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MANANTALI RESETTLEMENT PROJECT

by

Dolores Koenig

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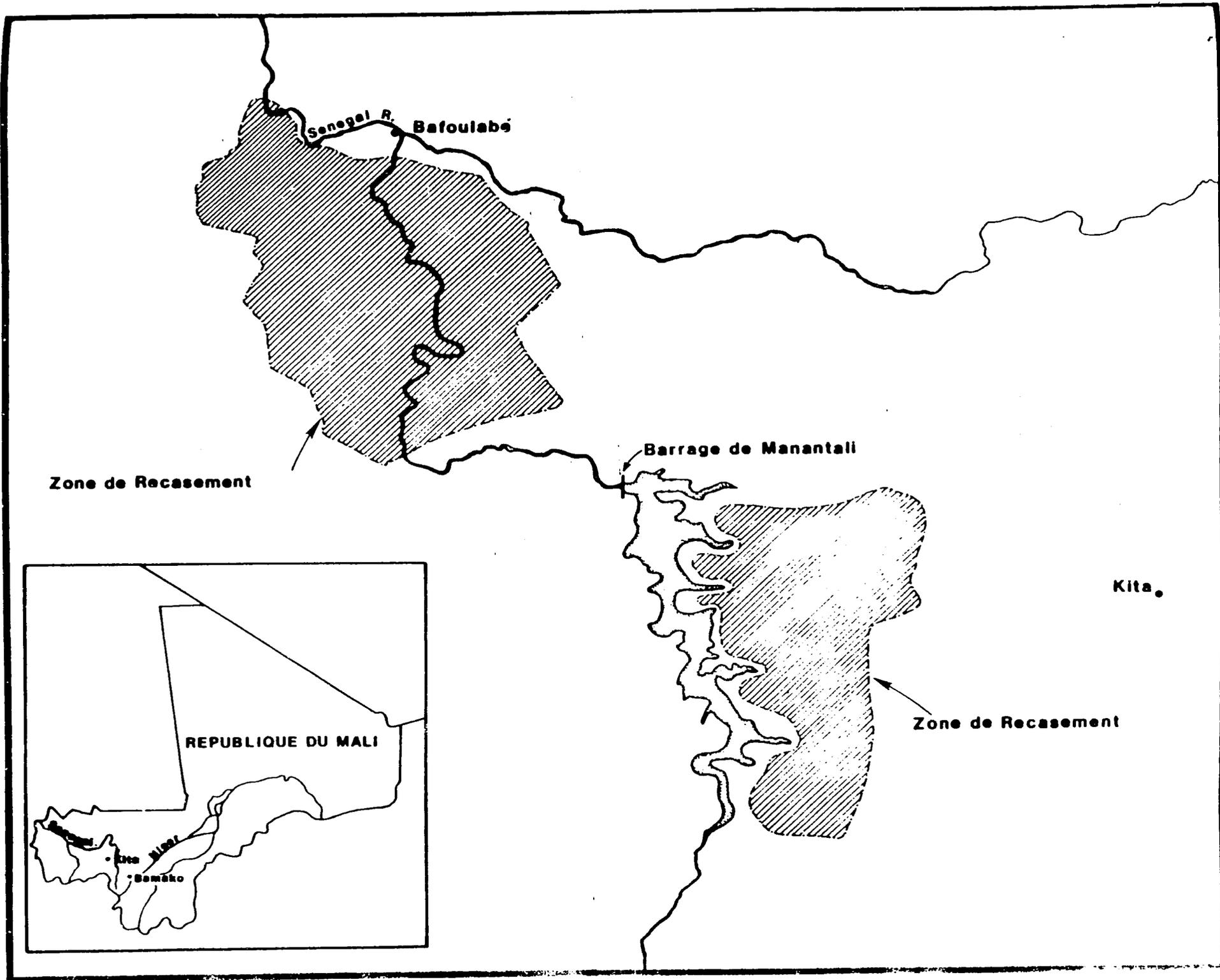
Agency for International Development,
Institute for Development Anthropology,
and Clark University
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Institute for Development Anthropology
99 Collier Street, Suite 302, P.O. Box 818
Binghamton, New York 13902 USA

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Dolores Koenig
Institute for Development Anthropology

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Introduction

The scope of work for the mission on which this report is based included the following items: 1) assess the potential importance of a number of specific problems raised by the resettlement effort; 2) propose studies to investigate those with the most serious potential impact; 3) propose terms of reference for those studies, including research methodology; and 4) identify future short term technical assistance needs during the life of the project to monitor, direct and evaluate this research.

A strategy for special studies is best suggested in light of existing plans of the Projet de Reinstallation des Populations de Manantali (PRM) for monitoring and provision of social welfare services during the life of the project. Therefore the first section of the report discusses the structure of Section Sociale et de Suivi (the Social and Monitoring Section or SSS), their personnel and their plans for studies. The report then suggests strategies for their two major research functions using their present personnel: 1) establishment of a Master Settler List; and 2) establishment of a series of indicators to be collected on a regular basis.

The report then analyzes and evaluates a number of specific problems. Some merit supplementary study; others need to be addressed in ways other than through studies; while yet others do not merit independent study. Two studies are suggested to address the priority problems. The first is a general comprehensive study on the re-establishment of production systems that can be used to address a number of specific problem areas, such as the re-establishment of gardening, or inequalities between men and women. Provisional terms of reference and short term technical assistance requirements are suggested. The second proposes an indepth examination of land tenure issues.

Suggestions for studies are based on a review of PRM and AID documents, discussions with PRM personnel, visits to the Manantali region and to various consulting firms in Bamako which do socio-economic studies. In Manantali, visits were made to both resettling and receiving villages in order better to understand some of the constraints under which the move will take place.

1.0 The Social and Monitoring Section (SSS)

The Projet de Reinstallation des Populations de Manantali (PRM), a part of the Direction Nationale de l'Hydraulique et de l'Energie (DNHE) of the Ministry of Industrial Development and Tourism, is the Malian agency charged with the resettlement effort. The PRM contains three major divisions, one of which,

the Section Sociale et de Suivi, is charged with monitoring and with the provision of social services to the resettling population.

At present, the personnel of the SSS are the following. The division is headed by a sociologist, Yacouba Konate, presently on board. He will be aided by another sociologist who will serve as his assistant; it is planned that this sociologist will be a woman to facilitate communications with women in the region. Although someone has been tentatively selected, the appointment is not yet final, and she is not yet in place. In addition there are to be two senior Téchniciens de Développement Communautaire (TDC's) who will work at the base at Manantali, with a focus on providing social services that are necessary to the resettled population. They will be assisted by seven TDC's who will be stationed in the villages and who will be the primary social service providers. Of this total of nine TDC's, only one has begun to work with PRM, although others have been identified and will soon join the section. Again it is planned that one TDC will be female, in order to respond more directly to needs of women in the area.

As should be clear from the list of SSS personnel, the emphasis of the division is on action rather than research. Although their training prepares them as facilitators of various local level development efforts, the major task of the TDC's at Manantali will be to work with the population to resolve the many everyday problems that will occur during the development effort. TDC's will assist at the distribution of WFP commodities; be present at the distribution of land and housing sites in the resettled villages; and assist villagers in the actual move. They will also serve as liaison between local government administration, PRM administration and the villagers. As there are to be only nine of them in the field, with some 44 villages and hamlets to be moved, it is clear that each TDC will be responsible for more than one village. Given the size of their social service tasks described above, their ability to undertake research tasks will be rather limited. They will be responsible for collecting various social and economic indicators which will track the effects of the project, and they may be used to establish the master settler list. In the PP, it was suggested that they be used for this latter activity, but due to circumstances to be discussed below, it may be more useful to contract with a private firm or hire supplementary interviewers to do this. It is not foreseen however that they will be used as interviewers for supplementary studies.

The project utility of having a master settler list (including an inventory of capital goods) and to have a series of socio-economic and health indicators is patent. The equally important need for several special studies has not been as well incorporated into general project thinking, although their potential payoff to project management and implementation is very high. These special studies call for detailed qualitative data and analyses, and cannot be accomplished by tightly structured

questionnaires. They are critical to project success, however, because they will address some of the problems that are certain to arise during resettlement yet that cannot be fully identified in advance. The special studies will also seek to provide the kinds of information and understandings that will generate enduring, longer-term solutions to problems than can be provided by survey research alone.

The in-depth studies therefore should be designed to serve several major functions. First, they should study significant potential problem areas in the region so that long-term results can be used to solve long-term problems and/or to be able to take preventive action against them. Second, they should be designed to form a basis for planning development activities to be undertaken by government or private agencies in the region after the termination of the actual resettlement project. And finally, the results of these studies may be used to aid in other resettlement efforts which occur in similar regions. For example, a somewhat similar situation can already be foreseen as the Gambia River Basin Authority (OMVG) plans a high dam at Kekreti in south-eastern Senegal which would require resettlement of a substantial population on the Gambia river.

The following sections discuss the Master Settler List, the establishment of indicators to be collected by the TDC's, and the proposed special studies.

2.0 Master Settler List

The first major task to be undertaken by the SSS is the establishment of the Master Settler List, an inventory of people to be resettled, their goods, and animals. It was originally foreseen that this would be done by the TDC's, but since then, the project has fallen somewhat behind schedule. Since the Master Settler List was originally planned to be completed in June of 1985, it may be advisable to have this task done by a private consulting firm in Bamako, so that TDC's can attend to the social service tasks that will be necessary at the beginning of the project. It was anticipated by the project designers that this might be necessary, and \$15,000 was placed in the project budget for this purpose. Another alternative which would also speed things would be to take on a number of supplementary interviewers who would work directly with the TDC's under supervision of the SSS for this project. Since the Master Settler List will not require sophisticated analysis, but rather some extra hands to do it, this may be the preferable and less costly alternative.

Terms of reference can be based on those formulated for the earlier "Etude Agro-socio-economique" funded by UNDP and done by IER (Institut d'Economie Rurale). They should include a population census, an inventory of fruit trees (substantially item K. of the UNDP terms of reference), an inventory of livestock (item M.), and an inventory of major capital goods held by the population. Little formal analysis will be required but

terms of reference should require that all information be collected household by household and forms should be turned over to the PRM in a clear legible format.

The Master Settler List need not include a census of structures, as this has already been provided by the recently finished GID report. The Master Settler List should complement the GID report, which can also be used as a reference for major household heads in the different villages.

There are several consulting firms in Bamako which could do this study. Since no sophisticated analysis of the data is required, the most important technical criteria in the choice of a firm would be its ability quickly and efficiently to get a competent team of interviewers prepared and into the field, and a track record of bringing work in on schedule.

This list should also be put on the PRM computers, using the data base program ordered by the the project. The PRM will need help in learning to use the data base program. If this is not available on the contract technical assistance team or from mission personnel in Bamako, short term technical assistance would be required. Such assistance is included in the IDA/SARSA proposal.

3.0 Indicators

It is also foreseen that the project will collect a number of indicators to chart the progress of the resettlement effort and the success of the villagers in re-establishing their villages. These indicators need to be easily measured and easy to collect, but also need to be meaningful, and to assess meaningful aspects of the life of the population. The following have been chosen in an attempt to fulfill both these criteria.

They should be collected by the VDC's once a month, except as noted. Certain indicators should be collected for the whole village (or in every household in the village, as appropriate), while others should be collected from a smaller sample of households selected for this purpose. Finally there are a few that should be collected at a regional level.

Once the indicators are decided upon, the PRM should develop a simple program so that the results can be fed into the computer quarterly, and large, unanticipated negative changes can be dealt with promptly. Positive changes may also be investigated further to understand why they are happening, so as to encourage them to occur elsewhere.

Indicators:

Village Level:

- Number of new in-migrants (by age,sex)
- Number of out-migrants (by age, sex)
- Weights for height, group most at risk (children 65-115 cm.

- in height - approximately 6 mos to 6 years; collaborate with public health study)
- Number of wells per village (including hand dug wells)
- Well-depth (of hand dug wells; if number gets too many, sample only)
- Number of times borehole pump broke down in previous month
- Measure of output or efficiency of borehole (check with technical personnel on the best way to do this)
- Rainfall
- Market survey (major goods available for purchase; cost per unit; also list goods available)
- Number of villagers hired by various resettlement enterprises, and their monthly salaries
- List of major problems encountered by the villagers

Household Sample: (perhaps 10/TDC over his/her different villages)

- Number of fields per family (by communal vs. individual, sex of farmer; during some months only, i.e., during months when most fields initiated)
- Yields on an even smaller selected sample of fields (do only in Nov, Dec and/or when any harvests occur)
- List of crops grown by anyone in the family (since many fields have more than 1 crop, this will indicate range of crops grown)
- Important craft activities of the past month
- Number of trees planted
- Animal births and deaths
- Days of work lost last week due to illness
- Major consumer purchases in the preceding week (including livestock; use preceding month if they can remember)

Other:

- Using dispensary records, get list of major diseases, and number of persons using over the past month
- Number of children attending school, by village
- ODIPAC activities for the past month, if important

Note: Some of these (e.g., children's weights and heights, well-depth, etc.) will require the purchase of special equipment to take indicators accurately. IDA can assist in obtaining anthropometric tools and provide instruction in their use.

Timing:

Collection of many indicators (e.g., in and out migrants, children's weights, market surveys) should begin before resettlement, while others (e.g., wells dug, trees planted) should begin only after resettlement at new sites. Establishment of a program for the collection of indicators should begin after the Master Settler List has been done and can be used to provide baseline information and a sampling frame, i.e., approximately June-August of 1985. Collection of the portion for villages pre-resettlement could begin any time after that point.

Short term technical assistance to the PRM would likely be necessary to aid in the design of forms and in the formation of a plan for putting indicators on the computer, and getting them out in a graphic (or other useful form). Technical assistance should be knowledgeable in both these areas, as questionnaire format should be planned in light of future computer programming needs. PRM may also want to use technical assistance to aid in a training program for indicator collection.

Liaison with other parts of the project should be emphasized in indicator formulation. In particular, there should be close cooperation with the public health survey to determine which health indicators are most appropriate. TDC's need not re-collect any information obtained by the public health survey on a regular basis. In addition, engineers or other relevant personnel should be consulted about the best way to monitor boreholes.

4.0 Evaluation of Potential Problems

The following section discusses three major sets of problem areas: 1) those which are likely to arise, and will cause significant problems, and where socio-economic studies will be useful for long term understanding and resolution of these problems; these are directly followed by draft terms of reference and discussion of potential personnel; 2) those which are likely to arise, and may cause significant problems, but because of their nature, socio-economic studies would not necessarily be particularly useful in their resolution; (other kinds of studies, for example, soil studies, may be needed however); 3) potential problems which at the moment do not seem likely to become serious and for which studies are not recommended.

4.1 Significant Problem Areas

At present four particular problem areas can be distinguished which may cause significant problems over the long term in the resettlement area. These are 1) the re-establishment of a diversified and integrated production system; 2) the re-establishment of this production system in light of changing environmental and climatic conditions, in particular, the continuing drought throughout Africa; 3) land tenure problems, particularly in areas of fairly dense population concentration; and 4) problems associated with the intensification of population in the region from New Bamafele to the dam. Although these are four analytically separate problems, two major supplementary studies are proposed: one which will be on the re-establishment of production systems, and includes both questions 1 and 2, and a second one which deals primarily with question 3. Question 4 should be dealt with by making both studies comparative, i.e., by including for each, study areas within the area between New Bamafele and the dam, and areas outside; this will be discussed in more detail below.

4.1.1 Re-establishment of a Diversified and Integrated Production System

A number of specific problem areas were raised in the terms of reference for this mission, including the impact of the move on the villagers' economy, potential changes in agricultural production, impacts (including nutritional) of the relocation on women and children, and problems of re-establishing wells and plots for vegetable and fruit gardens. It is unclear at this time which of these problems will prove to be the most important in the future. However, it is also true that these problems are not isolated. By this, I mean that most of these are interconnected and are in fact particular aspects of a larger question: whether the villagers will be able to re-establish their domestic economy in their new sites. To understand the problems faced in re-establishing the production system, it is necessary to know some of its present basic facets.

The major production strategy of the villagers to be resettled is dryland farming of millet, sorghum and peanut. Sorghum and millet form the basis of the diet, while peanuts have been the major cash crop of the region. However these are only the most visible components of the production system. As is common to many very isolated areas (as was the Manantali area before dam construction), villagers in the region had a production system which provided them with most of their necessities. Thus as is common in situations such as this, the production system was extremely diversified, both in food and in the production of many everyday items (e.g. calabashes, pottery, rope, etc.). In general, as areas become more commercialized, their production systems also become more specialized. Individuals produce a narrower variety of what they need, and rely on the market to provide the variety of goods they use and consume. However despite the presence of the dam, and some plans for irrigation projects in the future, it is not likely that the economy of the resettled villages themselves will become significantly more commercialized (except perhaps over the very short term of the period of dam construction). Thus, it is likely that their major goal will be to re-establish the diversified kind of production system that they presently have. The PF Social Analysis describes the general characteristics of the production system (Annex 7.4, pp.2-5) so there is no need to detail them here. Suffice it to say that the production system is very diverse.

To exploit such a diverse production system, access to a variety of resources, not just good cropland and a few wells, is needed. But with good reason, site selection was based on finding areas where only a few major resources (rainfed cropland, water) were available. There was neither time nor money to make a total list of necessary resources and then to check on their availability; pedologic and water studies of the region were done with these major crops and domestic needs in mind. Resettlement sites were chosen in areas where soil quality is adequate for these crops, where field sites are available, and where domestic

water can be reached through small bore wells. It was recognized in the PP Social Soundness Analysis (Annex 7.4, p. 8) that these resources were only the major ones in the production system, and that there were others, of qualitative, if not quantitative importance, that were a part of the production system. Peasants will presumably assess these other resources as they begin to resettle. Yet it is these parts of the production system that form a great unknown; insofar as many of these "minor" areas of the production are primarily the work of women, it is also possible that they will suffer disproportionately from potential problems that arise in this sphere. Another example has also been raised; the gardening potential of many sites is unknown, since it is unclear where the superficial water table lies, and hand dug wells (or direct access to the river) is necessary for the establishment of such gardens.

A study which emphasizes an understanding of a diversified production system and how it works should be one supplementary study for the division. It should concentrate on following and understanding the ways in which villagers go about reconstructing their system, to which areas they accord priority, what substitutions they make when they cannot reconstitute their initial production system, and what opportunities they take in reference to present activities at Manantali itself. This information would be useful in aiding those villagers who have problems in reconstitution but do not know what steps to take. The project may either help them find those resources, or may suggest feasible alternatives, based in part on their understanding of what other villagers have done in that situation. An understanding of the activities of the first group of villagers resettling (i.e., those moving in 1986) can also aid in dealing with the problems of the second group of villagers, i.e., those resettling in 1987. Hopefully the second group will be able to avoid at least some of the problems and mistakes of the first.

A crucial component of the study of diversified production is an understanding of the age and sex division of labor. In this region, there is a fairly clear division of labor by age and by sex. The study must be planned in such a way as to cover the major activities by both men and women, and to understand the differences between the production activities of older and younger adults, and of children, and how these are affected by relocation.

While the emphasis of the study should be on production activities, and their return to the family as subsistence or through sale, it should also pay attention to those activities usually referred to as "domestic". This is especially important in the case of women, for it is they as a group who have responsibility for feeding and clothing families. In an area primarily organized around a subsistence base, this implies such activities as getting domestic water and wood supplies, food processing, making meals, gathering foods and cultivating.

Finally, the study should look at the ways in which the different statuses interact within the family to arrive at a total family economy. It should attempt to discern: 1) in what situations families are able to reconstitute the family economy as it existed before the move; 2) in what situations they instead take advantage of new economic opportunities and what those are; and 3) in what situations they can neither reconstitute old ways nor take advantage of new opportunities (in other words, a situation where they are worse off than they were before the move). The understanding of the first two categories is important for understanding how best to aid those in the third. Information about the second category is particularly important for development planning that may occur in the future.

4.1.2 Climatic and Environmental Changes and Their Impact on Production

Since the drought of the 1970's, rainfall and its distribution have continued to worsen throughout the West African Sahelian countries. In Mali in general, the 1984 agricultural season was probably the worst of the century. In the Manantali area, the peasants saw the 1984 season as slightly better than the disastrous season of 1983. It is true that Manantali, in a Soudanian rather than a Sahelian climate, has not suffered to the same degree from the drought as has northeastern Mali (the 5th, 6th and 7th regions). Nevertheless villagers recounted a series of worsening climatic conditions over the past 10 years, which have entrained changes in their production systems.

This becomes important in the resettlement program for two reasons. One is the likelihood that this situation may continue, and villagers may be unable to reconstitute their production systems, not only because of moving, but also because of long term climatic and environmental changes. Secondly, most of the villagers are moving downstream, which in this case is to the north. The distance is indeed relatively short for most (less than 40 km.), but the West African savannah is noted for relatively quick climatic changes, as well as pronounced micro-environments, i.e., relatively small environmental zones with significantly different climates. The whole problem of long term environmental change complicates the issue of knowing whether there are enough resources, particularly water, to reconstitute production systems.

Villagers have already recounted long term changes in their production systems. These were of three types: 1) changes to shorter duration rainfed crops; 2) cessation or limitation of dry season gardening due to changes in water availability; and 3) shortages of gathered foods which lacked sufficient rain for normal development. In some villages, people noted that those who planted short duration "petit mil" this year experienced good harvests while those who did the more traditional longer duration sorghum had problems. It is also interesting to note that ODIPAI promoted a new variety of peanut which had come from Senegal. The villagers did not specifically state the reason for it, but

it is not impossible that it was suggested because it was a shorter season variety, as Senegal is in general drier than southwestern Mali. In light of the micro-environment problem, it should be noted that the situation varied from village to village, and some villagers claim both sorghums and millets did better this year than last.

The other change noted was in gardening and bas-fonds crops. In at least one village, Farabanding, villagers noted that they had to give up their rice fields as there was insufficient water in the low-lying areas. In other villages, where there were beautiful gardens, villagers noted however that in the past, gardens had extended much further, when the water table was in general higher. In one village, Tintilla, villagers had to give up anything more than very tiny gardens right around the house; in fact, they said, the rainfall had been so bad the past 10 years that they themselves would have moved. They waited however, because they knew the resettlement project was going to move them. The villagers claim that when the rainfall is good, this results in a higher water table during the dry season, thus allowing more gardening. Thus rainfall, they say, also directly affects dry season, irrigated crops.

Finally, there was talk about decreasing ability to make karite butter. As the rain decreases, the trees seem to put out less fruit. One woman told us that she had not made karite butter for three years since there hadn't been enough rain to water the trees. Note that both rice fields and karite butter are primarily in the hands of women.

What is of interest here, is that the long term impacts affect at least one part of the production system (dry season gardens) which seems problematic anyway. It is unclear if the resources are there to reconstitute them, even if there are no long term climatic effects; the long term climatic changes however add a complicating dimension.

In light of this problem, the study of production systems should also attempt to get information about their changes. Although not totally reliable, villagers should be requested to give information about changes in their resources and moves they may have made in the last 10 years or so. This should then be followed by comparisons among the resettled villages. Variables of interest may be closeness to the river and nearness to seasonal streams and low lying water fed areas. Rainfall statistics should also be collected in a sample of resettled villages, and comparisons made between villages with lower and higher rainfall.

Climatic changes may not be totally negative. The water table may actually rise somewhat due to the presence of the reservoir. However, this would affect primarily those villages settled directly around the reservoir, and there are very few of these since that area is very rocky and mostly uncultivable.

As already noted the comprehensive study of production systems should address problems 1 and 2 jointly; it will also make reference to problem 4.1.4 discussed below, that of the intensification of population in the region between New Bamafele and the dam.

4.1.3 Land Tenure

Traditional forms of land tenure and land attribution remain common in the region of Manantali. These forms are fairly clear and well known and depend upon the authority of the "chef de terre" and/or village chief in the region (these two may also be one and the same person) who has rights to particular parcels of land and may attribute their use to particular persons. Since the major crops of the region (with the exception of mangoes) remain annuals, the production system is still based primarily on bush fallow cultivation, and private property has not developed to any great extent, as it has in forest zones, where fruit is the major cash crop.

Before deciding on sites, care was taken to get the approval of the traditional chiefs who have land rights. Since this was done, it was thought that the situation would be fairly clear and not cause too much difficulty; the PP Social Analysis (pp.21-22) discussed land tenure but did not seem to consider it a significant problem area. However despite the agreement of the major interested parties and despite the fairly clear procedures involved, *it has become clear that the on-the-ground situation is more complicated than the theoretical one.* Land rights can be mobilized in a variety of ways, through various kinds of links with the village chief, and in fact this is being done.

Problems exist at both the individual household and village levels. Two individual examples of present situations are illustrative of the kinds of problems that may arise. In one case, a peasant was in the process of building a hamlet right on the border of the prospective resettlement site of Goumbalan, an act forbidden by the administration with the agreement of the chiefs in the area. This person was a stranger, who had been lodging with an inhabitant of the nearby hamlet of Kondegan, who supposedly had given him permission to begin the hamlet there. However the inhabitant of Kondegan was a former member of the village of Sobela, and according to the village chief of Sobela, had no right to make the hamlet there without his agreement, which he claimed he had not given. The situation was to be dealt with by the Chef d'Arrondissement of Bamafele, who had issued a convocation to all the relevant parties; the man was supposedly to be asked to discontinue building the hamlet although the issue was still not resolved at my departure from Manantali.

In another village, one villager refused to move with his co-villagers. He supposedly had mobilized land rights in three other villages where he wanted to build. He is free to do this; however unless he moves to the agreed upon resettlement site, he will get no project benefits, which of course he would like. He

is therefore trying to get others from his village to change their site preference and move together, making them more likely to get project benefits.

These are only two examples of the kinds of individual problems that have already arisen; it is likely that they are not isolated incidents and that continual problems like this will arise in the course of the resettlement. People spontaneously brought up various land tenure issues in the region, more so than they initiated discussions of other kinds of problems; this is an indirect indicator of the importance of these problems.

There are also village level problems. Despite an earlier agreement, there are villages that have still not agreed on their sites. One of the villages directly upstream from the dam insists that they want to move directly downstream. However the place where they want to move to has little cultivable land, and is right near the explosive storage area for the ECBM.

There are also villages that will have to be moved from originally agreed upon sites because there is not enough cultivable land. This is especially true of upstream sites, where a detailed pedologic study was not done. The more general study available (as well as our car trip) indicates very rocky terrain, with little cultivable soil. It may be that these villagers will have to choose a totally new downstream site, at an undetermined place.

The whole situation is further complicated by the existence of traditional cantons. Most of the villages to be resettled, as well as most of the resettlement area, is part of the traditional Bafing. Neighboring cantons include the Gangaran, upstream to the east, and the Bamouk, downstream to the west. Most villagers would prefer to settle in the confines of their traditional canton, since it is within that canton that they tend to marry and have significant kinship relationships. However it may not be possible for all the villages to resettle within the Bafing.

It would be very useful to have a study on the land tenure patterns of the region, including land disputes and the way that they are solved. This can help avoid some further problems, by understanding the way in which the rules actually work themselves out on the ground. An understanding of the alternatives involved may also help resolve some of the problems that will arise in the future, even after the resettlement is complete.

This study should include members of the local administration, members of the PRM, and villages chiefs and elders as well as the villagers and people newly settled in the region. Unlike the production study, which can be fairly intensive, this study should be fairly low key. It would be best undertaken by traditional anthropological participation, by one individual who can spend an extended time in the field (12-24 months). Confidentiality in regard to all participants should be assured, so that the fieldworker can be independent. This is

discussed in more detail in the terms of reference for the studies, and a full text for the study is annexed to the IDA proposal.

4.1.4 Intensification of Population in the New Bamafele - Dam Region

The population has already grown greatly in the region between Bingassi and the dam construction site. With the installation of New Bamafele to the west of Bingassi, and the establishment of arondissement headquarters and services there, the population growth is likely to continue at least that far to the west.

The production possibilities in this region are very different from those outside of it. Concerning agricultural production, it is possible that there will be a land shortage as the many people living in these villages claim land to cultivate at least small fields. It has already been suggested by OMVS personnel that the 1980 air photographs of cultivated field areas of Bingassi are serious underestimates, since, in the intervening years, the field area has greatly increased. This could jeopardize the field area available to the New Bamafele site, and make agricultural production in this area more difficult.

On the other hand, the concentration of population could open up new opportunities, especially commercial ones, in the region. This has definitely been true during the dam construction period, as people offering a variety of new goods and services have moved into the region. Some of this is surely short term, and directly allied to the large number of workers there to build the dam. However the question remains as to whether New Bamafele-Bingassi will be able to serve as a small market town, offering new services to the local population. A major difference between pre-dam and post-dam Bafing is of course the existence of the new good road to Mahina and the consequent access to markets for goods from the region, as well as a way for consumer goods to come into the region.

This may be an area where peasants do not simply reconstitute their old production system, but begin to make use of new opportunities available to them through the existence of this town. IDA's comparative study of new land settlement done for AID/S&T concludes that nonagricultural employment generated by the resettlement is a recurrent, though unanticipated, major benefit to the region. On the other hand, it may be an area where new alternatives are not feasible, and yet, villagers will be unable to reconstitute their old ways because of the increased population density and land pressure. This is a significant problem which needs to be studied.

However, the problem itself is directly allied both to problems to be dealt with in the production and land tenure studies discussed above. Thus, a separate study does not need to be set up for this. Instead, both the production study and the

land tenure study should be designed to include study sites both within this region and outside of it, and analysis should include comparisons of the different areas. In this way, the problems of this area can be dealt with, but in a way integrated into a study of the region as a whole. The following section provides draft terms of reference for these two studies.

4.2 Draft Terms of Reference

4.2.1 Draft Terms of Reference: Domestic Economy Study

Goals:

1. To understand changes in the domestic economy occurring as a consequence of resettlement;
2. To understand changes in the domestic economy which occur for reasons independent of resettlement, in particular, changes that occur due to long term environmental and climatic changes in the region;
3. To evaluate those changes in terms of people's ability to:
 - reconstitute their previous way of life and/or
 - improve their previous way of live by taking advantage of new opportunities;
4. In situations where successful adaptation is occurring, in either old or new ways, to understand the conditions that have led to this success so that;
5. In situations where people have been unable to do either, to suggest possible ways of successfully adapting, either through the reconstitution of traditional production systems, or through the development of new production strategies;
6. To lay a groundwork for any further development projects which may occur in the region after the end of the resettlement project per se (e.g., downstream irrigation perimeters or ODIPAC actions).

Tasks:

1. Delineate and describe all significant activities which contribute to the family economy in the village including:
 - Food production activities (including, but not limited to, rainy season farming, dry season gardening, fruit tree cultivation and use, gathering of wild crops, fishing);
 - Livestock production (including cattle, sheep and goats);
 - Craft production, for home use as well as for sale, (e.g., smithing, rope making, processed foods);
 - Entrepreneurial off-farm activities (e.g., various kinds of commerce, placer mining);
 - Wage earning off-farm activities, including seasonal migration and work on resettlement and dam enterprises;

- Activities which maintain the health and productive capacity of the household (household maintenance activities), including food preparation and processing, gathering wood and getting water, cooking, child care, and house, building, and fence construction and repair.
2. Identify the resources necessary to carry out each of these activities, the major processes involved, and the usual consumers of the results (e.g., the individual, the household group, the village, commercial markets). Although the household is foreseen as the major unit of analysis, include a discussion of the sharing of resources (both produce and labor) among households.
 3. Obtain information from the population on changes in their major activities over the past 10 years, and identify reasons for these changes (e.g., long term climatic and environmental changes, changes in world market prices for peanuts, changes in government farm policy, dam construction impacts).
 4. Disaggregate these activities by sex, age and status within life cycle (i.e., single, married, widowed; with or without single or married children) and discuss what differences these make for the exploitation of particular resources, the carrying out of particular activities and the use of results of those activities. Pay particular attention to inequalities among groups; as discussed in text, note whether women and children suffer disproportionately.
 5. Re-aggregate the activities of individuals within the family to better understand the way in which the activities of different family members combine to form an integrated household economy.
 6. Identify the criteria that distinguish among groups of families (e.g., large vs. small families, number of generations in household, relationship to founder of village, range of different activities carried out by the family, presence of educated urban family members) and the relationship that these factors have to the family's ability to exploit a series of resource environments. For those that are the most important distinguishing criteria, discuss the impact of these differences on the ability to successfully re-establish the household economy at resettlement.
 7. Identify the effects of resettlement on these activities, including:
 - Which of these activities have been successfully re-established in the resettlement zone, and what circumstances have played a crucial role in that re-establishment;
 - Which activities have not been successfully re-established (i.e., either not re-established at all, or

re-established in a way unsatisfactory to the population), and reasons why this may be so (e.g., lack of resources, other priorities). Identify those segments of the population most impacted by this problem. In cases where the population would like to see these activities re-established, make suggestions about how this might be done, or new activities instituted to replace the old.

Which new activities have been undertaken, and what circumstances have made this possible. Identify which portions of the population have been able to take advantage of new activities and which not, as well as the way these activities are integrated in the household economy.

8. Compare results across significant strata of the population:

- by rainfall
- by siting within, or outside, the New Bamafele-dam area
- by closeness to river
- by access to low lying bas fond areas

to see how these differences impact on the village's ability to adapt successfully to settlement sites. Identify those villages that have had the most difficulty in resettlement and suggest ways to improve their access to resources and ability to adapt. Pay particular attention to those aspects already expected to be problematic, i.e., the re-establishment of gardens, impacts on women and children, high expectations of the population, as well as others that prove to be salient.

9. Using these results, make suggestions for further development projects which might be possible in the region after the termination of the resettlement project. Pay particular attention to making linkages with active Malian organizations presently in the region.

10. Discuss relevance of the results for other resettlement projects which may be done in a similar way in a similar kind of environment, e.g., Kekreti, in the OMVG in eastern Senegal.

METHODOLOGY:

In order to follow changes over time, this study is conceived not as a one-shot study, but a study which will follow the sample chosen over time. To avoid a too heavy commitment of people to the field, I would suggest visits of approximately one month in length every 6 months throughout the period of the project, with one visit scheduled in the middle of the rainy season (e.g., August/September) and one in the middle of the dry season (e.g., February/March). It would be during the first visit that much of the basic framework would be set up, and the information about long term changes (#3) would be sought, so the initial period of study would likely be somewhat longer. The contract should include an appropriate time to write reports as

well as time for the field (e.g., 1 month in field, and 1 month to write). The first report would discuss the present structure of the economy and the villagers' perception of long term changes, while subsequent reports would do similar studies, but discuss changes taking place in light of resettlement, analyze the situations that lead to particular changes and make suggestions for changes and improvements as necessary.

This study should be primarily qualitative in orientation, and based on a relatively small sample of families. However it should be placed in a more quantitative context, by using the indicators which will be collected on a regular basis by the TDC's and available from the SSS. This study should not re-do work already done by the SSS on a regular basis, but should integrate that work into its more in-depth studies. All fieldwork should be done in conjunction with the SSS and with the aid of the TDC's placed in each of the villages.

The study should begin in the rainy season of 1985. In the rainy season of 1985 and the dry season of 1986, it may be preferable to begin only in those villages planning to move in 1987, including a sample from all villages the following year.

The study team should:

1. Familiarize themselves with IER reports, the census results, and the indicators collected by the SSS.
2. Using the Master Settler List, choose a sample of households of varying size and from varying ecologies (e.g., near river vs. far from river; upstream vs. downstream settlement; between New Bamafele and the dam vs. outside this area).
3. Using a combination of interviews and observations, major activities should be delineated. Activities which can be directly followed through all phases of their existence should be directly observed, with notes taken on raw materials used, sources of these raw materials, and relevant questions posed about access to the resources, what the product will be used for, and who will use it. Longer activities (especially farming) will have to be explored more through questions than observation. It should be emphasized that highly detailed information from close observation and attendant questions will likely prove more useful for understanding in-depth changes than superficial questioning of a larger sample.
4. Discuss with villagers their major perception of resettlement problems at the time, and their priorities for resolution of those problems.
5. Time use study. This should be modeled after the work of anthropologists (e.g., Allan Johnson in the 1975 American Ethnologist) who use a random sampling of households and times of the day to chart activities done at those times.

This is a standard method and can be done simply and quickly, but will need access to computer for analysis. Technical assistance may be necessary to aid in research design and computerized tabulation (see IDA proposal).

6. Simple consumption study. This should also be based on a random selection of households and meals, and should chart the foods eaten, what their sources were (household vs. bought; if bought, where bought; if prices are easy to get, include them), who will eat that meal. (Check with public health study to avoid overlap. I do not foresee this part of the study including the weighing of foods; it should be simpler than that.)

7. Compare the results of this study with the results of analysis of the indicators regularly collected by the SSS; use the results of the analysis of indicators to generalize the results; indicators should also be used to stratify sample analysis where appropriate (e.g., by rainfall, or by wells built, etc.)

8. The first two reports (i.e., the first for each season) should set up a narrative framework for understanding the domestic economy; subsequent reports should focus more on the changes that have occurred in the meantime.

9. Personnel Needs:

1. Team of approximately six researchers, at least three of whom are fairly experienced and willing to live in the villages during the period in the field. - The team should include at least some women in order better to understand the problems of women, in light of the fact that we expect them to be affected more seriously. This study could be carried out by a qualified Malian organization.

2. Depending on the previous experience of the organization chosen, technical assistance may be needed for the following tasks:

- Research design, especially the time use and consumption study components, in light of the fact that for these two parts, forms will need to be set up to facilitate direct computer tabulation;
- Direct help in computerizing data and integrating computerized tabulation and analysis into overall report;
- Report preparation, particularly at level of integration of results with other work done by the PRM and overall concerns of USAID (e.g., using this as a model for other resettlement projects.

The substantive requirements of this technical assistance into the overall scope of the IDA/Clark University Cooperative Agreement on Human Settlement and Natural Resource Systems Analysis.

4.2.2 Draft Terms of Reference: Land Tenure Study (see full IDA proposal with Annexes).

Goals:

1. To understand both the ideal structure of Malian and Malinke land customs and law, as well how these are interpreted and used in the particular case of Manantali Resettlement.
2. To understand land conflicts in the region, in particular, how they arise, what rules and institutions are used to solve them, and what solutions are found.
3. To typologize the major kinds of problems and their solution in order to make suggestions as to how to avert future problems, or to solve those that have already occurred.
4. To suggest ways of structuring resettlement so as to avoid some of the various land tenure problems that arise.

Tasks:

1. Get information on the way newcomers to the region have mobilized land rights and received land in the recent past; pay particular attention to the kinds of situations in which people have received access to land in the region between New Bamafele and the dam.
2. Follow a series of land disputes and get the following information on each:
 - How they arise in the first place, proximate as well as deeper causes;
 - Who the major interested parties are, including villagers, village chiefs, government and PRM administrators, and strangers to the region;
 - Legal principles (either traditional or modern) used to solve the disputes;
 - Other principles (e.g., kinship relationships, either affinal or genealogical; place and time of residence) used to solve the disputes;
 - Actual solution of the disputes.
3. Identify the contexts under which amicable settlements can be reached and those in which they cannot.
4. Identify major proximate and long term causes of land disputes.
5. Identify those situations in the villages which are most likely to induce land disputes, and those which will probably lead to amicable settlement. As a point of departure, it would be useful to look at some of the same points of stratification that are used in the domestic economy study, e.g., if the village is in the New Bamafele - dam area or not, if disputes may concern access to bas-fond areas for gardening or rice fields or not.

6. Chart changes over time in the land disputes that arise, i.e., if different kinds of disputes are found in the beginning of the resettlement and 1-2 years later.
7. Suggest solutions to the problems of land tenure disputes.
8. Suggest those disputes which are likely to arise in the future and those which are less likely to occur.

Methodology:

Malinke feel strongly about land rights, and the involved parties are likely to have widely disparate degrees of power. Hence I suggest a study using only one American fieldworker (perhaps with one Malian counterpart to facilitate training) and the traditional anthropological method of participant observation. I would not want to see a large team of people descend over the area over a period of time; a large number of transients is not likely to induce confidence in people. Rather one or two persons who will stay over a relatively long period of time can slowly gain the confidence of the people involved and begin to get more useful information.

The researcher should work closely with PRM, but should also have the right to complete confidentiality of the raw data, due to the sensitivity of the subject matter. However the researcher should also have the responsibility regularly to inform the PRM of the principles of land tenure and land dispute settlement that she is uncovering.

The study should be done by someone who will be willing to reside in one or more of the villages for an extended period of time, at least 12 months. Funds should be available so that the person could stay for a period of up to 24 months, if this should prove useful and if the person is available. Since it is unlikely to find someone in country who would agree to these conditions, I would suggest using an American student who would like to do doctoral research on this subject, who is fluent in French and has a demonstrated capacity to learn Malinke/Bambara.

This researcher would require little backstopping or logistic support, other than periodic consultation with the senior technical assistants proposed. The researcher should also of course work closely with the PRM and with the village TDC's, and be available to assist with methodological issues if desired.

4.3 Identification of Social Scientists

Mali seems to have a fair number of social scientists, but they are spread throughout a number of organizations, often one to an organization, where they work on social aspects of the relevant task. This is in fact the case of PRM where one social scientist serves as an employee of DNHE and oversees the social aspects of the resettlement. I believe that this way of distributing social scientists is probably good for the

development of a social consciousness in Malian institutions. It does however make it difficult to identify individuals at times, and even more difficult to identify a group to carry out a project.

Therefore the number of groups identified is small and well known in Bamako. They range from public concerns to a "societe mixte" to a private firm. Some likely sources, such as ENSUP, the training ground of many of the social scientists I met, failed to produce any leads. There are probably some other educational institutions (e.g., ENA, IPGP, IPAR-Katibougou) that could supply competent social scientists, but these were not investigated.

I visited four organizations and met with one individual. Where possible, Y. Konate (head of SSS) and I talked to representatives of the organization, read reports or got information from other people with whom they had worked. Unfortunately, rarely were all three done for any one organization. Final determination of an organization or an individual should however be made in light of their detailed response to final terms of reference for the studies.

The criteria which were considered included those which we felt were important to the success of the suggested studies. Primary of course was the quality of work done by the organization, as judged by reports they had done or by individuals they had worked with. In addition, other characteristics seemed likely to affect their ability to do the kind of work needed at Manantali. For instance, the terms of reference put a premium on in-depth studies; for these to be done well, it is necessary to have senior researchers in the field who are comfortable working with qualitative methods, rather than where the senior social scientist remained in town and directed a large corps of local interviewers. Given the distinction between men and women in rural areas, and given the likelihood of more significant impacts on women and children, it is likely that a team including women would be superior to one which had none, if other qualifications are equivalent. Finally, it is important to find a group which can bring in work on schedule so that results can be used as soon as possible.

1. IER (Institut d'Economie Rurale)

IER is a government institute, part of the Ministry of Agriculture and charged with providing research support in the rural areas, with special emphasis on the agricultural domain. It was they who did the UNDP baseline study, "Etude Agro-Socio-Economique" for the PRM.

2. ISH (Institut des Sciences Humaines)

ISH is also a government institution which accepts outside contracts from various organizations. It is the archeological-historical branch of ISH that will do the archeological survey

that is part of the resettlement project. ISH in general is less directly tied to any particular realm of project implementation, but the work of its ethnosociology division has been primarily on practical rather than theoretical issues. They have recently completed studies on both rural and urban Malian women and will soon begin one on juvenile delinquency, all funded by various outside agencies.

3. SNED (Societe Nationale d'Etudes pour le Developpement)

SNED is jointly owned by the Malian government and the private sector. It is by far the largest of the organizations, but in part this largeness reflects many different departments, rather than a large social science emphasis. Like ISH, they have four staff sociologists. Among their most recent work has been some sociological studies for the large First Region health project funded by the World Bank (Project KBK).

4. BECIS (Bureau d'Etudes de Conseils et d'Interventions au Sahe)

BECIS is a small, privately owned firm. It has had a number of short term contracts from a large variety of donors, and specializes in socio-economic studies. Its professional staff is small and exclusively male.

5. Djeidi Sylla, sociologist at OMBEVI

Sylla is the only individual we contacted. He is presently employed as OMBEVI's sociologist, but since there is little work for him there, he has taken leave to do short term consulting through BECIS from time to time. For example, he participated in an AID forestry evaluation through BECIS. Until now, his work has been primarily in the realms of forestry and livestock.

There is no one organization which is clearly superior to the others. Decisions about the use of a particular firm should not be made simply on some abstract consideration of their abilities, but in light of responses (especially technical ones) to detailed project proposals and terms of reference.

4.4 Significant Problems Which Do Not Need Socio-economic Studies

There are a number of problems which are likely to arise, and may be serious, but will not be solved by socio-economic studies. Following is a list of several of these that seem particularly important.

1. The Site of Tondidji and its associated villages

These four villages had planned to move upstream just east of where they are now; however initial indications from the soil map suggest that the area is totally rocky. No more detailed map was done for the region. Further soil quality studies of the proposed resettlement area should be done (if water has been

found for the region); another alternative is to move their proposed resettlement area to downstream.

2. Payment for Sacrifices

In order to occupy a new village site, the spirits which inhabit the area must be properly propitiated through particular sacrifices. PRM has censused all the villages about sacrifices that were done at their initial founding, and discussed the future sacrifices and maraboutic fees with them. It has been suggested that AID pay these fees. I would suggest that some way be found in order to do this. This would cause much good will with the populations of the region, and is a relatively small sum as compared with the amount to be spent on housing, food and road building.

3. Expectations of the Population

The local population seems to have great expectations in regard to the benefits they will receive from the resettlement activity. While the visit of the population to Selingue in November 1983 was extremely valuable in allowing village representatives to see what a reservoir looked like and to talk to resettled villagers, it also raised the expectations of irrigated rice perimeters like those put in at Selingue. People also expected to be hired on the project at salaries higher than those paid by the ECBM since "after all, the Americans are more powerful than the Germans, aren't they?"

All AID and PRM personnel should keep these high expectations of the population in mind as they do their work, and attempt to make the expectations more realistic.

4.5 Problems Not Meriting Direct Study

The following discusses some of the issues that have been suggested as being of possible interest. The first listed proved not to be very serious, as indicated by field discussions. The other two are likely of theoretical interest, but probably do not merit the expenditure of project funds on them.

1. Land which cannot be cultivated for religious reasons.

One of the major points of interests on the field trip was to try to define the areas on which cultivation had been forbidden for religious reasons. The IER study detailed a list of places which had been designated as non-cultivable. The results were that many of these areas were in fact cultivated, or were very small.

Although there were areas that were truly considered uncultivable, there were in general very small. They included sites of ancestors' tombs, and in one case included a narrow area between a steep hill and the river where bad spirits supposedly lived. The size of these areas suggests that they should not

impact in any substantial way on the availability of land for cultivation.

On other larger pieces of land, the whole issue seemed more or less negotiable. Once, we were told, evil spirits had lived in the land and it couldn't be cultivated; however new spirits had moved in, who were friendlier and they then allowed the land to be cultivated. In another case, the land had formerly been tabooed, but it also seems, it had been a rather deep marsh, uncultivable in any case. Now that it has dried up, it has become cultivable, and in fact a field had been there this year. Other supposedly uncultivable areas were areas in which large numbers of people had been killed during the 19th century wars; they can it seems be cultivated at present.

2. The Boom in the Dam Area

The boom in the area of the dam site itself is a highly interesting phenomenon. A village of seven families, Manantali, now has part of an urban population of approximately 10,000 people in that village and in the two camps constructed by the ECBM. This population is highly heterogeneous, including people from many African and European countries. Inflation was extremely high over the past several years as a previously isolated area became directly tied into many different world markets. All these people and things came into the region very quickly, and most of them will leave very quickly at the end of dam construction.

Their long term impact on the local population is unknown. Certainly local expectations have changed, and wage earning has become a real possibility for some people, especially young men. Interesting as these issues are, it does not seem worth doing a separate study on the dam site. Insofar as the impact on the local people are concerned, the most important issues are likely to be in terms of changes in the economy and in terms of land tenure and thus will be picked up by the two suggested studies. Many of the other impacts, e.g., increasing urbanization, social problems concerned with prostitution, drug use and increased crime primarily affect the migrants who have come to work on the dam.

3. Income and Expenditure

Another issue that has been of great interest is changing patterns of income in the region in light of dam construction and the changing economy. It would in fact be very interesting to chart changes in income over the period. However, it is very difficult to get accurate estimates of income from the local population, especially for anyone who has anything to do with the government, as does the PRM. Better estimates can be gotten through various kinds of repeat visit studies, which utilize a fairly large group of field based interviewers.

Given the desire of the involved parties not to add a full time group of field interviewers to the number of people already in the field, it would be a much better strategy to defer trying to get direct information about income. Instead, a certain number of indicators which will reflect general physical quality of life and social well-being have been suggested in the indicator section above. While these will give only gross estimates of economic well-being, they are much easier to obtain than would direct income-expenditure data.