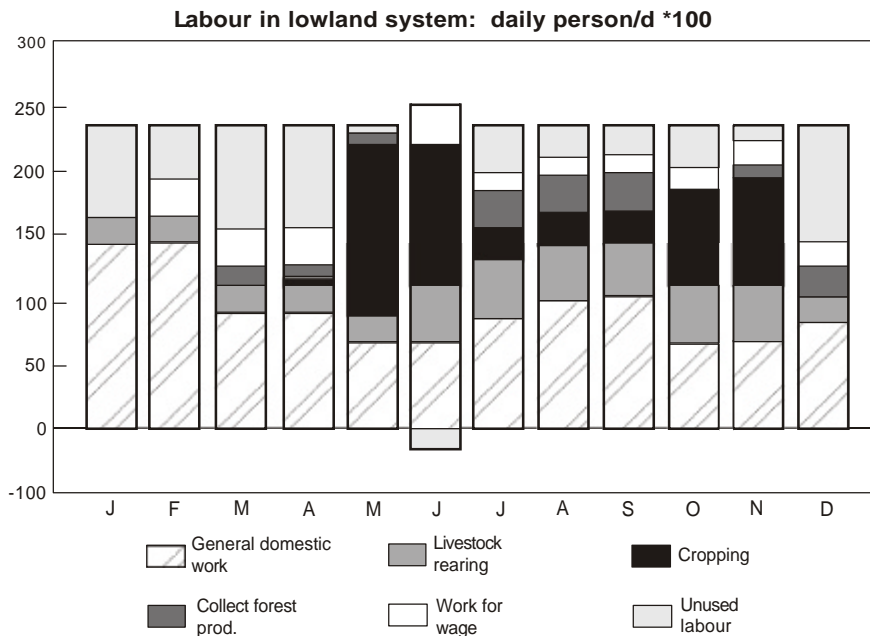
In the light of time and data constraints under which most project preparation teams work, a differentiated approach might be preferable: (i) at project identification, using simple line graphs, the sociologist could assist the agronomist to examine the overlap between crop, livestock, off-farm and domestic labour requirements and to weed out mistaken assumptions; then (ii) at preparation, gender-disaggregated farm labour profiles would only be completed in exceptional cases where there was evidence of possible constraints. Examples where gender-disaggregated labour profiles could be useful are irrigation projects aimed at introducing double cropped rice or vegetables in Africa in competition with rainfed crops, or animal traction projects which would double or triple the cultivated area.

### **Estimating Adoption Rates**

In the late 1970s and early 1980s, World Bank projects sometimes used rural sociologists to assist in predicting adoption rates. Formal surveys were undertaken to determine what proportion of the farmers had conservative as opposed to progressive attitudes towards technical innovation. Farmers were asked about their attitudes toward change and their willingness to do whatever the project proposed. Because the questions were abstract and it cost the respondents nothing to say "yes", this led in most cases to overestimation of adoption rates.

The approach utilized by more recent diagnostic studies differs from previous sociological surveys in that there is a much closer linkage between sociological and production systems analysis. The sociologist/anthropologist tries to understand the rationality behind existing farm practices, by placing them in the context of the wider regional and household economy. Adoption rates are linked to differences in the resource endowment and survival strategies of different types of households rather than psychological predispositions toward progressiveness or conservatism. Another fundamental difference is that sociologists are no longer expected to tell project planners how to "motivate" farmers to adopt technologies developed through a top-down process. Their role is to assist agronomists to understand farm households' objectives, survival strategies and perceived constraints and to screen technologies for their appropriateness to particular target groups.

**MYANMAR: Border areas SEPSS**



### **3. POVERTY-ORIENTED PROJECTS**

Poverty alleviation projects differ from conventional projects in that the actions are explicitly designed for a specific target group and the objective is to maximize the number of households which can be lifted permanently out of poverty with a given level of investment. It is important to ensure that the benefits reach the intended beneficiaries and to limit leakage to people outside the target group such as big farmers, corrupt government officials, middlemen or moneylenders. For this reason, poverty alleviation projects entail special types of analysis, namely: identification of target groups, diagnosis of the causes of poverty, targeting of project actions and monitoring the distribution of benefits.

#### **Terminology: Target Group and Target Population**

In its broadest sense, the term "target group" refers to people who are expected to respond to the opportunities which the project provides. It is synonymous with project participants and intended beneficiaries. In this sense, all projects have a target group - even those aimed at commercial farmers. In the narrow sense, the term refers to one or more categories of the population whom Government and the lending agency designate as the intended beneficiaries. These may be defined loosely by occupation, sex and age as "artisanal fishermen, landless labourers, women and youths, etc.". Or they may be carefully defined by setting forth eligibility criteria based on factors such as farm size, income level and occupation.

The use of the term target "group" does not imply that the intended beneficiaries have any shared class consciousness or ties of solidarity. They are not a group, but rather a loosely defined category of persons.

The term "target population" refers to the total pool of people from which project participants and beneficiaries are drawn. In the broad sense this refers to the total population of the project area. In the narrow sense, it refers to the total number of people falling within the categories selected by Government and the lending agency as intended beneficiaries for the project. The actual target during the disbursement period may be to reach only 20-30% of the eligible population.

#### **Identification of Target Groups**

The starting point for the design of poverty alleviation projects should be to identify the poor - their numbers, location and characteristics (age, sex, occupation, ethnic group, etc.). It is the responsibility of an economist to define absolute poverty in terms of a poverty line constituted by the cost of minimum diet (expressed in Kilocalories), and to estimate what proportion of the people in a region or occupational category have an income or expenditure below this level. Relative poverty may also be of interest. Apart from the "incidence of poverty" (i.e. the percentage of people in a region or category who are below the poverty line) they may also estimate the "depth of poverty" (the extent of the gap between the average income and the poverty line).<sup>17/</sup> This preliminary work is primarily descriptive: it tells

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<sup>17/</sup> The World Bank has undertaken a great deal of work on poverty at the sector level. For a fuller discussion see recent World Bank World Development Reports.

us which sectors and regions have the highest concentration of poverty but not the reason for their poverty.

The responsibility of the sociologist is to define the target group of a particular project. What is needed for project implementation purposes is a definition of the target group which is unambiguous and can be used to identify project beneficiaries without excessive administrative costs. Although per capita income levels in relation to the poverty line may be of interest, definitions based on income are notoriously hard to apply. Moreover, in some cases, the ownership of income-producing assets can be more important in explaining wealth than the distribution of current income or expenditure. Therefore, it is usually preferable for the sociologist to use other criteria which are more easily observed, such as occupation, farm size or lack of livestock in defining target groups.

The percentage of the total population which meets the lending agency's eligibility criteria is necessarily site specific. Anything which includes 100% of the total population is considered to be "too broad" except in special cases - such as a transmigration scheme - where all households have the same allotments and people at the start are uniformly poor. Even in poor regions, households which are in a position to exploit the rest of the population or to capture most of the benefits which the project would provide, should be defined as outside the target group. In wealthy provinces having poverty pockets, it might be preferable to define two sets of eligibility criteria: one for selection of villages and the other for selecting households within qualifying villages.

The definition of the target group should be quite specific regarding the upper cut-off point for eligibility but open-ended regarding the lower end of the spectrum. No household should be excluded from participating in a poverty alleviation project on the grounds that they are too poor. However in actual practice, most project participants tend to be drawn from the upper half of the eligible population. Many of the poorest households may be unable to respond to any opportunities which a project might provide, even though they are eligible, due to a shortage of active labour, land or fear of being unable to repay loans. In every village there will be some households which a project cannot help except through social welfare measures. These include the physically and mentally handicapped, and aged people with no relatives to support them.

It is important to ensure that the definition of the target group is logically consistent with other elements of the project design. A credit project can define 30% of the population as the target group but not an agricultural extension project, which must potentially provide services to the entire farm population. Likewise, most natural resource management projects need to involve the entire community for technical reasons. In this case, the target group for some activities could be the whole community, but for other activities, it could be a sub-group within the larger community.

### **Identifying the Causes of Poverty and Socio-Economic Differentiation**

The type of diagnostic work required for poverty-oriented projects differs from that of other projects in its themes and its methods. It should focus on understanding the root causes of poverty as a basis for identifying a comprehensive set of actions capable of addressing them. The analysis should distinguish between factors affecting all households in an area (such as low fertility, land degradation, drought, floods, frequent crop failure) and those affecting the poorest (such as landlessness, lack of livestock, labour shortage, distress sale of assets, etc.). For the purpose of analysis, the population should be stratified by relative wealth or income. Comparisons between households identified by consensus as "upper",



"middle" and "lower" economic condition in their own village can be used to analyze the process of socio-economic differentiation and to explain why some households have managed to get rich and others are still poor.

One part of the diagnostic work would focus on the process of impoverishment; another on mechanisms which permit households to escape from poverty and to start a self-generating process of capital accumulation. The analysis of impoverishment should distinguish between factors which exert a constant, downward spiralling "screw" effect on household incomes (such as repeated crop failures, successive years of drought, eroding producer prices) and the immediate precipitating factors (natural calamities, illness or death of the main breadwinner, etc.). The justification for documenting how households escape from poverty is to identify strategies which the project could replicate. If only a small proportion of the former poor have escaped from poverty, the next step is to identify what factors prevent other households from following suit and determine whether the project could remove these constraints.

### **Reducing Vulnerability**

If the project's goal is to have a sustainable impact on poverty, it is not enough to raise a household's income or level of consumption above an established poverty line. It is equally important to ensure that it does not slip back into poverty the first time it is faced with crop failure or a natural calamity. One means of reducing vulnerability is to assist target groups to acquire income-producing assets which they can fall back on in emergencies. Another is to reinforce savings mobilization in connection with targeted credit. Both of these are elements of the Grameen Bank's approach. An alternative is to develop what Chinese peasants refer to as an "*unbreakable bowl*" - i.e. an income-earning activity which is relatively unaffected by natural calamities. For instance, in the low-lying areas of Jilin Province, China, where crop failure due to excessive waterlogging is the main cause of poverty, activities which are not affected by excess rain, such as wet rice, fish-farming, animal husbandry and reed production can provide a relatively secure source of income which households can use to buy maize in years when staple crops fail. However, to ensure that households have enough resilience to keep from falling into debt when other crops fail, the *target income* from sidelines such as fish farming and reeds needs to be substantially above the official poverty line.

### **Targeting**

In the broad sense, this term refers to a wide variety of mechanisms which can be used to ensure that the project reaches the people whom it was designed to benefit and that the opportunities it provides are tailored to their particular needs. In the narrow sense (i.e. poverty-oriented projects), targeting refers to a set of mechanisms designed to ensure that the benefits of the project accrue to participants who meet certain eligibility criteria and to limit leakage of benefits to people outside the target group.

The most common means of targeting is to *restrict project participation* to certain categories of people. It is applicable to many types of projects, including those which are not poverty oriented. Potential beneficiaries are screened, and those who do not meet pre-determined eligibility criteria are excluded. For instance, credit could be restricted to members of registered farmers' groups or to individuals who have successfully completed a training

course. Poverty-oriented projects commonly use farm size or per capita income to determine eligibility. However, these measures are only effective when project authorities are in a position to verify the actual farm size or incomes of applicants. When the burden of verifying incomes falls on the implementing agency, the cost of information tends to be high. One way of reducing the cost of information is to involve villagers in the process. Villagers know who is rich and who is poor. Village leaders may have a vested interest in distorting the criteria to increase the number of beneficiaries or to allow their sons to qualify. In this case it may be preferable to organize eligible households into groups and allow these groups to select beneficiaries from their own midst.

One of the most controversial aspects of targeting regards the *exclusion of the rich*. Some say this is counterproductive on socio-political grounds because village leaders may thwart projects which threaten their power. Because of this, sociological studies need to look into the community power structure. In Africa, many sociologists feel that one cannot bring about sustainable development of target groups such as women, youths and the poor, without working through traditional authorities and community level institutions. Experience from Asia, on the other hand (Grameen Bank, BRAC, SEWA)<sup>18/</sup>, suggests that socially homogeneous beneficiary groups of landless people are much more effective in combating poverty than groups which do not exclude the wealthy. A compromise solution might be to consult village authorities and ensure their consent, but restrict group membership to designated target groups. Once project objectives are understood, traditional leaders can be enlisted to help ensure that eligibility criteria are respected.

Another point of controversy regards the *cost of targeting*<sup>19/</sup>. When the proportion of households outside the target group is relatively small (15% or less), the cost of enforcing eligibility criteria may be greater than the total value of the resources lost to people outside the target group. In this case, it would be preferable for the lending agency to accept the idea that a share of the benefits would accrue to the upper stratum of the village population.

Even if it is possible to limit project beneficiaries to persons meeting pre-established eligibility criteria, this by itself does not maximize the spread of benefits. The experience of a fish farming project in Guangdong Province, China, shows that in the absence of a realistic ceiling on the size of the investment per household, a project may make a small number of poor households disproportionately rich without helping the vast majority of the people who meet the same poverty criteria.

An alternative way of improving the spread of benefits, which can be used alone or in combination with beneficiary selection criteria, is to develop (small) standardized loan or input packages for each project activity or to establish a **ceiling** on the maximum amount which any household can borrow or receive in kind from project resources. Instead of trying to verify the farm size or income of loan applicants to determine their eligibility, it can be easier from an administrative point of view to set an upper limit on the number of acres of

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<sup>18/</sup> Hossain, Mahabub. 1984. Credit for the Rural Poor: The Experience of Grameen Bank in Bangladesh. Research Monograph No. 4. Dhaka, Bangladesh Institute of Development Studies.  
For BRAC See Martha Chen, A Quiet Revolution.

<sup>19/</sup> Besley, Timothy and Ravi Kanbur, The Principles of Targeting. World Bank, PRE Working Papers, March 1990. This approach is primarily concerned with the economics of direct resource transfers to the poor, such as welfare payments, food stamps, etc. as opposed to agricultural development.

coffee which a single household can plant with project funded assistance or the number of livestock which can be purchased on credit. In this case, large farmers could not get more credit than small farmers. If the limit is one bag of fertilizer per household, it is hardly worth the effort for wealthy farmers to apply.

Another option is to finance activities which are of great interest to the poor and of little or no interest to the wealthy, because they are too demeaning or the returns are too low. For example, the rich are generally not desperate enough to take up paddy-husking or to engage in food for work. This type of targeting has the advantage of excluding no one *a priori*: it works by self-selection. Whenever possible, design teams working on behalf of poverty-oriented lending agencies should make maximum use of self-targeting mechanisms and ceilings, reducing dependency on application of beneficiary selection criteria.

### **Gender Aspects**<sup>20/</sup>

There are three main options for targeting project benefits to women: (a) to design a project exclusively for women (or a "*WID project*" in jargon); (b) to include a *WID component* in a larger project or (c) to design a *gender-sensitive mainstream project* which integrates women throughout all relevant components. After examining the matter for 15 years, most international lending institutions (including IFAD, World Bank and AfDB) have concluded that the latter approach is more effective.

**Credit** components in a "mainstream" project can be targeted to women directly (e.g., by establishing a separate line of credit for women's groups within a mainstream banking institution or by requiring that a certain percentage of loans, or of total credit, be disbursed to females) or indirectly, by earmarking credit for women's crops and typically female activities such as agro-processing. But other aspects of credit delivery may need to be adapted to the needs of female borrowers, such as the minimum size of loans, the frequency of repayments and collateral requirements. Women's groups may also need training in micro-enterprise management and financial record keeping skills.

In most cases is possible to target **extension advice** to farm women without establishing a parallel female extension service. Female extension workers are rarely indispensable for delivery of agricultural advice except in cases where it is culturally inappropriate for male extension workers to contact women even in groups in the fields. Male extension workers' contact with farm women can be facilitated by adjusting the contents of extension messages (to focus on crops controlled by women), the timing and place of contacts, the extension language, and the mode of contact. For social reasons it is usually easier for male extension workers to work with female or mixed-sex *contact groups* as opposed to *individual* female contact farmers.

Women's participation in **training courses** can be increased by reducing the need for them to leave their families for long periods. When overnight stays at training centres cannot be avoided, it may be necessary to construct separate dormitories for women and to provide day care facilities in case they are forced to bring their children. In some Arab

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<sup>20/</sup> For details see Alice S. Carloni, *Women in Development - A.I.D.'s Experience 1973-1985*, Volume 1 - Synthesis Paper, A.I.D. Programme Evaluation Report No. 18, USAID, Washington D.C., 1987.

countries, women trainees will need to have a respectable older woman stay in the dormitory as a chaperon.

## **Targetability**

"*Targetability*" refers to the ease with which the distribution of benefits from a particular project component can be controlled. Some actions can be earmarked exclusively for disadvantaged sectors of the population whereas others cannot.

**Credit.** In theory, credit is one of the easier components to target.<sup>21/</sup> In fact, it is not difficult to establish credit eligibility criteria based on income levels or farm size, but the real challenge is to ensure that they are properly applied. Subsidized credit is difficult to target, because low-interest rates attract the non-poor. For this reason, a disproportionate share is likely to be taken up by better-off households at the expense of the poor unless market interest rates are applied. There are several alternatives for targeting: (a) a line of credit can be established exclusively for certain types of beneficiaries; (b) a pre-determined share of the credit funds can be earmarked for women or the landless; (c) income or farm size criteria can be used to screen loan applicants; (d) village leaders can be asked to certify that applicants meet certain poverty criteria; (e) loan ceilings can be applied to limit the share of credit going to any one borrower; (f) collateral requirements can be waived to make it easier for poor households to qualify; (g) a guarantee fund can be established to make it less risky for banks to lend to the poor without collateral and less risky for the poor to borrow; and (h) banks can make themselves more accessible to the poor by opening rural branches, streamlining application procedures and by reducing borrower transaction costs.

**Extension.** National extension projects are difficult to target, because they are usually expected to cover the entire country and to cater to smallholders of all types. Area development projects can attempt to increase outreach to the poor by extending coverage to remote geographic areas or by broadening participation at village level, but they cannot restrict advice to the poorest households. Under these circumstances, the best way to target the project may be to focus extension messages on rainfed crops and low-cost, low-risk technologies suitable for resource-poor households.

**Infrastructure.** Components such as roads, drinking water, dispensaries and primary schools tend to be inherently "*target group neutral*" in that they benefit all households in a village -- wealthy or poor. However, a measure of targeting can be introduced by selecting the poorest villages, or by establishing eligibility criteria such as absence of facilities, commitment of beneficiaries (cash and labour contributions) and willingness to assume responsibility for their maintenance and repair.

**Irrigation and animal health** are more difficult to target: the more land a household owns in the command area, the more it benefits from irrigation; the more livestock it owns, the more it profits from disease control or pasture improvement. However, some targeting may be achieved through application of conditionalities. For instance, a poverty-oriented project could improve the spread of benefits by making funding for irrigation rehabilitation conditional on redistribution of a part of the land and the establishment of a users' committee in which all users, large or small, would have one vote.

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<sup>21/</sup> A World Bank policy paper entitled *Rural Financial Institutions in Developing Economies* (1990) concludes that targeting of credit has proven more difficult and less efficient than originally supposed.

Some poverty-oriented lending agencies such as IFAD will not finance target-group neutral components unless these are pre-requisites for the success of other targeted components. IFAD also applies a ceiling on the share of untargeted components in the total project budget.

### **Maximizing the Number of Beneficiaries**

In designing a poverty alleviation project, it is important to maximize the number of households who can be raised permanently out of poverty with a given level of investment. This entails: (i) estimating a target income level needed to ensure that a household stays permanently out of poverty; (ii) establishing a ceiling for each income-generating activity (number of hectares or head of livestock to be financed) in the light of the target income and (iii) comparing which of the modules has a lower cost per household and per dollar of incremental income generated. In Jilin Province, China, the cost of raising the income of an average household of 4-5 members to the target income needed to keep it from slipping back into poverty was around US\$1,000 for paddy rice development, whereas for fishing farming it was almost \$2,000 and for reed production it was even higher. Therefore, with the same level of investment, if the project focussed exclusively on rice and ignored other alternatives, almost twice as many households could be raised out of poverty. This analysis was used to increase allocation of funds to rice development relative to fish farming and other components.

### **Beneficiary Analysis**

This term refers to: (i) the ex-ante analysis of who is likely to benefit from a project and (ii) the ongoing and ex-post analysis of the characteristics of actual beneficiaries. Although it is applicable to all projects involving smallholders, it is more important for poverty-oriented projects to have feedback on the age, sex and socio-economic status of beneficiaries reached by the project.<sup>22/</sup> At the design stage, ex-ante analysis of the expected distribution of project benefits should be part of the sociologist's TOR. Later, when implementation gets under way, the person responsible for designing the project's M&E system should incorporate beneficiary information in the project's Management Information System. For poverty-oriented projects, a mid-term evaluation should be scheduled to review whether project components are reaching the intended beneficiaries. The review team should have the authority to make adjustments to the project to improve the distribution of benefits.

### **Social Impact Assessment**

The Investment Centre *Guidelines for the Design of Agricultural Investment Projects*<sup>23/</sup> recommend that all projects should indicate the number of expected beneficiaries and their "without" and "with" project incomes. Preparation reports should also highlight any changes in access to productive resources which could have an impact - positive or negative - on the poor. Reference should also be made to expected effects of the project on other factors affecting living standards, especially health, nutrition, education and the role of women. In addition, poverty-oriented projects, especially those financed by IFAD, should make a

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<sup>22/</sup> The World Bank refers to this process as Beneficiary Assessment, which is being carried out in around 30 projects in different regions of the world. For details see Lawrence Salmen, *Beneficiary Assessment*, World Bank, Poverty and Social Policy Division, Africa Technical Department.

<sup>23/</sup> FAO Investment Centre Technical Paper No. 7, 1992.

detailed assessment of the project's expected impact on poverty and income distribution and, where relevant, access to the means of production.

#### **4. NATURAL RESOURCE MANAGEMENT PROJECTS**

Sociologists can contribute to the design of natural resource management projects<sup>24/</sup> in several ways: (i) by interpreting demographic trends and their long term implications on population-land relationships; (ii) by identifying geographically the territories belonging to different villages and segments of the population such as tribes, clans and kinship groups, and the nature of their claims and disputes; (iii) by analyzing the rationale behind traditional land management systems; (iv) by identifying the traditional locus of authority over land use as a basis for establishing community management systems under development projects; (v) by studying farmers' perceptions of land degradation and indigenous methods of controlling it, on their farms and on common property resources, and thereby contributing to the design of measures aimed at promoting the adoption of sustainable systems; and (vi) by designing mechanisms for community participation as a basis for project implementation. They may also assist in understanding the implications of adjustments in land tenure legislation on land use.

##### **Amenagement des Terroirs Villageois**

In the Sahel, the Investment Centre has designed a series of projects based on an open-ended, process oriented participatory approach to the management of space at village level. The projects seek to involve rural communities in identifying their needs, drawing up village action plans and undertaking small-scale land development and conservation works. The starting point is analysis of the social organization of physical space including common property resources such as forests, rangeland, and water points in addition to arable land. This is a vehicle to get the community to reflect on processes of deforestation, land degradation and options for addressing them. In some cases, elaborate resource mapping and soil survey work is undertaken together with cadastral surveys in support of the local planning exercise.

Project design is flexible. A programme approach is followed whereby broad criteria are drawn up for support of community initiatives. A "menu" of possible project actions is defined, but each community is free to choose whatever combination of actions it prefers. Government support is conditional on the population's willingness to share a part of the costs of works and to ensure their maintenance and repair. Sometimes the donor introduces other forms of conditionality: for instance, if a community leader asks the project to help him develop a small irrigation scheme in a valley bottom where his family has exclusive cultivation rights, the donor may make its support conditional on the redistribution of a part of the land to other families.

The list of activities which could be financed by the project is drawn up in advance by the project design team, usually without undertaking diagnostic work. This works best in cases where technical options are already well known and their benefits fully appreciated, and the main constraints preventing communities from implementing them are

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<sup>24/</sup> Since 1988, the Investment Centre has incorporated sociological analysis in land management studies (Nigeria, Jamaica, Ghana, Niger), conservation projects (Djibouti, Comoros), sand dune stabilization projects (Yemen), forestry projects (Laos, India), watershed management projects (Indonesia), land use planning and grazing management projects (Zimbabwe) and lagoon, oxbow lake and brackish-water fisheries projects (Egypt, India, Bangladesh).



simply lack of finance and limited technical know-how. It is less suitable in cases where communities are not familiar with the technical options. At project preparation an implementation methodology is worked out and crop budgets are drawn up to illustrate the profitability of certain actions. To assess the rate of return, some rough estimates are made of the area to be planted with trees or developed for dry season irrigation, but these are merely indicative. Usually the planning of individual community development is deferred until implementation.

The actual consultation with villagers is undertaken by a staff of *animateurs*, who may work several months to organize the community, elect a development committee, and carry out resource inventories, mapping exercises and cadastral surveys before the community draws up its development proposal. The main emphasis is on action-research: undertaking a series of micro-projects and monitoring what happens. First an *animateur* visits the village to assist the local population to elect representatives and to identify their needs. A village development plan is drawn up by the community. Then a formal contract is stipulated between the community and the implementing agency specifying the contribution of both parties to implementation of the plan. The Government usually contracts to provide technical guidance, materials and outside finance in exchange for the community's contribution of unskilled labour and local building materials. Project funds are released to communities in small *tranches*. In order to qualify for the next *tranche*, the community has to meet targets specified in the contract. The size of the project can be adjusted periodically in the light of achievements

In a variation on the *terroir* approach, promoted by French NGOs, project authorities contract with the village population to get them to undertake environmental protection measures in exchange for something the people want, such as primary schools, dispensaries, health centres, drinking water or water points for animals. In the latter case, the list of conservation measures is usually drawn up by technicians and the community may be left with the choice of accepting or rejecting them depending on how badly they want the infrastructure and services offered by Government as an incentive for participating in the project.

Although the actions funded by such projects appear to be sustainable, a number of problems have been reported. In many cases, Government has created mistrust because it has entered into a contract with a particular community and then failed to deliver the goods. On the other hand, villagers have been known to agree or contract to do something in which they are not particularly interested in order to get something else they really want: as soon as they get their well or dispensary, they let down their end of the bargain. They go through the motions of planting trees or building terraces but then let the trees die and the terraces erode. If the actions are to be self-sustaining, the question of the "fit" between proposed actions in the village development plan and the farmers' objectives cannot be avoided.

### **Land Management**

Land management refers to a series of methods designed to control soil erosion by improving moisture penetration and reducing run-off. Control is achieved primarily through biological and agricultural means such as maintenance of crop cover and land preparation methods as opposed to physical engineering works such as construction of terraces or cut-off drains. To date it has been applied mainly on arable land and its

applicability to common property resources such as pastures and forests is still unclear. One of its premises is that soil conservation works best when it is a by-product of land management practices designed to provide attractive benefits to farmers, such as better yield stability in marginal years or higher profits, depending on what farmers want.

Experience from a growing number of countries suggests that it is important to ensure that soil conservation measures make sense from the point of view of the individual household and not just that of the community. Techniques which fit the local farming system and give direct and tangible economic benefits to individual households tend to spread rapidly and to have lasting results. The spread of *fanyajuu* terracing in Kenya is attributable to the fact that the technique enhances food security. Women's groups are motivated to contribute unpaid self-help labour to build and maintain terraces because they improve moisture penetration and give more reliable crop yields - not because they reduce soil erosion. Stone contour barriers which improve water infiltration have spread in Burkina Faso for similar reasons.

A land management study prepared for the World Bank in Nigeria <sup>25/</sup> used a 3-person team consisting of a rural sociologist, a land use specialist and a natural resource economist. After selecting the parts of the country where threats to the environment were greatest, in terms of population pressure and carrying capacity, rapid reconnaissance was carried out in each site to analyze the farming system. Discussions were held with farmers to learn about their perceptions of soil erosion and land degradation and to find out what spontaneous methods they were using to control them. Many of the indigenous practices were incorporated in the team's proposals. Special attention was given to understanding farmers' reasons for planting or protecting useful trees (distinguishing between species planted for fruit, for cash, for shade, for yam stakes, building poles, firewood) or for piling trash on the contours or planting on mounds as opposed to ridges. Each of the project interventions was designed to fit within a specific socio-economic context and farming system. Similar exercises were undertaken for land management and soil conservation projects in Ghana and Jamaica on behalf of the World Bank.

### **Harnessing Indigenous Ecological Knowledge**

Participatory Rural Appraisal (PRA) is a methodology designed to elicit indigenous ecological knowledge from rural communities using visual techniques such as maps, models and drawings in the sand to focus discussion on natural resources. It is used as a tool to involve local communities in planning social forestry, watershed management and soil conservation projects. It is not intended to be used prior to project design, but as a vehicle for participatory planning during project implementation. Various university institutes and NGOs<sup>26/</sup> have developed packages of techniques which allow a team of community facilitators to assist a village to draw up a catchment conservation or watershed management plan in 5-7 days of field work.

The exercise usually starts by getting village elders to reconstruct the village's history by drawing a "time line" in the sand, indicating the dates of events such as wars,

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<sup>25/</sup> NIGERIA - Land Resources Management Study, Volume II, FAO Investment Centre, June 1990.

<sup>26/</sup> Notably the International Institute for Environment and Development (IIED) - London; IDS Sussex; Khon Kaen University, Thailand; Clark University (Massachusetts, USA); Winrock International and World Resources Institute (Washington, DC).

natural disasters and famines. This is followed by walking a *transect* which cuts across the village territory, to observe relationships between land forms, natural vegetation, land use, cropping patterns and interview people met along the way. The next step may be to invite the villagers to make a map or *model of the village* - showing the location of roads, rivers, landmarks, houses, arable land and common property resources. Villagers may also be asked to draw graphs to show the monthly distribution of rainfall, planting and harvesting dates, seasonal variations in food supply and prices, herd movements, water fetching, and farm labour peaks. They may also be asked to identify and rank local plants and trees or crop varieties. The process culminates in a group meeting in which villagers list their perceived problems, rank possible solutions and reach a consensus about which activities to undertake. It takes at least 5 days to complete the full exercise in one village, before the team can move to the next. The techniques can be taught to extension workers, to be used as a vehicle for participatory planning exercises in their own extension areas.

### **Community Regulation of Resource Use**

Projects concerned with the development and conservation of a natural resource have special requirements which set them apart from other projects. In order to be successful, they must necessarily involve all members of the community who use the resource. This is especially true in the case of forests, pasture and water bodies which are held as common property resources to which all community members and sometimes members of other communities, such as nomadic pastoralists, have free access. Governments can seldom afford to rely on fences and armed guards to defend the forests from people: it is likely to be much cheaper and more effective to give local people a stake in maintaining the forest and adopting sound conservation practices. However, community self-regulation cannot succeed by working through selected individuals: all community members must agree to respect the rules and sanctions must be applied to those who break rules.<sup>27/</sup> The non-participation of one segment of the population could lead to a breakdown of the system.

Even where land is privately owned, there are often sound technical reasons for directing land management and soil conservation projects to communities rather than individuals. If a household on the rim of an eroding catchment does not adopt measures to improve water infiltration, water will continue to run down the slopes and make gullies on the land of other farmers below. For this reason, the target group for resource management and conservation projects should usually be the community or group of contiguous land holders. There is no case for excluding the wealthy and powerful, since their opposition could undermine efforts of the rest of the population to regulate resource management.

As a basis for design of resource management and conservation projects, the sociologist should assist the community to:

- identify all of the users of the resource and the nature of their claims on it;

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<sup>27/</sup> The same principle applies to projects concerned with rehabilitation of degraded pastures or restoration of brackish water lagoons. Pasture improvement will only be sustainable if all livestock owners agree to regulate grazing and to set an upper limit on livestock numbers. Sustainability of the lagoon ecosystem depends on self-regulation of the fishing effort by the local fishing community.

- analyze the extent to which they depend on the resource for their livelihood;
- map the territories claimed by different categories of users at different times of year, showing areas of overlap and conflict;
- describe systems of land tenure;
- identify the locus of decision-making power over use of the resource, in the past and at present;
- describe traditional methods for regulating resource use and for resolving conflicts between users;
- identify the reasons why traditional regulation has broken down and what could be done to restore or replace it;
- determine whether the project should build on traditional social institutions or create new ones to manage the resource.

### **Ensuring an Equitable Distribution of Benefits**

If for technical reasons, conservation projects must involve the entire community, this may limit the scope for targeting project actions to disadvantaged groups within a community. Soil conservation projects must treat the catchment as a whole, regardless of land ownership. Benefits accrue according to the amount of land treated. If work is done communally, large landowners benefit proportionately more from communal labour than the small farmers and landless households. One solution would be to provide cash payments or food rations for conservation work on other farmers' land. A sand dune stabilization project in Yemen proposes to solve the problem by recovering the cost of land reclamation from land owners rather than tenants. Another option would be to make financial support for a particular community project conditional on the establishment of an equitable system for compensation of labourers and recovery of costs.

In some cases, project planners may be forced to choose between environmental conservation and poverty alleviation, because the two objectives cannot be reconciled. For instance, in an arid zone where crop failure is frequent, the poorest households may consider livestock as essential for their survival, because they rely on sale of goats to buy food in bad years. But environmentalists may object to a credit programme to help stockless households to buy goats, on the ground that grazing areas are already overstocked. If the large owners are unwilling to destock, the only way to assist the poor may be to find a substitute for livestock as a hedge in case of crop failure.

### **Public Choice Approaches and Institutional Economics**

*Public Choice Theory* refers to a school of economic thought which concerns itself with management of common property resources. It starts by assuming - for heuristic purposes - a Hobbesian or Malthusian world in which each individual seeks to maximize his individual economic gain in the short term without considering the long-term consequences

of his actions. In his pursuit of individual economic gains, each individual has an incentive to cut as much wood as possible from the common forest or to maximize livestock numbers in the common grazing area. But if all households do the same, the forest will be destroyed and pastures will be denuded of their grass. Thus the pursuit of short term economic gain by individuals is diametrically opposed to the long term welfare of the community and even to the long run self-interest of individual households.

One possible solution would be to privatize common property resources. This would give individual owners control over access and a vested interest in conserving their assets. However, where this has been attempted the results have been disappointing from technical, economic and social points of view. Where the transition to private property was left to market forces, the rich evicted the poor, but often there was no incentive for them to intensify land use. Conversely, when all users were given equal shares, sub-division interfered with rational resource management. The alternative to privatization is a "*social contract*" in which individuals agree to regulate the pursuit of private gain in the interests of the collectivity.

Underlying the idea of a social contract is the assumption that social engineering can succeed by manipulating the incentive structure of individuals in ways which are compatible with sustainable resource conservation. The principal weakness of the approach is its tendency to reason from abstract, theoretical and deductive premises, without sufficient regard for the actual socio-economic situation and cultural traditions of the people to which the theory is applied. It pays little attention to traditional patterns of resource management and indigenous ecological knowledge. Another disturbing aspect is the tendency to reduce sociological phenomena to purely economic terms. Its supporters claim to eliminate the need for sociological analysis in favour of behavioural engineering based on a system of economic rewards and sanctions. Empirical studies of farmers' reactions to proposed conservation measures are considered to be superfluous.

The Hobbesian world in which all individual actors seek to maximize short term economic gain in competition with one another has little or no basis among traditional pastoralists, fishermen and forest dwellers in developing countries. On the contrary, anthropological studies show that in most cases, under traditional regulation, the exploitation of common property resources was sustainable. It has broken down recently as a consequence of demographic pressure, penetration of the market economy, transport and changes in land tenure.

## **PART III: PROCEDURES**

### **1. INTEGRATING SOCIOLOGICAL ANALYSIS IN THE PROJECT CYCLE**

*This chapter is designed to assist Investment Centre mission leaders and managers to determine what type of socio-economic information is needed at different stages of the project cycle, and what type of sociological input is best suited to giving them the information they need. It is also intended to provide guidance to consultant sociologists and anthropologists who are unfamiliar with investment project work. It emphasizes the differences between qualitative diagnostic studies and quantitative surveys, which continue to be a source of considerable confusion for non-specialists.*

#### **Introduction**

Most international financing institutions for which the Investment Centre works (such as the World Bank, African Development Bank and IFAD) divide project design into 3 steps: identification, preparation and appraisal; followed by implementation and project completion evaluations. The potential contribution of social scientists, including rural sociologists, socio-economists and development anthropologists differs at each step.

<b>Steps in Project Cycle</b>	<b>Sociological Input</b>
General Identification	Identification of suitable target groups for lending agency
Project Identification	Diagnostic work; assist in developing project concept
Project Preparation	Design participatory mechanisms; income-generating components
Project Appraisal	Social soundness analysis
Project Implementation	Group formation; community mobilization
Ongoing M&E	Beneficiary analysis
Post Project Evaluation	Social impact assessment

Although sociological analysis has a potential contribution to make at each stage of the project cycle, from general identification to project completion or ex-post evaluation,<sup>28/</sup> the Investment Centre's *Design Study* concluded that project identification is the most important and most neglected stage of the design process. It is at this stage that sociological inputs to project design are most important, as a basis for defining a project concept and assessing alternative design options. Later, at project preparation, sociologists may also be required to design strong farmers' or community organizations as a vehicle for extension, input supply, credit, marketing, farm water management or land improvement activities.

<sup>28/</sup> However, this does not imply that a sociologist should participate in each and every mission, except in the case of poverty-oriented projects. For other types of projects, it is usually sufficient to examine sociological issues once during the project cycle.

## **Information Needs at Different Stages of Project Design**

Information required for project design and implementation can be divided into four broad categories:<sup>29/</sup>

- Type A: General statistical data needed for project design (demographic, physical, technical, socio-economic)
- Type B: Information on causes-effect relationships and dynamic trends needed as a basis for developing a project concept
- Type C: Baseline data needed for project impact evaluation
- Type D: Beneficiary information needed for M&E

In most cases, **general statistical data** needed to determine the potential target population and cultivated area are already available from official sources such as the population census, national census of agriculture and MOA statistics. Sometimes - when the boundaries of the project area do not coincide with the administrative units utilized for the census - some reaggregation of census data will be needed. However, the Investment Centre is sometimes requested to design a project in remote areas where no census is available, or where there have been massive population movements in response to war, famine, banditry, forced resettlement, compulsory villagization or ethnic conflict. In such cases the first priority should be to undertake a "*quick and dirty*" census before considering other types of information gathering.

For **diagnostic** purposes, we need information on causes and effects. For instance, to design a poverty-oriented project we need to develop and test a thesis regarding the causes of poverty and the options for alleviating them. This requires us to move beyond the static picture of the resource base which emerges from census data in order to understand the project area and its people from a dynamic point of view. This entails an understanding of the area's social and economic history, the process of socio-economic differentiation, impoverishment and accumulation of wealth. Likewise, we need to understand the farming system from a dynamic point of view, to know which crops and activities are expanding and what they are replacing and why. We need to understand the survival strategies of different types of households, their perceived problems, proposed solutions, priorities and their reactions to Government proposals.

For **monitoring** purposes we need continuous feedback on the number and characteristics of project participants, whereas for **impact evaluation** purposes we need statistically reliable descriptive data on those parameters which the project intends to influence, such as land distribution, cropping patterns, production and household income at two points in time - the **baseline** situation and at **project completion** - in order to compare the "with" and "without" project situations.

The type of socio-economic data needed at different steps of the project cycle is shown schematically below:

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<sup>29/</sup> This does not imply that each type of data needs to be gathered from scratch for every project. Data-gathering should be avoided except in cases where it is absolutely necessary due to lack of information from secondary sources.

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Step in Project Cycle	Main Information Needs
Reconnaissance	Census Statistics/Resource Inventory (A)
Identification	Diagnostic Studies (B) + Census Statistics (A)
Preparation	(A) + (B) + Institutions & Support Services
Implementation	Beneficiary Information (D)
Impact Evaluation	Baseline Survey Plus Repeat Survey (C)

### Choice of Socio-Economic Data-Gathering Methods

The choice of socio-economic data-gathering methods should be a direct function of the type of information needed and existing data availability.

Information Type	Source/Method
Basic Descriptive Statistics Land, Water, Soil Resources	Census or Sample Survey Resource Inventory, Mapping
Dynamic Patterns, Trends Farmers' Point of View	Diagnostic Study Structured Interviews
Baseline Data for Impact Evaluation	Formal Sample Survey

When basic demographic, agricultural and resource data on the project area are totally lacking, there are two options, depending on the time and resources available: (i) to do a "quick and dirty" census followed by a rapid diagnostic or, if time and resources permit, (ii) to complete a rapid diagnostic study as a basis for undertaking a formal quantitative survey.<sup>30/</sup>

Even when secondary data on a region are relatively complete, detailed resource inventories and cadastral surveys may be still be needed at the level of individual villages, to plan land development in connection with *terroir* projects; inventories of livestock ownership in relation to pasture resources may also be needed<sup>31/</sup>.

Whenever relatively recent basic production and census data are available, a large-scale household survey is not necessary. Farm management and income data from a smaller purposive sample will suffice for project design purposes. However, data from a small sample diagnostic study cannot be regarded as sufficiently representative to serve as a baseline for impact evaluation.

When information from secondary sources is exceptionally good or when much is already known about farmer response to actions similar to those promoted by the project, as in the case of second phase projects, diagnostic studies with a sociological input may not

<sup>30/</sup> A formal survey should not be attempted in a little-known region without undertaking exploratory work. This is needed to design questionnaires and to ensure that the data gathered are as reliable as possible.

<sup>31/</sup> A guideline for quantitative surveys of village land tenure systems and resources was developed by FAO IC in Niger - Projet d'aménagement des terroirs villageois de l'arrondissement de Mayahi.



be necessary. However, a diagnostic study should not be ruled out if the first phase encountered problems such as feeble farmer participation, low rates of adoption or collapse of farmer organizations.

Only when it is necessary to undertake a large-scale socio-economic survey prior to project design, can the data can be used as a baseline for impact evaluation. However, it is wiser to defer baseline surveys until the project design is final, because much of the information may be worthless if project design undergoes major changes at appraisal or if implementation is delayed for several years.

### Choice of Socio-Economic Study Design

The joint World Bank, IFAD and FAO publication on "The Collection, Analysis and Use of Monitoring and Evaluation Data" (1988)<sup>32/</sup>, distinguishes between two types of study designs: quantitative and qualitative. Each has its own purpose, logic, data-gathering methods and end use. Both have a legitimate and complementary role to play in investment project work. The main types of qualitative socio-economic studies used by rural sociologists and development anthropologists in connection with project design are case studies and diagnostic studies based on small-scale comparisons (of many cases). The main types of quantitative studies are surveys and experiments.

Method	Characteristics	Purpose
Case Study	Qualitative/ Descriptive	Understand how systems work; Analyze relationship of parts to whole;
Controlled Comparison	Qualitative/ Analytic	Analyze relationships, develop typologies; Generate theories about causes/effects;
Sample Survey	Quantitative/ Descriptive	Quantify distribution of traits in universe; Analyze statistical correlations between traits;
Experiment	Quantitative/ Analytic	Test theories: manipulate 1-2 variables holding all other variables constant

Each type of study is suitable for a particular task which is undertaken at a specific stage of the project cycle. *Case studies* are useful at the beginning of the project cycle, for instance for understanding a new region. They also have a legitimate role to play in monitoring and evaluation. *Controlled comparison studies* are useful for diagnostic work at project identification. Later in the project cycle, *formal sample surveys* can be useful in quantifying the parameters identified by previous qualitative studies and for evaluating the project's impact. *Experimental methods* have limited applicability to complex social phenomena but are useful for agronomic trials.

**Case studies** are primarily descriptive. They are ideal for analyzing agrarian systems at a given point in time and can be used to document how changes in one part of the

<sup>32/</sup> Casley, Dennis J. and Krishna Kumar, The Collection, Analysis and Use of Monitoring and Evaluation Data. Baltimore, Johns Hopkins Univ. Press for the World Bank, IFAD and FAO, 1988.

system affect the system as a whole. An example would be an in-depth study of two rural villages, one selected to represent a typical lowland village and the other a typical highland village. The aim of the study would be to understand how each village works, and to compare and contrast the two. Although the village level data would be very complete, there would be no way of knowing whether they were representative or not. Thus the studies could not be used to generalize about the project area.

**Diagnostic studies** are analytic. They use comparisons between a limited number of cases to facilitate analysis of differences between agro-ecological zones, production systems, types of villages and types of households, as a basis for project design. Each case is analyzed as a system, to shed light on the relationships between the parts and the whole. Then cases are grouped into types, which are compared in order to generate hypotheses about causes and effects and the evolution of systems over time. They can tell us the problems and priorities of different types of village and categories of the population, but they cannot tell us how many villages are of a particular type and or how many households are above or below the poverty line in the area as a whole.

**Formal sample surveys** are descriptive. They are designed to quantify the distribution of individual traits (such as farm size or family size) in the universe with a high degree of statistical accuracy (usually within 5%). Their main limitations for project design purposes are that they are unsuitable for analysis of systems and for understanding dynamic trends.

### **Trade-Offs Between Formal Surveys and Diagnostic Studies**

The main differences between formal sample surveys and qualitative diagnostic studies are summarized in the table below.

<b>Socio-Economic Survey</b>	<b>Diagnostic Study</b>
Formal Survey Methods	Comparative Case Study Methods
Statistical Sample	Purposive Sample
Fixed-choice Questionnaire	Structured Interviews
Enumerators	Researchers do own Interviews
Data Coding and Entry	Field Notes
Output: Statistical Tables	Typologies, Relationships
Cases Averaged Across Strata	Cases Grouped by Typology
Descriptive Report	Analytical Report

The principal advantage of formal surveys is that the relationship between the sample and the universe which it is supposed to represent can be known and described statistically. If certain rules are adhered to in drawing the sample, one can extrapolate from the sample to the project area with certain prescribed levels of confidence. The number of cases to be sampled is determined on the basis of mathematical theories of probability. The methodology presupposes a sampling frame in which the total number of units and sub-units to be sampled is known in advance. Construction of a stratified sample presupposes that other characteristics (such as farm size and agro-ecological zone) are known in advance as well. However, in most areas where projects are formulated, a full listing of villages and households

is rarely available to guide sample selection and cannot be accomplished within reasonable time limits. Another problem is that enumerators may be unable to follow random sampling procedures because their first choice household is not home on the day of the interview; the second choice is out in the fields, and so they often end up with whoever happens to be present in the village. This can introduce systematic bias.

Even if sampling errors are avoided, other flaws in survey design, execution and analysis (referred to in jargon as "*non-sampling errors*") can reduce the statistical validity of survey data to the point where it has no comparative advantage over data generated by qualitative studies. Some common types of non-sampling error include: interviewer bias, misinterpretation of questions, miscoding of responses, errors in data entry and computerized data processing, and cheating by lazy enumerators who sometimes fill out the questionnaires themselves to avoid doing the interviews.

The most important limitation, however, is that formal surveys are designed for descriptive rather than diagnostic purposes. They provide a static picture of the distribution of certain traits in the universe represented by the totality of households at a given point in time, but they do not tell us the underlying causes of the patterns and it is difficult to use data from a single observation to build up a picture of trends over time, although retrospective information can sometimes be gathered. Moreover, if the unit of data gathering is the household, it is difficult to build up a picture of village social organization or the relations between socio-economic strata.

The type of information which can be generated by surveys is relatively limited because the questions are standardized and answers are specified in advance; it is not possible to ask "*second generation*" questions which emerge from responses to the initial set of questions. Typically, respondents are asked to state how many cows, calves and bullocks they own, but they are never asked why they keep cows instead of bullocks or have fewer animals than their neighbours. Another limitation is that interviewing is usually done by enumerators, thus limiting the exposure of the project formulation team and government counterparts to the local people.

Qualitative studies are more adapted for shedding light on the farming practices and survival strategies of different types of households as a basis for generating hypotheses about the causes of poverty and options for addressing them. They can also be used to identify farmers' priorities and to verify assumptions underlying project design. The sampling principle is "*purposive*" in that the selection of cases is determined by the parameters which the researcher wants to examine (e.g. poor versus wealthy households, mixed farmers versus pastoralists, female versus male household heads, presence/absence of off-farm income). The number of households in each category can be specified in advance or adjusted to accommodate new parameters if necessary.

### **Selection of Data-Gathering Methods**

For each type of study, there is a corresponding method (or set of methods) of data gathering appropriate for that study design. Formal surveys use fixed choice questionnaires with pre-coded response, which are administered by enumerators. Qualitative studies, on the other hand, use a variety of data-gathering techniques such as case studies, in-depth interviews with key informants, group interviews, participant observation, secondary

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data sources such as credit and extension records and semi-structured interviews with a limited number of households deliberately selected to permit comparisons of different farming systems or socio-economic groups.

Type of Study	Data-Gathering Methods
Case Study	Participant Observation, Resource Mapping, Key Informants, Informal Sampling, Unstructured Interviews, Non-leading Questions
Diagnostic Study	Interdisciplinary Team, Sondeo, Key Informants, Group Meetings, Semi-structured Household Interviews
Sample Survey	Fixed Choice Questionnaire, Pre-coded Responses, Enumerators Conduct Interviews

Each type of study entails a different type of sampling, designed expressly to suit study objectives. Case studies use only 1-2 cases, selected as "typical" of a particular zone or type of village. Diagnostic studies use a "*purposive*"<sup>33/</sup> sample of 20-40 cases as a vehicle for comparing differences between types. And formal surveys use probability (random) sampling.

Type of Study	Sample Size and Principles of Selection
Case Study	Small sample (e.g. 1 to 4 villages), selected as typical or seemingly representative of different situations; within these villages, most households interviewed.
Diagnostic Study	Purposive sampling; sample size determined arbitrarily to maximize opportunity for comparing pre-selected parameters.
Sample Survey	Probability sampling (stratification; clustering and randomization within clusters); sample size determined by mathematical probability theory; large number of cases.

### Rapid Rural Appraisal (RRA)

Rapid Rural Appraisal is a technique designed in the late 1970s as an alternative to formal sample surveys. It is based on qualitative data-gathering techniques used by anthropologists, but introduces short-cuts to generate primary data within the time limits of project design, monitoring and evaluation missions. Manuals on RRA describe it as "an exploratory and highly iterative research methodology which allows a process of rapid and progressive learning to take place"<sup>34/</sup> or as a "toolkit of techniques designed to reduce bias in data gathered under severe time constraints"<sup>35/</sup>. Its core features include: (i) interdisciplinary teamwork (among sociologists, economists and technical specialists in agriculture and related disciplines); (ii) substantial use of indigenous knowledge; (iii) "triangulation" of information from intentionally different points of view (including different technical disciplines and a

<sup>33/</sup> Purposive sampling refers to a rigorous system for selection of cases on the basis of pre-determined parameters. It is not, as some critics claim, informal, sloppy, biased, casual or haphazard (for details on sampling see Chapter IV).

<sup>34/</sup> Khon Kaen University, Proceedings of the 1985 International Conference on Rapid Rural Appraisal, Khon Kaen University, Thailand, 1987.

<sup>35/</sup> Molnar, Augusta, Community Forestry - Rapid Appraisal. FAO, Community Forestry Notes, 1989.

combination of formal and informal data sources); (iv) the use of "purposive" sampling; (v) flexibility; and (vi) use of conscious judgement.

In recent years, manuals have been developed for application of RRA methodology to the design of projects in the fields of community forestry, land management, land tenure, and farming systems research/extension. It has also been adapted for project monitoring and evaluation. Some of the most common techniques associated with RRA include: map making, transects, crop calendars, seasonal profiles, remote sensing/photo-interpretation and wealth rankings. One offshoot of RRA, referred to as Participatory Rural Appraisal is designed to elicit indigenous ecological knowledge from rural communities through visual exercises such as building models of the village and drawing graphs in the sand.

### **Linkage Between Diagnostic Studies and M & E**

For technical reasons, diagnostic studies using qualitative methods cannot be used as a substitute for quantitative baseline surveys. Nor can the two methodologies be combined in a single "survey". However, the former can be of assistance for the latter. Whenever possible, completion of a qualitative diagnostic study of target groups and their production systems should be a prerequisite for the undertaking of formal quantitative baseline surveys for M & E purposes. In the case of poverty alleviation projects, development of an interpretation of the causes of poverty and socio-economic differentiation is essential as a basis for identifying which parameters the project seeks to change. These are the critical parameters which M & E baseline surveys should seek to quantify with a statistically significant degree of confidence.

The importance of narrowing the scope of data-gathering early in the project cycle should not be underestimated. Past experience of the World Bank and FAO with M & E suggests that, in many cases, masses of data were collected which then proved difficult to analyze. Insofar as it offers criteria for the selection of critical parameters and thus reduces the scope of quantification in a way that is coherent with project design, the present approach - which gives priority to development of an interpretive scheme as a prerequisite for design of quantitative baseline surveys - may be able to contribute towards the aim of setting up better focussed, more relevant and more manageable M & E systems.

Another option might be to repeat the original qualitative diagnostic study at the mid-term and again at project completion, to complement and interpret the information generated by formal baseline and repeat surveys.<sup>36/</sup> The interviews could cover some of the same villages and even the same households interviewed at the time of the diagnostic study. However it would not be advisable to limit such studies to the original sample covered by the diagnostic study.<sup>37/</sup>

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<sup>36/</sup> Repeat interviews would only make sense in cases where detailed interview data had been gathered during the diagnostic study on land and livestock ownership, cropping patterns, production and income at village and household level. Moreover, members of the diagnostic team would require at least 2 additional weeks to write up their field notes in a form which could be used by outsiders undertaking a restudy.

<sup>37/</sup> Since the diagnostic team would not know in advance whether the households interviewed would benefit from the project, the actual proportion of beneficiaries included in the original sample might be too low to be of use for project evaluation. On the other hand, if project management were to suspect that the financing agency intended to monitor the project's impact on the original sample, it might manipulate the evaluation by making certain that every household in the original sample was included among the beneficiaries.

## **2. OPTIONS FOR SOCIOLOGICAL ANALYSIS**

There are 3 main options for integrating sociological analysis in investment project design work, which can be used singly or in combination: (i) to use sociologists on design missions; (ii) to contract a formal (quantitative) socio-economic survey and (iii) to undertake a (qualitative) diagnostic study.

### **Option 1: Use of Sociologists on Project Design Missions**

This option works best when there is already a wealth of secondary data on target groups and production systems in the project area and the sociologist already has extensive experience in the country. There is no time to generate systematic primary data. Field work is used primarily to confirm and interpret data from other sources.

**General Identification Missions.** Participation of a sociologist is recommended only for missions undertaken on behalf of agencies concerned with poverty alleviation (notably IFAD). The main purpose of such a mission would be to develop a medium-term country strategy and on the basis of this strategy, to identify a series of projects to be included in the pipeline for eventual financing. Within this context, the sociologist would have two important roles: (i) to identify suitable target groups for projects and (ii) to assess the social feasibility of any projects proposed for inclusion in the pipeline.

**Specific Project Identification and Preparation Missions.** At project *identification*, the sociologist's main emphasis should be on diagnosis of constraints and opportunities: analysis of the socio-economic context in which the project will operate; identification of factors likely to affect farmers' uptake of technologies and the distribution of benefits; definition of target groups; identification of farmers' perceived problems and priorities; and diagnosis of constraints which the project should address.

At project *preparation* the sociologist would be responsible for designing components dealing with community organization and people's participation, and (in the case of poverty alleviation projects) for ensuring proper targeting of project components. In some cases the sociologist may also be requested to design components for rural women and disadvantaged groups. If there has been no previous sociological input at project identification, the TOR of sociologists assigned to preparation work should cover both diagnosis - to the extent that this is still necessary - and design.

### **Option 2: Socio-Economic Surveys**

In most cases, large-scale socio-economic surveys are not needed for ordinary diagnostic and design purposes. Since they entail considerable time, costs and risks, they should only be undertaken when data on people and production systems in the project area are totally absent. When census data are available, missing farm management and income data can be generated more quickly and reliably as part of a diagnostic study.

Socio-economic surveys may be undertaken directly by the IC or contracted to Government or national research institutes. The former option is more costly, but tends to result in a final product which is more suited to the needs of the project design process and

completed more quickly. Experience suggests that most surveys prepared on behalf of the IC have not been delivered on schedule. Most delays occur at the stage of data coding, entry, analysis and report writing. Many institutions have a large backlog of survey data waiting to be processed. Before awarding a contract, it is wise to make a realistic assessment of data-processing capacity in relation to demands. For a formal survey, it is prudent to allow 6 months from start to finish, even when the contract specifies that the report is to be delivered in 2-3 months. When an initial household listing is necessary prior to the survey, 8 months is more realistic.

Although most developing countries have the capacity to undertake socio-economic surveys, contracting of surveys to national institutes is not always cost-effective due to the uneven quality of the products. Many surveys undertaken on contract for the Investment Centre by local institutes have been insufficiently issue-oriented. Neither the questionnaires nor the analyses were designed to clarify specific project-related issues. The reports tended to limit themselves to descriptive statistics on household size, land holdings, cropping patterns, input use, production, incomes, and access to social services. For this reason, their utility for project design has usually been rather limited.

Some of these weaknesses could be overcome by involving Investment Centre sociologists in study design and interpretation of results. A sociologist would visit the country for 7-10 days prior to the start of the survey to work with the local team on survey and questionnaire design and to agree on approaches to the study. Later, he/she would return to the country to assist with analysis after data-gathering and coding was completed, to ensure that findings were presented in a form useful for project design decisions. The influence of the socio-economic study on project design could be multiplied by involving the same sociologist in project preparation (or in his/her absence, by hiring the local survey director to accompany the preparation mission during its field work).

A related problem is lack of continuity between the survey team and the staffing of IC project design missions. Experience has shown that if the survey is undertaken without the benefit of interaction with Government and IC mission members, its impact on project design can be minimal. To overcome this problem, it could be desirable to involve the national institution responsible for the socio-economic survey in the project from the beginning. The design of the survey would be discussed and agreed at the time of the project identification mission, in the hope that data could be gathered and fully analyzed in time for project preparation.

Whenever a formal socio-economic survey is carried out under IC supervision, the consultant responsible for supervising survey design and analysis of results should participate in the project preparation mission, to ensure that study findings are taken into account by the design team. Participation in the project identification mission would also be desirable, to ensure that the sociologist is conversant with the full range of technical and socio-economic issues which the study needs to clarify. Some mission leaders have brought the national counterpart sociologist to Rome to assist in drafting the project preparation report.<sup>38/</sup>

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<sup>38/</sup> However, experience suggests that many nationals will require substantial guidance from the mission leader and IC sociologists in drafting and editing their technical annexes. Nonetheless, this can be a useful way of familiarizing local sociologists with the mechanics of investment project preparation.



### **Option 3 - Socio-Economic and Production Systems Diagnostic Study**

Four years ago, the Investment Centre began to search for alternatives which would permit it to undertake deeper diagnostic work earlier in the project cycle, without unduly lengthening the total time required from identification to appraisal or aggravating costs. Instead of a formal sample survey, a qualitative socio-economic and production systems diagnostic study is undertaken over about 4 weeks in the project area at the beginning of the project cycle, using Rapid Rural Appraisal techniques. The methodology is designed to ensure:

- sufficient time for field work and analysis of results prior to project design;
- dialogue between sociologists and production systems experts,
- direct consultation with the intended beneficiaries;
- involvement of the implementing agency in field work;
- timeliness and pertinence of study findings;
- continuity between members of diagnostic and project design teams.

The design of socio-economic diagnostic studies is discussed in detail in Part IV.

### **Non-Viable Options: Combining Surveys and RRAs with Design Missions**

Sometimes the mission's TOR call for the rural sociologist to undertake a large-scale socio-economic survey during a project preparation mission, with the expectation that the data can be analyzed and written up in the usual time allotted for report writing and used in project design. This is, of course, unrealistic. The time frame is too short to do the job properly. Even if the sociologist spends the entire period in the field, there is not enough time to complete a village listing, draw a representative sample, design a questionnaire, train enumerators, pre-test the questionnaire, complete the interviews, code, cross-check and enter data and analyze it before the end of the mission's typical report writing period in Rome. The minimum amount of time required to design, administer, code and analyze even the simplest survey is two months. In most developing countries, 6 months is more realistic. If the findings are not available in time to be taken into account in the mission's report, they will have little influence on project design. The main disadvantages of this approach include: poor quality data, delays in data analysis, isolation of the sociologist from the rest of the mission and consequent lack of impact on project design.

Although it is technically possible to carry out a quick RRA simultaneously with a project preparation mission, it is preferable to send the sociologist and agronomist to do the diagnostic work ahead of the mission. If, for one reason or another, the latter is not possible, the following procedures should be followed: the sociologist should arrive in the country with the rest of the mission and should go directly to the project area to undertake rapid reconnaissance in advance of the rest of the mission. Upon the mission's arrival he/she should brief them on the findings, and assist other team members to make an itinerary for the field visits. He/she should accompany other mission members to the villages, to ensure that they incorporate sociological perspectives into their own work. Unfortunately, this rarely allows the sociologist enough time for systematic village and household interviews. Moreover, it forces

the sociologist to work in isolation from other mission members for much of the time. Another drawback is that it leaves no time for the sociologist to cover the institutional side: all his/her time is spent in villages, making it difficult to meet with ministries, donors and NGOs. Although a quick RRA is better than nothing, the Division's experience suggests that 3-4 weeks of field work is the minimum required for proper diagnostic work, and 2-3 weeks are needed to process the data to the point that meaningful conclusions can be drawn to support project design considerations.

### **3. INTERACTION BETWEEN THE SOCIOLOGIST AND OTHER TEAM MEMBERS**

The ultimate value of a sociologist's contribution to an Investment Centre mission lies in its influence on the design of projects/programmes. Although it is essential for the sociologist to produce a well-reasoned and documented report, this is not enough. For this reason, interaction between the sociologist and other mission members in the field is at least as important as report writing.

#### **The Sociologist's Role and Contribution on Mission**

On mission, the sociologist should interface closely with technical specialists in agronomy, livestock/pasture, irrigation, fisheries, and forestry. The sociologist and the technical specialists should work together to understand poor households' land and labour allocation strategies, their ways of minimizing risk and their constraints for adopting proposed technologies. Together they should weed out solutions which are technically possible but unlikely to be adopted and make judgements about the estimated rate of adoption and the number of households likely to benefit from each component. In the case of smallholder projects, it is equally important for the sociologist to work with specialists responsible for designing extension, credit and marketing systems, to identify what can be done to make these delivery systems responsive to the needs of small producers.

**General Identification Missions.** The sociologist would usually be a member of a 3-4 person team including an economist, an agronomist and possibly a technical expert in livestock, agro-forestry or fisheries. The assignment would ordinarily involve 3-4 weeks in the country, much of it in the capital city, plus short field trips to possible project sites, followed by possibly 3 weeks of report writing in Rome. The sociologist should work closely with the mission leader and other members of the inter-disciplinary team at all times.

During the mission's stay in the country, the sociologist should work closely with the mission leader/economist to gather and analyze as much relevant information as possible on poverty and income distribution, ownership of land, livestock and other income-producing assets, and rural employment. In most cases the mission will deal with the rural sector of the entire country. For the analysis, the sociologist would need to rely heavily on secondary sources because the time allotted for field work would be extremely limited.

The sociologist's first responsibility would be to assist the mission leader to identify the poor - their numbers, geographic location, resource base and demographic characteristics - as a basis for identifying priority areas (not necessarily geographic) for the funding agency's intervention. The next step would be to define and rank target groups in order of priority. Finally, the sociologist should examine all projects suggested for inclusion in the project pipeline to determine their consistency with definitions of priority target groups.

**Specific Identification and Preparation Missions.** The assignment usually would involve a 3 to 4 week mission in country, followed by about 3 weeks of report writing in Rome. The mission typically spends the first week discussing the project with officials in the national or provincial capital, followed by around two weeks in the project area and a few days back in the capital for wrap-up meetings. Even during the mission's presence in the

project area, much of the time will be spent in government offices and research stations - leaving relatively little time for direct contacts with farm households. This severely limits the amount of field work which a social scientist can hope to do, forcing him/her to rely on secondary data sources complemented by a limited number of trips to villages to talk with farmers. The person recruited should have a good "nose" and be willing to use "quick and dirty" methods to generate information needed to arrive at judgments about project design.

It is important that the sociologist continuously interacts with other mission members, and with officials from the implementing agency, assisting them to understand how the socio-economic context impinges on their own subject matter. Although it is easier for the sociologist to learn about people's reactions to the Government when there are no officials around, officials are likely to discount any information which is disclosed behind their backs. If consultation with the intended beneficiaries is to influence the project, it is important for representatives of Government to be present during village interviews.

**Socio-Economic and Production Systems Studies.** The assignment would usually involve a 4-5 week mission in country, alone with an IC (SEPSS) production systems expert and Government counterparts, followed by 5 weeks in Rome, of which roughly half would be for data coding and analysis and half for report writing. However, sometimes the diagnostic study might be done back-to-back with a project formulation or preparation mission though this is undesirable. In the latter case the field work would last 6-8 weeks, followed by 4 weeks of report writing. After 3-4 weeks of field work, the IC sociologist and production systems expert would be joined by the mission leader and other technical experts. In both cases, close rapport between the sociologist and production systems expert is essential for success.

Since the purpose of the diagnostic study is to generate primary data at grassroots level, team members should go to the field as soon as possible after making the necessary logistic arrangements. The initial few days in the country should be used to gather secondary information not obtained before departure, and to allow the production systems specialist to discuss possible technological innovations with MOA officials and research specialists. Upon arrival in the project area, they should complete a reconnaissance and zoning, select sample villages and get straight to work. The SEPSS team should plan to do a minimum of 20 full days of village and household level interviewing, working a 7 day week if possible, from dawn to dusk. In the evenings, they will continue to interact with one another and Government counterparts during and after meals. Most of the time in the project area should be allotted for village groups and household interviewing, but a limited amount of time should also be reserved to visit extension workers and research stations exclusively with the view of obtaining their opinion on available technological innovations and farmers' problems with adoption. No time should be reserved for visits to ministries, donors, banks, or to discuss and elaborate detailed investment proposals as this will be covered at project preparation. The persons selected for diagnostic work should be experienced field workers who enjoy contact with the local people. They should be prepared to trek to and from villages and to spend the night in farmers' huts if necessary.

### **Constraints Affecting Teamwork During Report Writing**

Whatever the type of mission (identification, formulation or preparation), the sociologist should strive to maximize his/her contribution to the project concept and to other

mission members' components before returning from the field. Ideally, inter-disciplinary teamwork should continue throughout the report writing period. However, experience suggests that once the mission returns from the field, individual team members are usually under so much pressure to produce the required technical reports within the allotted time that interaction between them is greatly reduced. If the sociologist expects the other mission members to take his/her findings into account while developing their technical annexes, he/she should discuss the salient points with them before they write their report.

### **The Sociologist's Contribution to the Mission's Report**

Depending on the nature of the project and the wording of the terms of reference, the sociologist will be expected to write part of the main diagnostic study report or one or more technical annexes to the mission's report. The main contribution would often consist of an annex which reviews what is known about socio-economic conditions in the project area, defines the target group and makes practical recommendations aimed at ensuring that the benefits go to the intended beneficiaries (see Appendices 1 and 2 for an outline). In addition, the sociologist may be called upon to design a specific project component. On request from the mission leader, the sociologist may also be asked to draft sections of the main report.<sup>39/</sup>

In the main report, the sociologist's contribution to the mission should be reflected throughout the text, and particularly in sections dealing with the project rationale and design considerations, definition of target groups, description of project actions and assessment of benefits - not just in the sociological background. It is not enough for the main report to describe the target group: the report should clearly state what the project will do to address the causes of poverty, what features have been built into the design to target it to the poor and what the expected outcome would be in terms of impact on poverty. It is the responsibility of the mission leader to ensure (i) that there are no major discrepancies between the definition of the target group given in the sociological annex and the beneficiaries of project actions, and (ii) that socio-economic and target group concerns are fully reflected in the mission's report.

In the case of a general identification mission, the sociologist's report might consist of one or more technical annexes dealing with rural poverty and target groups, as well as contributions to the main report or to annexes prepared by other technical specialists. The sociologist would also write an assessment of socio-economic and target group issues surrounding each of the proposed projects. Depending on the nature of the projects identified by the mission, he/she might also be given responsibility for writing on rural institutions or NGOs, or designing a project or component for a particular target group such as landless households, rural women or youth.

### **Where the Sociologist's Role Stops**

Although the sociologist is expected to make a contribution to the project concept, the design of mechanisms for farmer participation, and to the judgement about the adoptability of technical proposals it is important to avoid the impression that the sociologist is expected to assume full responsibility for work lying beyond his/her discipline, which is

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<sup>39/</sup> For an outline of a project preparation report, See *Guidelines for the Design of Agricultural Investment Projects*, FAO Investment Centre Technical Paper No. 7, Part III, 1995.

handled by other mission members. The sociologist may, for instance, be responsible for defining grassroots institutional arrangements but other aspects of institutions, including design of project organization and management structures and M&E systems are the responsibility of the mission leader (or an institutions specialist). Likewise, although the sociologist may be expected to contribute to selection of farm models, assessment of labour availability and estimation of the number of beneficiaries who are to take up different activities, the primary responsibility for this work lies with the agronomist. In the case of community development funds and income-generating components, the sociologist may be responsible for designing community mobilization systems and assist in selection of activities, the mission economist should prepare cash flows for individual activities, as well as estimate funding requirements and elaborate credit procedures.

## 4. OPERATIONAL ISSUES

### **Choice Between Sociologists, Anthropologists and Other Types of Specialists**

The type of specialization required for investment project work depends on the nature of the project and the stage of the project cycle.

- For **identification** work, we need people with a broad background, who are able to cover all aspects of rural sociology, anthropology, demography, land tenure and WID, and who have strong conceptual and writing skills. Previous investment project design experience is essential, and prior experience in the same or neighbouring countries is desirable. For general identification missions, consultants should also have expertise in poverty analysis and familiarity with issues related to social dimensions of structural adjustment and linkages with agricultural sector policy.
- For **diagnostic** work involving RRA, the consultants should be skilled field workers and enjoy roughing it. Preferably, they should also have strong analytical and report writing skills.
- For **project preparation**, we need people who have least 5 years of hands-on experience in the design and implementation of farmers' group, community development or WID components.

There is considerable overlap between the skills of **rural sociologists** and **development anthropologists**, although the former may be more experienced in formal survey methods and the latter in participant observation methods. Both can be used interchangeably for much Investment Centre work. However, a specialist in **social anthropology** may be necessary when dealing with an ethnically heterogeneous population or with tribal peoples, shifting cultivators or pastoralists. In this case a fuller understanding of social organization including clans, lineages, kinship, marriage, residence and inheritance rules may be important for the project. **Socio-economists** are trained primarily in formal farm management survey methodology. In this area their skills overlap with those of agricultural economists. Although most rural sociologists are knowledgeable about farmers' organizations and village institutions, an **institutions specialist** should be employed when specialized expertise is needed on financial, administrative and management aspects of institutional design.

The Investment Centre usually uses **WID experts** only when the financing agency requests a women's project or major women's component in a larger rural development project. Otherwise, gender analysis is handled by the rural sociologist or anthropologist. Therefore, for project identification missions and diagnostic work, we prefer to use rural sociologists/anthropologists who have expertise with gender analysis in addition to other aspects of sociology.

### **Time and Costs of Sociological Inputs in the Project Cycle**

The estimated time required for various sociological inputs into the project cycle is as follows:

- **Participation of Sociologist in Project Identification or Preparation Mission:** 7-8 weeks, simultaneous with other mission members (suitable when information from secondary sources is adequate);
- **Diagnostic Study (RRA):** 10 weeks from start to finish, including data analysis and report writing (not including the sociologist's participation in the project identification mission, which should be budgeted separately);
- **Formal Socio-economic Survey:** 6 months from start to finish including survey design, sampling, pre-testing questionnaire, data-gathering, coding, entry, analysis, report writing and editing in Rome; if a household listing is also required, add 2 months.

Average costs of sociological inputs into the project cycle are shown below, in 1992 prices. Note that it costs no more to field a two person team to undertake a joint IC/Government diagnostic study than it does to undertake a formal survey.

- **Expatriate Sociologist on Mission (2 m/m):** US\$ 20,000-25,000 including honorarium, travel, DSA and overhead.
- **Diagnostic Study:** US\$ 60,000 - \$70,000 (including travel, DSA and overhead for 2 expatriates - rural sociologist/anthropologist and agronomist/forester/livestock expert or master fisherman - not including the cost of Government inputs).
- **Formal Socio-Economic Survey:** (i) lump sum of \$20,000-30,000 to a national research institution plus \$5,000 for 1 week visit to Rome by the national study director; (ii) if IC backstopping is required, add \$20,000 for two visits by an IC staff sociologist or consultant (2 weeks each time); (iii) add an additional \$10,000 in headquarters staff time if the report needs substantial redrafting upon receipt. Total: \$40,000 to \$60,000.



## **PART IV: GUIDELINE FOR SOCIO-ECONOMIC AND PRODUCTION SYSTEMS DIAGNOSTIC STUDIES**

*This chapter is a working document, which attempts to set forth a methodology for socio-economic and production systems diagnostic studies. It is designed primarily for use by rural sociologists, anthropologists and production systems experts used to undertake diagnostic studies on behalf of the Investment Centre. It is also intended to provide guidance to mission leaders responsible for mounting diagnostic studies as part of a larger project design effort. The discussion may also be of interest to IC management and other financing institutions. The chapter will be revised periodically as the Division's experience with diagnostic work expands.*

*The recommendations are based on the experience of around 30 diagnostic studies undertaken by the Investment Centre on behalf of IFAD, World Bank, UNCDF, ADB and AfDB between 1988 and early 1992.<sup>40/</sup> The methodology is in rapid and continuous evolution: every new mission returning from the field poses new challenges and contributes new insights. Currently, the role of the sociologist has been elaborated in some detail, whereas the role of agronomists, foresters, fisheries and livestock experts is still being worked out. The next step should be to involve a wider circle of Investment Centre colleagues in developing guidelines for production systems diagnosis. There is also a need to incorporate economic and marketing issues and to adapt the sociological aspects to a wider range of situations which the team may encounter in the field.*

### **1. DESIGN AND MANAGEMENT OF DIAGNOSTIC STUDIES**

#### **Study Objectives**

The overall objective of a diagnostic study is to develop an interpretation of the process of social, economic and technical change in a particular region as a basis for designing a systematic set of actions aimed at accelerating agricultural development, raising the incomes of target groups and ensuring sustainable benefits. The specific objectives would be to:

- analyze the interaction between the economy of the farm <sup>41/</sup> and the broader household economy in which it is embedded, including off-farm, domestic and reproductive aspects;
- verify the assumptions underlying the project concept and Government or financing agency proposals;
- identify the perceived problems and priorities of different types of households and areas of convergence/divergence between the priorities of Government and those of the intended beneficiaries.

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<sup>40/</sup> Interested readers are referred to Appendix 7 for a list of diagnostic studies undertaken by the Investment Centre.

<sup>41/</sup> This applies equally to fishing, livestock or forest-based enterprises. For a discussion of the relationship between the economy of the farm and the household economy, see Part I, p. 3.

These objectives have far-reaching implications for design of diagnostic studies and their timing in the project cycle.

### **Methodology**

Since 1988, the Investment Centre has begun to develop its own methodology for socio-economic and production systems diagnostic studies for the design of area development projects, which emphasizes:

- a **multi-disciplinary team** composed of a rural sociologist or anthropologist, a production systems expert (agronomist, livestock, forestry or fisheries) and representatives from the Government agencies who will implement the project;
- **triangulation** between different technical perspectives and between primary data gathering and secondary statistics;
- **zoning** of a region into homogenous agro-ecological and ethnic units and selection of representative villages from each zone;
- **purposive sampling** to compare agro-ecological zones, types of villages and households;
- **qualitative data gathering methods** such as key informant interviews, group meetings and semi-structured household interviews;
- gathering of **village level data** on access to and distribution of resources and development of a **village typology**;
- development of a **typology of households** on the basis of interviews;
- gathering of **comparable household, production, income and expenditure** data on a sample of households selected to represent upper, middle and lower economic strata in their villages;
- emphasis on **processes of change**;
- and analysis of **differences** between agro-ecological zones, production systems, types of villages and types of households.

### **Timing in the Project Cycle**

The Investment Centre *Design Study* concluded that since many flaws in project design can be traced to errors and misjudgements at project identification,<sup>42/</sup> ideally, diagnostic work should be undertaken immediately prior to and in conjunction with an

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<sup>42/</sup> For details see *The Design of Agricultural Investment Projects: Lessons From Experience*, FAO Investment Centre Technical Paper No. 6, 1989.

identification mission. However, since in many cases the Investment Centre is requested to prepare projects already identified by Government or by a financing agency, diagnostic studies will need to be mounted before project preparation, to verify assumptions underlying the proposals of the identification team and to clarify areas of convergence between the priorities of beneficiaries and those of Government. The main drawback of delaying diagnostic work is that if the basic assumptions underlying the identification mission proposals are not confirmed, it may be difficult to change the project concept once it has been included in national development plans and lending agency pipelines.

Ideally the sequence should be as follows:

- **Reconnaissance:** a lightweight input aimed at generating a sufficient amount of information on project options to enable the Government and financing agency to select a priority project: this also provides an opportunity for reaching agreement with the Government on arrangements for preparation work, including the setting up of steering committees or national preparation teams.
- **Diagnosis:** the application of rapid rural appraisal techniques, often carried out by a sociologist and a production systems specialist together with Government staff, to generate information on the target group for the project, on the production systems in the project area on the aspirations of the potential beneficiaries, and on the potential for agriculture based development.
- **Formulation:** refinement of the project concept by a multi-disciplinary team on the basis of the findings of the diagnostic work, leading to a first approximation of a specific project and to the definition of any further studies (e.g. preliminary design of irrigation systems) and analyses required to complete project preparation. If no such studies are needed, formulation and final preparation can be combined as a single exercise.
- **Final Preparation:** completion of the feasibility study to the point at which the project can be submitted for appraisal.

The duration of the diagnostic study would be 10-12 weeks, depending on circumstances, which would typically be divided as follows:

- meeting MOA, making arrangements for field visit, collection of secondary data, visit to research stations: 3-4 days
- initial reconnaissance, zoning of the project area and selection of villages: 3-5 days
- intensive field work: 3-4 weeks (more if the team is expected to travel by boat or to trek on foot);
- brainstorming session to synthesize main findings and implications for project design for discussion at wrap-up meeting and return to Rome (3-6 days);
- extraction of information from field notes, data processing and preparation of summary tables (2 weeks);

- report writing (3 weeks).

## **Selection of Team Members for Diagnostic Studies**

For diagnostic work, most FSR manuals recommend a 5 person team composed of an agronomist, a livestock expert, an agro-forester, an agricultural economist and a rural sociologist or anthropologist. However, all this personnel may not be required at the diagnostic stage. The Investment Centre prefers to use a maximum of 2 experts to undertake the diagnostic study in advance of a larger 4-5 person project identification mission. Within this framework, a number of options have been tried:

- IC sociologist and agronomist plus a local team from the implementing agency.
- IC sociologist and agronomist plus local sociologists from a research institute.
- IC sociologist alone, with Government team.
- IC sociologist alone, simultaneous with IC project identification/preparation mission.
- sociologist and livestock expert.
- sociologist and master fisherman.
- local research institute alone.
- 3 person IC team.

On the basis of 30 diagnostic studies, some preliminary conclusions can be drawn. The best option from the standpoint of cost-effectiveness is a 2 person Investment Centre mission (sociologist and a technical expert in agronomy, livestock, fisheries or forestry) together with a team of 4-6 people from the Government agency responsible for implementation. Preferably the Government team should include agricultural experts, economists, planners and administrators. Government staff should be high ranking enough to have direct access to policy makers.

A 3 person IC team (mission leader/economist, sociologist and agronomist) is highly recommended if the added cost of a third member is not a constraint for the lending agency. So far, the Investment Centre has only tried it once (in the Comoros). This was achieved by combining Reconnaissance with the RRA. The mission leader participated in the initial village interviews, then withdrew from the field work to attend meetings with Government. Ordinarily, reconnaissance should be completed well in advance of the RRA, to protect Government and the lending agency from investing time and resources to prepare a project which has no chance of technical or economic success.

Options which are not recommended are: (i) for the sociologist to undertake the RRA alone (as opposed to jointly with an expert in production systems); (ii) for the IC team (sociologist and agronomist) to work without anyone from Government; and (iii) for a national research institute to work alone (with little or no Government or IC involvement).

## **Participation of Host Country Nationals**

It is absolutely essential that staff from the Government implementing agency participate in the diagnostic study to establish a dialogue between the lending agency, the

implementing ministry and the intended beneficiaries. Only Government participation can ensure continuity between project design and implementation<sup>43/</sup>.

The participation of host country socio-economic research institutes in the joint diagnostic effort is also desirable, not only to take advantage of local knowledge but also to assist in building up local capacity to undertake diagnostic studies in connection with local project preparation efforts. Since Rapid Rural Appraisal methods are relatively unfamiliar to most developing country nationals, the IC sociologist and farming systems expert may use the socio-economic and farming systems study to train national experts in RRA study methodology.

### **Scheduling of Project Formulation**

The first socio-economic and farming systems studies undertaken by the Investment Centre were followed immediately by a full-fledged project formulation mission, on the assumption that the main study findings and conclusions would be evident by the end of the field work, and that the rest of the data coding and analysis could be deferred until report-writing in Rome. The advantages of combining the diagnostic study with a design mission in a single uninterrupted process are that it saves time and money, ensures continuity and allows project formulation to get off to a flying start. It reduces the time required for project formulation because the IC sociologist and agronomist are already in the country and the team is geared up to work. It saves money because the sociologist and agronomist make only one trip and less time is allotted for report writing. It capitalizes on the good working relationships built up between Government and IC team members during their stay in the villages. It allows the Government staff involved in the RRA to take part in project design. It also ensures that the sociologist is present to contribute to project design.

The main reason for scheduling a break between the diagnostic study and subsequent project formulation or preparation missions is to allow team members enough time to analyze and write up their findings before the next mission begins. Although, ideally, the diagnostic team should analyze as much data as possible before returning from the field, it may be unrealistic to expect team members to always be able to code and tabulate data in the evenings when they are physically exhausted by hours of travel to and from villages, or when there is no electricity. Sometimes the team will be expected to participate in social events hosted by local leaders, leaving little time in the evenings for data analysis. In the light of these experiences, the consensus is that team members should be allotted 2 weeks for data analysis and 3 weeks for report writing before departure of the subsequent project design mission.

Another option is to have the mission leader join the diagnostic team for one week at the end of the field work to brainstorm with team members, with the aim of synthesizing mission findings, drawing implications for project design and writing an *aide memoire* for discussion with Government at the mission's wrap-up meeting. Upon return to Rome, the mission leader would draft a project brief which would spell out the project concept, rationale, objectives and strategy, target group, design considerations, followed by a list of proposed components, implementation arrangements and a rough estimate of costs.

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<sup>43/</sup> This does not imply that Government officials should be present during every interview. There are some circumstances when team members will need to do some interviews independently. However, Government should never be by-passed entirely.

This document would be discussed with Government and the financing agency before mounting a full preparation mission.

### **Ensuring Continuity between Diagnosis and Design Mission Members**

Continuity between the composition of the joint IC/Government diagnostic team and the design mission is crucial, to harness the acquired knowledge of the diagnostic team for project design and to ensure that people who know the project area intimately are available to keep other mission members on track. When there is a break between the socio-economic/production systems study and project formulation to allow for data analysis, it is important to ensure that the same group of people (agronomist, sociologist and Government counterparts) participate in the formulation mission, as their first-hand knowledge of the project area and its people should enable the project design process to get off to a flying start. During the formulation or preparation mission, the agronomist would be responsible for designing agricultural components and the sociologist for designing mechanisms for community organization and farmer participation.

### **The Role of the Mission Leader**

Diagnostic studies as currently designed are spearheaded by a sociologist and an agronomist (or forester, fisheries or livestock expert). Project preparation missions are often led by staff who have not participated in the SEPSS diagnostic work. In many cases this poses a number of problems: it can put the mission leader at a disadvantage because he/she knows less about the project area than other mission members; and if the diagnostic study mission is led by one person and the preparation mission is led by someone else, Government may be confused about who is the real interlocutor. These problems can be overcome in one of two ways: (i) by having the mission leader participate in the entire RRA (as was done in the Comoros) or (ii) by having him accompany the agronomist and sociologist to set up the RRA and having him return again when findings of the RRA are discussed with Government (as was done in Turkey and Nigeria). The mission leader's assistance in setting up the socio-economic study is particularly important when the RRA is undertaken by consultants or relatively junior IC staff.

## **2. CARRYING OUT THE STUDY**

The basic method involves three stages: (i) zoning and selection of sample villages; (ii) village level data-gathering and (iii) household interviews. Within this broad framework, two possible alternatives will be discussed: the *agrarian systems* method and the more *empirical* method developed by the Investment Centre over the past four years.

### **Agrarian Systems Method**

The *agrarian systems* method involves three separate activities which are carried out in consecutive steps. The first week of the diagnostic study is spent carrying out a *zoning* exercise, which involves an initial visit to each agro-ecological zone in the project area, to make preliminary contacts with district authorities and to observe land forms, soils, vegetation, cropping patterns, stages of crop growth, settlement patterns and markets. This is used to complement information obtained from maps and secondary statistics and discussions with people familiar with the area. This information is used to draw an *itinerary* based on purposive sampling principles. The team might select 3 villages per zone: to cover all of the relevant ethnic groups and to permit comparison of villages on the main road with isolated areas.

The second step in the process is to gather *village level data*. The team would return to each zone in the project area to spend a day or two in the villages selected during the zoning exercise. In each village, the team would start by reconstructing the history of the village, using village elders as key informants. Group meetings are held with farmers to learn about land tenure, land use, cropping patterns, planting dates, farming practices, input use, yields, marketing, migration, off-farm employment and remittances. The agronomist might walk along a transect of the village territory observing land forms, vegetation, land use and crops. The historical evolution of agricultural technologies and cropping patterns is also documented, as a basis for developing a household typology. The sociologist may hold separate meetings with local leaders to learn about kinship and social organization, village institutions, membership in formal and informal groups, and to talk to rural women about their activities, problems and priorities. If time permits, the team may spend 2-3 days in the first village in the zone, making short side trips to additional villages for comparative purposes. The second step would culminate in the development of a *typology of households* in each zone, on the basis of variables such as farm size, cropping pattern, level of technology, income sources, access to remittances, age/stage in domestic cycle and gender of the household head.

The third step is to complete a limited number of *farm interviews* with households selected as representative of each significant type. This involves a third trip to each region and visits to new villages. After a brief talk with village authorities, key informants would be used to identify households whose characteristics fit those specified in the typology. Usually, in each zone, a total of 2-3 interviews would be conducted with each type of household. The purpose of the interviews would be to document the objectives, cultivation practices, production and yields obtained by each type of farmer. This would be used as an input for design of *farm models*. The farm interview would not necessarily cover the same information with all three households representative of the same type. *No empirical data would be gathered on income, expenditure, savings or indebtedness*. The resulting farm



model would be an *ideal type* -based on an abstraction from the three household interviews to emphasize the typical pattern. For each type, household income and food self-sufficiency in relationship to minimum requirements would be calculated on the basis of the model - i.e. by multiplying total production by a standard market price and adding off-farm earnings.

### **The Empirical Method**

The method developed by the Investment Centre shares many points in common with the agrarian systems method. The main differences are: (i) that for reasons of time and economy, the team only makes *one* visit to each administrative unit of the project area instead of *three*; (ii) the zoning exercise is telescoped into a rapid reconnaissance; (iii) in each sample village in a zone, the team gathers *both* village and household level information; (iv) at the end of the morning, the village level information is used to stratify the population and to select households representative of different income levels for farm visits and interviews in the afternoon; (v) the sociologist and agronomist interview the same households; and (vi) household interviews are more systematic and more detailed - the team gathers complete information regarding household composition, the economy of the farm, off-farm and domestic activities and *household budgets*, culminating in an open-ended discussion of the household's objectives, survival strategies and priorities. The data on income, expenditure, food self-sufficiency, indebtedness and savings are tabulated during the interview and discussed with the informants to confirm their validity. At the end of the field work, the interview data is analysed separately for each socio-economic stratum or significant household type. This analysis is used to derive a more detailed household typology, based on actual observation of differences between types with regard to farm size, ownership of assets, economic activities, income sources, gender of the household head and stage in the domestic cycle. Farm models are selected from *actual* cases. They can be complemented by *household models*, to examine the interaction between farm, non-farm and domestic factors.

The advantages of the second method are: (i) that it is better adapted to Investment Centre missions from a logistical point of view, in that the team visits each district only once, completing all of its field work in 3-5 days and moving on to the next district or zone; (ii) the final household typology is derived from empirical investigation to confirm or reject preliminary impressions based on village level interviews; (iii) the method allows for systematic analysis of the interaction between the economy of the farm and the household economy - which is important for judgements about technology transfer and adoption rates; (iv) it also produces *empirical* - as opposed to *extrapolated* -data on income and food self-sufficiency which are an important input for targeting of poverty-oriented projects. The main disadvantage is that collection and analysis of household budget data can be very demanding.

As a rule of thumb, Investment Centre diagnostic teams working on poverty-oriented projects should adopt the empirical method, except in extreme cases where this proves unfeasible or would interfere with village-level data gathering. The collection of full household budgets is also recommended for production projects concerned with transfer of technology to small farmers, traditional herders and artisanal fishermen - especially in areas of high risk rainfed agriculture or where off-farm earnings are known to be important. For community resource management projects, detailed household budget analysis may not be required.

### **Selecting a Sample**

For diagnostic studies, we recommend the use of purposive sampling (as opposed to probability sampling). Purposive sampling is a heuristic technique designed to facilitate comparisons between different agro-ecological zones, farming systems, ethnic groups, types of villages, or socio-economic strata. The selection of villages and households is not random, but done "on purpose" to include a predetermined number of highland or lowland villages, mixed farm versus pastoralist villages, wealthy or poor families or male versus female headed households.

Purposive sampling should be done in three consecutive steps. The first step in sampling involves **zoning** - i.e. the division of a particular region into homogeneous areas from the point of view of geographic, climatic, agro-ecological and ethnic factors and farming or production systems. The second step involves the **selection of villages** within each zone. The third involves selection of **households** within villages.

The *zoning* of a project area can be achieved in several ways: (i) by relying on a previous zoning if one is available; (ii) by consulting maps and secondary statistics on population, rainfall, temperature, land use, cropping patterns, etc. complemented by discussions with Government experts and trips through the project area or (iii), if maps and secondary statistics are unavailable, by starting from scratch. The time required for zoning can vary from a few hours to a week or more, depending on what is available.

*Selection of sample villages* can be accomplished using maps and advice from key informants (such as MOA technicians, Government staff and private traders) who have a first-hand knowledge of the area. The team should attempt to visit a minimum of 3 villages in each zone, to examine the range of variation between production systems and socio-economic conditions depending on a village's size, its population and access to communication lines. If the Government has already elaborated a tentative project proposal, villages should be selected to permit the team to generate feedback on each project component by comparing villages which have already benefited from the type of development proposed by Government and others which have the potential but have not yet benefited from any Government support.

**Determining Sample Size.** From Government, get a list of administrative units and if possible of all villages or settlement units in the project area, and use this list to draw a sample. The sample size is not determined by considerations of statistical reliability but by practical considerations. Most teams are able to cover one village per day with an average of 1 key informant interview with village leaders, 2 group meetings and 2-3 in-depth household interviews per village. Under special circumstances, when travel to and from villages is especially time consuming (for instance, when there is no road access), the sample may have to be smaller. In this case, it might be preferable to concentrate on a smaller number of villages, staying overnight, and interviewing more households in the same village. As a rule of thumb, whenever there are many agro-ecological zones to be covered and the variation between villages is greater than the variation between households within the same village, it is preferable to allot only 1 day per village, even at the cost of only interviewing 2 households per village (in addition to village level data gathering). When social stratification within villages is highly complex, it may be preferable to reduce the number of villages in order to allow time for interviewing at least one household from each stratum in every village.

**Maximizing Flexibility.** Generally, the list of regions to be visited is communicated to Government before the mission's departure from Rome. The zoning and selection of villages to be visited is usually done jointly with local officials upon arrival in the project area, using a village listing, secondary statistics and maps. In some cases, the itinerary must be finalized at this time, to allow Government to arrange for the team's travel, food and lodging, set up meetings with local leaders and obtain police permits if necessary. In cases where elaborate advance preparation for the mission is not required, the itinerary may be more flexible. The *selection of sample households* is done directly in the villages, preferably after completion of key informant or group interviews, except in cases where the Government insists on selecting them in advance (e.g. some parts of China). Ideally, sampling procedures should be as flexible as possible, to allow the mission to adjust their itinerary as their knowledge of the project area expands.

**Box 1 - Sampling in the Cerrado Project in Brazil**

Prior to launching the RRA, a brainstorming session was held in Brasilia by a 12 person government team, with the Investment Centre agronomist and sociologist acting as animators. The sociologist invited the participants to list the characteristics which differentiate between communities. Each was written on the blackboard. Then the list was rearranged, putting the most important factor at the top, then the second most important and so on. A separate list was made of all the factors which differentiate households within a given community, and these were ranked in order of priority. Finally, using maps and a list of communities, the group selected villages to represent each of the main types.

Factors differentiating between communities, as reported by team members were:

- 3 broad geographic regions
- proximity to urban markets
- irrigation
- dairy cattle
- silkworms
- presence/absence of community organizations
- presence/absence of extension

The main factors differentiating between households were perceived to be:

- farm size
- off-farm income
- cattle ownership
- sex of household head
- presence/absence of sugar cane
- pump ownership
- extension (yes/no)

The group used these criteria to devise a system for selecting households once they arrived in a village. Each interview team was given a quota: e.g., one household in the smallest farm size, one household in the middle and one in the upper farm size category; one female household head per village, etc. Key informants and group meetings were used to identify households fitting these categories.

**Box 2 - Sampling Procedures for an RRA in Jilin Province, China**

In China, Government prefers to know the list of villages which the team will visit well in advance of the mission's arrival in country, in order to organize a proper visit and prepare the local people for the interviews. The following system was devised to ensure that the team would not be taken only to the "best" or the showcase villages and to ensure coverage of different agro-ecological zones. The first step was to get Government to prepare a listing of all villages in the 52 townships selected for the project, using official statistics collected for other purposes. China is fortunate to have an excellent statistical base. For each village, local authorities were to list the name, population, per capita income, total land area, arable land, low-lying land, and the existing area of paddy rice, fish farms and reeds (since Government proposes to develop the low-lying areas for these three activities).

Given that the total time available for the study was 4 weeks, and there were 5 counties, the decision was made to spend 5 days in each county, visiting 1 village per day for 4 days. Authorities were told to use the data from the listing to select one of the wealthiest townships and one of the poorest. Within each township, they were to select one wealthy village and one poor village. One of the four villages was to be a village suitable for rice, one for fish, one for reeds and one which was not suitable for either rice, fish or reeds and could only hope to benefit from animal husbandry. In half of the villages, some of the type of development proposed under the project should have taken place; in the remaining villages, no development should have taken place. The Chinese authorities followed the instructions to the letter.

### **Rapid Reconnaissance and Zoning**

Few Investment Centre socio-economic and farming systems study designs have allotted any time for **reconnaissance** before starting the rounds of village and household interviews. However, several of the teams returning from the field recommend that we allow 2-3 days for the sociologist and agronomist to complete a preliminary zoning and to familiarize themselves with the project area before starting the round of village and household interviews. The agronomist should use this time to travel to the countryside, observing the land forms, the cropping system, the soils and the crops, stopping to inspect fields and talk with farmers at random. He/she will also need time to familiarize himself/herself with the technologies which the Government intends to promote.

Before preparing an interview schedule for the first round of the study, the team needs to learn to talk about crops using local weights and measures and to complete one or more exploratory farm interviews. The **exploratory interview** should be completely non-directive: instead of asking about land preparation, planting, weeding, fertilizer application and harvesting, team members should avoid asking about a specific sequence of tasks, as this could induce the farmer to skip some crucial steps. Instead, they should merely ask the farmer "what was the first thing you did at the start of the new crop year? What did you do next? What time of year was that? Who did it - you, your wife? How many people worked? What tool did you use? What did you do after that? Why?" (and so on, for the entire calendar year, making sure that livestock are also discussed and that activities such as off-farm employment, post-harvest processing, hay making, wood cutting and manure preparation are not overlooked). The interview should be done jointly by the agronomist and the sociologist to ensure that each is familiar with the type of questions which the other one asks. For instance, during a joint interview, the agronomist may be more concerned with cropping

patterns, input use and yields while the sociologist may focus on gender differences in labour inputs and control of products.

Several IC consultants recommended that the sociologist should be allowed to spend 2-3 days in a single village for reconnaissance before launching the socio-economic study, in order to familiarize himself/herself with the basic principles of social organization, household structure, traditional institutions and the like. At this stage, the sociologist may want to keep a low profile. While the agronomist is undertaking the zoning exercise with Government counterparts, it might be preferable to leave the sociologist to work for a day or two in a single village with only a counterpart or an interpreter.

### **Village Level Interviews**

The IC study design calls for data-gathering on two levels: village and household. The former is valuable for understanding the total resource base and the mechanisms governing its allocation and use, as well as social and political organization, grassroots institutions, social stratification, power structure and patterns of interaction between the village and the outside world. The latter is useful for shedding light on the household economy and on differences between socio-economic strata and types of households in the same village. It is preferable to work from the general to the particular, completing village level interviews prior to and as a basis for selecting particular families for household interviews.

As a rule, the team should collect as much information as possible on village level, so as to avoid overloading household interviews with too many questions. Information which lends itself to collection on village level includes principles governing land tenure, land use, dominant cropping patterns and trends, rotations, farming practices, planting dates, seasonal calendar of activities, crop varieties and varietal preferences, range of yields, end use of crops and crop by-products, purposes of keeping livestock, importance of off-farm earnings, markets, village infrastructure, social organization, informal groups, contact with Government services, problems and priorities. For a list of topics see Appendix 1.

Group meetings have the advantage of permitting the study team to gather information simultaneously from a large number of people. They are useful for informing the whole village about the project and sounding out reactions to Government proposals. Even when villagers have been "briefed" ahead of time, a skilled interviewer can ferret out some honest responses from a group meeting. However, care must be taken in generalizing from responses given at group meetings because certain categories of people tend to be under-represented in the meetings (such as women and the poor). For this reason, separate group meetings with women are recommended. It is difficult to sustain a group meeting for more than 1 hour, and this limits the subjects which can be discussed.

The presence of Government during interviews is useful because it increases the officials' exposure to the intended beneficiaries and forces them to listen to the people's problems. Moreover, it increases the opportunity for the socio-economic study to influence project design and implementation. For this reason, counterparts from the Government agency which is likely to implement the project should be present during interviews and should take an active part in the interviewing. However, in cases where there is conflict between Government and villagers, it would be preferable for the team to conduct some of

their interviews independently, in order to get fuller understanding of the nature of the conflict and the options for dealing with it.

### **Options for Stratifying the Household Sample**

The methodology developed by the Investment Centre uses village level interviews on distribution of land, livestock, assets and off-farm income to develop a typology of households from which individual informants are selected for in-depth interviews. Generally the aim is to interview one household considered as "upper", "middle" and "lower" stratum in each village. Comparisons are used to shed light on differences between the problems and priorities of different types of households.

To date (1992), most IC studies have relied on **key informants** (village elders, local leaders) to identify households considered to be of "upper", "middle" and "lower" socio-economic condition in their own communities. This latter point has been somewhat controversial. Some argue that if selection of households is left to local leaders, there is a serious risk of bias: leaders will choose people from their own faction of the village and prevent team members from interviewing the opposing faction. Others argue that the selection is purely subjective and households can be misclassified. The IC's experience to date as borne out by the household income data gathered suggests misclassification is not a serious problem: village leaders can be relied on to select households which are representative of upper, middle and lower stratum. After a short time in a region, team members will be able to recognize some of the differences themselves and to compensate for possible classification errors, by requesting to meet a household which differs from the one which was selected. The problem of access to people who are not in the good graces of the leaders is more serious. For this reason, it is preferable to combine this method with one of the other methods listed below.

An alternative means of stratifying households is **self-selection** during a group meeting. Local leaders can assist by inviting the entire village to come to a public place to meet with the RRA team. After discussing with the group for about one hour, people are asked to identify households from their own midst who are better-off, average or disadvantaged or to identify female-headed households or other categories of interest.

Another option is for the interviewers to select the households themselves, after walking through the village and looking at the **condition of houses**. Where this has been tried (Indonesia, China) it has proven to be less reliable than the use of key informants, but it can be useful in combination with other methods, especially when the team suspects that local authorities may be leaving out some important categories of the village population.

**Wealth ranking** is a technique devised by anthropologists to get a good picture of social stratification at village level in a short time. With the help of key informants, a full list is drawn up of all households in the village, using tax records or some other list. Then the name of every household is written on a separate piece of paper and a key informant who knows everybody in the village is asked to sort the cards into piles according to relative wealth. The informant starts with the richest man in the village and works down, making as many piles as he wants. Then he is asked to explain what makes the people in one pile different from the people in the next pile. Each key informant is likely to come up with a different number of piles. If he belongs to the upper stratum, he is likely to perceive more differences at the top of the social pyramid, whereas someone close to the lower stratum is likely to make more categories at the bottom. This technique allows one to determine the characteristics of rich and poor and what proportions of the households in each village belong

to each socio-economic stratum. Another variant which has been used successfully in India is to invite key informants to make a map showing all houses in the village and then to place a coloured bean or stone on each house to indicate the family's caste.

Another option is to make a **household listing**. This technique was used by an IC diagnostic study for a project in Yozgat Province, Turkey. Four villages were selected to represent 4 different agro-ecological situations: mountains/forest zone, hilly dryland farming zone, rainfed plains, and areas with access to irrigation. In each village, the anthropologist made a complete listing of all households, showing the number of members, occupation of the head, farm size, cattle ownership, remittance income and tractor ownership. This was used to stratify households into upper, middle and lower economic categories for interview purposes. The main problem with detailed listing and wealth ranking exercises is that they are time consuming. It takes an entire morning to do a wealth ranking. Another limitation is the size of the village: 150 households tends to be the upper limit which a key informant can remember with a fair degree of accuracy. In Turkey, the listing process interfered with other interviews and the anthropologist was only able to cover a total of 4 villages and he was not able to do any interviewing jointly with the agronomist.

In some communities there are strong cultural pressures which prevent people from discussing differences in wealth - especially with outsiders. When villagers are reluctant to discuss the issue directly, it is preferable for the mission to construct -on the basis of village level interviews - a **typology of production systems** based on access and control over assets such as land, labour, capital and equipment, as well as off-farm earnings and select households to represent different ends of the continuum. Another alternative would be to develop a **typology of households** based on the age and sex of the household head, family size and the number wives, and to request interviews with particular categories which may be of interest for project design.

Two options are not recommended: the team should never leave the selection entirely to Government officials, and they should never select households entirely at random.

### **Household Interviews**

As noted earlier, one of the main objectives of a diagnostic study is to analyze interaction between the economy of the farm and the broader household economy in which it is embedded. Therefore, it is essential for the team to complement information from village level interviews with a limited number of households selected to represent different categories of the population which are of interest for project design. Even in the most extreme circumstances, such as areas affected by guerrilla war, the team should conduct a number of household interviews - even if this entails spending two days in the same village. Likewise, the team should always attempt to: (i) examine the interaction between farming and non-farm, domestic and reproductive activities; (ii) document the objectives and survival strategies of different types of households and their reasons for existing farm practices and (iii) shed light on sources of cash savings and how they are invested. For the purpose of targeting, it is also important to gather comparable data on production, income and expenditure for a limited number of households selected as representative of different socio-economic strata.

For this reason, none of the Investment Centre studies have been based exclusively on Participatory Rural Appraisal techniques which are designed primarily to elicit



information from key informants and groups. Investment project design - even for natural resource projects - is based on assumptions about the behaviour of individual farm households and these household interviews are indispensable for verifying those assumptions.

The main technique used for household level data gathering is **semi-structured interviews**. Before going into the field, team members should jointly draw up a detailed *interview guide* with a complete list of topics to be covered, organized in a logical order of presentation. The topics usually follow the order of a conventional farm management interview,<sup>44</sup> but there is no fixed questionnaire and the interviewer is free to *probe* certain responses, and to pass rapidly over others.

Decisions regarding the **number of household interviews** which should be carried out by the team should be a function of three main considerations: (i) **time availability** (the number of days available for field work; number of working hours per village considering travel to and from villages; time required for village level data-gathering; time required for each household interview); (ii) **complexity of the project area** (number of different parameters which the study is attempting to compare, such as differences between agro-ecological zones, ethnic groups, social strata, and presence/absence of off-farm earnings); and (iii) a subjective assessment of the **marginal utility of additional information**.

Let us assume for the sake of discussion that a team has one month at their disposal to carry out a diagnostic study and that allowing for travel time to and from and between districts in the project area they have 20 days available for actual interviewing at village and household level. Working a 10 hour day, they have 5-6 hours per day for interviews, assuming 4-5 hours for travel to and from the villages and lunch breaks. If village level interviews take 2 hours in the morning, this leaves a maximum of 3 hours in the afternoon for household interviews. Now, if each household interview can be completed in one hour, it is possible for the team to complete 3 interviews jointly; if it takes 1.5 hours, only two household interviews are possible unless the team splits into two groups; if it takes 2-3 hours per household, only one household interview can be completed per day unless the team splits up. The maximum which a team could hope to do working jointly would be 60 household interviews (or 3 per day for 20 villages) and the minimum would be 20.

If the team has to cover 5 counties, 2 agro-ecological zones which cut across counties and 2 ethnic groups (one of which is only found in the highland agro-ecological zone), they might visit 4 villages per county, 2 in each agro-ecological zone, of which 3 villages might be from the dominant ethnic group and 1 from the minority. If there were two distinct household types or production systems per village, a total of 40 household interviews would be adequate, but if there are 3 clear-cut strata, 60 would be needed.

If the upper limit for a month's work is usually 40 households, it is not practical to attempt to cover an area which has 6 agro-ecological zones, 4 major farming systems and 5 ethnic groups and a highly stratified population. It might be preferable to simplify the study by dropping one or more agro-ecological zones or limiting the number of visits to minority ethnic groups. If, on the other hand, the project area is relatively homogeneous, the team may be able reduce the number of interviews if they notice that the responses are becoming repetitive. However, a dozen interviews are usually needed simply to establish the norm, as a basis for probing the reasons for cases which do not fit the expected pattern. Interviewers also need some repetition to identify and correct any possible sources of misunderstanding in the phrasing of questions or responses.

<sup>44</sup> For details, see the checklist at the end of Appendix 2.

### **Division of Labour between the Sociologist and the Agronomist**

Theoretically, four main options are possible for household interviewing: (i) for the sociologist and agronomist to do all their interviewing *jointly*, (ii) for them to conduct *separate* interviews with the *same* household; (iii) for the two to interview *different* households in the same village, and (iv) for each to work in *separate villages*. However, only one or two of these options are useful for the main purpose of the study, which is to analyze the objectives and survival strategies of different types of households, by placing the economy of the farm within the broader context of non-farm, domestic and reproductive activities.

**Joint Interviews.** After completing key informant and group interviews at village level, the sociologist and agronomist identify 2-3 households, which are interviewed jointly, either at the family's home or directly in the fields. The advantage of this option is that it allows the team to understand the place of farming in the broader context of off-farm, domestic and non-farm activities. It strengthens linkages between the sociological and agronomic aspects of the interview. The only disadvantage is that it is more time-consuming than other options and it tends to limit the number of interviews which the team can complete. Recognizing this problem, we now recommend that the agronomist and sociologist conduct their interviews together for the first 5 days - or long enough to permit the agronomist to learn what type of questions the sociologist asks, and how to include these questions in his own interview; the sociologist should learn the agronomist's list of questions, so that each can cover at least part of the other person's subject matter.

**Separate Interviews with the Same Household.** This makes it possible for the team to save time: the agronomist interviews one household and goes on to the next and the sociologist starts with the second household and returns to interview the first after the agronomist finishes. It has the advantage of allowing the team to split: the agronomist can interview the husband directly in the fields, while the sociologist visits the home to interview the wife. The disadvantages are that it is more tiring for the respondents, who are forced to repeat some of the basic family background to each interviewer. Moreover, it is sometimes difficult to reconcile the information given by the husband with that given by the wife. If the two cannot be reconciled, it becomes difficult to put the farm economy back into the broader context of the household economy.

**Separate Interviews with Different Households in the Same Village.** In theory, this option allows team members to cover a larger number of households in a short time. However, it may not be possible to piece together a comparable data set on income and expenditure or input use unless the sociologist covers production and the agronomist covers household composition, income, expenditure and off-farm activities. Experience to date suggests that separate interviews should only be attempted toward the end of the diagnostic study, when the sociologist is completely familiar with the agronomist's line of questioning and vice versa.

**Agronomist and Sociologist Cover Separate Villages.** This option is not recommended. If one of the main study objectives is to understand the interaction between

the economy of the farm and other aspects of the household economy, socio-economic and production systems interviews should never be undertaken in isolation from each other.

### **3. ANALYSIS AND PRESENTATION OF FINDINGS**

#### **Note-taking**

All members of the RRA team should take written field notes during the interviews. Each team member should record the entire interview - not just the parts dealing with "sociology" or "agronomy", for several reasons: (i) to ensure that a complete set of data is available on each village or household; (ii) to ensure comparability between villages and households and (iii) to enable the team to go back and analyze responses which do not fit the expected pattern, by putting parts of the interview back into the context of the whole. This is especially important when the sociologist and agronomist do their interviewing separately.

In addition to field notes, some teams have drawn up a summary sheet which they use to record certain key data from village or household interviews (one sheet per village or per household). Extraction of data from field notes is much easier when the interviews cover the same set of topics in roughly the same order. Key information can be entered into a table in the notes.

During the interviews, the sociologist should add up household expenditure data and compare it with reported income. If, as usually happens, expenditure exceeds monetary income, he/she should ask the respondent the reason for the difference (probing for other income which may have been overlooked). Likewise, the agronomist should make sure totals for cropped area and production add up and probe the reasons for anything which is unexpected or out of line with other households.

#### **Data Coding and Analysis**

All information should be pooled by team members at the end of the day, to assess its reliability, identify contradictions between sources and detect potential sources of bias. The aim of information pooling and ongoing analysis is to eliminate subjectivity, reduce bias and gradually achieve a consensus. Sampling procedures and interview schedules are refined during the course of the study, as knowledge of the subject matter increases.

Experience confirms that the diagnostic team should analyze as much data as possible before returning from the field. Team members should share experiences with one another during travel to and from the field and during meals. For this reason, it is important for government officials and expatriates to travel and eat together and stay in the same guest houses. Evening sessions should be used to compare notes, with the aim of cross-checking data and detecting sources of bias. If possible, time should be set aside each evening to extract figures from interviews and enter them into coding sheets. It is useful to keep a running tabulation of 10-20 key variables.

An important difference between RRA and formal surveys is that data coding and analysis are not separated from data gathering. RRA data are analyzed immediately as

part of an ongoing process whereas survey data are only analyzed when data collection has ended. RRA studies can detect and correct sources of error and bias after the data-gathering has started, but formal surveys cannot.

### **Presentation of Analyses**

**Zoning.** The team should examine data on cropping patterns, livestock, crop calendars, etc. by agro-ecological zone to determine whether there is enough of a pattern to consider each a separate farming system.

**Village Typology.** After examining their village level data, team members should draw up a typology of villages. Then they should prepare tables comparing the different types of villages on a few salient parameters, which might include: average population, arable land per capita, livestock units per capita and per ha. of grazing land, percentage of households with off-farm employment.

**Household Typology.** The team should develop an initial household typology based on village level interviews, use it to stratify the community, conduct interviews with households selected to represent a range of types, then group the household interviews data by type and examine them for patterns. The last step, which is sometimes omitted by the agrarian systems method, is used to provide feedback on whether the typology stands up empirically.

**Comparison Between Socio-Economic Strata.** For the purpose of analysis, household level information for the three strata should be shown separately. The comparison should be carried through all of the tables - not just those done by the sociologist, but also those prepared by the agronomist. We want a comparison of the farm size, cropping pattern, levels of input use, cultural practices, output, yield, costs and returns of different socio-economic strata. Absolute values from a purposive sample should not be averaged across strata, because the weighting of each stratum in the total sample was predetermined by the researcher and need not reflect the importance of each stratum in the project area.

**Household Versus Per Capita Distributions.** Sociological analysis is generally concerned with analyzing the distribution of land, livestock and income by household whereas economic definitions of poverty emphasize income per capita. In some cases this has led to disagreement about whether the classification of households made by village elders was right or wrong. The elders tended to classify households with large land holdings and relatively large monetary income as "upper", but when income was divided by the number of household members, some of the largest "upper" households fell into the lower stratum and some of the smallest lower stratum households fell into the upper stratum. This phenomenon is well-known to statisticians. It does not mean that the classification system used by village elders was necessarily meaningless or subjective.

In many countries, household size distribution tends to be bimodal: extended families of 20 or more members on the one hand and nuclear families of 5-8 members on the other. Patterns of this type were revealed by IC diagnostic studies in Niger, northern Nigeria, Pakistan, Turkey and Brazil. The large extended households were found in the upper stratum, whereas the lower stratum was made up of nuclear families. There was a direct link between a household's resource base and its ability to keep the extended family together as a single unit

of production and consumption. Fission into smaller units is the rule among the poor. Not only did the large extended family units have more land, livestock and income than the average family, but they also had more off-farm earners and important economies of scale, which permitted them to adopt technologies which were beyond the reach of other households.

Whenever household size is bimodal, the choice of unit of analysis is crucial. The apparent skewed distribution of assets can be a function of household size. For instance, in one part of Northern Nigeria, the upper stratum controlled nearly half of the total livestock when the household was taken as a unit of analysis, but the middle stratum had more animals per capita than the upper stratum. For this reason, whenever distribution of household size is bimodal, it is useful to use both units - household and per capita - to examine patterns of access and control over resources.

It is well known that when the household is taken as the unit of analysis, female headed households tend to be concentrated in the lower income deciles (because they lack a male earner). But when the same households are ranked by income per capita, the female headed households tend to concentrate in the upper deciles. When households are ranked by per capita income, poverty appears to be a function of demography: couples in their forties with dependent children and aged parents to support tend to be concentrated in the lower income deciles, whereas newly married couples and old people whose children have married and gone away seem relatively better off. When they are ranked without regard for household size, the old couples are at the bottom, the newly married couples in the middle and the large households at the top of the continuum.

### **The Mission's Report**

When diagnostic studies were undertaken as a continuous process with project formulation the sociologist was expected to write an annex on the target group and the agronomist on the farming system. Both annexes were included in a larger formulation report, consisting of a main text and a series of technical annexes.

However, if the socio-economic study is to be released as a free-standing document, the two parts of the study - sociological and agronomic - need to be combined into a single main synthetic report which places the economy of the farm within the context of the broader household economy and community system, complemented, if necessary, by appendices which present the detailed information gathered by the mission.

### **Diffusion of Study Findings**

In Mexico, a series of workshops were held at national, state and local levels to enable members of the diagnostic team to discuss their findings with policy makers, representatives of implementing agencies and ultimately with leaders of local farmers' institutions. The purpose of the workshops was to generate recommendations for the project design. This type of exercise can be extremely useful at the beginning of a project formulation mission.

### **Where Should the Diagnostic Study Stop?**

How far should the diagnostic team go toward project formulation? All reports of socio-economic and diagnostic studies conclude with an extensive discussion of implications for project design, outstanding issues and follow-up required at the next stage of project design. At project identification, this might include a discussion of the project concept, the rationale for intervention, definition of target groups, perceived problems and priorities of different types of communities or households; areas of convergence between Government priorities and those of the local population; ranking of possible actions in order of importance; list of possible project components; potential for targeting project components; strategies for mobilizing beneficiary participation and other design considerations. The report should include farm models illustrating the "without" project situation and a review of the technical feasibility, financial profitability and social soundness of technical interventions proposed by Government or previous design missions. The contents of the sociologist's report are discussed in Appendix 2. The preparation of a preliminary Project Brief on the basis of study findings would be the responsibility of the mission leader - not the diagnostic team. On the basis of diagnostic study findings, it is not possible to estimate project cost or benefits.

## Appendix 1

### Guideline for a Socio-Economic and Production Systems Diagnostic Study Report

#### CHAPTER 1: INTRODUCTION

Indicate project origins and current status of preparation. State the purpose of the socio-economic and production systems diagnostic study. Highlight the issues which the study was designed to clarify.<sup>45/</sup> Briefly outline study methodology in the main text (1-2 paragraphs) and refer the reader to a methodological appendix for details of the study design.

#### CHAPTER 2: BACKGROUND

The purpose of this section would be to provide readers with enough background on the country and project area to enable them to understand the findings of the diagnostic study. It should be as brief and succinct as possible. Most of the information would be drawn from secondary data sources.<sup>46/</sup> Ordinarily, the sections dealing with the physical resource base would be written by the production systems expert, and the sections on population, administrative system, infrastructure and socio-economic indicators would be drafted by the sociologist.

#### CHAPTERS 3-5: DIAGNOSTIC STUDY FINDINGS

*This would constitute the main body of the report. The diagnostic team should put no more detail into the report than is needed to draw implications for project design. Team members should be selective about the amount of attention given to each subject depending on its importance for clarifying project-related issues. All descriptive material should be presented in such a way that it builds up to a series of concrete recommendations in the concluding section of the report - Implications for Project Design.*

Depending on the nature of the assignment, study findings could be arranged in a variety of different ways. Most diagnostic teams find it convenient to work from the general to the particular, dealing first with the context of the project area as a whole, then with community level phenomena, and last with households. It is usually preferable to divide the sociological material into separate chapters, one dealing with general socio-economic background and findings from village level interviews and a second analyzing findings from household interviews. The analysis of production systems would follow the general

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<sup>45/</sup> List any issues raised by the previous Investment Centre mission, lending agency or Government with regard to the project's target group or socio-economic feasibility. For IFAD projects flag any relevant issues raised by the Technical Review Committee (TRC) and Policy and Programme Review Committee (PPRC).

<sup>46/</sup> Whenever possible, the diagnostic team should refer interested readers to previous project identification reports. It should resist the temptation to incorporate too much secondary information in the background to the diagnostic study.

sociological background and precede the analysis of household income and expenditure patterns.

The ordering of chapters might be as follows:

- Chapter 3: Socio-Economic Context
- Chapter 4: Production Systems
- Chapter 5: Household Economy

The contents of the chapter on the **socio-economic context** would differ according to the type of project. For a production-oriented project it might cover: historical origins of existing agrarian systems, demographic context, economic activities, settlement patterns, social organization, village social and political institutions, land social stratification and power structure, tenure and control of common property resources, patterns of access to land, livestock and means of production, household structure, organization of production and consumption units, gender relations and the role of women, farmer and women's groups, and access to extension and support services.

The chapter on **production systems** would first make a zoning of the project area on the basis of agro-ecological and other factors. Then it would describe the main farming, herding and/or artisanal fisheries production systems in the project area, using material from village interviews. This analysis would be complemented by data from household interviews, which would be used to examine differences between socio-economic strata or types of households within each production system (see Appendix 3 for a checklist).

The chapter on the **household economy** would develop a typology of households as a basis for analyzing differences between socio-economic strata of the rural population with regard to: household composition, stage in domestic cycle, resource base (land, livestock, capital), income sources (combination of farming, animal husbandry, fishing, petty trading, food processing, casual wage labour and sidelines), objectives and survival strategies, income and expenditure patterns; indebtedness, savings and investment, access to inputs, credit and supporting services, participation in grassroots organizations and perceived problems and priorities.

## **6. IMPLICATIONS FOR PROJECT DESIGN**

*This is the most important section of the report because it links the analysis of target groups and production systems to project design issues. All other sections of the report should build toward its conclusions.*

### **Analysis of Constraints and Opportunities**

**Production-Oriented Projects.** Drawing on the information from the analysis of production systems, identify the key constraints in each system and the options for addressing them. Rank possible options in terms of their technical feasibility, profitability, sustainability, ease of implementation and acceptability to farmers.



**Poverty-Oriented Projects.** Analyze the causes of poverty. Describe the process of socio-economic differentiation, impoverishment and accumulation of wealth. Highlight strategies which some poor households have used to escape from poverty. Identify strategies which upper stratum households have used to capitalize their farm enterprises or to diversify out of farming. For each of the causes of poverty, discuss the range of possible technical solutions. Rank options in terms of feasibility and adoptability by the target group. In the light of what we know about poverty and socio-economic differentiation, what should the project concentrate on? What could be done to address the root causes of poverty? What could be done to reduce vulnerability to factors beyond the project's control, such as natural calamities, crop failure or collapse of markets? How could existing household survival strategies be reinforced? If some households have been successful in escaping from poverty, is the model replicable? What obstacles prevent other households from following their example? Could project action remove the obstacles or if not, could it at least accelerate the process? Which actions would have the biggest impact on the largest number of poor households? In the light of the above, which actions should the project emphasize?

**Resource Management/Conservation Projects.** Identify all of the categories of people who use the resource and the nature of their claims on it. For each of the main categories of users, indicate numbers and characteristics (sex, ethnic group, wealth/poverty) and assess their degree of dependence on the resource for their livelihood. Note conflicts between different users of the resource and discuss how the project would affect the livelihood of each category. If resource use was formerly in equilibrium and has recently broken down, analyze the causes of the breakdown. Identify the locus of authority over decisions regarding the resource in the different communities which use it. Describe traditional institutions which governed resource use in the past. If their authority has eroded, give reasons. Indicate how the project should approach the community: which of the various competing traditional and modern socio-political institutions is most suitable as a vehicle for project activities.

### **Development of the Project Concept**

Drawing on study findings, *define areas of convergence or divergence* between the project's technical strategy and the priorities of different categories of producers. Identify which activities are accepted, which are rejected and reasons for rejection. Draw implications for incentive policies.

Building on the analysis of constraints, opportunities and areas of convergence, outline the *rationale* for a possible project. Outline *project objectives and strategies* for achieving those objectives. *Rank possible actions* in order of priority. Explain the *linkage between objectives and proposed project components* or sub-components. Consider whether all of the proposed components are *necessary* to achieve project objectives and whether they are *sufficient*. Specify other *design considerations* which would need to be taken into account in determining the project's size and scope, the range of components and system of implementation.

Drawing on the analysis of socio-economic differentiation in Chapter 5 - Household Typology - define which categories of people should be the project's *target group(s)*. Make a table showing the number and percentage of households in the project area

which are considered to be the project's target group and those outside the target group. Rank target groups in order of priority. Indicate how target group criteria could be operationalized.

### **Comments on Technical Proposals**

If technical proposals have already been prepared by Government or a previous mission, spell out what changes they would entail in crop, livestock or fishery production practices at the level of farm households and communities. Examine evidence of *farmers' willingness to do what the project expects*. Depending on the nature of the project, some of the issues to examine under this heading might include:

- willingness to invest time and money in on-farm investment as opposed to off-farm activities;
- willingness to reduce the area planted to food crops in order to free land for cash crops or forage;
- willingness to limit livestock numbers or regulate the fishing effort;
- willingness to plant perennial crops or to do soil conservation on land held under insecure tenure;
- availability of family labour to meet incremental labour requirements in the light of the gender division of labour and off-farm activities;
- willingness of wives to provide unpaid labour for crops controlled by the husband;
- incentive of family members to give up off-farm work to meet incremental labour requirements;
- willingness to invest in seed and fertilizer in relation to risk of crop failure;
- evidence of the need for credit.

Examine whether target groups can *afford* to adopt the proposed technical packages, whether assumptions about *labour availability* are consistent with what is known about the gender division of labour and migration and whether the *returns* from proposed technical innovations can compete with those of *alternative activities* (off-farm employment, investment in non-farm activities). Flag any outstanding issues for investigation at the next step in project design.

List any initial Government or lending agency proposals which do not appear suitable for target groups on technical, economic or social grounds. Give justification. The justification could be based on the experience of previous projects or on farmers' stated reasons for rejecting certain proposals. Highlight what could be done to make technical innovations less costly, less risky or more suitable for small producers.

### **Community Participation and Targeting Mechanisms**

For each of the main project activities, assess who is expected to *participate* and how *benefits* would be distributed between wealthy and poor. Identify any actions which are *target group neutral* - in that they benefit everybody in the project area, regardless of their economic status. Draw attention to any actions which are likely to benefit the better-off households at the expense of the poor. Specify which actions are intended mainly for the poor.

Identify mechanisms which could be used to target project benefits to the poor. Discuss the trade-offs between different *methods of targeting*. Outline the approach to be adopted by the present project.

Indicate, for the main *delivery systems* to be used by the project, such as agricultural extension, veterinary service, agricultural credit, input supply or marketing services, the current level of contact with the target groups and state what the project could do to improve coverage.

Indicate whether there are any *grassroots organizations* which the project could harness as a vehicle for extension, credit or other activities. If there is more than one alternative (e.g. formal cooperatives, informal farmers' groups, rotating savings groups, women's groups) compare their advantages and disadvantages (e.g. geographic coverage, representation of the target group among their membership, viability, sustainability) and state why the project should opt for one or the other. In particular, examine whether existing organizations are dominated by vested interests and assess the potential for reorienting them to the target group.

Assess *institutions* involved in farmer organization and community participation in terms of their implementation capacity and orientation to the target group. Draw implications for choice of agencies to implement the component.

## **7. ISSUES AND FOLLOW-UP**

In the concluding section of the report, list any outstanding questions on which action by Government or the financing agency is needed before the project can be prepared. This might include: changes in boundaries of the project area, changes in project objectives and strategy, adjustment of the list of possible project components, inclusion of components not foreseen in the original design, or willingness of government to contract community development to an NGO. Outline any follow-up action needed.

## **Appendix 1**

### **Attachment 1**

#### **Prototype Outline for Report of Socio-Economic and Production Systems Diagnostic Study (SEPSS)**

*The outline below is intended to assist diagnostic study teams to structure their report. The list of topics and the extent of coverage of each will need to be adapted to circumstances. The background section should be synthetic and short.*

#### **1. INTRODUCTION**

- Project Origins and Status
- Purpose of Diagnostic Study
- Methodology

#### **2. BACKGROUND**

- Country Economic Context
- Economic and Income-Distributional Policy Framework
- Administrative and Institutional Framework
- Location of Project Area
- Physical Resource Base
  - Land and Topography
  - Climate
  - Geology and Soils
  - Water Resources
  - Vegetation
- Population Distribution and Demographic Trends
- Economic and Social Infrastructure
- Existing Support for Project-Related Subsectors
- Lessons from Previous Projects

#### **3. SOCIO-ECONOMIC CONTEXT OF THE PROJECT AREA**

- Historical Origins of Existing Agrarian Systems
- Demographic Context and Settlement Patterns
- Social Organization
- Village Social and Political Institutions
- Land Tenure and Control of Common Property Resources
- Social Stratification
- Household Structure
- Gender Relations
- Farmers and Women's Groups
- Access to Supporting Services

#### **4. PRODUCTION SYSTEMS IN THE PROJECT AREA**

Zoning of Project Area

Production Systems

- Land Availability and Land Use, by System
- Crops: Cropping Patterns, Rotations, Crop Calendar, Production Methods, Input Use, Labour Use, Yields, Production, Crop and By-product Use, Marketing of Crops/By-Products, Crop Budgets
- Livestock: Role of Livestock in Farming System, Production Methods, Productivity Parameters, Herd and Range Management Product and By-product Use, Marketing, Costs and Returns
- Other Income-earning Activities: Permanent Crops, Off-farm Employment, Non-farm Production, Non-timber Forest Products
- Labour Allocation between Crop Production, Livestock, Other Types of Production (e.g. fishing, hunting, gathering); Off-farm Employment, Non-farm Production, Household Maintenance and Reproductive Activities

Typical Farms (without project farm models)

- Farmers' Objectives and Strategies, by System and Socio-Economic Stratum
- Resource Endowment (land, labour, capital) of Different Strata
- Cropping Patterns and Farm Practices, by stratum
- Production, Income, Food Self-sufficiency, by stratum

Constraints Analysis

#### **5. HOUSEHOLD TYPOLOGY**

Socio-Economic Differentiation between Production Systems

Sources of Differentiation between Villages

Sources of Differentiation between Households

Characteristics of Upper, Middle and Lower Stratum Households

- Resource Base
- Household Composition and Labour Force
- Economic Activities and Income Sources
- Income and Expenditure Patterns
- Indebtedness, Savings and Investment Patterns
- Survival Strategies

Causes of Poverty and Process of Socio-Economic Differentiation

Perceived Problems and Priorities by Household Type

#### **6. IMPLICATIONS FOR PROJECT DESIGN**

Constraints and Opportunities (by production system and household type)

Area of Convergence between Government and People's Priorities

Rationale for Project

Definition of Target Groups

Project Objectives and Strategy

Ranking of Possible Actions in Order of Priority

List of Possible Components  
Comments on Technical and Economic Feasibility of Government or Lending  
Agency Proposals  
Targeting of Project Components  
Participatory Mechanisms

## **7. ISSUES**

## **8. FOLLOW-UP**

## **APPENDICES**

Maps  
Tables from secondary data sources (population, rainfall, etc.)  
Tables showing characteristics of sample villages  
Tables from household interviews  
Crop or seasonal calendar  
Without project crop and livestock budgets from interviews  
Without project farm or household models  
Without project graph of monthly labour use  
Table showing gender division of labour  
With project crop and livestock budgets (Government proposals)<sup>47/</sup>

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<sup>47/</sup> If proposals have been prepared by Government or a previous mission.

## **Appendix 1**

### **Attachment 2**

#### **Prototype Terms of Reference for a Diagnostic Study**

*These pages are intended to assist mission leaders in drafting terms of reference for staff members and consultants who are to undertake socio-economic and production systems diagnostic studies for the Investment Centre. They will need to be adapted to fit the circumstances of each mission. Use of terms such as "survey" and "questionnaires" should be avoided as this could give the unintended impression that the team is supposed to use formal survey methodology.*

**To:** (Insert names of mission members)

**From:** Service Chief

**Subject: Country name - Project - Socio-economic and Production Systems Diagnostic Study - Terms of Reference**

1. On or about (date), the rural sociologist and the production systems specialist (agronomist, forester, fisheries or livestock expert) would assemble in the host country for a briefing by the leader of the FAO Investment Centre project preparation task, who would introduce them to Government, assist in setting up their field programme and ensure that Government counterparts from the institution which is likely to be responsible for the project are assigned to the team. Before returning to Rome, the mission leader would also make preparations for the follow-up mission which would take place after the fieldwork has been completed. After the mission leader's departure, the joint IC/Government team would proceed to the project area to conduct their field work.

#### **Study Objectives**

2. The overall purpose of the study would be to gather information on the people, the farming systems and the institutions in (insert name of region selected for follow-up), as a basis for formulation of a project for (name of lending institution) financing. The immediate objective would be to verify assumptions underlying the project design proposed by (insert the name of agency responsible for project identification).

3. It is essential that the members of the team (sociologist/anthropologist, production systems specialist and technicians assigned by Government) conduct and analyze the interviews together so that they share a common body of information which they can draw on during project formulation. During the course of the field work they should freely discuss their diagnosis of the constraints in the system and possible solutions, with a view to achieving consensus about how to intervene.



4. The responsibility of the *sociologist* would be: (i) to analyze the socio-economic and institutional context in which the project would operate; (ii) to identify the critical factors which account for socio-economic differentiation between regions, ethnic groups, villages and households; (iii) to define priority target groups, (iv) to analyze the relationship between the resource endowment of different types of households and their farming practices, and (v) to make practical recommendations for project design.
5. The responsibility of the *production systems specialist* would be to analyze the different farming, herding or fishing systems, diagnose their constraints, and to identify opportunities for development.
6. *Government team members* would facilitate contact with the local administration and institutions, provide background information on government policies, priorities and budgetary constraints, and contribute to the team's work within their own technical specializations.
7. The team would use a combination of data-gathering methods including triangulation of information from secondary sources (existing physical resource, agronomic, socio-economic and demographic data; reports of credit institutions, extension records), qualitative methods (rapid rural appraisal techniques, in-depth interviews with key informants, meetings with groups of farmers, visits to crop-buying stations, discussions with local traders) and in-depth interviews with a limited sample of households.
8. After consulting with Government, the team would draw a purposive sample, stratified in such a way as to ensure coverage of all important agro-ecological zones, farming systems and ethnic groups within the project area. It would then proceed to collect data on two levels: community and household. Interviews should be carried out directly by team members - not by enumerators.
9. On the community level, data-gathering should focus on reconstructing the origins of existing agrarian systems, demographic trends in relation to the resource base, the locus of decision-making over resource allocation, management of common property resources, land tenure, land use, dynamic trends in cropping patterns and farming practices, social organization, village institutions, social stratification, village infrastructure, access to supporting services, perceived problems and priorities.
10. On household level, interviews should focus on understanding the economy of the farm within the broader household economy. Both men and women should be interviewed, to get a fuller understanding of the gender division of labour and its implications for the project. The interview should focus on the inter-relationship between crop production and animal husbandry, off-farm and domestic activities. The team should try to relate factors such as cropping patterns, planting times, seeding rates, input use, labour allocation and other aspects of production to household goals and survival strategies.
11. Team members should pool information in the evenings, entering it into coding sheets and keeping a running tabulation on key variables. By the end of the field work, the team should have at their fingertips the information they will need to use in formulating the project. After completing their field work, team members would present their findings and

preliminary conclusions to the Government. Government team members would play an important role in conveying the team's findings to their own agencies.

12. Upon their return to Rome, the sociologist and production systems expert would be responsible for writing an integrated report, covering both socio-economic and production systems diagnosis. The sociologist would be responsible for: (i) analyzing the socio-economic context in which the project would operate; (ii) developing a household typology; (iii) defining the project's target group; (iv) identifying the objectives and survival strategies of target groups; (v) examining the area of convergence between Government priorities and those of intended beneficiaries; (vi) analyzing the strengths and weaknesses of existing farmer groups and community institutions as a vehicle for project implementation and (vii) making concrete proposals for design of participatory mechanisms (as well as components for women and/or disadvantaged groups if requested by the financing agency).

13. The production systems specialist would be responsible for: (i) analyzing the physical resource base and its implications for project design; (ii) defining agro-ecological zones and farming systems; (iii) analyzing differences between the farming practices of different types of households; (iv) diagnosis of constraints in each major farming system including specific constraints faced by the poorest households; (v) proposing technical innovations suitable for target groups; (vi) working up crop budgets and without project farm models and identifying development opportunities.

## **Appendix 2<sup>48/</sup>**

### **Outline for a Typical Sociological Annex**

*When a diagnostic study is either unnecessary or cannot be completed due to time or budgetary constraints, a rural sociologist/anthropologist may be asked to participate in a conventional project identification or preparation mission. In this case, he/she will be expected to write a technical working paper on socio-economic conditions and target groups which would be annexed to a project identification or preparation report as supporting documentation, along with papers prepared by other experts. Annexes should be prepared whenever a socio-economic and production systems study will not be issued as a self-contained document (Appendix 1).*

A typical sociological annex would be divided into 6 parts: (i) a brief introduction; (ii) a description of the socio-economic context in which the project will operate (of variable length, depending on the stage of the project cycle and data availability); (iii) an assessment of the institutional context and lessons from ongoing programmes and projects; (iv) a concise discussion of implications for project design; (v) elaboration of project proposals relevant to the sociologist's assignment, followed by (vi) a brief discussion of issues requiring action by Government or the lending agency and any follow-up work to be undertaken before the next mission.

The relative importance of each section of the report would naturally differ according to the type of mission and data availability. At project identification, there would be more emphasis on development of the project concept and elaboration of preliminary proposals. At project preparation, the emphasis should be on institutional aspects and design of targeting mechanisms and components in support of beneficiary organization and community development efforts.

The total length of the text might range from a minimum of 15 pages at project identification for an annex based on secondary sources to a maximum of 25-30 pages at project preparation. Statistical tables should not appear in the text except in cases where their inclusion is essential for comprehension, but should be grouped together in an appendix.

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<sup>48/</sup> This appendix is intended for consultant sociologists and anthropologists who are unfamiliar with Investment Centre work; it also may be of use to mission leaders in guiding the work of such consultants.

### **Approximate Length in Pages of a Typical Sociological Annex**

Section of Annex	Identification Report	Preparation Report
Introduction	1-2 pp.	1-2 pp.
Socio-Economic Background	5-10 pp.	5-10 pp.
Institutional Context	2-4 pp.	3-5 pp.
Design Implications	3-5 pp.	3-5 pp.
Design Proposals	5-8 pp.	6-10 pp.
Issues and Follow-up	1-2 pp.	1-2 pp.
Total Report	15-20 pp.	20-30 pp.

#### **A. Introduction**

List any issues raised by the previous mission or the lending agency with regard to the project's target group and social soundness (source: report of previous mission, pre-mission briefing) and state how the annex will address them. For IFAD projects flag any relevant issues raised by the Technical Review Committee (TRC) and Policy and Programme Review Committee (PPRC). Specify main data sources used in preparing the annex and their limitations. If a formal survey or RRA was undertaken, insert 1-2 paragraphs on the study methodology in the main text and refer the reader to a methodological appendix for details.

#### **B. Socio-Economic Context**

This section should lay the foundations for project proposals outlined in Part IV. **The sociologist should put no more detail into the descriptive section than is needed to draw implications for project design.** In the case of IFAD projects, description of target groups should be sufficiently detailed to satisfy IFAD's management that the project is line with the Fund's lending criteria.

All descriptive background should be related to the project. A checklist of subject matters which should be considered during the course of the mission follows at the end of this appendix. **It by no means implies that each and every subject should be covered in the sociological annex. On the contrary, the sociologist should be selective about the amount of attention given to each subject depending on its importance for clarifying project-related issues.**

Depending on the nature of the assignment, the sociological background could be arranged in a variety of different ways. Most sociologists find it convenient to work from the general to the particular, dealing first with the socio-economic context of the project area as a whole, then with community level phenomena, and last with households.

The general sociological background might cover the following topics:

- Historical origins of existing agrarian systems

- Population and demographic trends
- Economic activities and settlement patterns
- Communications and access to markets
- Health, education and social services
- Social organization<sup>49/</sup>
- Grassroots social and political institutions
- Land tenure system including common property resources
- Patterns of access to land, livestock and means of production
- Household structure and domestic cycle
- Organization of production and consumption units
- Gender relations and the role of women
- Social stratification and power structure
- Relations between villages and the outside world
- Farmer and women's groups
- Access to extension and support services
- Constraints and priorities as perceived by village leaders.

The discussion of community level social and economic organization should be complemented by developing a typology of households, as a basis for comparing between different categories of the population with regard to family composition and stage in the domestic cycle, farm size, ownership of livestock and income-producing assets, income sources and levels. For each type, relate farming practices to resource endowments and household members' goals and survival strategies. Examine the constraints, perceived problems and priorities of each type.

Depending on the nature of the project, some of the factors to examine at the household level might include:

- *household composition* in relation to stage in domestic cycle, education, labour force and migration patterns;
- *resource base*: land and livestock holdings, ownership of farm equipment and other assets, housing type and condition;
- *economic activities*: combination of farming, animal husbandry, fishing, petty trading, food processing, casual wage labour, sidelines and migration;
- farming or *production system*;
- patterns of labour allocation between farm, off-farm, household maintenance and reproductive activities;
- household survival strategies;
- patterns of income and expenditure;
- indebtedness, savings and investment;
- access to inputs, credit and supporting services;
- *participation* in grassroots organizations;
- *perceived problems and priorities*;
- reactions to development proposals of Government and mission.

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<sup>49/</sup> Including kinship, marriage and inheritance patterns.

### **C. Institutional Context**

This section should have a prominent place in sociological annexes at project identification and at preparation. It should include an assessment of the various ministerial and NGO programmes serving the target population, in terms of their mandate, activities, staffing, presence in rural areas, type of beneficiary, coverage of the target population, quality of technical support, strengths, weaknesses, constraints and absorptive capacity, and a critical review of the experience of prior and ongoing projects which have implications for project design.

### **D. Implications for Project Design**

The contents of this section should be tailored to the type of project and the stage in the project cycle. Three possible variations are illustrated below: one for production-oriented projects, one for poverty alleviation projects and one for resource conservation projects.

#### **Production-Oriented Projects**

Drawing on the information presented in Section B - Socio-economic Context, analyse convergence and divergence between Government priorities and those of potential target groups. Note which activities they accept, which they reject and reasons for rejection.

If technical proposals have already been elaborated by Government or a previous mission, an in-depth analysis of the reactions of different categories of the potential target population would be appropriate. Clarify what beneficiaries are expected to do under the project: what changes it would entail in crop and livestock production, how much additional time and money they would need to invest, and what proportion of the population is expected to participate. Highlight what they would have to give up, for instance by destocking or taking land out of production or withdrawing labour from off-farm activities to meet incremental labour requirements.

During the course of the mission, examine whether target groups can afford to adopt the proposed technical packages, whether assumptions about labour availability are consistent with what is known about the gender division of labour and migration and whether the returns from proposed technical innovations can compete with those of alternative activities (off-farm employment, investment in non-farm activities). If the project would affect household level food security, by taking land out of food production, show evidence that the poorer farmers are willing to do what the project expects.

Depending on the nature of the project, some of the issues to examine under this heading might include:

- whether marginal farmers are more interested in off-farm activities rather than on-farm investment as their main source of cash;
- willingness to reduce the area planted to food crops in order to grow forage for a draught animal;

- likelihood that grain deficit households would take land out of food crops to grow cash crops;
- willingness to plant perennial crops or to build terraces on land held under insecure tenure;
- availability of family labour to meet incremental labour requirements in the light of the gender division of labour and off-farm employment;
- willingness of wives to provide unpaid labour for crops controlled by the husband;
- incentive of household members to withdraw labour from off-farm work to meet incremental labour requirements of the project;
- willingness to double investment in seed and fertilizer in relation to risk of crop failure;
- evidence of the need for credit.

In the text of the annex, show evidence that the above issues have been examined and satisfactorily dealt with. If the mission has rejected or modified any initial Government or lending agency proposals due to lack of farmer interest or other social considerations, justify the decision. The justification could be based on the experience of previous projects or on farmers' stated reasons for rejecting certain proposals. This section should be thoroughly discussed with the agronomist, livestock expert, economist and other technical specialists before anything is put on paper. Highlight what the project is doing to make technical innovations less costly, less risky or more suitable for small producers. If evidence of farmer willingness is not adequate, flag the issue for further follow-up in the next stage of the project cycle.

### **Poverty-Oriented Projects**

Drawing on information in Section B - Socio-economic Context - define which categories of people should be the project's target group(s). Identify which categories are outside the target group on grounds of wealth. For IFAD, make a table showing the number and percentage of households in the project area which are considered to be the project's target group and those outside the target group. Rank target groups in order of priority. Indicate how target group criteria could be operationalized.

Analyze the causes of poverty. Describe the process of socio-economic differentiation, impoverishment and accumulation of wealth. Highlight strategies which some poor households have used to escape from poverty. Identify strategies which upper stratum households have used to capitalize their farm enterprises or to diversify out of farming.

Spell out the implications of the above for definition of the project concept and strategy. In the light of what we know about poverty and socio-economic differentiation, what should the project concentrate on? Why is the target group poor and what could be done to address the root causes of poverty? If poverty is attributable to factors which are beyond the project's control, such as natural calamities, droughts, guerrilla warfare or collapse of markets, consider what the project could do to reduce vulnerability. How could existing household survival strategies be reinforced? If some households have been successful in escaping from poverty, is the model replicable? What obstacles prevent other households from following their example? Could project action remove the obstacles or if not, could it at least accelerate

the process? Which actions would have the biggest impact on the largest number of poor households? In the light of the above, which actions should the project emphasize?

Examine areas of convergence or divergence between the priorities of Government and those of the target group. Identify which of the proposed project activities are of interest to the poor and which are primarily of interest to wealthier households.

For each of the main project activities, assess who is expected to participate and how benefits would be distributed between wealthy and poor. Identify any actions which are target group neutral - in that they benefit everybody in the project area, regardless of their economic status. Draw attention to any actions which are likely to benefit the better-off households at the expense of the poor. Specify which actions are intended mainly for the poor. At project preparation, examine whether the share of each component in the project's total budget is consistent with an emphasis on poverty alleviation.

Identify mechanisms which could be used to target project benefits to the poor. Discuss the trade-offs between different methods of targeting. Outline the approach to be adopted by the present project.

Indicate, for the main delivery systems to be used by the project (e.g. agricultural extension, veterinary service, agricultural credit, input supply, marketing) the current level of contact with the target groups and state what the project will do to improve coverage.

Indicate whether there are any grassroots organizations which the project could harness as a receiving mechanism for extension, credit or other activities. If there is more than one alternative (e.g. formal cooperatives, informal farmers' groups, rotating savings groups, women's groups) compare their advantages and disadvantages (e.g. geographic coverage, representation of the target group among their membership, viability, sustainability) and state why the project has opted for one or the other. In particular, examine whether existing organizations are dominated by vested interests and assess the potential for reorienting them to the target group.

Drawing on information presented in section C - institutional context - assess institutions involved in farmer organization and community participation in terms of their implementation capacity and orientation to the target group. Draw implications for choice of agencies to implement the component.

### **Resource Conservation Projects**

The section on "Implications for Project Design" might begin by synthesizing the essential points from the previous socio-economic background from section B. Identify all of the categories of people who use the resource and the nature of their claims on it. For each of the main categories of users, indicate numbers and characteristics (sex, ethnic group, wealth/poverty) and assess their degree of dependence on the resource for their livelihood. Note conflicts between different users of the resource and discuss how the project would affect the livelihood of each category. This is especially important in the case of common property resources which are shared by an entire community, such as grazing land, water resources, forests or fishing areas.



If resource use was formerly in equilibrium and has recently broken down, analyze the causes of the breakdown. Identify the locus of authority over decisions regarding the resource in the different communities which use it. Describe traditional institutions which governed resource use in the past. If their authority has eroded, give reasons. Indicate how the project should approach the community: which of the various competing traditional and modern socio-political institutions is most suitable as a vehicle for project activities.

Analyze areas of convergence and divergence between Government priorities and those of different categories of users of the resource. Identify which activities are accepted, which are rejected and reasons for rejection. Draw implications for incentive policies.

Drawing on the information presented in Part C - Institutional Context - assess institutions involved in community mobilization and resource management in terms of their implementation capacity and suitability for implementing the project.

### **E. Outline of Components Designed by the Sociologist**

This section is most important for project preparation missions. Depending on the nature of the project and the TOR, the sociologist might design one or more components for community development, farmers' organizations or income-generating activities for women, youths or landless households.

*Objectives* of farmer organization/community development component and list of proposed activities

Items to be *financed* under the component (if applicable)

- buildings: number, location, proposed use
- additional personnel: number, qualifications, source
- equipment and demonstration materials
- vehicles
- training (staff, beneficiary)
- credit or revolving fund (if applicable)
- technical assistance
- other

*Cost* estimate for component

*Phasing* (for each year of the project)

- build-up of personnel
- number of villages to be covered
- number of groups to be contacted
- build-up of group membership
- number of people to be trained (if applicable)

*Organization and management* of component

- institutional framework (designate responsible ministry)
- designate who will coordinate component (specifying grade and title in ministry, if applicable)
- spell out to whom coordinator reports (in project management structure)
- spell out how the component will coordinate with other project components (if applicable)
- lines of authority from programme coordinator to village level workers and contact groups
- organization of groups at village level.

**Benefits.** For poverty alleviation projects, the preparation mission should specify the number of households expected to benefit from each project component, the total number of beneficiaries (eliminating double counting of households benefiting from two or more components), the percentage of beneficiaries expected to come from target group households, and what percentage of the total households in the target group the project expects to reach.

**Risks.** Highlight any risks that the project might fail to achieve its objectives to lack of farmer participation or cause social conflict or have a negative impact on weaker sections of the population or women.

### **F. Issues and Follow-Up**

In the concluding section of the socio-economic annex, list any outstanding questions on which action by Government is needed before the project can be prepared any further. This might include: modification of components rejected by beneficiaries, willingness of Government to collaborate with NGOs, acceptability of proposed methods for targeting or the inclusion of activities not foreseen in the original design.

Outline any follow-up action needed. If a socio-economic study is needed, provide terms of reference for the study and estimate its cost in an appendix.

## Appendix 2

### Attachment 1

#### Checklist for Sociologists

##### **List of Information to be Considered by the Sociologist (On Mission - In the Field - Not on Paper)**

*This appendix is intended as a fairly exhaustive list of items which should be considered by the sociologist during the course of the field work. It by no means implies that each and every subject should be discussed in the sociological annex. On the contrary, each should be considered to determine its relevance for the project at hand and included or excluded from the descriptive part of the annex depending on its importance for project-related issues.*

#### **Population and Demographic Trends**

Analyze the demographic context in which the project will operate, including the origins of existing patterns of population distribution and implications of population growth, settlement patterns, ethnic groups, migration and female headed households for the project. Relate household structure and composition to wealth/poverty and to stages in the household development cycle. Present statistics on the number of farm households in project area and average household size in a table in the text.

#### **Infrastructure and Economic Activities**

Identify the main urban centres, communication lines and infrastructure of importance for the project area. Analyze the relationship between agriculture, industrialization and urbanization in the project area. Identify the main economic activities, including non-farm production, in terms of their geographic distribution, seasonality and proportion of the population engaging in them. Explore the linkage between age, sex, ethnic group (or caste) and occupations.

#### **Access to Land and Means of Production**

**Land Tenure.** Analyze the system of land tenure, origins and recent evolution, mechanisms of land allocation/acquisition, inheritance, and transfer, including access of women and youth. Consider how land tenure will affect soil conservation, development of valley bottoms or the incentive to plant perennial crops. If land title is required for credit, investigate how many households have title. If the project would introduce changes on land farmed by tenants or sharecroppers, terms of existing contracts between landlords and tenants need to be examined. If a livestock component is included in the project, access and control over communal grazing resources need to be discussed. The same applies to rights to water, fishing and forest resources.

**Access to Land.** Analyze the distribution of households by farm size and type of land (irrigated/rainfed) including landless population. Consider whether farm size is a good indicator of wealth/poverty and what might be the upper/lower cut-off for size of holdings of priority target groups, if appropriate.

**Livestock.** Analyze the reasons for keeping each type of animal, in order of priority. Investigate the distribution of households by number and type of livestock owned (including those with none). Determine whether livestock is a good indicator of wealth/poverty. Consider whether livestock ownership would be useful in defining the target group (if appropriate).

**Draught Power and Equipment.** Analyze the distribution of farm households by type of draught power used and source (own, hired, borrowed). Depending its relevance for the scope of the project, analyze the ownership of equipment such as pumps, carts, or pick-up trucks. For fisheries projects, analyze ownership of boats, outboard engines, nets and gear.

### **Organization of Production**

Identify whether basic units of production and consumption coincide with the nuclear family, the extended family or some other unit. Analyze production structures. Identify who (husband, wife, landlord) has decision-making power over main crops and livestock activities and who controls the income from the sale of different products. Identify who has authority over management of common property resources such as pastures, woodlands and water bodies.

### **Social Organization and Rural Institutions**

Items to be considered include social organization (clans, lineages, inheritance rules, marriage, bridewealth/dowry, traditional leaders, modern village institutions, formal and informal groups) and its implications for the project. Assess the suitability of traditional institutions such as exchange labour groups, savings groups, self-help groups, women's groups or religious groups as well as government-sponsored institutions such as cooperatives, extension groups and community development groups as a vehicle for involving the target group. Identify what percentage of the membership of the latter groups is drawn from different socio-economic strata. Analyze the pros and cons of involving formal cooperatives if these are proposed by government. Determine what needs to be done to existing institutions to increase the participation of the poor.

### **Social Stratification and Local Power Structure**

Analyze the system of social stratification. Relate it to the historical context, the distribution of land and assets, income sources and levels, ethnicity, and other factors. Examine the mechanisms of socio-economic differentiation, impoverishment and accumulation of wealth.

Analyze the local power structure and the role of different socio-economic groups in decision-making, including both formal institutions such as local Government and cooperatives, and informal pressure groups. Consider the role of local leaders in mediating

villagers' relationship with outside institutions and clientelistic relations within the villages. Sound out villagers' attitudes toward government agencies. Consider the implications for the project.

### **Production Practices of Different Socio-Economic Groups**

In the field, the sociologist and the agriculturalist should compare the farming practices of the poor with those of better-off households with a view to understanding the reasons for the differences. Differences might include cropping pattern, area under irrigation, use of improved varieties, organic and chemical fertilizer, source of draught power, planting time, plant density, cultural practices, plant protection, production, yields, and utilization of the harvested product for home consumption, livestock and sale. In pastoral areas, compare herd composition and livestock management practices of poor versus wealthy households. For fisheries projects, investigate ownership of boats and fishing gear, catch sharing arrangements, differences in income between owners, skippers and crew members; also compare differences in fishing grounds, fishing effort, catch per unit effort and relations with fish traders and boat/gear suppliers among different socio-economic groups of fishermen. Consider implications of seasonality of farming practices, livestock management and fishing operations.

### **Labour Allocation and Role of Women**

Analyze the gender division of labour in crop and livestock production as well as domestic and non-farm activities. Consider the relative amount of time spent by adult males, women, boys and girls in farming versus off-farm activities and the implications of domestic tasks, migration and children's schooling for labour availability. Investigate the use of exchange labour and hired labour, the source and characteristics of hired workers (age, sex), the tasks for which they are hired, the season, the contractual status of labourers, mode of compensation and wage rates.

Compare labour requirements for the various farm models with and without the project; determine how much additional labour is needed and peak season requirements (tasks, months of year). Taking into account the gender division of labour, migration, off-farm work, and women's domestic responsibilities, analyze whether the average small farm household has sufficient family labour.

### **Household Survival Strategies**

Analyze the part played by self-provisioning food production, crop sales, livestock, off-farm wage employment, non-farm activities and remittances in the total pattern of household activity among the main socio-economic groups. Emphasize the rationality behind farmers' actions - their reasons for doing what they do. Identify different strategies which households use to keep from falling into poverty as a consequence of crop failure, natural calamities and other emergencies.

### **Income Sources and Levels**

Identify the contribution of farm and non-farm income sources to different socio-economic strata or types of households, and their degree of dependence on earnings of women and children.

Compare the average household income per capita in the project area with the national average (usually available in World Bank atlas) and with official poverty lines (or in their absence, the minimum wage). Try to discover what percentage of population is below the poverty line. Compare time series data on income levels, to shed light on inter-annual fluctuations. Review any available information on income distribution within the project area, even if based on micro-studies of a limited sample of households. Relate trends in income levels and distribution to changes in the surrounding economy such as changes in the price of consumer goods relative to agricultural commodities or changes in the demand for casual wage labour.

### **Food and Nutrition Situation**

The main items which should be considered during the course of the mission include: (i) food self-sufficiency (national level, project area, and household level); impact of the project on food self-sufficiency; (ii) seasonality of food supply and of food prices; (iii) diet (staple foods, frequency of consumption of other foods such as meat, fish, milk, fats, vegetables); food taboos; (iv) hungry season (identify what months of the year this occurs, what foods are consumed by the poor during this season including wild plants, game and fish); the role of early maturing crops, homestead gardens and consumption credit; analyze how the project is likely to affect the hungry season food supply of the poor; (v) nutritional status of children; nature of main deficiencies (protein, energy); age-specific deficiencies (weaning?)

Analyze linkages between food and nutritional factors and project design options. Assess how the project as originally designed is likely to affect food and nutrition and consider alternative designs which might improve that impact.

### **Indicators of Poverty**

Consider whether the secondary data give an accurate picture of the distribution of poverty. Identify reliable indicators of poverty (qualitative or quantitative). Possibilities include the size of land holding (irrigated, rainfed), type of tenure, presence/absence of cash crops, livestock ownership (especially cattle), age, sex, ethnicity, off-farm income, access to remittances.

### **Access to Support Services**

Analyze available information on extension in the project area: proportion of villages, number of villages covered, characteristics of villages covered; total number of farm households, number of households covered; rate of participation; rate of penetration in villages covered by the system.

Investigate which types of farmers (age, sex, farm size, type of crops) are contacted by the extension services and which are bypassed. If possible, indicate the percentage of people contacted who are female. Identify main constraints for contact of

extension system with different categories of the target group (landless, women, youth, farmers with no cash crops, etc.). Compare with the performance of other extension projects elsewhere in the country. Review lessons regarding farmer participation and contact with the poor. If the project proposes to introduce the Training and Visit System (T&V), analyze the trade-offs between using contact farmers as opposed to contact groups.

Repeat the exercise for each of the main institutions involved in the project such as agricultural credit, input supply, veterinary and livestock production services, commodity and marketing boards, community development, women's extension services, fisheries department, forestry service, etc.

### **Perceived Problems, Constraints and Priorities**

As an exercise which can assist the team to clarify the project strategy, list the problems and constraints faced by target group households. Make a separate list for the problems identified by households whose wealth puts them outside the target group. For each problem, list solutions proposed by farmers. Rank farmers' problems in order of priority. Rank solutions proposed by farmers and compare them with solutions proposed by government authorities. Determine whether farmers' ranking of project components differs from that of authorities.

## **Appendix 3**

### **Checklist for Agronomist - Diagnostic Study**

#### **Topics to be Considered During Field Work**

##### **Resource Base and Zoning**

- Physical characteristics of project area (from *Guidelines for Design of Agricultural Investment Projects*<sup>50/</sup>)
- Trends in land quality and carrying capacity
- Natural factors influencing farming systems (climate, rainfall patterns, frost-free period, waterlogging, hail, floods, drought, cyclones etc.)
- Importance of natural and other factors for zoning
- Brief description of salient characteristics of each zone
- Summary overview of the main production systems in the project area

##### **Land Tenure and Land Use**

- Locus of decisions over land and common property resources
- Land tenure, farm size distribution, land market (if applicable), trends; factors determining patterns of access to land
- Variation between production systems
- Variations between socio-economic strata and types of households
- Relationship between land tenure and land use
- Relationship between land quality and land use
- Indigenous land classification terminology

##### **Cropping Patterns**

- Cropping patterns, rotations, crop calendar; variations between systems, socio-economic strata and household types
- Reasons why certain crops are expanding, contracting in area
- When new crops are introduced, what do they replace?
- Varieties, factors determining varietal preferences

##### **Planting Decisions**

- Factors determining what farmers plant and where
- Factors determining how much farmers plant of each crop
- Factors determining choice between pure stand, mixed cropping
- Factors determining when farmers plant

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<sup>50/</sup> FAO Investment Centre Technical Paper No. 7.



### **Use of Technology**

- Factors determining technology use by different types of households
- Levels of input use: seeds, chemicals, fertilizer, farm manure
- Input source, cost, availability, how financed, reason for not using more, percentage of population not using any
- Irrigation (source, how acquired, area and crops irrigated, number and timing of irrigations, depth of water, cost recovery, water management decision making, farmer participation in irrigation maintenance and repair)
- Equipment (animal traction, carts, ploughs, seeders, tractors, threshers, grinders, choppers, mills, pumps)

### **Cultural Practices and Labour Use**

- Cultural practices, by crop, type of land, farming system and socio-economic stratum
- Timing of key operations (reasons for delays)
- Labour use (seasonality, gender roles, hired in/out), labour availability (taking into account time spent on off-farm and domestic tasks), cost of hired labour; reasons for using/not using hired labour

### **Production and Yields**

- Production and yields, by crop, variety and type of soil
- Yield variation: by zone, farming system and type of household
- Reason for high/low yields

### **Utilization of Farm Products**

- End use of crops (human consumption, seed, sale, livestock)
- Crop marketing (amount sold, price, where sold, season, buyer; reasons for selling/not-selling, reason for high/low price)
- Factors determining end use of by-products (fuel, fodder, manure, other uses; sale of by-products, prices)
- Variation in use of crops and by-products by farming system and socio-economic stratum

### **Food Preferences and Level of Self-Sufficiency**

- Staple foods in order of preference
- Variations in diet of wealthy and poor
- Degree of food self-sufficiency, market dependency
- Seasonality of supply and price of food
- Food deficit households
- What people eat when food supply runs out

### **Animal Husbandry**

- Purpose(s) of keeping each of the main species, in order of importance
- For each species: number of animals, distribution of ownership, largest holding, average, herd composition
- Production parameters: births, deaths, calf mortality
- Marketing: sales of live animals; animals slaughtered, production and sales of wool, hair and hides
- Livestock management practices and input use, by species
- Pastures, pasture management, grass cutting, hay making, pasture improvement, forage crops, fodder trees
- Crop/livestock interactions (traction, land preparation, hauling, manure, crop-by products)
- Variations between farming production systems and socio-economic strata in all of the above

### **Other Sources of Farm Income**

- Tree crops (fruit, nuts, coffee/cocoa)
- Forestry, farm forestry; gathering of wood and non-timber forest products; fuel consumption; forest management and use rights
- Hunting/fishing/food gathering
- Variation between farming/production systems and socio-economic strata

### **Cost/Benefit Analysis of Farm Models**

- Costs of farm operations (crop, livestock, other)
- Food expenditure
- Other expenditure (schooling, house, marriage, medical, fuel)
- Taxes and production quotas
- Monetary income from all farm and non-farm sources
- Typical farm models for each farming system or stratum of the population, showing costs and returns.

## **Appendix 4**

### **Rapid Assessment Methodology for Projects Concerned with Community Level Land Use Planning (West Africa and the Sahel)**

This methodology, which was developed by Investment Centre missions for projects in Niger, Mali and the Central African Republic, has two parts: (i) a rapid inventory of the resource base, land tenure and land use at village level followed by (ii) a survey covering all households in each village involved in the land use planning exercise. Only a few (usually 2-5) villages were surveyed as part of the diagnostic work. Survey work in the other villages was deferred until project implementation, where it formed an integral part of the land use planning exercise.

#### **Phase I - Rapid Community-Level Resource Inventory**

A team consisting of an agronomist and social scientist (rural sociologist, socio-economist, anthropologist or social geographer) collected primary data on a village for 1 day. The team's activities included:

- a meeting with local Government authorities; assignment of a Government counterpart to accompany the team; travel to the first village selected for a case study;
- a brief visit to with the head of the village to explain the objectives of the project, the type of information needed and to arrange a meeting with members of the village council (key informants) later in the day;
- rapid field reconnaissance along a transect crossing the village territory, accompanied by the village head and 1-2 key informants, to familiarize themselves with land forms, soil types, land use, vegetation, crops, etc.;
- key informant interviews to learn the local terminology for land forms, soil types, plants and crops;
- a meeting with the village council, focussed on village social and political organization, land tenure, production systems and perceived constraints.

The main outputs of the rapid reconnaissance phase were: (i) a sketch map showing the boundaries of the village territory in relation to those of neighbouring villages, access roads and markets; (ii) a list of local terminology for clans, lineages, neighbourhoods, compounds, extended households and nuclear families; (iii) the local names of the different clans and lineages which have land rights in the village, from the village founders to the most recent arrivals; (iv) a brief description of indigenous political organization (village head, council of elders, religious authorities, etc.); (v) a sketch map showing the location of different types of land forms found in the village territory and their name in the local language; (vi) a brief description of the use of each land type (vegetation, crops, etc.); (vii) notes on factors governing access and control over each type of land (principles of land allocation, transfer, inheritance); (viii) a calendar of agricultural activities, showing their relationship to rainfall

patterns; (ix) brief descriptions of the principal crop rotations, methods of land preparation and cultural practices used on each type of land; and (x) a list of felt needs and priorities expressed by the villagers.

## **Phase II - Detailed Resource Inventory**

The socio-economic survey was undertaken for approximately one week in each village by a larger team (6-8 people) and covered every household in the village. Simultaneously, detailed resource mapping was carried out by another team.

First a list of households in the village was compiled, from the *cartes de famille* kept by the village council for the purpose of taxation. Each card corresponds to one household (nuclear or extended). It shows household composition, by age, sex and their relationship to the household head; household members living outside the village; births and deaths; the number of members liable for taxation; and the number of animals owned by the family (as these are subject to a separate tax).

Then using the list of clans and lineages developed earlier, households were sorted into groups according to their clan origins.

Key informants were used to compile a list of the local name of every neighbourhood or *quartier* of the village territory, and the clan or lineage to which it belongs. Names of land areas or *quartiers* were matched with the predominant type of land use.

Then each household was interviewed to determine the size and location of its land holdings, by *quartier* and type of tenure. This was done in the field, with the team of surveyors, who measured and mapped each parcel. Exact measurement of clan territories, family holdings and their boundaries were used as inputs for estimating the number of kilometres of windbreaks or hedgerows to be planted along the boundaries of each holding.

For projects involving community management of pasture or rangeland areas, the inventory of land holdings at household level should also cover livestock, in order to verify whether the information recorded on each *carte de famille* is accurate. Information on the total number of large and small ruminant animals in relation to the carrying capacity is crucial for planning purposes. Information on the distribution of livestock ownership and the numbers and characteristics of stockless households is needed as a basis for negotiating with the community to establish a ceiling on livestock ownership.

## **Appendix 5**

### **Guidelines for Design of Components for Community Organization and Income-Generating Activities**

*This appendix is meant to give guidance on some of the questions which arise most frequently in the course of designing community development components. It is intended primarily for consultants who are unfamiliar with Investment Centre work for IFAD. Consultants should keep in mind that our thinking on these issues is in constant evolution and will be revised periodically.*

#### **Options for Community Organization**

If, as a vehicle for project activities, beneficiaries are to be organized into groups, the project design must specify who will organize them - i.e. the institutional location of the group organizers. The range of possibilities includes government ministries/departments of agricultural extension, rural development, community development, local government, social affairs, cooperatives, adult education, women's affairs and youth. In some projects, group organizers are attached to credit institutions. In others, organization of beneficiaries is contracted to an NGO. The sociologist should consider the trade-offs of working with one or another of these institutions in terms of a few critical parameters, such as: the institution's mandate, the type of activities covered by its programme, its existing staff presence in the project area and clientele.

At this point, the sociologist is often faced with a dilemma. The Agricultural Extension Department usually has the largest number of village level staff but the Government may be committed to working through individual contact farmers as opposed to groups. Another ministry such as community development or rural development may have a clear mandate to undertake grassroots organization but staffing in the project area is very limited. In many cases the option of increasing the number of group organizers/community development workers is ruled out, since most countries now have restrictions on hiring of additional ministry staff. The alternatives are: (i) to recruit community development workers on a contract basis for the duration of the project; (ii) to use extension workers to organize beneficiaries; or (iii) to co-opt NGOs to organize the beneficiaries on behalf of a government department.

The option of recruiting group organizers/community development workers on a contract basis should only be considered when it is possible for them to accomplish their work in a given community within the loan disbursement period and withdraw staff without compromising the sustainability of benefits. The contract workers must aim at making beneficiary organizations self-sufficient before the end of the project. The amount of training and supervision required to equip a community organization to maintain and repair infrastructures and equipment and/or to recover their cost through user fees is relatively modest in comparison with the amount of backstopping required to enable a farmers' association to handle input supply, credit, marketing and related bookkeeping functions or to manage a joint enterprise such as a grain mill.

The option of utilizing NGOs for community organization should be considered whenever there happens to be a strong NGO which is acceptable to Government. The NGO would work in close collaboration with Government extension services. The aim of using NGOs should not be to replace or compete with Government services but rather extend their outreach and effectiveness at village level. Modalities for Government/NGO collaboration are evolving rapidly. One alternative is for a Government department to sub-contract community organization to an NGO, paying a flat fee which covers part (not all) of NGO costs including staff and transportation. If this is not acceptable to Government, it may be possible to establish a revolving fund which finances the "projects" undertaken by NGO-assisted beneficiaries; in this case the project supplies only the credit, while NGOs cover their own staff and transportation costs. Arrangements for channelling funds to NGOs are the responsibility of the appraisal mission - not the Investment Centre sociologist.

If there are neither government nor NGO community organizers available, the option of using extension workers to organize groups can be considered. However, extension workers will need additional training to ensure that the right target groups are included. The approach is suitable for extension projects which propose to use farmers' groups mainly as a receiving mechanism for diffusion of extension messages. It is not suitable when the groups are expected to take over complex functions such as input supply, credit, marketing or operation of joint enterprises. In the latter case, specialized group organizers are needed to train groups in bookkeeping, accounting and enterprise management skills and to provide regular follow-up.

Another question which frequently arises regards what to do if existing community development staff are highly "politicized" or unresponsive to target groups. The general policy is that whenever possible, one should attempt to reorient existing Government institutions to make them responsive to the needs of small farmers and landless households rather than creating parallel institutions outside and in competition with Government. The next best option is to use an NGO. Only in extreme cases would it be justified for a project to set up an autonomous project implementation unit with its own parallel complement of group organizers outside line agencies.

For project preparation, the sociologist should specify the number of community organizers required (both grassroots workers and supervisors); their source (are they to be seconded to the project from an existing government department or recruited afresh?); their qualifications; the cost, duration and contents of pre-service training (if any); the job description; the pay scale; where they are to be posted; the phasing of staff over the duration of the project and its cost. It is preferable to work with existing staff and to keep recruitment of new staff to a minimum.

**Male versus Female Community Development (CD) Workers.** The sociologist should consider whether, in the local context, it is culturally acceptable for male CD workers to contact farm women in groups in a public place. If not, female CD workers will be needed in addition to males. The supply of suitably-trained female CD workers should also be investigated.

**Commuting versus Posting in the Village.** The sociologist should consider the advantages and disadvantages of both options. Experience suggests that community development staff should usually be posted at the same level as village extension workers.

Commuting between district headquarters is costly in time and resources (vehicles, fuel) and exposes staff to risk of accidents. On the other hand, qualified people may be unwilling to live in villages unless suitable housing and schooling facilities for their children are available. Related problems of high staff turnover should be carefully considered.

**Para-professionals.** If CD workers cannot be posted full-time in villages, an option is to identify villagers to receive training to provide para-professional services and advice to other villagers on a continuous basis. They would not receive a government salary and would be remunerated by charging a modest fee for certain services such as livestock vaccination.

**The Interface Between Community Development and Extension.** The sociologist should clearly distinguish between the roles and responsibilities of community development workers and technical extension workers in agriculture, livestock, fisheries or forestry. CD staff should not provide technical training and advice in competition with government extension workers.

**Group Organization and Structure.** The main issue is whether there should be one multi-purpose group for the whole village or a series of smaller, socially homogeneous groups organized around a single set of activities. There cannot be any hard and fast rules: the type of organization proposed should be determined by the project's objectives and the socio-economic context. As a rule, in West Africa and the francophone Sahel, most sociologists tend to favour village-wide multi-purpose groups; in East Africa, mixed-sex self-help groups; in South Asia, separate groups for landless and for small/marginal farmers and within these categories, separate organization of men and women, with smaller 5-person sub-groups sharing joint liability for credit.

**Phasing of Beneficiary Organization.** The sociological annex should spell out how many groups are to be organized in project year 1, year 2 and so on until the end of the project. If CD workers are to work with a group for two years and then move on to new groups, the implications for staff deployment and the phasing of other inputs such as training and credit should be fully worked out (and reflected in the cost tables). The number of groups to be organized by each CD worker and the frequency of contacts should also be specified.

**Savings Mobilization.** Weekly deposits to either individual or joint savings accounts can be a mechanism for mobilizing local resources in support of productive projects, increasing members' stake in the group, and reducing credit risks to the borrowers. Although, ordinarily, savings mobilization should be the responsibility of a credit expert, if there is no credit expert on the mission, and the sociologist recommends savings mobilization in connection with community micro-projects or income-generating activities, he/she should specify how the savings scheme would work.

**Group Profits and Sustainability.** If groups are supposed to be self-financing or to make a small profit on input supply and marketing operations, at project preparation the annex should include a cash flow showing projected costs and returns. In some projects, the group is also expected to act as a bank which collects savings and makes small loans to other villagers. Projected earnings from interest charges on such loans should also be spelled out.

## **Income Generating Activities**

**Selection of Activities.** There is no hard and fast rule, but experience suggests that income generating components are more successful when activities are selected by the beneficiaries - not by the sociologist or the ministry implementing the project. However, community groups may produce "shopping lists" based on stereotyped perceptions of what they think the implementing agency is prepared to give them. Therefore, all proposals should be carefully evaluated to determine their appropriateness and economic viability.

**New versus Existing Activities.** As a rule, it is preferable to build upon the existing non-farm activities of the target group as opposed to introducing new activities which are either unfamiliar or unproven in the local context.

**Inventory of Existing Activities.** It is useful to start by making an inventory of existing off-farm and non-farm activities undertaken by the target group - the number of persons/households involved, their age, sex, and socio-economic characteristics. The inventory should cover the organization of production (including sub-contracting), marketing chain, supply of raw materials, costs and benefits, with a view to identifying which activities have potential. Identify the critical constraints for expansion of each main activity (e.g. investment capital, working capital, labour, technical skills, business and management skills, raw materials, prices or markets). Outline what the project will do to address these constraints.

**Costs and Returns.** As a rule, when an income-generating component is proposed, the sociologist or WID expert should make a cash flow for the main activities demonstrating their profitability (4-10 activities). Consultants who have never done this should seek assistance from the mission economist.

## **Development Funds**

Many sociologists propose the establishment of small development funds in support of community micro-projects or income-generating activities. IFAD has prepared guidelines on the incorporation of development funds in its projects (available on request). Some of the salient points are summarized below.

**Credit versus Grants.** In principle, finance from the development fund should be disbursed to community groups on a loan rather than a grant basis, because this is necessary to make the fund self-sustaining. If the beneficiaries pay back the entire amount (plus interest to cover inflation), the fund will continue to revolve year after year: the number of people which can benefit from loans is much greater than the number which could benefit if the fund reduces progressively as money is not recovered. However, there is not a firm rule. The Investment Centre has also designed community development funds which operate on a matching grant principle. Beneficiaries raise a predetermined share (usually half) of the total value of the project and the fund matches their contribution. The local contribution need not be in cash, but can also include land, labour and building materials. The difficulty with matching funds is that, as the money is not recovered, they do not revolve; they need to be replenished periodically from outside.

**Social versus Productive Activities.** Several of the Investment Centre projects aim at reorienting an existing community development or micro-project fund from investment



in social-infrastructure (schools, clinics, village water supply) towards agricultural activities such as irrigation, small livestock, community woodlots, agro-processing and marketing. If the sociologist proposes the latter type of activities, he/she may be required to prepare a cash flow demonstrating that the productive activities pay and to specify how their cost is to be recovered from the community.

**Cost Recovery for Labour-Saving Devices.** Consultants often ask for guidelines regarding the use of development funds for labour-saving devices which do not necessarily generate cash income. This includes village water supply projects, donkey carts for hauling water and fuel, maize shellers, sorghum dehullers, fuel-saving ovens and woodlots. Many bilateral donors and NGOs give outright grants for these activities. Others have established matching funds. Although there are no hard and fast rules, IFAD tends to favour full cost recovery from the beneficiaries, who should be prepared raise cash from other sources to repay the cost of the equipment, even if the activity itself does not generate profits.

**Fund Ceiling.** As a general rule, development funds for community development and income-generating projects should not exceed 15% of the base cost of the project.

**Sustainability of the Fund.** In principle, the fund should continue to revolve year after year without diminishing in size. This implies: (i) that the recovery rate should be as high as possible, (ii) the full cost of credit should be recovered from beneficiaries and (iii) that positive interest rates should be applied.

## **Appendix 6**

### **Prototype Outline for a WID Annex**

#### **I. INTRODUCTION (1-2 pages)**

Origin of request for WID component.  
Purpose of the consultancy, duration, places visited.  
Data sources and their limitations.  
Outline of the WID annex.

#### **II. ESSENTIAL BACKGROUND (6-10 pages)**

Brief profile of the people in the project area.  
Gender relations - implications for the project:

- household composition and female-headed households
- implications of male migration
- gender aspects of access to land, livestock and other assets
- gender division of labour
- control over crops and income from their sale
- implications of women's role for household food security and nutrition
- women's role in domestic activities
- women's sources of income
- role of women as providers for their families
- gender aspects of poverty
- women's needs and priorities

Existing support for rural women in the project area.  
Lessons from ongoing projects.

#### **III. RATIONALE AND DESIGN CONSIDERATIONS FOR WID COMPONENT (2-3 pages)**

Justification for including women in the project  
Constraints and felt needs which the project could address  
Gaps in existing support for women which the project could fill  
Opportunities: technologies ready for transfer to women, etc.  
Precedents on which the project could build  
Activities of other donors which the project could replicate  
Trade-offs between a separate WID component versus integrating women throughout the project  
Target group for WID component  
Reasons for selecting certain income-generating activities  
Justification for size and scale of component  
Justification for choice of implementing institution

Other factors influencing design, such as:

- limited implementation capacity of agencies serving rural women
- limited supply of qualified female staff; high turnover
- constraints on recruitment of additional female staff
- constraints on female staff mobility and use of motorcycles

Finance for income-generating activities: credit, grant?

#### **IV. WOMEN'S COMPONENT (4-8 pages)**

Objectives

Activities

Items to be financed by the project (if applicable):

- buildings: number, location, proposed use
- personnel: number, qualifications, ministry
- equipment and demonstration materials
- vehicles
- training (staff, beneficiary)
- revolving fund (if applicable)
- technical assistance
- other

Cost estimate for component

Phasing (for each year of the project):

- buildup of personnel
- number of villages to be covered
- number of women's groups to be contacted
- buildup of group membership
- number of women to be trained (if applicable)

Organization and management of component:

- institutional framework (designate responsible ministry)
- designate who will coordinate component (specifying grade and title in ministry)
- spell out to whom coordinator reports (in project management structure)
- spell out how the component will coordinate with other project components (if applicable)
- lines of authority from programme coordinator to village level workers and contact groups
- organization of groups at village level
- functioning of credit (if applicable)

Benefits

Risks

**V. ISSUES AND FOLLOW-UP** (1-2 paragraphs)

Issues on which action by Government is needed before the component can be prepared any further.

Follow-up: list any studies to be completed before the next step in the project cycle.

## Appendix 7

### List of Diagnostic Studies Undertaken by FAO Investment Centre (up to 1992)

#### On Behalf of IFAD

China	Shandong/Yantai Agricultural Development Project
Pakistan	Neelum Valley Community Development Project
Brazil	Smallholder Technological Development in the Cerrado
Indonesia	Smallholder Tree Crop Development Project
China	Shanxi Agricultural Development Project
Mexico	Development of Ixtlera Zones
Algeria	Artisanal Fisheries Development
Turkey	Yozgat Rural Development Project
Nigeria	Katsina State Community Development Project
Egypt	New Land Agricultural Services Project
China	Development of Low-Lying Lands in Baicheng Prefecture (Jilin)
Zaire	Bumba Agricultural Development Project
Niger	Développement Intégré de l'Arrondissement d'Aguié CAROmbella M'Poko, Phase II
Comoros	Soil Conservation
Guinea	Siguiiri Rice, Phase II
Mexico	Development of Marginalized Indigenous Communities of Puebla State
Yemen	Sand Dune Stabilization in the Tihama Toor el Baha Minor Wadi Development Programme
Mozambique	Niassa Agricultural Development Project Nampula Artisanal Fisheries Rehabilitation Project
Myanmar	Border Areas Development Project
Indonesia	Sumba Smallholder Cashew Development
China	Yunnan (Simao) Minority Areas Agricultural Development Project
Brazil	Sergipe Rural Development Project
Nigeria	Niger Targeted Rural Household Support Project Benue Targeted Rural Household Support Project
Chad	Kanem Wadi Rehabilitation Project
Namibia	Northern Livestock Improvement Project

### **Other Lending Agencies**

Zimbabwe	South Matabeleland Livestock Project (AfDB)
IndiaBihar	Plateau Agricultural Development Project (WB)
Laos	Forestry and Conservation Project (WB)
China	Sichuan ADP - Qinjiang Prefecture Component (WB)
India	Brackish Water Fisheries (WB)
Uganda	Kotido District Rural Development (UNCDF)
Mozambique	Rural Rehabilitation Project (WB)
Nigeria	Land Management (WB)
Jamaica	Watershed Management (WB)
Ghana	Land Management (WB)
Swaziland	Smallholder Development Project (AfDB and IFAD)
Indonesia	Sulawesi Forestry (ADB)
Bhutan	Western Watershed Project (ADB)

## **Appendix 8**

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