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EVALUATION OF THE EASTERN ORD
INTEGRATED RURAL DEVELOPMENT PROJECT

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Integrated Rural Development Project

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I. INTRODUCTION

The approach to be used in this evaluation will be first to evaluate project performance against what was intended in the project paper and the various project agreements and, second, analyze the project and the ORD program of which it is a part from the standpoint of what is required to achieve sustained and widespread increases in small farmer production. The Eastern ORD IRD project agreement was signed in December 1974 and implementation is now slightly past the half-way mark. It is intended that this evaluation will provide the basis for deciding: (1) the composition of the final tranche of AID funds to be obligated in FY 1978; (2) whether the existing project needs to be redesigned to reflect changing conditions and objectives; and (3) what will be the broad lines of a phase II AID project in the Eastern ORD.

II. PROJECT BACKGROUND

The Eastern ORD (Organisme Regional de Developpement) is one of eleven ORD's in Upper Volta. ¹ These organizations represent an attempt on the part of the Upper Volta Government to decentralize its rural development program. The major responsibilities of the ORDs are to:

- provide extension services for farmers and artisans
- motivate and organize the population in the planning and execution of development programs
- assist in agricultural research
- provide farm credit
- improve the marketing of farm products
- participate in the execution of infrastructural programs.

When the IRD project was designed in 1974, the Eastern ORD had not yet received any significant external assistance. At present it is receiving technical assistance mostly from AID and UNDP/FAO, and capital assistance from AID, the UN, and IBRD. The following table shows the sources of financing for the ORD program in 1977: (million CFA)

	<u>TOTAL</u>	<u>INVESTMENT</u>	<u>OPERATIONS*</u>
GOUV	140.5	15.1	125.5
USAID	186.7	153.1	33.6
Other Donors	<u>83.6</u>	<u>66.5</u>	<u>17.0</u>
TOTAL	410.8	234.7	176.1

* Operational expenses excludes donor-financed expatriate technicians and GOUV civil servants financed by the National Budget.

¹ Attachment 1 is a map of the Eastern ORD and Attachment 2 provides basic data on the economy and administrative structure of the region.

As is true of all the ORDs, the Eastern ORD's program is focused on increasing agricultural production mainly through extension services. There are currently about 140 extension agents in the ORD covering 650 villages. Each agent covers an "extension unit" (unité d'encadrement) which consists of anywhere from 3 to 6 villages.

As discussed in greater detail in section IV, the extension approach is to organize farmers into groups (groupements villageois) primarily to enable the agents to reach more farmers but also to facilitate efforts to initiate local activities. The extension service is backed up and complemented by several bureaux each of which are described briefly below: *

Bureau for Community Development is responsible for organizing village-level programs. Its most important activities are:

- 1) organizing the village groups mentioned above;
- 2) organizing women's groups;
- 3) organizing clubs for older children (similar to 4-H Clubs);
- 4) setting-up Young Farmer Training Centers;
- 5) setting-up functional literacy centers; and
- 6) organizing radio clubs for functional education.

Most of the field work related to the village groups, 4-C clubs, and radio clubs is the responsibility of the extension agents. Animatrices are provided for the women's groups and instructors are provided for the farmer training and functional literacy programs.

The Bureau for Agricultural Production is responsible for providing the technical back-up to the extension agents. This includes conducting field trials, selecting technical packages to be disseminated to farmers, and distributing agricultural inputs. The bureau is divided into two sections covering crop and animal production.

The Bureau for Agricultural Equipment and Rural Infrastructure is responsible for the construction of buildings and minor rural works including the design of bas-fonds (low lying water catchment areas) land management structures.

The Bureau for Economic Analysis and Planning is responsible for data gathering and analysis, applied research of a non-technical nature, evaluation, and planning.

* Attachment 3 shows the entire ORD organization.

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The Accounting Bureau is responsible for all of the financial affairs of the ORD including the disbursement of credit for equipment and farm inputs, and funds for purchase of cash crops.

Although the above described programs of the ORD are now operational, it is important to point out that this is a very recent development. Consequently, the scale of activity is small, (e.g. the ORD estimates that only 16,000 ha. out of a total cultivated area of 204,000 ha. has been reached by the extension program and less than 1,000 farmers use animal traction) and a number of inefficiencies remain to be ironed out. However, with donor assistance, the ORD program is growing at a very rapid rate and is now in a position to begin to make a measurable impact on the population. As will be seen below, both the newness and the rapidly changing nature of the ORD are important factors in assessing the performance and appropriateness of the existing project and identifying appropriate activities for future funding.

III. PROJECT IMPLEMENTATION

Evaluating this project required the restatement of project purpose and outputs. Attachment 4 is the logical framework that accompanied the original Project Paper. This document lists 26 separate outputs including increased production, higher levels of marketed surpluses, increased incomes and improved nutrition. The project inputs, on the other hand, were limited largely to technical assistance for applied research, equipment and commodities for central ORD headquarters and credit funds for farmers in four so-called "intensive" zones. These inputs could not lead to all of the outputs listed without making clearly unrealistic assumptions about the availability of proven technical packages, the effectiveness of the ORD as a development organization and the provision of major complementary inputs by the GOUV and other donors. The subsequent project agreements listed a set of outputs that were more in line with the proposed inputs but still overemphasized the likely impact of those inputs on farmer production and incomes. For purposes of this evaluation, therefore, a new logical framework was prepared which specifies outputs that can reasonably be expected to flow from the inputs and that probably more accurately reflect the true expectations of AID and the GOUV when the project started. This logical framework is shown as attachment 5. It should be made clear that the revised logical framework and the summary description that follows below are meant to describe the project as presently designed. Changes in the logical framework may be required depending on the outcome of some of the actions recommended in this evaluation.

A. Project Description

In summary form, the targets against which project performance is evaluated in this document are as follows (details are provided in Attachment 5):

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- The project purpose is twofold: (1) to increase the Eastern ORD's capacity to assist small farmers to increase agricultural production and incomes; and (2) to achieve a measurable impact on farmer productivity in four "intensive" zones.

- The project purpose was to have been achieved through the following project outputs:
 1. Expansion of the capacity of the ORD for administration and outreach through:
 - a. the construction and equipping of improved central and field facilities and the provision of logistic support for field staff;
 - b. the training of ORD personnel, and
 - c. technical assistance.
 2. Generation of basic data through applied research related to:
 - a. traditional and improved farming systems;
 - b. credit requirements and alternative credit systems;
 - c. technical possibilities and economics of animal traction and animal production; and
 - d. marketed surplus, marketing systems and price fluctuations.
 3. The testing of production and marketing interventions primarily in the intensive zones with AID providing support mostly in the form of medium-term credit for animal traction and a revolving fund for the purchase of cash crops by the ORD.

The project inputs that have been made available to achieve the above outputs are:

1. Technical assistance personnel under a Michigan State University (MSU) contract - \$701,900
2. Commodities and equipment - \$560,300
3. Training - \$134,000
4. Construction - \$404,000
5. Revolving credit funds - \$651,000

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6. Budget support - \$350,000
7. Research by local organizations - \$51,300
8. Project manager - \$210,000

An additional \$500,000 remains to be obligated in FY 1978, bringing total project funding to \$3.56 million.

A non-formal education element has recently been added to the IRD project but, since implementation has not yet begun, it is not covered in this evaluation. This add-on is referred to in several places, however, in connection with recommended future actions related to increased farmer participation.

B. Project Performance

Not surprisingly, given the complexity of the project and the difficulties of working in the Sahel, the implementation of virtually all project activities is behind schedule. Construction of the ORD complex in Fada N'Gourma was originally scheduled to be completed in December 1976. This was later rescheduled to mid-1977 and now it appears that work will not be completed until June 1978. Similarly, construction of housing for the MSU team was completed far behind schedule. The reasons for the various delays stem primarily from the lack of construction capacity in Upper Volta and the extreme difficulty of obtaining construction materials and equipment in a timely manner. On the other hand, vehicles, equipment, and commodities to support expanded ORD activities in Fada and in the field were delivered more or less on schedule and have been in use for some time.

The applied research activities are also behind schedule as a result of the MSU team arriving 18 months late. This was accompanied by a budgetary crisis in UNDP which prevented that organization from providing key technical experts and funds for part of the construction of the ORD headquarters. AID decided to pay for the entire complex by reallocating funds out of the credit component of the project, but no action was taken with respect to the technical experts. A final delay related to the training component which has not yet started. The effects of these various delays and other developments on the achievement of the outputs listed above are discussed below.

1. Expansion of the ORD's administrative and outreach capacity.
It appears that construction delays have not had any major effect on ORD operations. With the availability of AID-financed equipment and budget support, the ORD was able to expand its operations more or less as anticipated. A more serious problem is the lack of progress in staff training. Most of the ORD staff including all of the agents require additional training to perform their tasks effectively. The ORD recognizes this and has organized

a program of on-the-job training focused on technical aspects of agricultural extension. The ORD Director considers training a high priority need but finds it difficult to make employees available without adversely affecting his ongoing program. The problem requires urgent attention. The ORD needs to identify its training objectives and establish a firm but realistic schedule for the use of AID training funds.

2. Data gathering and applied research. This component has taken on increased importance since the arrival of the existing ORD Director about one year ago. Upper Volta is now beginning to prepare its next five-year Development Plan (1981-1985) and the Director wishes to have a medium-term plan for the Eastern ORD ready for presentation to the GOUV in 1980. According to the Director, the data gathering, research, and analysis required for this exercise is a high priority task of experts currently assigned to the ORD. Implementation, however, has been and will continue to be a problem. The 18-month delay in the arrival of the MSU team was a serious setback. Two years of data gathering have been lost which will certainly detract from the validity and reliability of the research findings concerning traditional farming systems and the farm-level constraints to the introduction of improved systems. A second possible problem is the recent assignment of all of the MSU team members except the agricultural production economist to operational positions in the ORD structure. Although this has the obvious advantage of more closely associating the team to the work of the ORD and in this way increasing their short-term impact on programs, there is little doubt that it will interfere with their research responsibilities. This is especially true of the marketing economist who must function as the MSU team leader and head of the Economic Analysis and Planning Bureau. Problems in this regard would be diminished if it were clearly recognized that operational duties include basic data gathering needed for the planning and design of future programs.

The next section includes some observations and recommendations concerning the substance of the MSU work. From the standpoint of implementation, it is the view of the evaluation team that the present draft work plans for the individual team members are generally overambitious and not sufficiently clear on what activities will be given priority and how they will be scheduled. As discussed at greater length in the next section, the priority tasks of the MSU team should be to (1) develop a data base on existing agricultural production systems and assess the adequacy of key supporting services (i.e., credit and marketing); (2) identify and analyze socio-economic and institutional factors involved in the introduction of new technologies; and (3) set up an ongoing data

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gathering and evaluation system for the ORD. Each of these tasks is important but it is unlikely that they will all be accomplished unless firm priorities are set and schedules established and adhered to. The evaluation team was advised by the MSU experts that this has already been done on a preliminary basis. It is recommended that this scheduling exercise be completed by mid-February at the latest and submitted to the ORD and AID for formal approval. The schedule should assume a one-year extension in the MSU contract and should therefore cover a 30 month period ending in mid-1980. Future progress reports of the team should be presented in terms of whether the scheduled activities are being accomplished in a satisfactory and timely manner.

3. Production and marketing interventions. As noted above, both the PP and the Project Agreements emphasize the impact of the project on farmer production. In the "intensive" zones, farmers were to have benefited from 12 separate interventions including extension, credit, livestock services, low-land (bas fonds) development and various types of functional education. In the "extensive" zones the interventions were to have been limited to better extension services, some agricultural inputs including credit and improved marketing. These interventions, in fact, generally did not take place. The major problem with including the production effects of these various interventions as project outputs is that very few of the necessary inputs are provided for under the project.

Although it is not realistic to evaluate the production and marketing component of the project on the basis of the outputs stated in the PP, it is possible to redefine the output of this component as the introduction of animal traction in the intensive zones. This is accomplished by providing credit for animals and equipment, accompanying the credit with close supervision by extension agents, and arranging for the ORD to purchase any resulting surpluses if other outlets are not available. Even this output, however, is not being achieved. The main reason is that, although the credit funds were utilized at satisfactory rate, there were widespread delays in the delivery of equipment. Consequently, many farmers who had obtained draft animals were unable to use them during the last crop year because the equipment arrived late or not at all. There are also a number of problems related to the proper care and feeding of draft animals.

Second, there seems to be some question as to the ORD's acceptance of the intensive zone concept. It is perfectly clear that the ORD has not given the highest priority to providing all of the services to the intensive zones that are called for in the project agreement. In fact, there is no evidence that the ORD has made any special effort to achieve the desired level of one extension agent per 75-100 farms in the intensive zones. The ORD Director admits that he sees no essential difference between intensive and extensive zones and it was the impression of the evaluation team that he would like to discontinue the concept at least as it relates to the present AID project. He does not preclude the possibility of concentrated efforts in different parts of the ORD when opportunities exist but he would like to postpone a definite decision until the medium term planning exercise currently underway is completed.

At this juncture it is important that AID and the ORD resolve the issue of the intensive zones. The evaluation team feels that the concept has merit in the sense that establishing the technical and farm-level feasibility of new practices requires that they be tested over a period of time and accompanied by the necessary supporting services before feasibility can be established and deficiencies identified. It is appropriate for AID to contribute to this task, but agreement must be reached on what is the best way to proceed. In arriving at an agreed course of action, attention needs to be given to the setting-up of an effective evaluation system to monitor results and introduce necessary changes. In connection with the final tranche of credit funds to be provided this fiscal year, a major issue is whether these funds can achieve their stated objective - increased use of animal traction - in the absence of those inputs and services that were to have been provided by the ORD and/or other donors. In its discussions with the ORD extension agents, the evaluation team found general agreement that attempts to introduce animal traction cannot succeed without the timely delivery of the necessary equipment and close supervision by extension agents. Since this is not now happening, it is recommended that AID discuss possible solutions with the ORD. If a solution is not forthcoming, it will be necessary to establish an alternative justification for the use of credit funds under the project. In the next section, the related issue of whether credit should be available to village groups for purposes other than animal traction will be discussed.

The evaluation up to this point has dealt with how effectively the project has achieved its intended outputs. A more difficult and important set of issues relates to whether the project purpose will be achieved. On this point the evaluation is hampered by the lack of quantifiable indicators. The indicators listed in the PP (see Attachment 4) are clearly unrealistic and beyond the scope of this project. An alternative set of indicators proposed by the evaluation team states that at the end of the project:

1. The ORD will be providing a satisfactory and effective level of extension services to 10-15,000 farms.
2. A firm data base will exist for planning and evaluation.
3. A medium-term regional plan will have been prepared.
4. The productivity of farmers using animal traction in the intensive zones will have increased by 50 percent.

This listing is based on the team's interpretation of what AID and the GOUV wished to achieve at the outset of the project given the inputs being provided and activities called for in the project agreements. Whether these targets are achieved depends to a large extent on:

- the administrative competence of the ORD,
- the quality of technical innovations being introduced by the ORD,
- the rural development policies and priorities of the ORD, and
- the amount and types of assistance being provided by other donors.

Although these factors are basically ORD program issues and beyond AID's control, they are critical to the achievement of the objectives of the IRD project and to any determination of what types of activities should be financed by AID after the current project is completed. These factors and others that are important for increasing small farmer production are the subject of Section IV.

C. Project Management

The present AID project management consists of a direct-hire project manager and a locally hired assistant, both located in Ouagadougou. During the first year of the project there was also a direct-hire assistant project manager, also located in Ouagadougou. Although this arrangement enabled the CDO to oversee project implementation, there is some question as to whether problems were addressed and resolved as expeditiously as they could have been. The MSU team felt that they would have greatly benefited from having had a full-time AID project manager in Fada during the period when they were trying to get all of their logistic support and housing straightened out. Furthermore, the project manager for the FAO project, who is stationed in Fada, expressed the opinion that implementation problems are more effectively resolved by an on-site manager. The general feeling of the evaluation team is that the logistical aspects of the project were well managed from Ouagadougou and it is unlikely that having a full-time AID person in Fada would have helped very much in that regard. The problems of the MSU team would have been alleviated by an administrative assistant, and one is currently being recruited.

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The decision of where to locate the project manager depends on what is considered to be his role. Basically, a project manager is responsible for overseeing the implementation of the various project activities, working with all parties concerned to resolve problems as they arise, and providing AID inputs and approval for changes in project design when called for. In the case of the IRD project the main activities are the MSU contact, the delivery of commodities, training of ORD staff and disbursements of credit and demonstration funds. It is the opinion of the evaluation team that AID management of these activities is best handled in Fada. Except for the applied research component, which is being implemented by MSU, all project activities are the direct responsibility of AID and the ORD. During the last two years, the existence of a project manager in Fada could have, for example:

- helped provide more of a focus to the work of the MSU team during the first months after their arrival;
- led to better agreement between AID and the ORD on activities in the intensive zones; and
- helped get the training component started.

The CDO has recognized the need for a full-time project manager in Fada and this is reflected in current reorganization plans.

The CDO's proposed management structure for ORD programs consists of (1) a senior officer charged with overseeing all AID-financed regional (sub-national) development activities, (2) a project manager and assistant project manager for the IRD project, (3) a local hire program assistant for the IRD project, and (4) a project manager for the E. ORD Rural Roads project. Of these positions, the IRD project manager and probably Rural Roads project manager would be located in Fada. The evaluation team is in general agreement with this approach. It should be emphasized, however, that administrative back-up for project managers in the CDO is extremely weak. This necessitates someone associated with the IRD project being in Ouagadougou almost full-time. This implies that the project manager position should not be transferred to Fada until it is certain that there will be two positions.

The position description for the IRD project manager should be based on the duties discussed briefly on the previous page. The senior position in Ouagadougou should be more of a policy level position. This is necessary in view of the many departures from the original project design and targets, and the need to develop a follow-on project. Visits to Fada by this senior individual will be necessary to oversee the work of the project manager, provide substantive guidance to the MSU team and maintain a policy level contact with the ORD Director.

A second management issue relates to the coordination of the IRD project with other AID-financed activities in the Eastern ORD and with activities financed by other donors. It is important to note that the externally-financed activities currently on-going in the ORD have been selected on the basis of donors proposing projects that are consistent with their interests and strengths on the one hand, and the ORD program and objectives on the other. The donors are in regular contact with one another and this assures that there is a minimum of duplication and inconsistency. But there is certainly no master plan into which all the projects neatly fit. At the present time the major coordinating role is being played by the ORD itself on a more or less ad hoc basis. Prior to the change in ORD Directors, i.e., pre-September 1976, a more or less formal Coordination Committee existed composed of the ORD Director and major donor agencies including FAO and USAID. Most donor representatives, including the AID Project Manager, regret the termination of this ad hoc committee and believe that the current situation requires improvement. The ORD Director is uncomfortable with the existing situation and feels that the initiative is too much with the donors. He hopes that once the medium-term development plan for the ORD has been completed, the ORD will be in a better position to utilize donor resources more systematically in the pursuit of its policy and program objectives.

IV. PROJECT DESIGN

The activities of the IRD Project are mainly focused on increasing agricultural production ~~and~~ selected interventions in the areas of marketing, credit, livestock, and the formation of village groups. Obviously, a truly integrated rural development project would have a broader focus and seek to increase the quality of life through improvements in food, shelter, and clothing, and through social interventions in education and health. The absence of such a broad approach in the AID project does not mean that these aspects are being ignored in the Eastern ORD. Improvements in areas other than agriculture are being made by interventions under the auspices of both governmental and non-governmental agencies, private and voluntary, and involving both local and outside funding.

It cannot be assumed that the various development interventions currently underway in the ORD are necessarily integrated or consistent with the AID project. Many are completely outside the control of the project or indeed the ORD plan for development. The AID project operates within a framework of continuously changing national, regional and local policies that also are not necessarily coordinated nor internally consistent. The AID project should remain flexible enough to adapt to changes in the environment in which it works, and yet focused enough to achieve growth in its selected areas of improvement. Since the time frame for changes in agricultural production to occur is not short, and the time frame for integrated rural development is even longer, the project has to be viewed as taking the first steps along a long road. The basic underlying assumption of the current AID project, with which the evaluation team agrees, is that it is possible to assist the small farmers in the Eastern ORD to increase agricultural production and that this is a necessary first step in achieving overall rural development.

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The basic issues to be addressed in this section relate to the entire range of interventions needed to achieve sustained and widespread increases in small farmer production. Although the current IRD project has quite specific objectives that fall short of area-wide increases in production, we are nonetheless providing substantial organizational assistance to the ORD in support of its overall program. It is therefore necessary to determine what is involved in moving from the specific accomplishments of the existing project to the longer-term ORD goals of increased production, incomes and quality of life for major segments of the population. This will help us to determine (1) whether AID and the ORD are on the right track; (2) what activities are required in addition to those financed by AID; and (3) what activities and targets should be included in a phase II IRD project.

The evaluation team considers the following six elements as essential to any program aimed at achieving sustained increases in small farmer agricultural production:

1. the existence of improved technical packages adapted to the region concerned;
2. a thorough understanding of traditional farming systems in the area and of the socio-economic constraints to introducing the available improved technologies;
3. effective supporting services that can serve the majority of small farmers;
4. adequate infrastructure;
5. active farmer participation in the design and implementation of production increasing activities; and
6. the means for assuring that the large majority of farmers benefit from the productivity-increasing interventions.

Each of these elements is analyzed below in the context of the Eastern ORD's program and objectives. Recommended courses of action in each area are for ORD consideration and should not necessarily be construed as requiring action by AID. Although this section evaluates the project primarily as a small farmer production program, the analysis of participation and equity issues spills over into integrated rural development in the broader sense. In this connection, possible interventions in the areas of off-farm activities, non-formal education and health will be explored.

A. Technical Innovations and Farming Systems

Unfortunately there is no tested package which can be recommended to the small farmers of the Eastern ORD at this time. There are a series of themes being disseminated by extension agents which are supposed to result in increased production and incomes, but they are not always inter-related, do not apply to all crops and have not been adequately tested.

The following improved practices are being suggested to farmers in the Eastern ORD:

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1. use of animal traction;
2. improved cultural practices mainly in association with the use of animal traction;
3. use of mineral fertilizer (not recommended by AID on food crops);
4. application of insecticides and fungicides, including the expanded use of the well accepted pesticides Thioral (seed fungicide) and Gamma grain (harvest protection insecticide);
5. improved use of bas fonds; and
6. use of improved seed varieties.

These changes have various associated costs and returns and in general insufficient data exists to assess their economic feasibility. Furthermore, they are being suggested for use by both farmers and groups; they may be more economical or desirable for farmers only, groups only, or in association with other qualifications, referring to such variables as size of enterprise, cropping pattern or specific ecological constraints. It is beyond the scope of the present AID project to come up with a tested package of improved practices, but the MSU production economist will have to give priority to the assessment of the farm-level feasibility of the changes in farming practices being suggested. This will entail a great deal of well-planned collaborative and individual effort in data-gathering at both the micro and macro-levels.

Assessment of the effects of the individual items will involve the analysis of a number of technical, economic and social variables. Some of the difficulties and unanswered questions relating to each of the recommended practices are listed below.

1. Use of animal traction:
 - a. lack of information on costs and returns to ox or donkey traction based on realistic farm models;
 - b. lack of information on effects of animal traction on cultivated area, cropping patterns, crop yields, labor allocation;
 - c. need for standardization of implements;
 - d. effects of animal drawn plowing on soils; and
 - e. technical and farm management problems related to improved animal husbandry techniques.

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2. Improved cultural practices, mainly with respect to animal traction:

- a. Better land clearing and deeper preparation of seed beds should be possible with animal traction but actions to prevent erosion need to be made part of the package.
- b. Seeding in lines is necessary for animal traction, but may be counter-productive with traditional hand methods since plant density and spacing may not be optimum.
- c. Better timing of field operation, planting, weeding, thinning, harvesting, etc. This may require two suggested calendars, since farmers using hand methods may have different labor bottlenecks than those using animal traction.
- d. Assessment of the benefits and returns to monocropping versus interplanting, since only monoculture is possible utilizing animal traction.

3. Use of mineral fertilizer:

- a. With the recent doubling of price, or removal of a large part of the subsidy, there is a question about the economic return to mineral fertilizer use. This needs to be examined with respect to specific cash crops and improved varieties.
- b. Lack of knowledge by extension agents of the appropriate mixture and recommended rates of application. The fertilizer package for cotton seemed to be used for everything. However, the quantities being used in the region are not large enough to have any discernible effects on total production.

4. Development of bas fonds:

- a. In some areas there appeared to be good potential land available but not used due to land tenure problems. More attention needs to be paid by the ORD to intra-village arrangements to allow land use by non-owners or village groups.
- b. The heavier soil structure in the bas fonds in some areas may require animal traction for plowing, and may be particularly appropriate for the "village groups."

5. Use of improved seed varieties:

- a. Lack of knowledge of possible improved varieties of millets and sorghum seemed to be a particular problem. Dwarf sorghum appeared to have had a limited trial. Many different varieties of local sorghum were observed, having different maturities and characteristic food uses. Some local varieties may be suitable for wider dissemination.

- b. Cotton, rice and soybean seeds seem to be more readily available to farmers in improved varieties.
- c. Information seemed lacking on local suitability of given varieties, their tolerance to early or late rains during the planting season, and the increase in yields to be expected with fertilizer use.

On the basis of the above observations the evaluation team has identified a number of activities in the areas of improved technical packages and farming systems research that must be undertaken before small farmer production in the Eastern ORD can be significantly increased.

In the technical area these are:

1. Continued agronomic research with new varieties, inputs and new cultural practices. Most of this work should be conducted at the national level but as promising technical innovations are developed they should be introduced on farmers' fields in a systematic way and under careful monitoring.
2. A more concentrated applied research effort by the ORD on improving techniques of animal production. The technical package of innovations is well known and it is now a matter of adapting it to Voltaic ecologic conditions and farming systems.
3. Given the major emphasis being placed on animal traction, soils research is necessary to determine
 - a. the extent to which excess arable land exists in the Eastern ORD, and
 - b. the effects of continuous plowing on soils.

The lack of this information at present should not hold up the animal traction program but research should be included in the program.

4. The number of improved practices currently being promoted by the ORD could be increased. It should be possible for the ORD to expand its package of practices to include such innovations as the use of green manure, forage crop production and better rotation practices.

With respect to farming systems, a thorough socio-economic understanding of small farmers in the area is essential before attempting to introduce widespread changes in farming practices. This implies first a study of existing farm systems including:

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- types and amounts of crops produced and marketed
- costs and value of farm production
- household consumption
- on- and off-farm labor requirements and availability
- land tenure, especially in connection with small irrigated perimeters and bas-fonds development

Farming systems research also involves the close monitoring of efforts to introduce productivity-increasing innovations in order to identify socio-economic constraints and requirements for adaptation to local conditions. Under the IRD project, a considerable farm systems data collection and analysis effort is to be carried out by members of the MSU team. This effort is being complemented by (1) a less systematic and more farm management-oriented study by a FAO associate expert and (2) a sociological study of traditional Gourmantche farming practices by an AID-financed anthropologist. At a more macro level, AID is financing an agricultural statistics study by SAED on cropping patterns and yields in the different ecological zones of the region.

With the exception of the work of the anthropologist, activities in this area either planned or ongoing indicate a marked lack of emphasis on the sociological aspects of farming systems. While the ORD director does not presently view this as a problem, it is clearly a gap which threatens to seriously reduce the comprehensiveness and utility of the data to be collected. In order to minimize the degree of duplication between the work of the anthropologist and the MSU team and to enhance the value of both efforts for purposes of development planning, it is recommended that the anthropologist be asked to participate fully in the design and execution of the MSU study. The anthropologist has indicated a willingness to assist in this task, and the MSU team have asked for his assistance. Also, MSU is considering sending a production economist as a short-term consultant during the design phase. Both these latter moves should be encouraged, and attention should be given to the continual coordination of the various data collection and analysis activities currently ongoing or planned for the ORD. It is also important that these studies give more weight to issues other than agricultural production, i.e., land tenure, the social division of labor, land carrying capacity and population density, and short- and long-term migration.

With specific reference to animal traction, information should be sought on the experience of other such programs currently being implemented in Upper Volta. These include the FAO and Dutch programs as well as ARCONA.

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B. Supporting Services

A major cause of failure in small farmer production efforts is the inadequacy of various services required to support increased production. The most important of these are: (1) extension, (2) credit, and (3) marketing. They all have national and regional elements to them and some are in both the public and private sectors. Each is discussed separately in this section to assess the extent to which they constitute constraints to increased agricultural production in the Eastern ORD and to identify appropriate interventions that should be undertaken by the ORD and AID.

1. Extension

At least two main themes characterize extension in Upper Volta: polyvalence of extension agents, and the methodology of encadrement. Theoretically, each extension agent (encadreur) is responsible for the entire process by which farmers are exposed to, and adopt, technical themes and packages, since he has been trained at the theoretical and practical levels in a multi-disciplinary approach to agriculture.

His first task is to sensibilize the farmers to any theme or innovation which is to be expounded, or any input to be adopted. Once an individual farmer or group has understood the innovation, his next task is to animate, to establish the necessary organization or structure for the adoption of the innovation. Thirdly, he must vulgarize, or expand the adoption of the innovation over a wider population or area. Finally, he must monitor the peasants who have adopted the package or innovation to ensure their proper use of handling of it. The total of these four tasks constitutes encadrement, and those who have been exposed successfully to the whole process are considered to be encadré.

Each extension agent is responsible for an extension unit (unité d'encadrement) which in the Eastern ORD usually include from 3 to 6 villages. The norms established by the ORD are:

- 5 villages per extension unit
- not more than 3,000 inhabitants for the five villages
- no villages more than 20-25 kms. from the center of the unit.

Obviously, not all extension units can meet all criteria but they remain valid guidelines. Increasingly, extension agents in the ORD are responsible for carrying out this process for a variety of themes which, though they do not constitute a well-integrated technical package, are supposed to be inter-related and together lead to increases in production. In addition, they are responsible for carrying out the commercialization campaign at the end of the production cycle. Since they are polyvalent, they are also responsible throughout the year for other programs which are not necessarily agriculture-related, such as non-formal literacy training, women's programs, animal husbandry practices as distinct from cultivation, health, and local enterprise development.

Organizationally, the ORD's 144 extension units are grouped into 23 subsectors which are then combined into 8 sectors. The subsector chiefs supervise the extension agents, program the required inputs, and channel the paper work of the staff back and forth in the ORD system. Additionally, they are responsible for the placement and logistic support of the agents as well as for evaluating their performance. The sub-sector chief's field tasks include maintaining contact with farmers on a discontinuous basis and training his agents on site about new themes and tasks.

In practice, the extension structure that has been created in the Eastern ORD with significant AID support appears to be highly centralized, increasingly ridden with reporting requirements, and relatively insensitive to alternative methods of working with small farmers individually or in groups. Group formation is seen as essentially a means of facilitating the work of the over-extended agents rather than as a means to encourage base-level participation. Despite or perhaps because of the theory behind encadrement, individual agents are responsible for too many kinds and levels of intervention, many of which they themselves poorly understand. They are frequently unable thoroughly to monitor the adoption of themes and inputs even at the level of the village group. The availability of technical information seems variable, and despite ORD efforts to carry out on-the-job training, a considerable variability of competence and skills is evident among agents at all levels. This situation has recently been exacerbated by the ORD Director's decision to move all of the sector heads and some sub-sector chiefs and agents around the region. This has led to confusion and a noticeable (hopefully temporary) lessening of commitment at all levels in the field.

A further problem characterizes the system as it now operates in the ORD. Although important steps have been taken to improve the lifestyle and motivation of individual agents, including the doubling of the minimum base pay to 20,000 CFA per month and improved transport, they are essentially bound in an extremely hierarchical structure in which merit in job performance is difficult to measure or reward. Given the hierarchy, they tend to work to please their superiors rather than to meet the needs of the farmers. While there are some expressions of change toward decentralization down to the sector level, these do not appear to be likely to accomplish much in the way of dynamizing the system.

A number of changes can be suggested, some of which were ideas mentioned by agents themselves during the team's field trips:

- a. Agents can be offered bonuses for good performance, but the criteria should include assessments made by the farmers and their traditional chiefs as well as by sector chiefs of the ORD.
- b. Training sessions should be organized at times of year at which the agents are least busy.

- c. The amount of paperwork can be cut down rather than increased.
- d. Experiments with part-time agents from among the local farmers can be begun, along model farmer lines; experiments can begin with advanced village groups with the hiring of paraprofessional agents themselves.
- e. Existing agents can be supplemented with a greater number of animatrices, functional literacy teachers, health workers, and livestock agents to make up multi-disciplinary teams at the sub-sector level.

It is recommended that before the radio net financed by this project is put in place in early CY 1978, AID should strongly urge the ORD directorate to explore ways of utilizing this net to increase decentralization rather than to increase control at the center.

It is further recommended that the project management, together with ORD directorate staff, more closely monitor the collective performance of agents at the field level so as to identify and eliminate bottlenecks regarding training and promotion to various levels. The proposed Agriculture Human Resources PP should be carefully reviewed with these bottlenecks in mind.

It is also recommended that, if the intensive zone concept is retained by the project, AID obtain agreement from the ORD to keep agents in place (except for short periods of training) for the full four years considered necessary for the agent to transfer new technologies to the farmers with whom he is working.

2. Credit

The sum originally budgeted for medium term rural credit amounted to \$729,000. This was later reduced to \$466,500 when some of the funding was reallocated to the building program. The objective of the credit program was to enable farmers to obtain agricultural equipment and draft animals. The credit terms involved a 5-year loan period for oxen and oxen traction equipment with a one-year grace period. For donkey traction equipment the loan period was to be four years with a one-year grace period. Other loans were to be for either 4 or 5 years. An interest rate of 5.5 percent per annum was to be charged on the balance of the loan. To date, all but about \$50,000 has been disbursed, all of which has been spent for animal traction. When the credit was first given out, some was disbursed to individual farmers who had to promise to join a village group within a year. As funds became short only farmers who were already members of group had access to the credit, and some loans were to the groups themselves.

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In the Eastern ORD, short-term credit loans are made to members of village groups, women's groups and youth club projects to cover seed, fertilizer, and seed treatment chemicals and storage insecticides. Most of the funds for this program come from the National Development Bank. No short-term credit is provided under the IRD project. The major function of this seasonal credit is the provision of selected seeds. These are given to the farmers at planting time, and they must return 150 percent of the amount at harvest time. Other inputs are given to the farm in kind and have to be repaid in cash.

Various problems are apparent in the present medium term credit program. The first is the lack of microfarm data, especially on production and marketing. The Eastern ORD includes a wide variety of farm types with different soils and cropping patterns. Without adequate farm models or prototypes it is impossible to assess the viability of credit for animal traction. Much data is vital to knowing whether to encourage donkey or ox traction and under what conditions. Income streams have to be examined to set up realistic repayment schedules. Finally, extension has to be targeted to meet the needs of farmers utilizing the new package of inputs: improved animal husbandry practices, changed cropping systems with their attendant cultural recommendations and the use and maintenance of traction equipment. Hopefully, the collection of data on agricultural production will meet many of the needs of the credit program. The data can then be utilized to refine guidelines under which credit can be extended. Farmers are obviously going to have to cultivate a required minimum farm size, with minimum hectareage devoted to cash crops (either food or non-food) if they are going to be able to pay off their loans. Donkey traction may be more desirable than oxen in areas having light soils and smaller holdings. This was recently found to be true around Mopti, an area climatically rather similar.

An additional area for discussion is whether credit should be made available in both the intensive or extensive zones. The implementation agreement implies that priority will be given to the four intensive zones but there is now some question as to whether the intensive zone concept will continue. It would be sensible to concentrate credit in those areas receiving close supervision from extension agents.

Credit is currently being extended for both work animals and equipment. A preliminary inquiry into the agricultural credit situation in the Eastern ORD conducted under the technical assistance project of Michigan State University was published in August 1977. It suggested that, on the average, about ten percent of the farmers could provide a pair of oxen if the ORD gave a loan for the machinery. Obviously the response varied by sector, but it did point up the need to restrict the credit to those farmers who could simply not acquire oxen without it.

Another issue is the low lending rate of 5.5 percent which has been established by the GOUV. It is clearly too low to allow the credit fund to be self-financing over the long-run. Furthermore, it does not approach the true economic cost of capital in Upper Volta. The issue, however, is beyond the scope of the ORD and will need to be resolved at the national level.

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Whether credit should be given to both individual farmers (even if members of group) and to groups themselves is another topic of interest. Given limited credit availability there are strong arguments in favor of giving preference to groups who have access to adequate land area and adequate labor supplies to utilize the animals to maximum advantage. A final consideration would be whether credit should be extended for other rural non-farm activities. This was allowed under the implementation agreement. It would appear desirable to make some small loans on a selected basis to gain experience in the area so that an informed decision could be made whether to continue such activities in the second phase of the project.

One of the MSU team members is a credit advisor. His major tasks are to:

- (1) assist the ORD to define its credit objectives and thus establish criteria for setting up a viable credit system;
- (2) assist in the development and training of village groups to utilize credit to achieve their objectives; and
- (3) assist in the development of an adequate accounting system.

Most of the work of the credit advisor to date has consisted of information gathering through surveys and interviews. These have gotten off to a very good start, especially in view of the many logistical problems that the MSU team had to contend with during the early months. A survey was conducted of 44 village groups in the ORD to see how they were set up, and how they were utilizing credit. From these groups, three well-managed ones were selected to receive credit for a cereals bank under an experimental approach. In addition, a survey was undertaken and will be available shortly of almost 150 users of credit for animal traction. Information is also being collected on an informal basis of practices of local money-lenders and from individual farmers of their experiences borrowing from money-lenders as well as their attitudes towards various types of saving institutions including credit unions. Such data gathering activities will provide answers to some of the questions raised above and are an essential first step in the setting up of a viable credit program.

3. Marketing

An effective marketing system is critical to any small farmer production program because as production increases beyond the subsistence level farmer initiatives to produce are dependent upon their ability to sell at remunerative prices. Many factors can prevent this from occurring including poor roads, lack of storage, inappropriate pricing policies and an inadequate information system. The discussion in this section is limited mostly to the institutional aspects of agricultural marketing. The infrastructure aspects are discussed in the next section.

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The marketing system in the Eastern ORD is complicated because of the coexistence of a major public sector participant, the ORD itself, with the more traditional marketing channels. In addition to directly purchasing cash crops as a service for the national export crop marketing organizations and as a means of self-financing, the ORD carries out a series of marketing interventions including the improvement of information flows and the formation of village groups for more effective marketing and storage.

The achievement of a more efficient marketing system through these interventions by the ORD is constrained by the parameters of the larger national framework. The national marketing policy can be characterized by two major problems: the instability of policies with respect to both food and cash crops, and the lack of coordination between the various institutions active in marketing. OFNACER (Office National des Cereals) is legally charged with the operation of grain price stabilization activities involving storage and resale. With a poor crop year in 1976 it was able to unload most of its stocks not all in good condition. Recently the Comité Nationale des Stocks de Reserves funded by FAO and German assistance has been buying food grains. In addition the ORD has been purchasing food grains through extension agents as a service to government or quasi-governmental agencies. ORD participation in food grain marketing faces problems of several types including: the undesirable use of extension agents on activities that detract from their main responsibilities; the lack of local bulking storage facilities; the lack of timely cash or credit for purchasing; lack of adequate trucks for evacuation; and difficult road conditions. In general, the ORD's track record with food grain marketing has been mixed due to problems at both the national and local level. It would be more appropriate for the ORD to participate in activities designed to aid individual farmers deal with private traders. These activities could include increased assistance to village groups to store and sell bulked food or cash crops at the village level. The use of radio programs in local languages to disseminate price and other market-related information is another desirable activity for the ORD to encourage.

Not only does the ORD operate within a framework where national policies can be the dominant influence on marketing, but it also operates within a system presenting both political and logistic problems. In the political arena, the geographic location of the Eastern ORD would make it easy to conceive of the neighboring countries of Benin, Togo, and Niger being logical markets for agricultural surpluses. In addition, the area west of Fada might more easily be serviced in terms of marketing by the neighboring ORDs of Koupela and Kaya. The poor road system and lack of trucks present additional logistic constraints.

One of the most striking aspects of the agricultural marketing system in the ORD is the lack of knowledge about how it functions. In general, little is known about the location, nature and quantity of agricultural surpluses. The one exception is the quantity of crops sold to the ORD which is a very small proportion of total sales. Little is known about storage of crops from the farm level to bulking facilities. Marketing channels have not received much attention: who sells what, where, and to whom? Neither prices

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nor margins are regularly reported, nor are the effects of marketing policy analyzed. Given the heavy administrative load of the marketing economist on the MSU team, the most productive area for emphasis is probably the collection of data on various aspects of marketing. This would entail setting up a regular data collection system for such items as prices and quantity marketed. Other variables may require more sporadic and targeted information. It is only by having better marketing information that the MSU team can assist the ORD to plan, evaluate, and improve its operations and its policies with respect to marketing.

There is little doubt that present ORD management of marketing operations could be improved. However, these operations are a sensitive element of the ORD program, and as such are not an area in which the MSU team can expect to have much impact. The MSU marketing economist should, therefore, minimize his direct involvement in ORD marketing operations and concentrate on the gathering and analysis of data on the existing marketing systems and on ways of addressing critical constraints. The identification and creation of new market outlets seems an area where decisions are either made at the national level or more efficiently sought by private traders, and as such should be dropped from the MSU work program. In general, AID should concentrate its inputs on generating information on all aspects of the marketing system, and on the development of a regional development plan which serves to integrate marketing requirements with infrastructure development. At the local level, assistance in the formation of groups to market or store cash or food crops is a priority need.

C. Infrastructure

The Eastern ORD region has yet to benefit from any major infrastructure investments. There are two all-weather laterite roads in the region -- the Ouagadougou-Niaméy road and the Kantchari-Namounou rd. There are also secondary laterite roads, not open during the rainy season, linking Namounou to Fada, Fada to Bogande and Diabo to Comin Yanga.* In addition there are some dams that were built to hold back rain water in low lying areas for irrigation, fishing, watering of animals and to prevent erosion. The major towns of Fada, Kantchari and Diapaga have no electricity or water and sewerage systems.

The key questions are what are the infrastructure requirements of the region and how much infrastructure can the economic potential of the area sustain? There are four major concentrations of population in the Fada region. These are in the sectors of Bogande, Fada, Diabo and Diapaga. The first step in determining infrastructure requirements should be to identify and measure the economic activity of these areas and the potential for increased activity assuming that all of the necessary development interventions are undertaken. This is essentially a regional planning exercise and the objective should be to locate growth centers, determine how they relate to the areas around them and identify what they need in the way of infrastructure. This would include primary and

* See map for location of these roads.

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secondary roads, storage facilities, various buildings for social and administrative services, and marketing facilities for agricultural products as well as for inputs and consumer goods. Infrastructure to support small industry should also be identified.

An additional potentially large requirement for infrastructure investment is bas-fond development. There are about 60 bas-fonds in the ORD with about 800 hectares of potentially irrigable land of which only about 85 hectares have been developed. Economic feasibility studies are needed on these areas to determine how large an investment program is called for.

On the basis of an analysis of requirements it will be possible to put together a program of infrastructure construction including both large projects and smaller rural works of a self-help nature. The major infrastructure activity currently being planned is the AID-financed rural roads project. Under this project all-weather laterite roads will be constructed from Fada to Bogande (72 km), from Diabo to Comin Yanga (48 km) and from Namounou to Logoubou (39 km). This will increase the all-weather road network in the ORD by 50 percent. Several other activities are underway or about to get started including land improvement in three "intensive zones" financed by the U.N. and an ILO self-help project to construct village wells and rural access roads.

Although there is virtually no infrastructure in the Eastern ORD, the evaluation team is unable to recommend major investment outlays in this area at this time. Two of the three roads being financed by the AID project (Diabo-Comin Yanga and Namounou-Logoubou) will serve relatively densely populated and productive areas and therefore seem to have been well selected. In general, however, too little is known about the development potential of the different regions of the ORD to make any firm decisions on infrastructure investment. Intuitively it appears that some areas can be more productive than they are presently. It can therefore be assumed that after the farm level testing of new technologies and farm system studies have been completed, it will be possible to identify several sound investments in roads, storage and bas-fond development. AID should be prepared to consider interventions in these areas as part of or in conjunction with a phase II project.

D. Small Farmer Participation

Over the long run, sustained and widespread increases in small farmer production are possible only when the farmers themselves are committed to the changes being introduced and are prepared to contribute of their own time and resources to bring about the necessary improvements in infrastructure and supporting services. To bring this situation about it is necessary to address production programs to farmers' felt needs and involve them in the decision-making process. This is often the most difficult part of small farmer production programs. This sub-section assesses the existing ORD program in terms of its success in generating small farmer participation and recommends steps that can be taken to make the program more effective in this regard.

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1. Village groups

Development policy makers in Upper Volta are currently reviewing national policy regarding the status and purpose of village groups or pre-cooperatives. Three regional seminars on the subject were followed by a national seminar attended by all ORD directors and others, financed with German assistance. The purpose of the seminars was the further consideration of the role and purpose of these groups in terms of current community development policies and especially their relationship to the ORD structures.

While presently village groups (groupements villageois) have the ostensible status of precooperatives, one of their major functions as seen by many ORD personnel is to facilitate the job of the extension agent by aggregating people who will meet and be exposed to demonstrations in one place. A second major function is the guaranteeing of credit made available to individual members. These groups are thus presently viewed as serving the collective interests of the ORDs more than as a means to increase mass participation in development decision-making and to improve peasants' skills in self-management.

It is now widely accepted within the development community that the main value of village groups is as a means of increasing farmer participation in the development process. According to this view, village groups are primarily precooperative institutions which have potential for credit, banking, marketing and rural enterprise activities. They are seen, then, as being eventually a venue for independent decision-making by farmers, and not merely as a convenience for the extension service. They are to be based on traditional organizational patterns which will evolve in various directions as functions are discerned.

Although village groups were set up as multi-purpose organizations some years ago, the present situation in the Eastern ORD is apparently as follows: (a) groups are used for the provision of medium-term credit and to facilitate the work of over-extended extension agents; (b) aside from their function as "moral guarantors" of credit provided to individuals who are members, they appear to have no legal or quasi-legal standing; (c) they are encouraged to set aside communal fields on which new or known cash crops are grown using recommended cultural practices; (d) the produce from these communal fields (which are usually quite small) is marketed through the ORD, supposedly at a guaranteed price, and profits are shared among group members.

These general factors apply specifically to the male village groups. In the case of the few women's groups, the major emphasis is on the communal cultivation of cash crops and their sale primarily through the ORD. The emphases on introduction of new cultural practices, the extension of credit for inputs, and the stocking of produce are usually absent in the case of women's groups whether or not there is an animatrice available to work with the group in cooperation with the male extension agent.

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In the two years of AID intervention in the project area, the keynote of AID-funded activities in the "intensive zones" has been the provision of medium-term credit for purchase of animals and equipment for animal traction. This has been the primary basis on which (male) groups have been formed at the village level in these zones. A requirement for the provision of credit funded by AID has been that individual recipients be members of village groups either at the time credit is provided or within a year thereafter. A group formed for the purpose of guaranteeing credit must have a minimum of seven members, and is to have officers chosen by the members themselves. Access to medium-term credit for traction through the group, however, does not appear to be determined by the group but rather by programming of needs and priorities by the extension agent. Credit and delivery of animals and equipment is on a first request-first served basis.

Members are not obliged to use their traction animals and equipment for group farming or to lend scarce equipment among the membership. However, in some instances different approaches have been tried, such as ownership and control of one set of traction animals and equipment by the group itself.

Nowhere in the intensive zones has repayment of AID-financed animal traction loans begun; 1978 will be the first year after the grace period. Thus, it remains to be seen to what extent the guarantee function of the village groups will prove to be successful and appropriate. Given the problems which have occurred in the timely distribution of animals and complete equipment sets (as well as spare parts), it seems virtually certain that repayment rates will be minimal. Further, a recent survey on village groups and credit carried out by the project administrative assistant (M. Mayabouti D.) indicates that the entire credit system is poorly understood by individuals and by groups. Meanwhile, individual agents interviewed by the evaluation team indicated that they have encountered numerous problems in filling out and monitoring loan agreements and that they will be hard-pressed to know what and how much to collect from whom, and when.

On the positive side, a second survey carried out by M. Mayabouti and MSU team members appears to indicate that there are at least 200 viable village groups presently in existence, many of which are ready to diversify their activities toward marketing, agricultural processing, storage, and savings. These groups have been in existence for several years, have sufficient activity to generate a willingness to proceed with communal ventures and to commit group resources toward them. The first step in this direction will be the provision of repayable loans from the project demonstration fund (total outlay thus far - \$7,000) for the creation of one pilot grain storage bank in each of three intensive zones. Other self-help projects suggested by village groups include village stores, pharmacies, mills, oil presses, poultry raising projects, and credit unions. At present, however, it is not clear whether the ORF

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Director is willing to allocate additional funds from the demonstration fund for these kinds of activities. Depending on the outcome of the review proposed in Section III on the use of medium-term credit for animal traction, it may be appropriate for AID to use that component of the project for some of the purposes listed above.

When asked during the team debriefing session why none of the demonstration funds had yet been expended, the ORD Director indicated that his understanding had been that these funds were for the purpose of agricultural demonstrations put on by extension agents and that in his opinion the agents did not have time to engage in such activities. When it was suggested by the team that this was not necessarily the purpose of the fund, he indicated a willingness to consider releasing funds for self-help projects mounted by groups if there were reason to believe that they would not be construed as handouts and could be efficiently and sufficiently monitored. He stressed that such monitoring must take place within the project area, and not be managed from Ouagadougou. The evaluation team feels that the ORD Director's points on the subject of demonstration funds were well taken.

2. Participation in Development Decision-making

In response to a more general question concerning participation and organization at the village level, the director responded as follows: "Organization is the farmers' best means of self-defense. It facilitates extension work and the distribution of the means of production." More generally ". . . participation is the sine qua non of development." However, with regard to an explanation given of the AID New Directions policy, he responded that a compromise would be necessary between the medium-term objectives of the ORD and the (more extreme) equity and participation objectives of AID. He reacted strongly against the suggestion made by the team that the project and ORD operations as presently managed were at risk of exacerbating or creating inequalities between relatively well-off and relatively poor farmers. However, he reacted positively to the suggestion that raised expectations on the part of farmers exposed to extension and animation programs should begin to be met through the provision of village group self-help projects where possible.

A final revealing statement from the director prompted by a question about the apparent top heaviness of the ORD structure should be mentioned. He indicated that the ORD's development strategy is one involving the progressive transfer of competence from the top down by means of the encadrement approach described on pages 19 and 20 above. He did not respond to a suggestion that competence also existed at the bottom, among the farmers themselves. He indicated a general lack of interest in the "sociological" aspects of development questions and practices, viewing them as something to be added on after other approaches had been tried, if such addition proved necessary. A pitch for the simultaneous consideration of traditional cultural practices with potential technological improvements met with a cold response.

It is important that the personal development philosophy of the present ORD Director not be overemphasized here or in planning a follow-on project. However, his views are indicative of more general orientations within the GOUV which have yet to be fixed. There is considerable conflict of views concerning the appropriate role of participation at the base level, and the status on village groups which is supposed to appear as a result of the national seminar should provide a key to future directions. To the extent that ORD directors currently have considerable autonomy, their personal views are significant. But what is more significant for the Eastern ORD is the structures which are presently being created and used, and their appropriateness for participatory and integrated rural development in the region.

Given the likelihood that there will be no major changes in the top-down encadrement approach to development in the ORD, it is important to underline incremental changes that can be introduced within that context toward increased participation at the base level. As members of the MSU team have suggested, there are a variety of such incremental changes, most of which are targeted on the diversification of village group functions into such areas as grain storage, cooperative marketing, purchases of inputs and processing of produce. Also, increased emphasis on the development and management of low-lying water catchment areas and areas below earthen dams to generate increased cultivation options with processing component for the benefit of the poorest farmers. A more important activity which should be explored as part of the NFE add-on and built into any follow-on project is the creation of one or more rural resources centers or rural academies along the lines of the Comilla model. This recommendation is discussed in detail below.

3. Rural Resources Centers

The purposes of the Non-Formal Education (NFE) Add-On are to:

- (1) enhance the capability and capacity of the ORD to carry out effective extension and rural adult education programs in all areas of the ORD program and
- (2) support the ongoing literacy programs in the ORD in such a way as to make them more focused on pressing development needs.

Anticipated outputs are: (1) a Learning Resource Center staffed and supplied to provide audio-visual aids and materials for instruction in literacy, health, (2) orientation and training of all ORD extension staff and literacy teachers, (3) innovative and inexpensive adult learning techniques using volunteers in tested villages, (4) literacy instruction materials and post literacy readers for minimum three aspects of the ORD development program.

A condition precedent of the project agreement is that 10 villages be identified to receive funds for the construction of village learning centers with contributions of labor and other resources from villages themselves. Ultimately, 30 such centers are to be constructed.

A suggestion from the MSU team which is thoroughly endorsed by the evaluation team is that at least one of these centers, and possibly one per intensive zone, should be turned into a pilot rural resources center or rural academy along the lines of the Comilla model. Such a center would provide a focus for village group activities of various sorts, including literacy training, but also village group meetings, demonstration projects, organization of self-help activities of various sorts, animation for health and nutrition, etc. The thrust would be toward the on-going involvement of villagers themselves in decision-making and management of the center rather than toward using the center exclusively for the convenience of the extension agents. Such pilot centers would be designed and run so as to become self-financing and self-managed.

The present NFE/LRC Add-On budget provides for all costs of village workers salaries and self-help projects to be met by the GOUV. Given the present ORD attitude concerning social services, functional literacy, etc., these activities may not receive high priority for funding should budgetary constraints become a problem. On the other hand, thus far, the GOUV has more than met its financial obligation under the IRD project and there is no reason not to expect this to continue. An additional potential problem is the present division of responsibility for such programs between the ORD and the technical services and ministries. It is crucial that before the Add-On is implemented, and especially before pilot resource centers are designed, that there be evidence that the appropriate entities in GOUV will provide the financial support required for the success of the project.

If the pilot resource center idea is operationalized, care should be taken in the placement of the pilot centers, their design in conjunction with operative village groups, and the provision of sufficient monitoring by the MSU audio-visual specialist and other MSU team members to ensure their proper functioning. Finally, this close monitoring should yield direct evidence of whether the pilot program should be replicated in the remaining learning centers. The establishment of pilot rural resources centers will provide a good venue for controlled testing of different approaches toward working with and through groups. This will be all the more true if a somewhat different approach is followed in each pilot center. In one, emphasis could be placed on the training of extension agents and animatrices in group processes. In another, emphasis could be placed on the training of part-time agents from among the local farming population. In another, emphasis could be placed on a still more bottom-up approach by which the local population would be more directly and exclusively responsible for identifying and developing self-help activities which could then be supported by extension and animation activities. Such variety might at first seem hard to manage. Nevertheless, there are sufficient training funds in the budget to allow training in a variety of techniques, and those receiving such training could be monitored during a probationary stage, at the central Learning Resources Center in Fada.

Whatever training and motivation approach is chosen in the end, it is crucial that provision be made for the local learning centers to be able to accommodate people coming to be trained and to use the center. Building plans should include simple dormitories, and provision should be made to accommodate women with babies and smallchildren as well as men. The same holds for the central LED in Fada N'Gourma, especially since there are currently no accommodations available even for agents who come to town for ORD-sponsored training.

E. Social Feasibility Issues and Distribution of Benefits

The generalizations that follow address the equity issues related to this project as well as other subjects that are often covered in a social soundness analysis. They are based largely on discussions with Dr. Swanson held in Oumgoudougou and in the field during the visit of the evaluation team.¹ In the opinion of the team, these issues are critical to the success of the present project in meeting its purpose and goal, but are even more crucial to the design of any follow-on project. For this reason it would be very desirable for Dr. Swanson to be included as a member of the design team for any follow-on project.

1. Land Tenure and Usufruct Rights

Among the Gourmantche of the Fada Department all land that is owned is claimed by individuals or groups. Though considerable unclaimed land exists, there is much less "free" available land than is usually assumed or realized. In addition, trees useful for human food consumption purposes are owned in the same manner. Allocation to usufruct rights in land is the prerogative of supra-village chiefs, village chiefs, heads of extended families, and individual themselves. Usufruct rights can be extended to individuals outside of an extended family or village on a variety of bases, for medium and long term periods. In some instances, such individuals are allowed to build on and cultivate parcels of land for an interim period, but are obliged to leave when the individual who owns the land chooses to use it again. In such cases, the duration of usufruct is highly variable. That is, since any land owner can choose at any time to reclaim his land for his own use, the person who has temporary usufruct rights has no clear security of usufruct over a pre-determined period.

Nevertheless, there are some cases in which large tracts of land have recently been taken over by outsiders from the city of Fada or outside the region. If these individuals are regarded as sufficiently powerful, traditional owners of that land who are small farmers are not able to protect their original rights, especially as there is no current system of land registration operating in the region.

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1. Dr. Swanson should not, however, be held responsible for any inaccuracies or superficialities of the statements which follow. N.B. Certain portions of the last draft of the evaluation report were reviewed by Dr. Swanson and corrections made of factual errors or misconceptions. The conclusions drawn by the Evaluation Team were, however, not changed unless based on significant errors of fact.

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In the case of small farmers with temporary usufruct rights, increasing pressure on the total of cultivable land available in the region has recently generated situations in which newcomers are summarily kicked off the parcels they are cultivating, trees they have planted then being either pulled up or taken over as well. This kind of situation is apparently becoming more and more common, with the result that individuals with temporary usufruct rights are increasingly reluctant to make significant improvements to the parcels they cultivate for fear that these will be taken away and the investment wasted.

For those with inheritable tenure rights the situation is not entirely without complexities either. Within an extended family concession, there are a number of different exploitations, some of which are worked in common by all adult family members, and some of which are fields allocated by the family head to individual members, including wives and children. These individual fields are cultivated at times when labor is not required on the "family" fields. These individual fields are not, however, the fields crucial to that family's basic food requirements. They are more oriented to individual cash income production. In some instances, such fields are "bush" fields far from the concession, and time pressure is exacerbated by the distances to be covered back and forth to these fields, so the overall productivity on individual fields may be significantly less than might otherwise be the case. This seems particularly true of individual fields held by women, given their allocation of time among child rearing activities, food preparation and other domestic chores, work on the "family" fields, work on their own fields, and petty trading.

Women are, however, entitled to all the produce from their individual fields in normal times, and only in times of great stress are they asked to contribute to the feeding of other family members. Apparently, most women tend to cultivate cash crops on their individual fields -- traditionally peanuts, some sesame, a little cotton or tobacco and more recently, at the encouragement of the ORD, soybeans. In some areas, such as Bogande, there seems to be sufficient pressure on land and impoverishment of soils that women are increasingly allocated less productive parcels while at the same time extension agents are encouraging men to cultivate larger amounts of cash crops traditionally grown by women. (Grace Hammings, pers. comm.) Women are also entitled to the fruits of various trees, for processing, particularly shea nuts to make into shea butter, an important element in traditional cuisine. Increasingly, however, shea nuts are being sold unprocessed to merchants (commercants) and the ORD, thus diminishing the supply used locally and raising the price of processed shea butter to the consumers.¹ A similar pattern may be emerging for oil seeds such as soybeans and peanuts. Some women now buy these seeds from other women or at the market or from men so as to process them into oil or peanut butter or cakes. These products can be conveniently stored and sold locally later at a significantly higher price or used domestically over a longer term.

1. (per Dr. R. Swanson - his research does not confirm this claim)

One of the underlying assumptions of the entire IRD project and current ORD policy toward the popularization of animal traction is that compared to the rest of Upper Volta there is a great deal of land to spare in the Fada region, and that it is basically available for exploitation by almost anyone at any time. ORD personnel have been taught to deplore the fact that traditional cultivation practices include burning off of new bush fields while at the same time to believe in the efficacy of animal traction insofar as it allows both more intensive and more extensive cultivation. A few agents and sector chiefs indicated some comprehension of soil erosion problems associated with swidden cultivation and with animal traction, but on the whole these relationships are unclear to them. This fact, combined with their general inattention to traditional tenure patterns, is likely to have a number of negative unintended side effects both in the short and the long term.

A further ORD thrust to which tenure patterns are relevant is water resources development and management, specifically the development of low-lying water catchment areas (bas-fonds) and areas below dams that have been built for water control. Here again, the underlying assumption appears to be that land in bas-fonds and around lakes created by the dams is not necessarily individually owned, and that therefore, groups of small farmers can be encouraged to begin cultivating rice and other crops in these areas once the land has been properly prepared. A sharp distinction must be made between bas-fonds land and newly-developed land of this nature around newly-created dams. Traditionally, the Gourmantche did not cultivate in bas-fonds -- they did not cultivate rice. For this reason, it is not owned or claimed land. It is therefore much easier to find bas-fonds land (rice lands) which are "free" for the first farmer to lay claim to than the newly-flooded (dam-created) areas where farming may have previously taken place. In fact, the project area is characterized by a number of such water sources which are undercultivated at present at least partly because the potential cultivators are well aware that they do not have tenure or usufruct rights in those areas. Thus, they show the kind of unwillingness mentioned above to improve land which can then be taken away from them in a proper manner given traditional conceptions, and improperly due to modern pressures from other, more powerful outsiders.

Nevertheless, as was stressed by M. Abdoulaye Djanari (phonetic) of the ORD directorate staff, these water resources, and improved rice cultivation and other gardening practices which can be used to exploit them, constitute an important potential option for the poorest farmers. Some village chiefs have apparently recently agreed to donate such areas for exploitation by the poorest farmers in their villages, but this kind of experiment must be carefully monitored if indeed it is to generate a broader and more equitable distribution of benefits. At the present time, the FAO expert in agronomy and rice cultivation is also head of the ORD Bureau of Agricultural Production and is thus relatively unable to pursue his interest in rice cultivation. At the same time, there is agreement that there are not enough agents available trained in these areas. This tends to support the team's impression after the field trips that most improved water sources were exploited more or less the same way as unimproved ones. Since these water sources are not being developed at a rapid rate, there is an opportunity for project staff involved in applied research and planning for the ORD to emphasize the need for revision of underlying assumptions about land tenure and usufruct in connection with their exploitation, as well as to collect data relevant to the whole problem and its important equity aspects.

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2. Women and Youth

Traditional Gourmantche values appear to favor hierarchical social relations based on vertical relationships through males, and horizontal relationships within generations. Extended families are the traditional unit of production, including adult sons and their wives and children, usually resident within one concession. The oldest male is the family head, and is responsible for the vast majority of decision making, including the allocation of rights to fields, stock, and the allocation of family labor. A number of extended families constitute a sub-clan or clan, and sometimes a village.

The status of women of child-bearing age and of young males is clearly one of subordination to the family head, and to the local village chief. With increased pressure on land, and with various changes occurring in the area, young men are increasingly opting where possible for their own concessions, and opting out of working on their fathers' family fields. Increasingly, young men leave the area for wage-earning jobs in Fada N'Gourma, Ouagadougou, Lome, Niamey, and Abidjan. Some return annually, some after three years or so, and some not at all. Those who migrate temporarily for work after they are married usually leave their wives and children in the care or under the jurisdiction of their brothers, uncles, or fathers. Those without their own families appear less likely to return.

Nevertheless, they retain their claims to land and these claims can be taken up again at any point, whether or not someone else is now cultivating the particular parcels in question. They can also be passed on to children who have never even seen the land or the village.

Women of child-bearing age depend on their husbands and on their husbands' fathers for land, houses, and food for their children. They have relatively little license and little autonomy except over the produce of cultivation of their own fields and the income from their petty trade. Women past child-bearing age do, however, have considerable license and are accorded considerable respect by men of their own age as well as older and more powerful men. They are no longer required to work on common fields, and have more time available for ventures on their own. It is these women who have an important role to play as change agents, demonstrators of new cultivation practices, borrowers of credit, and leaders of women's groups. They have clout in the community and are willing to use it.

Unfortunately, this seems to be little recognized either by extension agents or by animatrices. There is a general tendency in the ORD to seek out the younger men and women to join groups and to be sensitized and animated and provided with technological innovation. In a number of animation programs, such as economie rurale, health, 4-H clubs, and young farmer groups, the traditional values with regard to the status of women and of the young have been essentially ignored with the result that innovations are not well received,

projects fail for lack of support from the local power structure, and more appropriate change agents are often ignored. The evaluation team was unable to meet with the FAO expert who is head of the ORD's Bureau of Community Development, under which all of these programs fall. However, a number of interviews with agents and animatrices, as well as members of village groups and local chiefs, indicate that lack of support from the local power structure is a serious problem. Interviews with central ORD staff tended to confirm this view, but also indicated a poor understanding of the underlying reasons, and options to be pursued to improve the situation.

There are a number of interventions now coming into the ORD region which could either rectify this situation or exacerbate it. The AID-sponsored Partnership for Productivity study of rural enterprise strategies may prove beneficial, as may the AID Strengthening Women's Roles in Development (SWID) Project. The latter, however, is designed in such a way that it may prove counter-productive in terms of distribution of benefits and equity. The present Project Agreement provides for interest of loans to women's groups for mills and other processing equipment to be 8%. All other projects in the area, including the IRD Project's medium-term credit for traction animals and equipment have an interest rate of 5.5%, in line with the GOV national policy. This will mean that women will soon become aware that their loans are more expensive, and may militate against applications for loans and participation in the program. Even if this is not the case, and applications are received and approved, women will in fact be paying significantly more for their loans than are men, when women are significantly poorer.

Further, the SWID Project Agreement specifies that women's groups must be served by trained animatrices in order to be eligible for loans. Given the present staffing pattern in the Eastern ORD, this in fact means that few existing women's groups can meet this criterion, let alone new groups that are in the process of being formed. Interviews with the central ORD staff indicate that there is a high level of dissatisfaction with the present skill level and attitude of animatrices in training and that those now in the field-training stage are unlikely to be employed by the ORD at the end of this year. Meanwhile, the training funds for women agents as well as for male agents provided for under the IRD project have yet to be spent, including those allocated for the training of two animatrices.

Interviews with animatrices and with local women, as well as with male extension agents indicated a high level of dissatisfaction with present women's programs, and a high incidence of raised expectations on the part of women who have joined women's groups and never got anything out of their membership except the shared profit from a small communal group field. Given the failure this year of the ORD to be able to maintain the guaranteed price for soybeans, the major crop cultivated by members of women's groups, dissatisfaction is likely to increase. These women will not be able to sell their soybeans, and have already said they will not cultivate this crop again.

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3. Medium-Term Credit

The present provision of medium-term credit in the intensive zones is made on the basis of programming at the level of the level of the "extension units", sub-sector and sector. There is ostensibly a great demand expressed in all the zones for draft animals and equipment to be purchased on credit; certainly all reports indicate that the overall demand is greater than the available supply. However, what is far from clear is whether the majority of borrowers of credit really need that credit, whether they understand what they are getting into, whether either of these factors enter into decisions about who should receive credit and who should not, and particularly, whether those who really need the credit are sufficiently visible and audible to be taken into account.

The evaluation team was unable to accumulate reliable evidence one way or the other. However, a number of accounts from extension agents and their ORD superiors indicated that it seems to be true that a number of richer farmers have applied for and received credit for traction. What is not clear is whether they are disproportionately represented in the total population of credit borrowers or not. There are some indications that they may be. One is that women do not have access to medium-term credit at all. (A few women in groups have access to short-term credit.) Another is that in a number of instances, farmers have already paid off their traction loans in one or two years--that is, before payments were to begin--in order to avoid paying interest. Since the returns to animal traction are by no means spectacular at the present time, it is difficult to assume that the use of traction is what provided the funds for premature repayment of loans. One of the major gaps in the medium-term credit program is the lack of criteria on who should receive the credit. At present it seems to be more or less on a first come first serve basis.

Even if richer farmers are not over-represented among credit recipients, there are other possibilities for exacerbation of inequities as an unintended side-effect of the current AID-funded medium-term credit program in the ORD. On the one hand, if traction really turns out to be critical to increased production, those who have received credit on the present relatively ad hoc basis are likely to become relatively more prosperous than those who applied and were not served, or those who never applied. On the other hand, if traction turns out in the medium term to be irrelevant to increased production or even counter-productive, those who have received credit under the present system will be either somewhat poorer than before or considerably poorer than before. Either way, not enough is yet known about the benefits accruing to the adoption of animal traction in the area, the way a medium-term credit program could best be operated in the region to achieve equitable distribution of program for the evaluation team to be sanguine about the present program so long as it is used exclusively for animal traction.

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4. Spread-Effects of the ORD Program

The GOUV has adopted a development policy which includes emphasis on community development by means of centers of progress (foyers du progres). These centers are supposed to be foci for a variety of interventions which, taken together, should improve the quality of life of the small farmer. Choice of "centers" is based on assumptions about agricultural potential as well, presumably, as social potential. Further, it is assumed that a center will serve as a model for those in areas of less intrinsic potential, and where fewer interventions are possible. Foyers du progres are thus supposed to begin a process by which innovations and their attendant benefits are supposed to spread of and by themselves.

There are a number of things wrong with the assumptions that underlie the foyer du progres concept and with the intervention modalities based upon it. In fact, there is considerably variability both within and among foyers (and AID's intensive zones) as well as in the kind and level of interventions now in place or likely soon to be in place. Further, there is probably even greater variability between foyers and areas of less perceived potential based on ecological, economic, cultural and social variables. The idea that "progressive" farmers in "progressive" zones of high potential in agricultural terms are somehow going to provide a motive force for the spread of benefits which only they receive in the first instance seems highly questionable.

Meanwhile, in such parts of the project area as Diabo, where various donors have intended to intervene through the foyer du progres mode, what has in fact occurred is that local expectations have been raised again and again over the past few years, and have scarcely been met. Thus, there is a great potential for what were thought to be progressive farmers now to become if not regressive, at least cynical and harder to reach.

The ORD Director may have been recognizing this growing disparity between the ideal and the real when he told the evaluation team that AID's idea of four intensive zones in the project area is now out of date. However, the question remains whether AID agrees or should agree (and if so, what should be designed to replace the intensive zones and the "progressive" farmer approach). As noted above, thinking behind AID's intensive zones was the provision of a complete package of improved practices and the necessary supporting services to specific zones in order to test their effectiveness and acceptability and identify shortcomings and constraints. In this context intensive zones are useful and appropriate. The evaluation team feels, however, that given the wide differences between zones and people in the ORD, special effort will need to be made to assure that any progress achieved in the intensive zones spreads to farmers in other areas. The extent and types of efforts required should be explored as part of the ORD's applied research program.

5. Health Services

To date there have been no health activities associated with the IRD project, yet this seems to be an area where some interventions could have an excellent potential. Visits to the rural areas revealed high rates of malnutrition in children, particularly those in the weaning category, but also those under two seemed unusually stunted in their growth. Goitre was endemic in some areas visited. At some point nutrition and health should be included in the data gathering activities of the ORD.

Health facilities staffed by Ministry of Health officials in the ORD consist of dispensaries at Bogande, Diabo, Diapaga, Matiakoale and Pama. Medications even of the most elementary nature such as aspirin and nivaquin are in short supply. The dispensaries get stocked only once a year, and medications are usually exhausted long before new supplies come in. Health manpower below the dispensary level seems very scarce and most villages are out of reach of any modern medical system.

Among the Gourmantche responsibility for health matters is more diffused than with many other Sahelian groups. Responsibility for treating sick individuals with traditional medicines falls on the most senior or elder members of the concessions. Chiefs or older men treat adults related to their family group. Older women treat other females and children and act as midwives. Special skills or experience with specific types of illness are recognized. The existence of this diffused system would suggest that the upgrading of the skills of a single village midwife or healer is not appropriate. Neither is the use of a young or unmarried animatrice to give nutritional advice.

Further consideration should be given to some health interventions at the village level. Older women should be trained as trainers to give the village women lectures and demonstrations on such topics as improved infant nutrition, weaning foods and improved maternity and delivery practices. Antibiotic ointment, aspirin and nivaquin were found at women's stalls in even small village markets. Prices were high, 10 CFA for a single tablet. The idea of having a small village "pharmacy" or box stocked with basic pharmaceuticals, where villagers would pay for their supplies is worth consideration. If such a system were set up with a revolving fund, it would probably be desirable to have a village elder in charge, even if bookkeeping functions had to be passed to a younger numerate individual. Participation of the Ministry of Health may prove difficult. Senior officials seem more oriented towards curative medicine at the professional level.

Some health interventions are underway under AIP funding to be implemented by the Frères des Hommes located in Fada. Activities include enlargement of the present rural health personnel's duties, construction of primary village health units and training of village health personnel.

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V. SUMMARY OF FINDINGS AND RECOMMENDATIONS

Project Design and Implementation

The overall finding of the team on project design is that the objectives originally set for this project were overambitious. Unrealistic assumptions were made regarding the effectiveness of the ORD, the availability of improved technical packages and contributions from other donors. Consequently, most of the outputs as originally defined will not be achieved by the end of the project in 1980. The project activities, however, were well selected and should be evaluated against what they could reasonably have been expected to achieve. This was the approach taken in this evaluation and the major findings and recommendations with respect to each component are summarized below. As will be noted, some of the recommendations imply the possible redesign of some parts of the project. If this proves to be necessary the CDO will have to prepare a new logical framework and project description and negotiate an amended project agreement with the GOUV.

A. Increasing the Administrative and Outreach capacity of the ORD

1. Although virtually all of the ORD staff are hampered in the performance of their duties by inadequate training, the training component of the project has not yet started. AID and the ORD should work out a training schedule that reflects a balance between the ORD's short term needs for having its staff on the job and the long-term need for better and more appropriately trained personnel. Agreement is also needed on what types of training are most urgently needed. It is the view of the evaluation team that most of the training should be practical in nature and conducted either in Upper Volta or in other West African countries. If necessary, funds currently available for overseas training should be transferred to training within Africa.
2. It is likely that the assignment of all but one MSU team member to operational positions will detract from their research activities. This is especially true of the marketing economist who also serves as MSU team leader and head of the Economic Analysis and Planning Bureau. A final assessment of this situation must await the arrival of the regional planning consultant in January, since the ORD Director has indicated that the final assignment of duties will be partly based on the consultant's advice regarding what needs to be included in the ORD's regional plan. The evaluation team recommends, however, that, at least for the next year, data gathering and analysis be given priority over operational and advisory activities. The one exception is the credit advisor who will have some advisory tasks as described on page 42.

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3. The present draft work plans for the individual members of the MSU team are generally overambitious and not sufficiently clear on what activities will be given priority and how they will be scheduled. It is unlikely that even the more important tasks will all be accomplished unless firm priorities are set and schedules established and adhered to. It is recommended that this be done as soon as possible and submitted to the ORD and AID for approval by mid-February at the latest. Future progress reports should be presented in terms of whether the scheduled activities are being accomplished satisfactorily.
4. The farming systems component of the MSU research requires a larger sociological content to assure an adequate understanding of Gourmantche farming systems. The evaluation team strongly recommends that the work of the MSU team and the AID-financed anthropologist be closely coordinated and that the anthropologist play a major role in the design, execution and analysis of the field surveys.
5. The present applied research program of the MSU team relates primarily to factors affecting agricultural production. Given the need to address all basic human needs and problems of equitable distribution in rural development programs, the MSU team should be encouraged to add a social and equity dimension to their survey work (i.e., questions concerning conditions among the lower 50 percent of the population, common characteristics, and major constraints to reaching them with ORD services). The advice of the anthropologist should be useful in this regard.
6. Except for the points raised in the previous three recommendations, the evaluation team agrees with the general thrust of the MSU team's work program. Our only specific recommendation is that the marketing economist minimize his involvement in the management aspects of the ORD's marketing program and concentrate on data gathering and analysis. Better information is needed on what is marketed (which crops, where, when, and in what quantities), price fluctuations, and major constraints to the timely sale and movements of goods. The marketing economist should also advise the ORD in the setting up of an ongoing program to generate and disseminate market information for the ORD and the farmers of the region.

C. Production and Marketing Interventions

1. It is very unlikely that the production increases that were to have resulted from AID's inputs into the intensive zones (primarily credit) will be achieved. The main reason for this is that the ORD is not committed to the intensive zone concept and is consequently not providing the necessary extension and equipment on a priority basis. AID must reach agreement with the GOUV and the ORD on whether the intensive zone concept is still operative as it relates to the AID project. If it is, the ORD needs to make a renewed commitment to providing all the

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necessary inputs that complement the credit provided by AID or this component of the project will not work any better in the future than it has thus far. The commitment should indicate the types and quantities of inputs to be provided by the GOOV or the ORD. Also, the impact of the package of interventions especially animal traction needs to be closely monitored by the ORD (presumably with assistance from the MSU team) to identify constraints and requirements for redesign. On the other hand, if the ORD no longer considers the intensive zone concept as valid, AID's production and marketing interventions will have to be redesigned to reflect an approach and objectives that are different from those implied by the intensive zones.

2. Regardless of whether or not the intensive zone concept is retained, AID's contribution to the ORD's animal traction program should be reviewed and probably redesigned. First, there does not appear to be a very good understanding of how animal traction fits into the existing farm systems. Very little is known on the conditions under which ox or donkey traction is economic, how they lead to increased production, or whether they will generate sufficient increased income to permit loan repayments. Second, it is generally agreed by all the extension agents that the introduction of animal traction is a slow drawn-out process that requires close supervision by extension agents to assure that the full package of improved practices are adopted. Finally, there are problems like the lack of farm implements, spare parts and animal health services that prevent animal traction from working as it should. Before the final tranche of medium-term credit is provided, AID should obtain agreement from the ORD that priority will be given to (1) generating better data on the effects and economics of animal traction, (2) providing a minimum level of extension and supervision to recipients of credit for animal traction, and (3) addressing whatever other bottlenecks are preventing the ORD's animal traction program from working satisfactorily. A specific step that could be taken at an early date would be for the ORD to send the animal scientist on the MSU team to observe and gather available data on animal traction programs in other parts of Upper Volta.
3. It is clear that there are many legitimate needs for credit in the Eastern ORD aside from animal traction. Furthermore, in order to increase beneficiary involvement in the development process, it is desirable that the village groups expand their activities into non-agricultural areas. For these reasons, AID should consider broadening the credit component to cover activities other than animal traction and the marketing of cash crops. For the same reasons, it appears desirable to increase the availability of demonstration funds.

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D. Project Management

1. Until now the AID management of this project has been based in Ouagadougou with frequent visits to Fada. Although this arrangement permitted the more effective handling of problems related to procurement (which were, of course, of major importance during the early phases of the project), it appears that many of the other problems (training, intensive zones) could have been resolved more expeditiously and effectively if there had been a full-time project manager in Fada. The CDO has decided to create a policy level position in Ouagadougou for all ORD activities and assign a project manager to Fada for the IRD project. The evaluation team supports these actions.

2. Despite the large number of externally-financed activities in the Eastern ORD there is no formal coordination mechanism. The various donors are in fairly close contact with each other and the ORD must at least concur on all activities to be undertaken in its region. This is sufficient to keep duplication and inconsistency down to a minimum. However, there is no master plan into which all the projects fit. The ORD Director feels that the initiative is too much with the donors and intends to take steps to change that. The evaluation team feels that improved coordination is needed, but recommends that any new coordination mechanism be at the level of the ORD rather than at the donors' level.

Overall ORD Program and Future AID-financed Interventions

1) Improved Technology

There does not yet exist a package of improved practices that has been shown to increase farmer productivity significantly over existing levels in the Eastern ORD. Agronomic research needs to be continued and expanded at the national level. At the level of the ORD four actions are urgently required:

- 1) closely monitored farm trials to test new inputs and develop new practices;
- 2) applied research in animal production to determine how to introduce improved practices into existing Gourmantche farming systems;
- 3) soils research and mapping to determine the implications of continuous plowing and the extent to which excess arable land exists in the Eastern ORD; and
- 4) socio-economic studies of existing and improved farming systems to determine what is acceptable and economically feasible from the standpoint of the farmer. The last of these and part of the second are being carried out by the MSU team. The remaining actions are currently within the purview of the FAO/UNDP project in the ORD. What the ORD should strive for over the next two years is to develop a proven package of practices that can clearly increase productivity at the farm level. If this can be accomplished, a follow-on AID project could finance part of a large-scale effort to introduce the new package and provide the necessary inputs, supporting services and infrastructure. If a suitable technical package cannot be developed this would imply a smaller AID effort in terms of production interventions and perhaps increased AID involvement in the technical aspects of applied research, especially if UNDP continues to have budgetary problems.

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2) Extension Services

The shortcomings of the ORD extension program are similar to those in most other developing countries: inadequate training, lack of logistic support and not enough emphasis on the proper motivation of agents. Several improvements could be introduced, some of which would be appropriate for inclusion in a follow-on AID project:

- more practical training in the farm-level application of improved technical packages;
- an improved system of promotion and reward based on actual results with farmers rather than on the ability to function within the ORD bureaucracy;
- use of "model-farmers" as part-time agents to supplement regular ORD staff; and
- use of increased numbers of animatrices, functional literacy teachers and livestock agents to work with extension agents as multi-disciplinary teams at the sub-sector level.

It is also recommended that AID work more closely with the ORD in assessing the performance of the extension service to identify administrative and other bottlenecks.

3) Credit

The existing credit program in the ORD is quite small and is able to cover only a very small percentage of the potential needs of the population. On the other hand, the key prerequisites for a viable expanded credit program -- the identification of economically sound investment opportunities and the administrative capacity to oversee and assure repayment of a large number of small loans -- is lacking. The major recommendations of the evaluation team with respect to credit are:

- a. Information is required on the effective demand for credit in the ORD and the financial soundness of the various activities for which credit is being considered. This need is being met in large part by work of the MSU agricultural credit advisor.
- b. It is essential that the medium-term credit program (both agricultural and non-agricultural) not expand faster than the ORD's capacity to supervise the loans. A major task of the MSU credit advisor should be to advise the ORD on the organizational aspects of credit management, especially the methods of loan selection and subsequent follow-up with borrowers.
- c. The interest rate being charged on medium-term credit is too low to permit the ORD credit program to be self-financing over the long-run. To the extent that the ORD has any control in this area it should try to establish an interest rate spread that will cover all of its costs of operation including bad debts. Furthermore, the interest rate does not approach the true economic cost of capital in Upper Volta -- but this is not an issue that can be resolved at the ORD level.

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Depending on how successful the ORD is getting its credit program off on a sound footing, a follow-on AID project could include a sizable credit component.

4) Marketing

The ORD is directly involved in the purchase and transport of export crops and, to a smaller extent, foodgrains. The export crop portion of the activity seems to be functioning reasonably well. The ORD is providing a service to national exporting organizations and in the process earns fees that pay for part of its operating expenses. The ORD's foodgrain purchasing program, on the other hand, is facing numerous problems due to a general lack of purchasing agents, funds, storage and trucks. The evaluation team feels that the justification for direct purchases of foodgrains by the ORD is questionable. The approach recommended here is that the ORD first establish what are the constraints to the effective marketing of agricultural products in the ORD and then concentrate on improving the private sector marketing system and assisting the villagers to operate more effectively within it. This includes working with cooperative-type groups on marketing matters, providing village-level storage and disseminating timely information pertaining to agricultural markets. Some of these interventions are or will be carried out under the existing AID project. Others would be appropriate for inclusion in a follow-on project.

5) Infrastructure

Although there is virtually no infrastructure in the Eastern ORD, the evaluation team is unable to recommend major investment outlays at this time. Two of the three roads being financed by the AID project (Diabo to Comin Yanga and Namounou to Logoubou) will serve relatively densely populated and productive areas and therefore seem to have been well selected. In general, however, too little is known about the development potential of the different regions of the ORD to make any firm decisions of infrastructure investment. Intuitively it appears that some areas can be much more productive than they are presently. It can therefore be assumed that after the farm-level testing of new technologies and farm system studies have been completed, it will be possible to identify several sound investments in roads, storage and bas-fonds development. AID should be prepared to consider interventions in these areas as part of or in conjunction with a phase II project, should they prove to be economically feasible.

6) Farmer Participation

It is the view of the evaluation team that there is insufficient farmer involvement in the design and execution of the ORD program. This leads to a general lack of commitment on the part of the farmers and risks that the ORD program will not be truly responsive to the felt needs of the farmers themselves. One way of achieving increased participation is to expand the functions of village groups beyond being mere recipients of extension advice to being venues for collective decision-making and executing small projects. Some specific activities that could be performed by village groups include village-level storage, small processing industries, retailing, and savings institutions. It is recommended that AID consider increasing the demonstration funds to help finance some of these activities.

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It is further recommended that AID and the ORD explore the possibility of expanding some of the literacy centers to be financed under the Non-formal Education Add-on into "pilot rural resource centers" along the lines of the Comilla model. These centers would be used by villagers to undertake such activities as literacy training, demonstration projects, self-help activities and functional training in health and nutrition. The centers would be managed and financed by the villagers themselves.

7) Distribution of Benefits

a. "Centers of Progress"

The development approach of the ORD until recently has been to work in centers of progress (foyers de progres) with the full range of interventions needed to improve agricultural production and otherwise increase the quality of life of villagers. There is an implied assumption that progress achieved in these areas will spread gradually to the areas around them. The evaluation team feels, however, that given the wide differences between zones and people in the ORD, special efforts will be required to assure that spread effects do in fact occur. The nature of the problems related to replicability and the extent to which special efforts related to the spreading of benefits are required should be made part of the ORD's applied research program.

b. Women's Programs

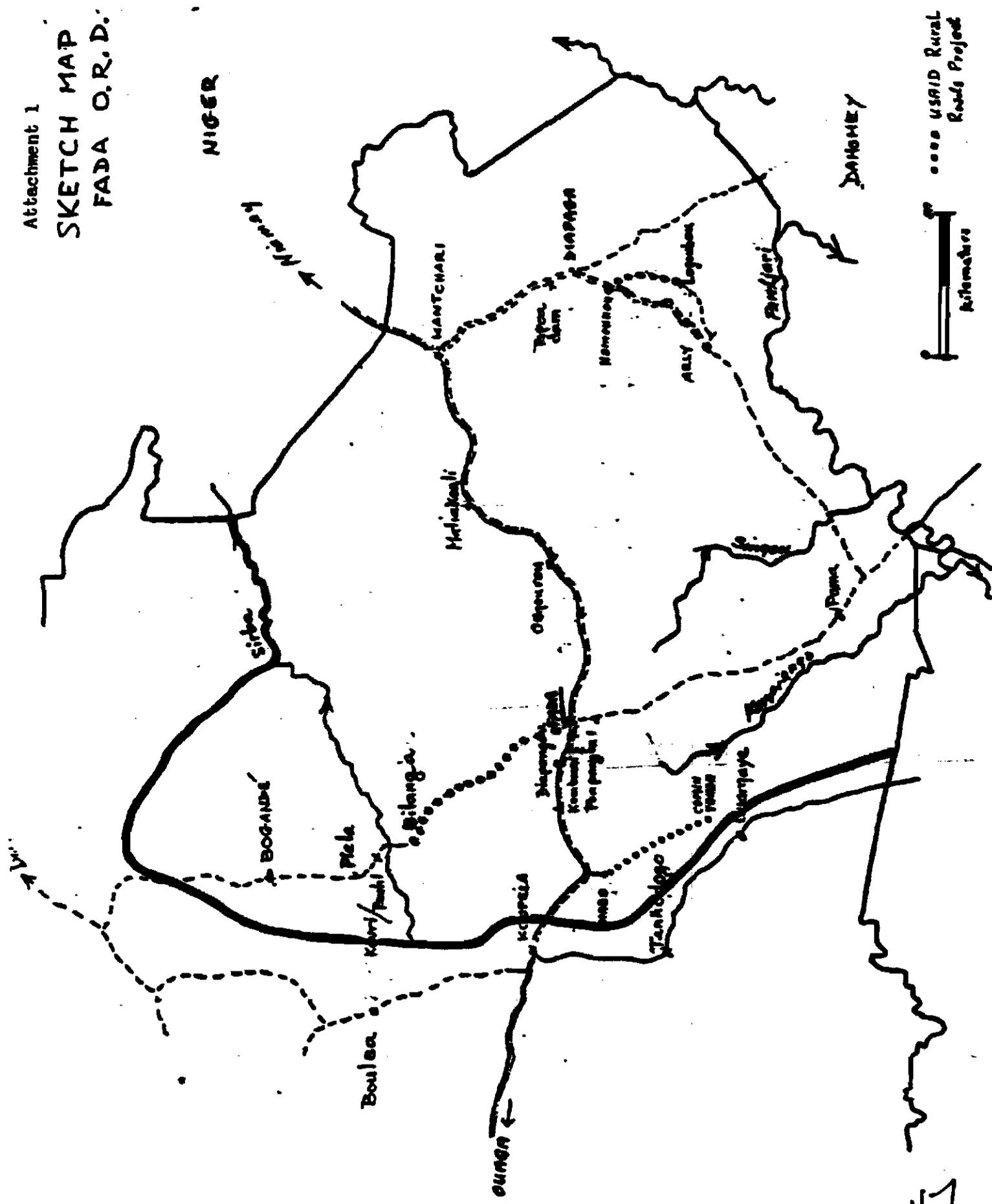
Present ORD efforts to include women in their programs are relatively unsuccessful. One reason is that animatrices are too few and not appropriately trained. Another reason, however, is that ORD activities do not reflect the social structure of village communities. The older women in villages are influential and are effective change agents. They are also receptive to new ideas that they perceive to be in the interests of village women. It is recommended that the ORD explore ways of working more effectively within the traditional village social structure especially in programs like the introduction of food and oil processing equipment and improved child care and nutrition practices.

c. Credit

There is no evidence that equity considerations are taken into account in the implementation of the ORD credit program. Some recipients of credit do not really need it. The best farmers are, of course, also the best credit risks, while the poorer farmers are the least likely to use credit effectively: add'bg able to repay. Special efforts are therefore needed to reach poor farmers not only with credit but also with close supervision. Also, expanding the credit program to include uses other than animal traction would help increase the number of people receiving loans.

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Attachment 1
SKETCH MAP
FADA O.R.D.

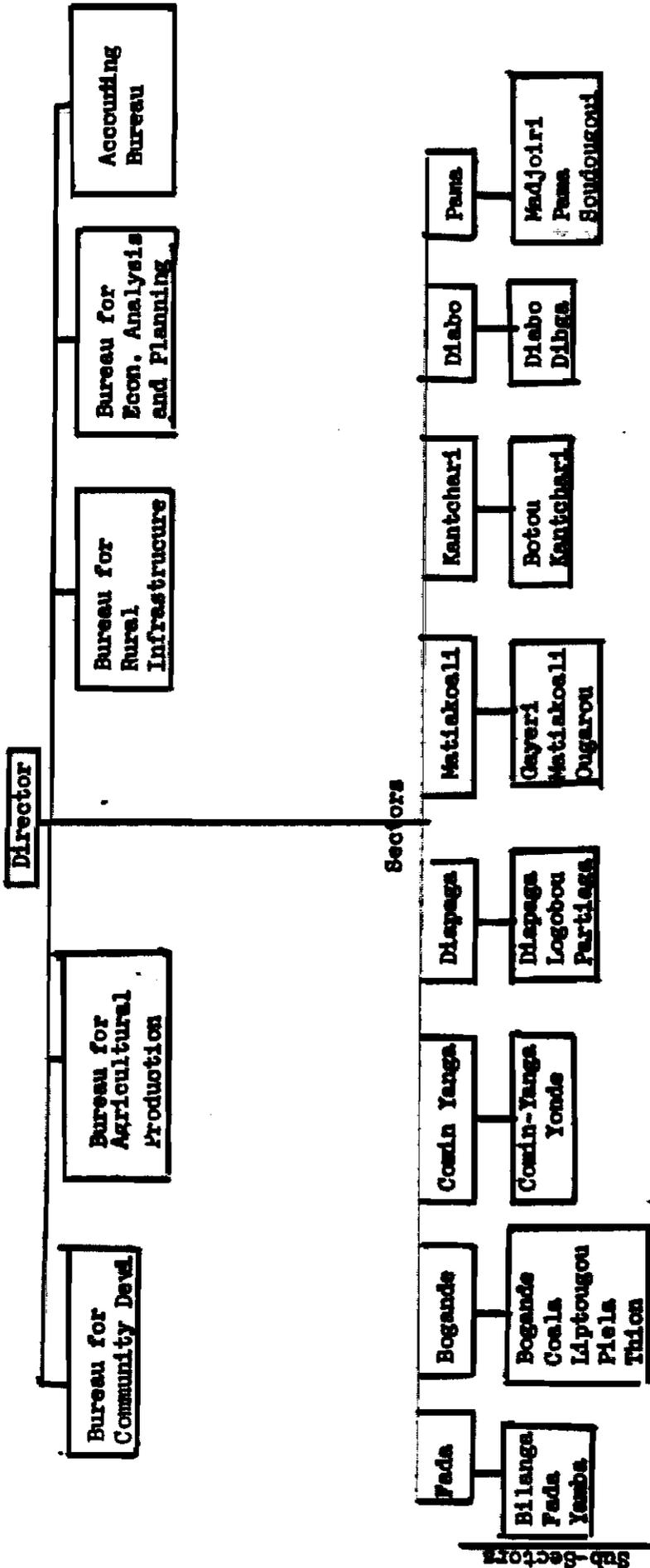


Basic Data on the Eastern ORD

Area:	49,992 sq. km.
Population:	410,526
Population density:	8 per sq. km.
No. of Villages:	650
Cultivated Area:	204,121 ha.
Rainfall:	700 mm-1000 mm per annum
<u>Bas-fonds</u> suitable for intensive agriculture:	830 ha.
<u>Bas-fonds</u> already developed:	85 ha.
As of 3/31/77:	
No. of plows in ORD:	930
Area fertilized	438 ha.
Area receiving extension services:	16,435 ha.

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ORGANIGRAM



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LOGICAL FRAMEWORK

EASTERN ORD - UPPER VOLTA

(original, dated 7/30/74)

GOAL STATEMENT	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>1. To assist in the over- all development of the rural sector in Upper Volta by support- ing the GOUV ORD program</p>	<p>1. Increase in overall agri- cultural and livestock production on the national level</p> <p>2. Established rural health and education services</p> <p>3. Measurable increases nationally in rural per capita income</p>	<p>1. National statistics</p>	<p>1. GOUV will continue to support the ORD to the best of its budgetary capacity</p>

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PURPOSE

END OF PROJECT STATUS

MEANS OF VERIFICATION

IMPORTANT ASSUMPTIONS

<p>1. To upgrade the quality of rural life in the Fada ORD primarily by progressively increasing food supplies and surpluses which can be marketed outside the ORD, climatic vagaries notwithstanding</p>	<p>1. Measurable increases in yields of millet, sorghum, rice and peanuts in areas reached by "encadrement"</p>	<p>1. Crop yields</p>	<p>1. The ORD grain, peanuts purchasing program will be of sufficient size to maintain a better price for the producer but not so high a price as to drive out merchants</p>
<p>2. Increased marketing of surpluses at higher average seasonal price</p>	<p>2. Increased marketing of surpluses at higher average seasonal price</p>	<p>2. Local prices</p>	<p>2. Fada ORD will not suffer from population pressure in foreseeable future. Land will not be a limiting factor</p>
<p>3. Revolving FMD credit in ORD will be self-financing</p>	<p>3. Revolving FMD credit in ORD will be self-financing</p>	<p>3. Ministry statistics, BND records</p>	<p>3. Water resources development and management will help alleviate water shortages</p>
<p>4. Increased livestock production. Disposable surplus up from approximately 14% to 19%</p>	<p>4. Increased livestock production. Disposable surplus up from approximately 14% to 19%</p>	<p>4. Livestock statistics</p>	<p>4. ORD and OFNACER will cooperate in grain price stabilization and marketing efforts</p>
<p>5. Increased per capita disposable income from approximately \$32 per capita to \$264 per year</p>	<p>5. Increased per capita disposable income from approximately \$32 per capita to \$264 per year</p>	<p>5. Base line survey, as measured against later</p>	<p>5. OFNACER will provide some funding for the purchase of grain and storage when required</p>

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OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
1. Establishment of 4 intensive "encadrement" centers at high possibility locations as determined by soil, access, presence of extension effort, marketing potential, and receptivity to change	1. "Encadrement" of 750-1000 farm families per intensive areas	1. a) Inspection, census information b) Special reports of sub-sector chief	1. Rainfall patterns will return to more nearly normal levels
2. Improved technical, programic, and management capacity of the ORD in general, and particularly at the village level. Alteration of organization to respond to new programs	2. a) Placement of 10 "encadreurs" in each intensive center b) Improved communications between Fada and various areas of ORD c) Installation and staffing of new organization	2. a) Inspection b) Verification of ORD organization and staffing	2. There will continue to be a ready market for surplus agricultural and livestock production of the Fada ORD
3. Increased food supplies, both from crop and livestock production	3. Decreased reliance on external sources of food, both commercial and donated		3. Rural schools will continue to exist as a program. Additional program will be designed to expand numbers of young farmers
4. Higher levels of marketable surpluses and disposable income among small farmers	4. a) Greater sales of crops and livestock production b) Farmer income levels (in 4 centers average annual income of "encadred" farmer increased approximately eightfold)	4. a) Inspection/census b) ORD reports, statistics	4. Increased income will be partly spent to upgrade local diet

OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
5. More extensive acceptance of improved agricultural practices especially in intensive saturation villages	5. Number of farmers using animal traction, collecting fertilizer, using new seed, cultivating vegetables, raising improved breeds of animals, etc. (750-1000 farm families per center)	5. ORD reports	5. Work animals with machine will double area that can be farmed by a small family (2-3 workers)
6. Significant increase in use of low-lying fertile areas ("bas-fonds") through use of improved water control techniques and use of existing dam storage for small irrigation	6. Approximately 940 hectares of "bas fond" land under cultivation a) Successful demonstration of double cropping potential in "Bas Fonds"	6. ORD reports	6. Plowing with oxen (or donkeys) increases yields by: a) Improving soil/water relations b) use of manure
7. Greater consistency of supply of well water through well rehabilitation and construction of new hand drawn wells	7. Completion of 120 new and reconstructed wells	7. ORD reports	7. Fertilizer at current world prices is not profitable with existing crop varieties and commodity prices
8. More active entrance into rural life or farming by graduates of rural schools	8. a) Increase in percentage of graduates of rural schools who enter agriculture b) Use of credit and other incentives offered in intensive centers	8. a) Rural school statistics	8. Use of fertilizer at prices subsidized by the cotton program would be profitable if a supply is available for the ORD. (The ORD currently provides no cotton for the international market)

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OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
9. Improved village access in farm-to-market roads	9. a) Increase in number and kms of improved roads b) Road repair brigade established under ORD c) Number of merchants from outside (trucks)	9. a) ORD reports b) ORD road team statistics c) ORD reports	9. Byproducts from agriculture processing, especially low grade cotton seed, will be available at a low price for animal feeding
10. The population of the ORD will begin to improve their diets	10. a) Voltaic home agents trained and in each center b) Acceptance of vegetable production/consumption, greater protein intake	10. a) ORD manpower report b) Nutritional survey	10. Agreements can be reached with the nomadic
11. Greater role and participation for women in the productive programs in the village	11. a) Number of women attending agricultural school b) Number of women attending agricultural meetings (1000 women/center)	11. a) ORD reports b) Reports of sub-sector chief c) Reports of PC volunteers	11. The ORD can intervene in the marketing of peanuts, sesame, sheanuts and cotton with benefits to producers and with income generated for ORD operation
12. Improved range management in selected locations around intensive zones	12. a) Number of pastures put into reserves b) Agreement between farmers and herders on pasture use	12. a) ORD reports b) Reports of sub-sector chief c) Reports of PC volunteers	12. Seed multiplication center financed by a separate AID project and under the central direction of DEA, will be established in the Eastern ORD

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OBJECTIVELY VERIFIABLE INDICATORS MEANS OF VERIFICATION IMPORTANT ASSUMPTIONS

13. Substantial increase in the number of trained "encadreurs" for Feds ORD
 a) Completion of new dormitory at Matoukou for students
 13. a) 25 new "encadreurs" trained for ORD each year. Ratio of "encadreurs" to "encadred" farmers in intensive areas is expected to be 1/100
 b) Overall increase in number of "encadreurs" from 26 to 113

14. Increase farmer income through suppression of fraudulent "times" used by merchants to cheat farmers (standard measure is a 20-liter container called a "tine")
 14. a) ORD reports
 14. b) Special survey
 14. The Africa Development Bank will study the upgrading of selected agricultural secondary roads in the ORD

15. Reduced storage loss through better and wider use of "gamma-grain" (insecticide)
 15. Reduced storage loss from 20% to 10%
 15. ORD reports

16. Increased resources available to the ORD through the purchase, transport and sale of peanuts and other cash crops
 16. a) ORD reports
 16. b) ORD budget
 16. Increased ORD financing of operations through returns earned by ORD on peanut and other crop transactions

17. Increased communication facilities within the ORD
 17. Radio communication stations
 17. ORD reports
 17. In the sub-sectors, the ORD, the hospital and in any of the intensive centers which are not already sub-sectors

OUTPUTS	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
18. Improvement in the level of technical management through retraining agricultural agents	18. Number of courses, seminars training programs offered	18. ORD reports	
19. Greater mobility of "encadreurs," livestock vets and home agents in ORD	19. Provision of each "encadreurs," livestock vet, and home agent with a mobylette	19. ORD reports	
20. Greater transport resources of ORD, allowing greater distribution of inputs and purchase of produce	20. Number and type of trucks provided by program: 1 7-ton truck, 6 3-ton trucks, 6 small pickups	20. ORD reports	
21. Community development in each of 4 intensive centers through self-help efforts	21. 4 schools/village meeting places constructed, 2 dispensaries constructed, 120 wells constructed, 20 village associations organized	21. ORD reports	
22. Creation of demonstration farms in each of the 4 intensive centers	22. Variety tests, livestock, tree nursery, "bas fonds" etc.	22. ORD reports	
23. Completion of farm machinery workshops to make and repair farm equipment	23. One workshop equipped and operating in each of 3 Circoles (Fada, Diapaga, Bogande)	23. ORD reports	
24. Introduction of improved livestock breeds and practices	24. Trained encadreurs a) In livestock, and speaking Peuhl and Gourmanche	24. ORD reports	

Key Assumptions	Details and Quantities
<p><u>For Purpose Achievement to Lead and Goal Achievement</u></p> <p>1. Improved technical packages adapted to the Eastern ORD can be developed.</p> <p>2. The GOV will have the means and desire to provide necessary supporting services.</p> <p>3. Constraints to regional development that are national in nature will be effectively addressed by the GOV.</p>	<p><u>Goal</u></p> <p>Increased production, income and quality of life for rural population in Fada ORD</p>
<p><u>For Purpose Achievement to Lead</u></p> <p>1. Improved technical packages adapted to the Eastern ORD can be developed.</p> <p>2. The GOV will have the means and desire to provide necessary supporting services.</p> <p>3. Constraints to regional development that are national in nature will be effectively addressed by the GOV.</p>	<p><u>End of Project Status</u></p> <p>1. Necessary supporting services being provided to 10-15,000 farms.</p>
<p><u>For Output Achievements to Lead to Purpose Achievement</u></p> <p>1. a) The ORD has the managerial and technical capacity to deliver the necessary inputs and services.</p> <p>b) Inputs and activities not financed by AID will be forthcoming from other donors or the GOV.</p> <p>2. a) Sampling techniques used in surveys are valid and variables are such that they can be reliably measured over a two to three year period.</p> <p>b) There are no obstacles to providing farmers with the necessary equipment and extension follow-up and the ORD is able</p>	<p><u>Purpose</u></p> <p>Increase GOV's capacity to assist small farmers in the Fada ORD to increase their agricultural production and incomes; and begin increasing production in the intensive zones.</p> <p>* This logical framework is for the purpose of the evaluation, and evaluation. It is meant to describe the project as presently designed. Changes in this logical framework may be required depending on the outcome of some of the actions recommended by the evaluation team.</p>

<p>2. Firm data base for planning and evaluation:</p> <ul style="list-style-type: none"> - natural resources - technical packages - farming systems - experience with animal traction - marketing - credit systems 	<p>2. Firm data base for planning and evaluation:</p> <ul style="list-style-type: none"> - natural resources - technical packages - farming systems - experience with animal traction - marketing - credit systems
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Details and Quantities

Key Assumptions

to devise and implement an effective means of monitoring the experience of farmers and impact on production.

3. Regional plan for medium term

3. The ORD is willing to utilize the work of the IAU and FAO experts as the basis for its regional development plan.

4. Fifty percent increased production in the intensive zones.

4. a) same as 1) above.

b) The technical package being introduced is more productive than existing systems and is acceptable to farmers.

5. Non-formal education program established and reaching _____ individuals.

Outputs

1. Expand the capacity of the ORD for administration and outreach

a. Central and field facilities

a. 1) Headquarters

2) Matourkou training center

3) Power and water facilities

4) 3 storage warehouses

Details and Quantities

Key Assumptions

	Details and Quantities	Key Assumptions
	5) 3 houses for contractors	
	6) Vehicles and equipment	
	7) Budget support	
b. Training	b. 1) _____ staff sent for long-term training abroad 2) _____ staff sent for short-term training 3) _____ in-country training	Trainees can be identified and freed from their work
c. Technical assistance	c. 1) _____ % of MSU team time spent on operational functions within ORD 2) Short-term consultants	The ORD management is willing to allocate part of the MSU team's time to operational rather than research activities.
2. Research and planning	2. a) 2 years data for traditional and some improved farm systems including: costs and value of production, value marketed, labor use, cropping patterns and household consumption. b) Supply and demand for short and med term credit and possible mechanisms. c) Possibilities for animal traction and animal production add-ons to existing farming systems. d) Amounts of marketed surpluses, constraints, price fluctuations.	- MSU researchers arrive on time and scope of data to be collected proves to be manageable and not over-ambitious. - counterparts and interviewers are available to assist the MSU researchers. - data availability is such that meaningful findings can be obtained by early 1980.

Details and Quantities

Key Assumptions

3. Production and marketing interventions at the farm level
- a) _____ loans for animals and equipment in the intensive zones
 - b) _____ loans for equipment outside the intensive zones
 - c) _____ uses of demonstration funds to village groups
 - d) 3,000 to 4,000 farms exposed to intensified extension services (1 agent/75-100 farmers)

EASTERN ORD INTEGRATED RURAL DEVELOPMENT

PROJECT BUDGET

(\$ Thousand)

<u>Total</u>	<u>3,564</u>
<u>AID Contributions to date</u>	<u>3,063</u>
<u>1. US Personnel</u>	<u>911.9</u>
1 Project Manager Institutional contract, 8 man-years Mktg. & Transport Econ., Credit & Coops Spec., An. Hus./Range Mgmt. Spec. plus consultants	710.9
<u>2. Commodities & Equipment</u>	<u>560.2</u>
<u>a. ORD Central Equipment</u>	(457.4)
- 15 Vehicles: 9 pick-ups, 2 station- wagons for ORD, 3 pick-ups and 1 station-wagon for contract team	89.2
- 1 7-8 T Truck	13.0
- 6 3-5 T Trucks	78.0
- 225 molyettes for agents, animatrices, interviewers, livestock agents, admin. personnel, sub-sector and sector chiefs	70.0
- Central repair shop tools and equipment	20.0
- Farm equipment workshop and tools and equipment	15.0
- Generator(s) totaling 100 KVA	30.0
- Radio communications network	73.0
- Office equipment & furnishings; ORD sector and sub-sector	53.2
- 2 trailers	8.0
- Technical equipment and supplies	8.0

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b.	<u>Marketing</u> (includes use of ORD Central Equipment as well)	(29.6)
	- 600 grain measures	4.6
	- Marketing equipment and supplies	20.0
	- Rice decorticator	5.0
c.	<u>Rural Engineering</u> (includes use of ORD Central Equipment as well)	(30.6)
	- 8 brick making presses	3.2
	- 1 tractor 75 hp. disc plow and attachments	27.4
d.	<u>Animal Husbandry/Range Management</u> (includes use of ORD Central Equipment as well)	(17.6)
	- 8 refrigerators	3.1
	- 3 freezers	3.0
	- 1 ice-maker	6.5
	- Veterinary equipment and supplies	5.0
e.	<u>Demonstrations & Training</u>	(25.0)
	- 5 sets of equipment, tools, fertilizer, seed, breeding stock, etc.	25.0
3.	<u>Other Costs</u>	<u>1,590.9</u>
a.	<u>Training</u>	(134.0)
	Participant Training; details provided in individual PIO/P's	92.0
	In-country training; in operating budget support	42.0

b. <u>Construction</u>	(404.1)
Encadreur Center, Matourkou	35.5
ORD Admin. Complex	230.0
3-Village/Sector storage facilities	28.6
AID Contractor Houses	110.0
c. <u>Research</u>	(51.3)
Contracts, two Voltaic research organizations	
Group organization and ag credit	19.7
Sedentarist-nomad eco-social relationships	31.6
d. <u>Special Funds</u>	(350.0)
Operating Budget Support	350.0
<u>Revolving Funds</u>	<u>651.5</u>
Medium Term Rural Credit	466.5
Marketing Fund; cash crops, etc.	185.0
<u>GOUV Contribution</u>	<u>501.0</u>
1. Personnel.	384.0
2. Operating budget, excl. personnel	117.0