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AGRO-ECONOMIC EVALUATION OF THE  
GUIDIMAKA IRD PROJECT

Contract No. AID/afr-c-1651

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GUIDIMAKA IRD PROJECT

Report Submitted to

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Submitted by

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## I. RECOMMENDATIONS

In an effort to most efficiently utilize the resources and time remaining in the GIRD Project in such a way to best meet the project's goals as were originally set in the PP and Project Agreement, the Evaluation Team makes the following recommendations.

### A. Project Recommendations

1. To successfully test new agronomic interventions in Selibaby, demonstrations should be conducted for a minimum of two crop cycles. Based on the status of the project to date and the fact that the rainy season is expected next month, it is recommended that the implementation team in the field concentrate its efforts on cultivating plots manually. If the barb wire is not in Selibaby prior to the rainy season, traditional fencing or guards should be used to protect the field from animals.

If a crop is not cultivated this year, it will be June 1981 before the first planting is carried out in the project. Given that the project is now scheduled to terminate in December 1981, not enough <sup>trials</sup> trials would have been conducted to permit a conclusion as to the types of interventions that are replicable in the area.

2. The remainder of the project's efforts should be concentrated in the following areas:

- (a) Dryland cereal production
- (b) Animal traction
- (c) Techniques to more efficiently utilize animal fertilizers
- (d) Testing of crop rotation systems with cereals and leguminous crops
- (e) Development of more efficient harvesting techniques
- (f) Improvement in crop drying techniques
- (g) Improvements in crop storage

3. The following activities which have either been begun or contemplated in the project should either be dropped altogether or de-emphasized:

- (a) Irrigated vegetable gardening
- (b) Establishment of a tree and vegetable nursery
- ~~(c) Mechanical cultivation~~
- (d) Chicken farming
- (e) Development of cooperatives
- (f) Building of firebreaks
- (g) Building additional wells for agricultural purposes
- (h) Reforestation
- (i) Activities related to nature protection.

The major emphasis of the project during the remaining lifespan should be on demonstrating improved technical packages with a view toward replication. Tests of innovations which do not show immediate replication should not be undertaken.

4. Efforts should be made to better integrate the agronomic and livestock interventions to make the development project a truly integrated one. This can be done best by introducing animal traction and better techniques in utilizing animal manure.

5. In order to permit enough time to demonstrate new interventions, it is recommended that the project be either extended for two (2) additional years, or a new project developed with some of the same "demonstration" elements included. The original PP did not permit enough time to accomplish the intended objectives.

#### B. Recommendations for Future Projects

1. The Evaluation Team recommends a truly integrated rural development project involving a selected number of farmers in the area. The major thrusts of the project should be as follows:

(a) Division of fields into plots based on a pedological survey on which crop rotation schemes will be followed according to a plan to be developed by the project team. (Hopefully, schemes will have been developed by the current GIRD project that will serve as the basis for a crop rotation plan.)

(b) Introduction of animal traction to grow cereals and leguminous crops.

(c) Agricultural extension to spread the new techniques to a limited number of selected farmers,

(d) Provision for a revolving credit fund to make short- and medium-term loans to qualified participating farmers to purchase equipment for animal traction, animals, small farm implements, improved seeds, etc.,

(e) Marketing provisions for crops (mostly grains) produced by farmers,

(f) Establishment of a village-level health and nutrition program,

(g) Improvement in village drinking water and sanitary facilities,

(h) Community development, concentrating on aiding women to improve their social and economic conditions, food preparation, hygiene, etc., and

(i) Introduction of new solar and wind technologies to draw water and possibly to cook food, etc.

The project should be rationally planned and based on the spread of simple techniques requiring little or no major capital investments. The emphasis should be placed on extension of animal traction to increase cereal production and marketing of the final products. \*

### C. Recommendations for Studies

1. A marketing study of crops produced in the area should be conducted to determine the potentials for expanding cereal production and marketing in the Tenth Region. Specifically, the study should cover:

- marketing schemes of cereals (inside and outside the region,
- GIRM cereal marketing policies with the view of identifying exactly how these policies aid or hinder cereal production and marketing,
- identifying policies which may aid in expanding cereal production and marketing of the region,
- a study of cereal prices and pricing policies and the effect of pricing on cereals production and marketing,
- a study of marketing institutions, arrangements, and potential institutions and arrangements which may aid in cereal production and marketing,
- a study of the institutional arrangements of the project (recommended project) to aid farmers to market the products produced in the project zone,
- a study of inter- and intra-annual storage of grain at the village level and the factors which influence the farmers' decision to sell his grain,
- storage of grain at the village level with the view of identifying interventions which may serve to reduce lossage due to poor storage facilities.

2. It is recommended that a study be conducted on farmer cooperatives. This study should look into the cooperative movement of the past, reasons for their dissolution, and the potentials for re-establishing cooperatives in the area.

3. A pedological/Agronomic study should be undertaken to determine the following:

- mapping of agricultural land to be used for the recommended project zone,
- soil tests (or the results of prior soil tests) to determine the suitability of soil for cereal production,
- estimation of the amount of land required to produce enough grain to feed an average farming family for one year,
- the amount of land that a farmer must cultivate (based on projected productivity figures) to pay for the equipment purchased on credit from the project fund, and
- estimate of average productivity of the various technological packages recommended for the project.

4. A village health and nutrition survey should be conducted to determine health and nutritional needs of the North Region in an effort to identify feasible health-related interventions that may be included in an integrated rural development project. Specifically, the study should address:

- the incidence of specific diseases in the area,
- an evaluation of existing health and medical facilities in the area.
- an assessment of the availability of health-related manpower in the area and in the country,
- health training needs, and
- administration and management schemes for a health component within an integrated rural development project.

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## II. INTRODUCTION

This paper presents an evaluation of the agricultural component of the Guidimaka Integrated Rural Development (GIRD) Project which is located in the Tenth Region of the Islamic Republic of Mauritania. The GIRD Project is essentially one with two components: agriculture and livestock. This paper will concentrate on the agronomic interventions and on issues which may be directly related to both the agronomic and livestock interventions. An evaluation of the livestock interventions will be submitted under a separate cover. The approach will be to concentrate on the progress of the project to date related to the goals of the Project Paper (PP) and the Project Agreement, including subsequent amendments. Little effort will be expended on the past problems of project implementation. The approach will be to review the project in terms of the future directions which it may take in order to best meet its original objectives, given the project's available resources, its technical capabilities, and the time remaining to accomplish the original objectives. Lastly, some recommendations will be made concerning possible features of the scope of a future "integrated rural development" project for the Tenth Region following the termination of the existing project.

## PROJECT EVALUATION CRITERIA

The objective of the Guidimaka Project, as related to the agronomic interventions, is to improve agricultural productivity to make the country self-sufficient in food crops. The

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specific purpose of the project is to contribute to this goal by testing agricultural interventions in the food sector of the Tenth Region in order to determine the best "technological packages" that show potential replication in the project zone.

There are a few comments which should be made here about the intent of the PP and Project Agreement which will serve as a guide in evaluating the progress of the project to date. These comments will be presented in the section below.

## A. Replicability of Interventions

The general intent of the project was to foster the spread of interventions in the food sector which were feasible within the economic and social context of the rural economy of the Selibaby area. This implies that new productivity-increasing technologies which fall outside the economic and social means of the peasant farmer should not be included among the intervention options to be tested in the demonstration sites. In other words, if there is no hope for replicating an intervention in the area, then it should not be tested as an option. This evaluation will be guided by the "replicability" principle as was intended in the PP and Project Agreement.

## B. Promotion of Rainfed Crops

The Tenth Region is one of the few areas in Mauritania where there is adequate rainfall to support dry-land agriculture. There are no major bodies of water in the area and the physical, economic and financial situation will not support the construc-

ion of wells or catchment tanks to grow irrigated crops during the dry season. Thus, this evaluation supports the PP's intended goals of supporting interventions in dryland agriculture. Any irrigated-related interventions should not be considered an option to be tested in the demonstration sites because they are not feasible within the local context.

C. Interventions in Cereal Production

The PP recognized that the Tenth Region's comparative advantage lies in the area of cereal production (sorghum, millet, and corn). This region is often called the "Bread Basket" of Mauritania. As there is an acute shortage of grain in the country and little potential for expanding cereal output in other regions, the most important interventions that this project can test are those related to expanding cereal production. The cereal varieties of the region should be tested to determine the best ones and new varieties should be imported and tested in an effort to determine the high-productivity varieties which can be adopted in the area. If the project does not make some headway in this area, it has basically failed to meet its overall objective. This issue is important and progress in this area will be one of the key measures of success in this evaluation.

D. Integrated Agriculture and Livestock Interventions

The PP and Project Agreement intended this project to be an "integrated rural development" project. As it stands now (and as was in the PP) the only sectors of intervention are

agriculture and livestock. In order for the project to be integrated, interventions must be carried out so as to link the two sectors in such a way that each sector contributes to the other in a mutually beneficial way. The mere inclusion of two projects under the same management does not make for an integrated rural development project. The sectors of interventions created by the other; that the whole (as a result of integration) is greater than the sum of the parts. In economic terminology, these benefits are called "integration economies." The successful integrated rural development project takes advantage of integration economies to the fullest.

Looking at agriculture and livestock in the Tenth Region, how can the two sectors be best integrated so as to create the greatest integration economies?

The Tenth Region has an abundance of animals (donkeys, horses, cattle, goats, sheep, and some camels), many of which can be used for animal traction. In addition, there appears to be an ample supply of available land (with reasonable fertility) which could be put into cultivation during the rainy season. There is also an adequate supply of manpower (which incidentally runs short in supply during the peak cropping periods). One can conclude, therefore, that the most obvious innovation that will have the greatest impact in the region; will be the introduction of animal traction in conjunction with cereal production. Animal traction will permit more land to be cultivated in the area, would reduce the labor shortages

ing the beginning of the cultivation cycle, and would raise ductivity as a result of deeper plowing and better tillage the soil. The animals are available in the region for this pose. Thus, one of the key measures of success of this project will be in its ability to foster interventions related to animal traction.

#### E. Interventions Using Animal Fertilizers

As related to animals, there are numerous animal manure piles in the area which can be used to make compost or turned directly into the soil as fertilizer. The project should concentrate on developing interventions that may better utilize animal manure for fertilizer in conjunction with crop production.

#### F. Crop Rotation Schemes

The PP and Project Agreement emphasized the development of a rational crop rotation scheme with cereals and leguminous crops. Here again, the Evaluation Team concurs with this objective. The demonstration sites should test feasible crop rotation schemes that can be replicated in the area.

In sum, the evaluation views the success of this project in terms of what it has or will accomplish in the area of increasing improved cereals production using animal traction and animal fertilizers under a rational crop rotation scheme. This was the intent of the PP and Project Agreement, and should constitute the major thrust of the agronomic interventions of the project during Phase I of implementation.

G. Progress of the GIRD Project to Date

Taking these criteria as given, it can be concluded that the GIRD Project has had little or no progress to date in these areas. There have been no cereal crops cultivated on the demonstration plots, little or nothing accomplished in the area of animal traction, no tests made on crop rotation schemes, etc. At this stage, the project is in the process of fencing in (setting posts) the demonstration plots. Crops were not planted last year because only the Project Director was in Selibaby during the rainy season. Thus, the current year will be the first that a crop could be planted. The Implementation Team insists that crops will be planted this year. Nevertheless, much of the necessary crop planning has not been accomplished to get crops in field by the first rains which are expected in June. In addition, the expatriate agronomist is currently out of the country. In sum, it is doubtful that the field staff will be able to plant the three demonstration plots during the current crop year.

If crops are not planted this year, the earliest period that another crop could be cultivated is June 1981. Given that the project has been extended to December 1981, not enough trials will have been conducted to permit a reasonable conclusion as to which interventions show potentials for spreading in the area. If Phase I of the project is not extended for at least one year (two will be preferable), it is doubtful that its original goals will be met as were outlined in the PP and Project Agreement.

The following remarks should not be taken to mean that nothing has been accomplished in the Project. Most of the accomplishments have been made in the building of a project infrastructure (housing and wells for the expatriate staff, wells for the project, project's office building, the beginning of fencing, etc.). At first glance, it appears that the project management has placed too much emphasis on infrastructure at the expense of other elements of the project--those elements which will ultimately determine the project's success. For example, it was not absolutely necessary that wells be dug on the agricultural plots prior to cultivation. It should be remembered that only rainfed interventions will be tested on the test sites.

~~It was not absolutely necessary that the plots be~~  
closed with barb wire before land preparation for crops. If it became clear that there would be delays in getting barb wire to the project sites in time for cultivation, then a decision could have been made to either build "traditional" fences, or hire labor to guard the fields.

In conclusion, in spite of all of the many logistic and administrative problems that the project has encountered to date, it is the Evaluation Team's belief that more could have been accomplished if the project management had ordered different priorities in the implementation areas as opposed to infrastructure.

It should be noted that the project management has had to add additional thrusts (nursery, irrigated vegetable gardening, tree farming, chicken farming, etc.) which were not included in the original projects. The Evaluation Team feels that there is little potential for success in these areas and should, thus, be given lowest priority. Many of these issues will be addressed in detail in the remaining parts of the paper.

#### AGRICULTURAL/COOPERATIVE ELEMENT

The PP viewed agricultural cooperatives as being the primary vehicle through which the tested and proven new technological packages could be spread throughout the region. The PP said that cooperative associations existed and functioned in the region prior to the project and were thus capable of spreading proven interventions to their membership. In addition, the PP viewed the agricultural/livestock cooperatives in Selibaby as being the organism that would operate the demonstration sites, seed multiplication plots under the direction of the project supervision, directed by the resident agronomist. On this issue, the Evaluation Team takes issue with the Project Paper.

Based on the Team's limited observations and discussion with responsible residents of the Tenth Region, there are no functioning agricultural cooperatives in the area. In addition, it is very doubtful that there ever were "functioning" cooperatives, although the Team is aware of the past efforts of the Ministry of Rural Development to foster cooperatives in the area. More important still, there does not appear to be

Obvious economic and social foundation which can be exploited to foster cooperative formation. COOPs in developing countries are best (although difficultly) in areas where cash crops (usually export oriented) are produced and marketed. The COOP is usually responsible for marketing the crops grown by its members which permits it to subtract immediately after sale, so that members owe for the purchase of agricultural inputs and farm implements. COOPs thrive best where the pooling of resources through association offers more benefits to members than can be achieved alone (bulk buying of inputs and the joint use and use of specialized equipment, etc.). Savings as a result of economies of scale in the purchase of supplies and equipment can be passed on to association members. Although there are other benefits from association (knowledge, marketing assistance, spreading of technological information, etc.), without a marketing and credit basis, there tends to be little success in cooperative organization.

As for the Tenth Region, there is no organized marketing of major agricultural crops cultivated in the area. Cereals, major crops, are basically autoconsumed and small amounts marketed within and outside the area.

The option of turning the project over to an agricultural cooperative is a <sup>more</sup> not one since no COOPs exist in the area. The Mission Team concurs with the project management in the decision to turn the sites over to the Regional Office of the MRD. For long lasting success, the project should help build the

stitutional capability of the Regional Office of the MRD to conduct adaptive research on an ongoing basis. One weakness of the project's conception was its tendency to work too much in isolation of the Mauritanian counterparts.

Finally, it is not clear exactly why so much emphasis is placed on the existence of cooperatives for spreading applicable interventions. Admitted that extension is easier if it is done within a cooperative organization, this is by no means the only way. If cooperatives do not exist, other formulas can be developed and used to spread new technologies among farmers. For example, the extended family could be the unit. Currently, the production unit consists of the extended family which usually groups together several individual farmers. If this unit is deemed too small, families can be organized into groups of extended families (groupement de producteurs). If this unit is still too small, a whole village can be organized as one unit.

In sum, there are several possible alternatives to cooperatives for these purposes. The Evaluation Team recommends that a study be conducted on the cooperative formation of the region in general, with the view of identifying feasible alternatives which may serve to achieve the project's objectives.

The above remarks should not be taken as anti-cooperatives. They are meant to focus on the fact that cooperative formation is a difficult, long-term undertaking, especially in developing countries. In addition, cooperative formation should be treated

the economic and social confines of the region. If the project is successful in raising cereal production and a market-surplus is produced and sold for cash, then an economic incentive may be created to encourage cooperative formation. Only at this stage will one be able to depend on cooperatives. It is a question of which should come first.

The Evaluation Team is completely opposed to the project's using its limited resources in the development of cooperatives. This is a long and tedious process and requires specialized knowledge of which the Implementation Team appears to be short. In the long run, then, it is our belief that the Implementation Team is getting sidetracked into areas with limited potentials for success at the expense of neglecting the major purpose of the project -- demonstrating replicable new technologies. The cooperative movement tends to follow agricultural production increases rather than precede them. If the new agricultural interventions are successful in increasing output, an economic foundation will be created upon which cooperatives can be built.

#### PROJECT IMPLEMENTATION WEAKNESSES

One of the major weaknesses of the project as defined in the Project Agreement, and project management is the tendency to include too many sub-tasks, many of which show at best minimal potential results. The project attempts too much with too little resources (both manpower and financial). The

valuation Team feels that much of the project implementation delays can be attributed to the inability of the project management in the field to prioritize the many efforts that included in the original mandate. Rather than come to grips with the original tasks, the implementation has added additional thrusts to the project which were not included in the original scope of the project. As a result, the Project Management in the field has become overwhelmed with the many thrusts which resulted into delays and confusion about the future direction that the project should take.

In broad terms, the project covers both agriculture and livestock interventions. Concentrating on the agriculture, the following thrusts have been either identified in the PP, Project Management including its Amendments or by the Implementation Team in the field:

- Agronomic demonstration on three sites scattered at relatively far distances apart and managed from the central office in Selibaby,
- Animal traction using donkeys, horses, and cattle,
- Mechanized cultivation using a tractor,
- Irrigated tree and vegetable stock nursery,
- Vegetable gardening,
- Chicken farming,
- Surveying of land,
- Digging of wells and catchment tanks,
- Training of staff and trainers,

- Cooperative formation,
- Conducting an agricultural marketing survey,
- Census of agricultural villages,
- Nature protection and reforestation,
- Building and maintenance of firebreaks,
- Construction of buildings, fences, and sheds, and
- Seed multiplication.

The above list has not been exhausted as it does not cover aspects of the livestock interventions which will constitute her long list in itself.

An agronomic team consisting of one expatriate agronomist limited field experience and two resident agricultural extension aides (moniteurs) will not be able to implement all the above. Thus, the Evaluation Team strongly recommends these tasks be prioritized and the remaining efforts be directed in areas which are directly related to the original intent of the project.

The Evaluation Team feels that such efforts be directed as discussed in the sections below.

#### A. Agronomic Demonstrations

Demonstrations of grain-related interventions using animal traction, improved seed varieties, animal fertilizers and a planned crop rotation system (mostly cereals and legume-crops).

## B. Elimination of Mechanized Cultivation

The idea of using tractors to cultivate plots should be dropped as a replicable option irrespective of the experiment's outcome. The justification of using a tractor for initial plowing of virgin land is also questionable. The Evaluation Team observation did not support the project Implementation Team's belief that the land in the area was difficult to clear or turn over with manual or animal labor. The soils range from sandy to semi-sandy (with some clay soils further up in the valley). Animals and manual cultivation should be sufficient to cultivate the soils in the area. It is always advisable to keep new innovations as simple as possible in traditional agriculture. Animal traction is already a big jump. A jump even further to a tractor makes little sense. In addition, experience in mechanized agriculture in poor, tropical agriculture has shown that it does not pay off. There is no need to try to reinvent the wheel in this project.

## C. Animal Traction

Livestock is one of the most abundant factors in the North Region and is used only to a minimum extent in agriculture. It appears that the most important contribution that this project can make to the region is to better utilize these animals to raise output. Animal cultivation is the obvious place to begin in this regard. In addition, the many animal droppings can be more rationally used to raise agricultural productivity.

Animal traction should be pushed because this is an integrated agriculture and livestock project. There remains little the project that is truly integrated. Animal traction permits a better utilization of livestock and farming in a mutually beneficial way. More land can be brought under cultivation with animals and the acute labor shortages at the beginning of the year can be reduced by substituting animals. Crop output increases as a result of both more land under cultivation and deeper plowing. The increase in cereal production provides more food for animals to eat (both grains and crop by-products).

It is highly recommended that resources be directed to support animal traction. The project's success depends on the results of animal traction in cereal production.

D. Elimination of Project Elements Requiring Irrigation

The PP meant for the project in the Tenth Region to concentrate on dryland agriculture. Well irrigated counter-ions vegetable and tree crops as are now being tested in the very are expected to yield limited results. Even if these trials show some degree of success, well irrigated agriculture not be a replicable option in the region. The acute shortage of water and the high cost of well construction will prevent large-scale expansion of such irrigated techniques. The Evaluation Team feels that resources expended in this area should be curtailed.

### E. Pilot Demonstration Sites

In view of the many delays, it is recommended that efforts be concentrated on starting cultivation on at least one of the plots (the largest one) during the current crop year. Although it may be advisable to test interventions on all the soil types of the region, it will be very difficult for a limited staff to undertake prior to the onset of the next rainy season.

The pilot sites are poorly located for demonstration purposes. They tend to be too far from the lands where farmers presently cultivate. Farmers now sow their crops in the low-lying areas (bas-fonds) where water is more available. The demonstration sites would have had a greater impact had they been located near cultivated areas.

Due to the poor site location, one may recommend that one of the chosen sites be dropped altogether. Otherwise, the project may "demonstrate" failure rather than success. The peasant farmers can do bad by themselves. The Evaluation Team commends the use of one site at this time so as to get something off the ground this year. If all three plots can be cultivated this year, so much the better. Nevertheless, all three plots should be cultivated.

### IMPLEMENTATION TEAM'S EXTENSION PROPOSAL

Frankly, the Evaluation Team cannot understand why the Implementation Team is requesting an increment in funds to

expand the pilot zone when real tests of interventions have not yet been begun in the pilot zone itself. It appears that proven technological packages should be developed before they can be tested anywhere. This is where the project's efforts should be concentrated.

No one has yet convinced the Evaluation Team of the necessity of the existence of cooperatives to spread proven technologies. The Team does not understand the emphasis that the Implementation Team places on cooperative formation. Also, it is not certain to us that the current project team possesses the necessary expertise to encourage cooperation. Cooperatives are difficult to get off the ground in developing countries. It is doubtful that the project team is going to have much success in this effort even if granted the budget increase as requested.

## II. PROJECT MANAGEMENT AND ADMINISTRATION

The project management and administration have been technically and administratively weak from the consulting firm which has the contract to the project Implementation Team in the field. Much has already been said and written about the administrative and logistic problems that this contract has encountered. Many of these problems can be attributed to the lack of a history of AID projects in Mauritania. Nevertheless, it is still felt by the Evaluation Team that much could have been achieved in the project implementation had priorities been properly set and the implementation parties taken a few

unorthodox measures to get things accomplished.

For example, peasants could have been organized to construct traditional fences to surround at least one demonstration plot while awaiting the delivery of equipment and supplies. The plot could have been manually cultivated using traditional farm implements that were available in the area. Animal manure could have been manually collected and turned in the field with the use of simple tools. Improved sorghum varieties (both local and imported) could have been tested and results compared.

There was no reason why all of the wells had to be undertaken at the same time. After all, as for agriculture, the emphasis of the project was to be put on dryland cultivation.

In sum, it appears that the project has suffered from a lack of innovative ideas in getting things accomplished under difficult circumstances and the inability of the management and administrative teams to come to grips with the primary objective of the project at an early phase of its inception.

#### VIII. CASE FOR A TRULY INTEGRATED RURAL DEVELOPMENT PROJECT IN THE TENTH REGION

In reality, it is difficult to call the Guidimaka Project an integrated rural development project. In fact, it is difficult to call it an integrated agriculture and livestock project. The mere inclusion of livestock and agriculture under the same management does not make for an integrated project.

To be a truly integrated project, interventions must be planned in such a way that each sector of intervention supports the other in a mutually beneficial way. As of the current stage of project implementation, these linkages have not been achieved.

Integrated rural development is an application of the balanced growth theory explicitly to the rural sector. The primary objective of rural development is to achieve self-sustained and regionally balanced growth and development, taking advantage of the intersectoral linkages that each sector affords the other. Although the major emphasis of rural development is on agricultural development, it also entails the expansion of complementary activities on a number of social fronts in an effort to achieve a harmonious balance in social and economic development on a broad scale.

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The Evaluation Team recommends that the following additional sectors of interventions be considered during the re-design of the Guidimaka Integrated Rural Development Project:

A. Health and Nutrition

The Evaluation Team recommends a truly integrated rural development project when the current project has terminated. In addition to the thrusts in the GIRD Project (as have been discussed in this evaluation), there is a specific need for a health and nutrition component. Experience indicates that health-related projects work best when implemented in the context of rural development.

B. Small-Farmer Credit Program

Given the high cost of farm implements for animal traction, an agricultural credit component with a revolving fund should be added to provide short and medium-term credit to farmers who participate in a pilot project in animal traction.

C. Women in Development

The current project does little to improve the economic and social condition of women in the area. The Evaluation Team recommends the inclusion of special projects to deal with the specific needs of women. These projects may be included within the context of community development designed to help women improve their social and economic conditions as well as that of their families.

D. Other Possible Sectors of Intervention

~~The major thrusts of the integrated rural development~~ should always be in agriculture and livestock. If Phase I is successful in developing replicable productivity-increasing interventions which increase farmers' income, then the project should provide outlets to farmers to spend their additional incomes to improve their social condition as well as that of their families.

Other areas which may be addressed during Phase II are:

- Renewable energy-related projects
- Improvements in village storage facilities
- Marketing promotion for crops and animals
- Development of small-scale agri-businesses  
and rural handicraft
- Improvement in agricultural feeder roads
- Farmer production and marketing organization.