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A.I.D. Project Number 650-0018

Amendment No.SIX

PROJECT GRANT
AGREEMENT AMENDMENT

between

THE DEMOCRATIC REPUBLIC OF THE SUDAN

and the

UNITED STATES OF AMERICA

for

BLUE NILE INTEGRATED AGRICULTURAL DEVELOPMENT

(31)

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AMENDMENT TO PROJECT GRANT AGREEMENT

BETWEEN

THE DEMOCRATIC REPUBLIC OF THE SUDAN ("GRANTEE")

AND

THE UNITED STATES OF AMERICA, ACTING THROUGH THE
AGENCY FOR INTERNATIONAL DEVELOPMENT ("A.I.D.")

1. The purpose of this Amendment to the Project Grant Agreement entitled "Blue Nile Integrated Agricultural Development" is to make certain changes in the Project Grant Agreement of 30 September 1978, as amended, as indicated below.
2. The Project Grant Agreement, as amended, is further amended as follows:
 - A. Section 2.1. Definition of Project: (1) Delete subsection (a) and substitute therefor "(a) instituting systematic data collection, supervising and coordinating all studies conducted under the Project, monitoring technical activities, developing work plans and preparing evaluations."; (2) Delete the word "and" from subsection (d); (3) Add the following after subsection (e): "and (f) developing an effective extension system".
 - B. Section 3.2. Grantee Resources for the Project. Delete "U.S. \$ 3,691,000" in subsection (b) substituting therefor "U.S. \$ 4,019,300".
 - C. Section 4.2. Additional Disbursement - Technical Assistance: (1) Delete subsections (a) and (c); (2) Delete subsection (b) and substitute therefor "Evidence that the Blue Nile Agricultural Development Committee (BNADC) has been established by the Sudanese Government to address immediate issues arising in the course of implementing the Project. Unless otherwise agreed to by the Parties in writing, the BNADC will be headed by the Provincial Commissioner or his designee and will include provincial and district officials whose responsibilities relate to the Project, the Project Director, Branch Manager, Agricultural Development Bank, the Chief of Party of the U.S. Advisory Team as an ex-officio member, an AID representative and any others as agreed upon in writing by AID and the GOS. The BNADC will meet at times mutually agreed to by the interested parties".
 - D. Section 4.3. Additional Disbursement - Farm Credit. (1) Subsection (a) delete "Central Bank of Cooperatives (CBC), or other certified banking institutions, acceptable to AID, to operate until such time as the CBC can meet this condition precedent" and substitute therefor "Agricultural Development Bank"; (2) subsection (b); delete "Central Bank of Cooperatives or other such banking institution as referred to in (a) above" and substitute therefor "Agricultural Development Bank".

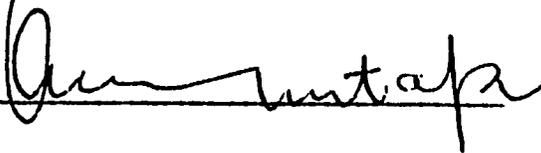
E. Section 5.9. Credit Rollovers. Delete "Central Bank for Cooperatives" and substitute therefor "Agricultural Development Bank".

F. The Amplified Project Description, Annex I, is deleted in its entirety and the attached Amplified Project Description, Annex I, is substituted therefor.

Except as further amended herein, all terms and conditions of the Project Grant Agreement of September 30, 1978, as amended, remain in full force and effect.

THE DEMOCRATIC REPUBLIC OF THE SUDAN

BY:



TITLE: VICE PRESIDENT

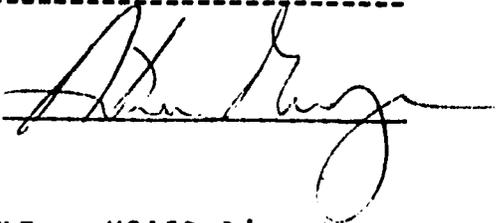
92 HANNAH

DATE:

12th February 1983

THE UNITED STATES OF AMERICA

BY:



TITLE: USAID Director

DATE:

February 13, 1983

ANNEX I

AMPLIFIED PROJECT DESCRIPTION ^{1/}

This amplified Project description elaborates on the description provided in Section 2.1 of this Agreement. Except as may be specifically limited in this Annex, elements of the amplified description may be changed by written agreement of the authorized representatives of the Parties named in Section 8.2 without formal amendment of this Agreement, provided that any such change is made within the limits of the definition of the Project as set forth in Section 2.1.

A. The Project

The Project is designed to develop and verify a viable systems approach to small farm crop and livestock development which will be suitable for replication in similar ecological zones within the "traditional" (small producer) rainfed agricultural sector of Sudan. This will be achieved by implementing, in a selected area of Blue Nile Province, the following Project components: (1) Project Management and Support - The Blue Nile Agricultural Services Center (BASC); (2) Project Monitoring and Planning Unit; (3) Agricultural Mechanization; (4) Improvement of Agronomic Practices; (5) Livestock and Range Management; (6) Cooperatives and Credits; (7) Extension; and (8) Infrastructure Activities.

A "farming systems" approach to the design and implementation of Project interventions will be followed. This will involve the disciplinary expertise provided by Project personnel in the fields of agricultural economics, agronomy, extension, mechanization, livestock and range management and cooperatives/credit, as well as incorporate the viewpoints and needs of Project beneficiaries. Under this activity the following tasks will be performed: (1) identify production problems and constraints; (2) select farm-level problems and constraints to be addressed by the Project; (3) plan and program Project activities and interventions; and (4) monitor and evaluate Project interventions. Project activities will concentrate initially on traditional crops such as sorghum, sesame and cowpea, and will subsequently be extended to include other crops appropriate for commercial sale or home consumption. In all cases the goal will be to produce an optimal sustained yield without the use of fertilizer and other expensive commercial inputs.

The Project area includes approximately 300,000 feddans (approximately 312,000 acres) situated south of Damazin. The natural boundaries of the Project area as follows: starting at the point where Khor Uffat joins the Blue Nile, southeast to the point where Khor Tumat flows into the Blue Nile; west to Kharen-Kharen and Khor Uffat; then north to the junction of Khor Uffat and the Blue Nile. A map, showing the project area is attached as Annex 1A.^{2/} The Project area will be registered officially by the GOS in order to ensure the integrity of its borders.

^{1/} Dates and quantification of outputs should be viewed as targets only, unless otherwise stated in this Project description. Similarly, the precise mix of Project inputs may vary. Year 1 of the Project will begin in 1979 when the technical assistance contract is signed.

^{2/} All directions are only approximations and are not to be considered official.

With respect to policy, the Project will be administered by the Ministry of Agriculture and Irrigation. The Ministry may, at its convenience, delegate technical and administrative responsibilities to regional and district entities. The Project will closely coordinate its activities with Blue Nile Province and district authorities and will receive guidance from the Blue Nile Agricultural Development Committee to be established as set forth in Section 4.2 of its Project Agreement. Three project sites will be established, one each in Abu Gamai, Abu Sheneina and Kharen-Kharen. A multi-purpose Agricultural Development Center (ADC) will be established at each site. Initial emphasis will be given to activities in Abu Gamai and Abu Sheneina as there is year-round access to these Project sites.

B. Project Components

(1) Project Management and Support - The Blue Nile Agricultural Services Center (BASC)

Under the Project the Blue Nile Agricultural Services Center (BASC) will be established in Damazin to provide management functions, housing, transportation and other support facilities associated with headquarters and field operations of the Project. A liaison office will be located in Khartoum for purposes of communication and coordination with GOS entities and USAID.

The following component inputs will be provided under the Project:

(a) GOS Personnel (GOS Funded)

The Sudanese Project Director, to be appointed by the Sudanese Government, will be an experienced administrator. The Director will have overall responsibility for the Project including both the GOS and AID contributions. Supporting the Director in managerial and administrative functions will be a GOS professional staff, consisting of an Assistant Director for Administrative Affairs in Damazin, and a Liaison officer in Khartoum. The Assistant Director will have responsibility for basic support functions related to operations of the Project and will have appropriate assistants for finance, personnel, supply, workshop operations, maintenance, and other miscellaneous service activities. The Liaison Officer, assisted by appropriate staff, will be responsible for Khartoum operations, including contact with GOS organizations and USAID, as well as certain administrative functions and communications with project headquarters. Additional support staff for the Khartoum and Damazin offices and for the three ADCs will be provided as necessary.

Also supporting the Director in the area of planning, programming and reporting will be a Project Monitoring and Planning Unit responsible for Project monitoring and planning, studies, data collection and analysis, and report preparation. This unit is described in further detail below.

(b) Technical Assistance (AID Funded)

The Chief of Party of the U.S. technical assistance team will be assigned to the BASC. Among his duties will be to: advise the Project Director and GOS staff regarding management of Project activities; administer the

technical assistance contract and finances; and supervise all U.S. long and short-term technical staff and consultants. The Chief of Party will provide services for a minimum of 5 years, starting in Year 1 of the Project. The Project administration will be assisted by an Administrative/Logistics Advisor who will serve with the Project for approximately 3 years, beginning in Year 1. A General Services Advisor will join the BASC in Year 3 and will assist in organizing building and vehicle maintenance, warehouse and supply activities for a minimum of 18 months.

(c) Facilities (AID Funded Except for Maintenance)

Basic facilities at the BASC will include office space and housing for the GOS and U.S. staff members to be located in Damazin, storage facilities for office, fuel, seed and machinery requirements, a mechanical workshop, bulk fuel storage tanks, a guest house and a farm building for the agricultural Demonstration/Verification Farm (DVF). All such facilities will be provided by AID. The GOS will provide a housing allowance for Sudanese staff in Khartoum as well as those GOS staff members without housing at Project headquarters.

In the Project area, three multi-purpose Agricultural Development Centers (ADCs) will be constructed at Abu Gamai, Abu Sheneina and Kharen-Kharen. At all three locations office space, housing, storage and other facilities will be constructed, in addition to the establishment of a demonstration farm. Additionally, specialized facilities will be constructed. For instance, the Abu Gamai facility will have a machinery storage and workshop facility and bulk fuel tank. The Abu Sheneina ADC, having principal responsibility for livestock operations, will have an animal health station, livestock pens, sheds and dipping facilities.

Maintenance of all facilities will be provided by the GOS.

(d) Land (GOS Funded)

Land for all BASC and field facilities will be contributed by the GOS.

(e) Commodities (AID Funded)

Imported commodities for the BASC will include approximately 30 passenger vehicles, to be shared among the various Project components, a 5-ton truck, a 5000 gallon tanker truck, a mobile workshop, a road grader and heavy equipment trailer and other equipment and vehicles as necessary. Maintenance of all equipment will be provided by the Project. In addition, two work boats will be provided for essential transportation to the Project area during the rainy season. Other commodities include necessary communications systems, office equipment and POL.

(f) Operating Costs (GOS and AID Funded)

POL and spare parts for all Project activities will be provided by AID. All other operating costs for all activities, including vehicle, machinery and housing maintenance, will be provided by the GOS.

(2) Project Monitoring and Planning Unit

A separate office will be established within the BASC having the following functions:

- (a) In conjunction with other Project technical personnel, supervise and coordinate all studies to be conducted under the Project;
- (b) Monitor all technical activities of the Project;
- (c) Develop a data collection and information system to assist Project management with its planning, programming, monitoring and evaluation functions;
- (d) Develop life-of-Project and annual work plans and reports for Project activities;
- (e) Obtain and analyze data for the two major evaluations of Project impact in the field.

Various studies and surveys will be conducted and field data will be analyzed by the Monitoring and Planning Unit. The primary purpose of this effort will be to develop comparative sets of social and economic indicators which can be utilized to accurately measure the impact of various Project interventions at both the farm and the sub-regional level. Initially, baseline information for implementation planning will be required in the following categories prior to initiation of field activities: credit demand and practices; indigenous forms of production and consumption; the role of the village merchant; cooperative organization among farmers and nomads, respectively; various economic studies of traditional agronomic and livestock practices; and studies related to cultural and social obstacles to Project implementation. These studies will be carried out by Project personnel.

Funds will be made available to undertake studies using specialized expertise not available under the Project. Locally available research organizations or private firms will be employed to perform such studies.

A follow-up survey will be conducted after the 1983 growing season in order to measure and evaluate Project progress and impact. Findings from this survey will be utilized for Project evaluation purposes and Project modifications, if necessary. A third and final survey for evaluation purposes will be carried out upon conclusion of the 1985 growing season.

A land and water use study of the Project area will be carried out and will be designed to achieve the following objectives:

- (1) Estimation and distribution of human and animal populations.
- (2) Description of current land use patterns and recommendations for improved land utilization.

(3) Identification of watering points, wells in use, and wells, earthen dams, and hafirs (earthen depressions) to be constructed as appropriate.

(4) Demarcation of nomadic cattle routes within the Project area, as well as grazing areas within the Project area.

In addition to analysis and evaluation of comparative field data to determine Project impact, it will be important to monitor, review and evaluate other indicators relative to Project implementation, support and acceptance. For this reason three formal evaluations - as distinct from but utilizing the results from the social/economic studies - will be carried out as follows:

(1) In Year 3 - this evaluation will review progress in laying groundwork (logistics, administration, staffing, construction, initial studies, preliminary agricultural field trials, etc.), for the commencement of field operations in June of that year. This will be an AID evaluation, in collaboration with the GOS.

(2) In Year 5 - this evaluation will focus on comparative farm, village, and regional level data generated from social/economic surveys as well as other program indicators relative to field operations, contractor performance, AID and GOS support. On the basis of this evaluation, decisions will be made concerning Project modifications, as well as possible expansion and/or continuation of the Project into a second phase.

(3) Post Project - provided that the Project has not been extended. AID funding is provided for independent contractors for the second and third evaluations, although AID may decide to carry one or more of them out directly. It will be the task of the Monitoring and Planning Unit to supervise the collection and preparation of data and other material for use by evaluation teams.

The following component inputs will be provided under the Project:

(a) GOS Personnel (GOS Funded)

A Sudanese planning expert will be assigned to direct this activity. Supporting him will be two graduate level associates, i.e. one agricultural economist and one rural planner. These three individuals will report to the Project Director, and will be affiliated with an appropriate GOS entity, probably the Central Region Ministry of Agriculture. Other GOS personnel, including enumerators and office staff, will be provided as necessary.

The GOS will provide personnel, as necessary, to carry out the land and water use study. GOS personnel from appropriate agencies will also be made available for the three Project evaluations.

(b) Technical Assistance (AID Funded)

One rural planning expert and one agricultural economist will be

provided. Both experts will arrive in Year 2 of the Project and will remain for a minimum of four years. Approximately 12 months of specialized technical assistance in agricultural, social and economic surveys, research design and analysis will be provided. Additionally, approximately \$100,000 will be made available to be utilized flexibly for other short studies, analyses, and planning exercises as required in the course of Project development and implementation.

With respect to the land and water use study, a U.S. consultant will be provided to supervise the study and provide short-term technical assistance in range management and land classification. Other short-term assistance may be provided as necessary.

Regarding the three planned evaluations, AID personnel and contract personnel will provide assistance as necessary.

(c) Commodities (GOS and AID Funded)

Firms or research organizations contracted to perform social studies will be provided three heavy duty passenger vehicles, and appropriate office equipment. Vehicles, POL, camping equipment and other materials for the Monitoring and Planning Unit will be provided by the BASC. All of the above commodities will be provided by AID. The GOS will furnish other locally purchased items as necessary for the various studies.

(d) Training (U.S. Funded)

U.S. advanced degree scholarships will be provided by the Project to a local research organization for two Ph.D and one master's degree candidates in social and economic research fields. If possible, field work for the degrees will be carried out in the Project area.

The GOS agricultural economist will be sent to the U.S. for masters degree training in Year 3 of the Project. Short-term specialized training in data management will be made available to the GOS rural planner.

(e) Other Costs (AID Funded)

Prior to arrival of vehicles to be used for the various economic and social studies, funds will be made available for the rental of vehicles and equipment. Fuel will be provided for studies throughout the Project lifetime. Specialized supplies and materials, aerial photography, and other such items will also be purchased.

3. Agricultural Mechanization

This component of the Project is designed to test the technical and economic feasibility of selective mechanization for the small farm producer. A major criterion will be net financial return to the farmer realized through increases in either productivity or total production which can be attributed

to mechanization and complementary inputs. An important aspect of the Project is to test the assumption that such activities can be implemented by cooperatives.

The mechanization component initially will be managed and implemented by GOS personnel to be assigned to Project headquarters in Damazin and at the Agricultural Development Center (ADC) to be located at Abu Gamai. A U.S. agricultural engineer will provide technical assistance for this activity. Subject to the financial and organizational viability of the Cooperative Union, by the end of the Project the mechanization services will be assumed, funded, and managed by this organization.

The primary mechanization and maintenance unit will be established at Abu Gamai and will be supervised by a GOS graduate agricultural engineer trained and experienced in farm mechanization. Tractor drivers for the project will be recruited from the Project area, if possible, trained at the Farm Machinery Training Center at Tozi and provided subsequent on-the-job training. Land suitable for mechanization will be determined by the findings of the land and water use study.

The following component inputs will be provided:

(a) GOS Personnel (GOS Funded)

At the BASC in Damazin a qualified agricultural engineer, a senior mechanic and a supply clerk will join the Project in Year 1. They will remain throughout the Project period and will concentrate on establishment and supervision of the mechanization activity. A farm equipment specialist, a mechanic and an electrician will be stationed at the ADC in Abu Gamai. They will supervise the operation of the tractors and other equipment, in addition to running a basic maintenance facility to be constructed by the Project. The GOS will also provide three trainees in the fields of farm machinery mechanics who may be converted to Cooperative Union employees in Year 6.

(b) Technical Assistance (AID Funded)

An agricultural engineer specialized in farm machinery will be provided for a period of approximately 5 years, commencing in Year 1.

(c) Commodities: (GOS and AID Funded)

Ten tractor units, related implements, and trailers will be purchased, in addition to workshop equipment and tools. Draft animals and equipment also will be purchased for experimental purposes in relation to plowing, weeding and harvesting activities. Vehicles and PCL also will be supplied for mechanization activities.

(d) Training (U.S. Funded)

Tractor drivers will be trained at the Farm Machinery Training Center at Tozi and will be provided subsequent on-the-job training. Project mechanics will receive training at manufacturer's training centers. The agricultural

engineer will receive short-term training in the U.S. with particular reference to crop and soil conditions similar to those of the Project area.

4. Improvement of Agronomic Practices

The purpose of this component is to develop and extend to the farmer an improved package, inputs and practices which address the basic constraints to improved productivity experienced by traditional farmers on rainfed land, including: low quality seeds; ineffective weed, disease and insect control; declining soil fertility levels; low plant populations and densities; and inadequate harvesting and threshing techniques. Production techniques designed to address these constraints, together with mechanization and credit, will be provided in order to test an integrated service package. The Project will also test a non-mechanized but improved package of inputs, credit and services, which may prove financially attractive to the traditional farmer over the long term.

Additionally, various cropping approaches will be explored, including mixed (livestock and crop production) farming on a small scale, in collaboration with livestock and range personnel. While trials of other potential cash and food crops will be carried out, principal emphasis will be placed on traditional food and forage crops, especially sorghum and sesame. To the extent that new tools or equipment of an "intermediate technology" nature can be identified, an effort will be made to test and introduce those items of highest potential, such as animal draft equipment. Finally, the Project will test various extension techniques and attempt to arrive at the most cost/effective approaches to reach large numbers of farmers.

This activity will be managed by two Sudanese agronomists, to be located at the BASC. They will be supported by a U.S. long-term agronomist advisor and a long-term extensionist advisor (see section 7, below).

A dual purpose Demonstration/Verification farm (DVF) will be established as part of the BASC near Damazin to verify, test and demonstrate the applicability of available research information, as well as Project designed packages or inputs and practices which may prove to be technically feasible and financially attractive to the farmers and nomads of the Project area. The DVF will also be used for in-service training for extension workers and farm leaders. Once suitable findings have been verified, they will be introduced to the participants through the three Agricultural Development Centers (ADCs) to be located at Abu Gamai, Abu Sheneina and Kharen-Kharen as well as nomadic encampments throughout the Project area. Priority will be given initially to Abu Gamai and Abu Sheneina due to their accessibility during the rainy season.

The following component inputs will be provided under the Project:

(a) GOS Personnel (GOS Funded)

Two experienced Sudanese agronomists will be assigned to the BASC for this activity. One will have a general agronomy background, the other applied research experience and extension methodology. Other GOS support personnel will be provided as necessary.

(b) Technical Assistance (AID Funded)

A U.S. long-term agronomist will be stationed at the BASC for a minimum of four years beginning in Year 2. Initially, the agronomist will be responsible for the activities of the DVF until the return of the two Sudanese agronomists from long-term training (See (d) training, below).

(c) Commodities (GOS and AID Funded)

One complete tractor unit will be purchased for the DVF. Necessary vehicles and fuel will be provided for transportation needs. Additional specialized equipment will be purchased for farm trials, and other activities as necessary. Fencing will be provided for the DVF and ADCs.

(d) Training (AID Funded)

The two GOS agronomists will be sent to the U.S. for masters degree level training in agronomy, extension and short-term USDA specialized training in Year 3 of the Project. They will rejoin the Project in Year 5.

5. Livestock and Range Management

The objectives of livestock and range management activity are to: (a) increase nomad income, (b) improve animal health and productivity, (c) optimize natural resource utilization in the Project area through organizing and modernizing pastoral activity, including stabilization of animal populations, (d) assist with the establishment of a mutually beneficial pattern of coexistence and cooperation between nomads and settled farmers, (e) assist sedentary farmers with the improvement of village livestock production conditions and practices, and (f) determine a practical and effective approach for the development of mixed cropping systems (livestock and crop production) for both farmers and nomads.

This component will be managed by the livestock production and range management specialist, respectively, at the BASC, each in charge of a unit directed to his area of responsibility. This will be a cooperative endeavor, supported by district livestock and range management officials. At both the DVF and field facilities, a variety of activities will be carried out relative to mixed and dryland farming systems, and various methods for improved production, productivity and health will be tested. Periodic visits of short-term U.S. experts having specialized expertise in range management and livestock production will be made.

Field operations will be carried out through a main livestock health station to be located at Abu Shereina and sub-stations incorporated with ADCs at Abu Gamai and Kharen-Kharen. A veterinary officer will be in charge of the Abu Shereina station and will supervise health-related activities.

Based on Project studies, nomads will be assisted through a balanced land use program, including the delineation of grazing areas and animal corridors, and improved animal health and production practices.

With respect to sedentary farmers, services from the three livestock stations will include preventative and curative animal health care, upgrading of animal husbandry capabilities, the testing and introduction

of forage crops in rotation and the development of year-round system for provision of adequate feed.

The following component inputs will be provided under the Project:

(a) GOS Personnel (GOS Funded)

At the BASC, a senior level livestock production specialist and a senior level range management specialist will head their respective sub-activities. Close coordination with the Pasture and Range Management Administration will be emphasized.

At the main livestock health station at Abu Sheneina a veterinary officer will be in charge, assisted by two technically trained assistants, one in livestock and one in range management. At both the Abu Gamai and Kharen-Kharen sub-stations, two technical assistants, one each in livestock production/health and range management, and two para-professionals will be assigned. At all three stations auxiliary personnel will be provided as necessary.

(b) Technical Assistance (AID Funded)

Approximately 18 months of short-term services of range management and livestock production specialists will be provided.

(c) Commodities (AID Funded)

At the BASC, miscellaneous items such as dairy equipment, incubators, veterinary drugs and materials, and animal handling equipment will be necessary, in addition to camping gear, fencing materials and hand tools. For the Abu Sheneina ADC veterinary equipment will be provided together with kerosene refrigerator/freezers, mobile crushes for livestock, as well as camping equipment. Abu Gamai and Kharen-Kharen will both require only veterinary and refrigeration equipment. Necessary office equipment will be supplied for the three ADCs. Special range related equipment will include such items as a baler, a mobile feed mixer, feed storage and other specialized equipment as needed.

(d) Training (AID Funded except for Para-Professionals)

Four technical assistants, two each in livestock production/health and range management, will be trained for six months in Year 3 at a vocational institute in the Sudan. Short-term training will be provided to the GOS range management and livestock specialists. The para-professionals will be trained by the GOS at an appropriate Sudanese institution. Much of their specific training will take place on the job.

6. Cooperatives and Credit

The cooperatives/credit component is designed to create and test a regional member-owned delivery system for the provision, on a continuous basis, a package of credit, services and goods, required by the traditional farmer for the purposes of increased production and income.

With respect to credit, the Project will provide initial seed capital to cooperatives to lend to members for inputs, labor and other production requirements. The fundamental objective will be to provide a viable alternative to the traditional debt system known as "sheil". This credit will assist the farmer in overcoming the critical labor bottlenecks associated with land preparation, weeding and harvesting. Finally, the program is designed to stimulate rural savings generation at both the village and Cooperative Union levels. It is anticipated that the cooperatives will become self-sustaining by the end of the Project. Loans to farmers will be at commercial rates in order to allow sufficient margin to cover both costs and capitalization requirements. A financial institution such as the Agricultural Development Bank will receive Project funds as part of the AID Grant for the establishment of a special revolving account for the Project sponsored cooperatives.

The cooperatives/credit activity will be managed by a senior GOS expert on the BASC staff in Damazin. Implementation of this activity will require close liaison with the District Cooperative Office in Damazin. The BASC cooperative section will coordinate its activities with other major components of the project, i.e. mechanization, agricultural extension, agronomy, livestock and range management and the Monitoring and Planning Unit. The activity will be advised by one long-term U.S. cooperative/credit advisor and periodic visits by short-term U.S. consultants.

The Agricultural Development Bank will establish a revolving credit account for the Project. Funds will be received in the form of an AID grant from the Project and will contribute to the Bank's general capitalization. In return, the Bank will charge its normal and customary fee to administer the fund. Administrative and disbursement procedures will be more specifically agreed to and set forth in Project Implementation Letters.

The following component inputs will be provided:

(a) GOS Personnel (GOS Funded)

The activity will initially be managed by a senior cooperatives specialist who will occupy a position at the BASC in Damazin. He will be assisted by other GOS personnel as appropriate, and will closely coordinate Project activities with the District Cooperatives Office.

At the Abu Gamai Cooperative Union location a GOS cooperative development officer will be assigned who will function as manager of the field program and the Union, starting in Year 4. Assisting him will be an accountant who, in addition to bookkeeping responsibilities, will act as credit program manager. Subject to the financial viability of the Cooperative Union, these positions will be assumed by either the Union or the GOS at the end of the Project.

In the area of cooperative extension, three field agents will be assigned to the Union, one each at Abu Gamai, Abu Sheneina and Kharen-Kharen. Assisting the agents will be six para-professionals (two each at Abu Gamai, Abu Sheneina and Kharen-Kharen) who will be recruited from the villages. Other support personnel will be provided as necessary. These positions will be funded by either the GOS or the Union at the end of the Project.

(b) Technical Assistance (AID Funded)

AID will finance the services of a general cooperatives/credit advisor for a minimum of three and a half years, starting in Year 2, as well as short term assistance in credit, training, storage and marketing.

(c) Commodities (AID and GOS Funded)

For transportation needs of the Union and its extension staff vehicles and POL will be available during the life of the Project. Donkeys or bicycles may be purchased, primarily for para-professional use. Office furniture and supplies will also be provided. At the end of the Project title to the tractors and related implements described in 3 (c), above, will be transferred to the Cooperative Union, subject to the financial viability of the Union.

(d) Facilities (AID Funded)

The Cooperative Union will share ADC offices with extension and livestock staff at Abu Gamai and Kharen-Kharen for the life of the Project. These facilities will continue to be made available by GOS for the Cooperative Union beyond the life of the Project.

(e) Training (AID Funded)

The National Cooperative Training and Development Center or another appropriate institution will provide training for approximately three extension agents, six para-professionals, officers and members of cooperatives and the Cooperative Union. Other training will be provided as necessary and appropriate.

In addition, one long-term participant, who will assume management responsibilities for the Union, will be sent to the U.S. in Year 2 for a master's degree program in cooperative management, finance and marketing.

(f) Credit (AID Funded)

AID will provide credit in amounts specified in the financial tables below.

(g) Incentive Grant (AID Funded)

A special grant may be provided to the Cooperative Union, at an appropriate stage in the implementation of the Project, which would match on an equal basis, accumulated member capital (contributions plus retained earnings), with the exception of necessary reserves, such as replacement of capital items and bad debts.

(h) Extension (including Women in Development)

Extension personnel will assist all major components of the Project through implementation and coordination of field extension activities, planning monitoring and evaluation of small farm technological packages, and development of range and livestock practices affecting the target population.

Problems and needs of small farmers and nomads will be communicated by extension personnel to the Project in order to incorporate their viewpoints into the design of Project interventions and to ensure that proposed interventions are compatible with the needs, customs and lifestyle of Project beneficiaries. Similarly, extensionists will work with farmers and nomads in introducing new technology.

Particular attention will be given to the involvement of women in development (WID). In addition to facilitating a larger role for women in agricultural production, special attention will be given to improving the standard of living of women through improved nutritional practices, introduction of small ruminants and poultry, improved health practices and literacy, and other such activities.

The following inputs will be provided under the Project:

(a) GOS Personnel (GOS Funded)

An experienced Sudanese extension specialist will administer this component of the Project. He will be assisted by a specialist who will focus largely on the needs of women in development (WID) in the Project area.

In the Project area, an extension officer will direct the extension activities at ADC located in Abu Gamai, Abu Sheneina and Kharen-Kharen, as well as supervise village level extension activities. At Abu Gamai the extension officer will be assigned two assistants and 10 trained para-professionals. At Kharen-Kharen only one extension assistant and 7 para-professionals will be assigned to the extension officer.

(b) Technical Assistance (AID Funded)

A U.S. extension specialist will be provided to the BASC for a minimum of three years, starting in Year 2. Approximately 6 months of short term technical assistance in specialized areas will be provided.

(c) Commodities (AID Funded)

Audio-visual equipment, books and pamphlets, reproduction equipment, improved hand tools and other equipment and materials used in extension methodology will be provided by the Project.

(d) Training (AID Funded, except for Para-professionals)

The GOS WID specialist will be given university level training in extension in Year 3 in order to provide her with specialised expertise at the bachelor's level. The male extension specialist will receive master's degree level training and short term USDA training in the U.S. in Year 3.

The extension officers in charge of the ADCs and the senior GOS extensionists will be sent in Year 3 to a short-term training course in the Sudan, the U.S. or a third country, as appropriate. One assistant from each ADC will be sent for specialized training at an appropriate Sudanese institution. The para-professionals will be trained at the DVF and at ADCs. Other training may be provided as necessary and appropriate.

8. Other Infrastructure Activities

(a) Water Sources Development (GOS Funded)

The development of new water sources and points is necessary for both the agricultural and livestock components of the Project. In the case of villages and farmers, not directly on the Blue Nile, annual water sources will be developed for both humans and animals.

Although firm planning for this activity will have to await completion of the land and water use study described above, it is estimated that approximately fifteen wells for nomads and five for village clusters of Kharen-Kharen and Eseil could be located along the major khors in the Project area.

The land and water use study will determine suitable locations for wells, dams, hafirs. Based on the report's findings, the GOS will make arrangements for construction with the Rural Water Corporation, in consultation with the Soil Conservation Land Use and Water Programming Administration.

(b) Road Maintenance Services (GOS Funded)

The Project will maintain dry-weather roads to and within the Project area. These roads will be graded, as necessary, to facilitate Project implementation.

II. FINANCIAL PLAN AND PROCEDURES

The tables below set forth by Project component the contribution to the Project currently contemplated by the Parties. Those Tables are subject to change by the Parties without formal amendment of the Agreement, provided that no such changes cause: (a) AID's contribution to the Project to exceed the amounts stated with respect to each such contribution as set forth in Section 3.1, or (b) the Government's contribution to the Project to be less than the amount stated thereof in Section 3.2(b). Changes in the Tables, if any, will be from time to time a subject for mutual discussion and agreement, thereafter to be recorded in Project Implementation Letters.

Disbursement of Project funds consistent with this Agreement will be made pursuant to the procedures set forth in Article 7 above. Project Implementation Letters may elaborate on and revise those procedures from time to time.

FUNDING SUMMARY
PROJECT MANAGEMENT AND SUPPORT
(\$000)

	<u>AID</u>	<u>GOS</u>
1. GOS Personnel		322.0
2. Technical Assistance	1,300.0	
3. Construction of Facilities (BASC and DVF and ADCs)	3,400.0	
4. Commodities	421.2	92.1
5. Land		328.3
6. Operating Costs		
a. POL	589.6	
b. Other - Supplies, Maintenance, etc.		508.9
	<u>5,710.8</u>	<u>1,251.3</u>

PROJECT MONITORING AND PLANNING

1. GOS Personnel		224.8
2. Technical Assistance	860.0	
3. Evaluation	200.0	
4. Commodities	80.6	7.8
5. Training	247.0	
6. Other Costs	48.5	
	<u>1,436.1</u>	<u>232.6</u>

AGRICULTURAL MECHANIZATION

	<u>AID</u>	<u>GOS</u>
1. GOS Personnel		136.9
2. Technical Assistance	550.0	
3. Commodities	605.8	60.2
4. Training	24.2	
	<u>1,180.0</u>	<u>197.1</u>

AGRONOMIC PRACTICES

1. GOS Personnel		254.0
2. Technical Assistance	600.0	
3. Commodities	281.7	69.8
4. Academic and USDA Training	75.8	
	<u>957.5</u>	<u>323.8</u>

LIVESTOCK AND RANGE MANAGEMENT

	<u>AID</u>	<u>GOS</u>
1. GOS Personnel		284.4
2. Technical Assistance	210.0	
3. Commodities	107.1	53.5
4. Training		<u>10.6</u>
	<u>317.1</u>	<u>348.5</u>

COOPERATIVES AND CREDIT

1. GOS Personnel		147.9
2. Technical Assistance	550.0	
3. Commodities	65.0	26.5
4. Training	40.0	14.2
5. Credit Funds	328.5	
6. Incentive Grants	<u>100.0</u>	
	1,083.5	<u>188.6</u>

EXTENSION

1. GOS Personnel		120.0
2. Technical Assistance	500.0	
3. Commodities	30.4	60.3
4. Training	<u>65.0</u>	<u>56.0</u>
	595.4	236.3

TOTAL PROJECT

FUNDING SUMMARY BY COMPONENT

(\$000)

	<u>AID</u>	<u>GOS ^{1/}</u>	<u>TOTAL ^{2/}</u>
1. Project Management and Support	5,710.8	1,251.3	6,962.1
2. Project Monitoring and Planning	1,436.1	232.6	1,668.7
3. Agricultural Mechanization	1,180.0	197.1	1,377.1
4. Agronomic Practices	957.5	323.8	1,281.3
5. Livestock and Range Management	317.1	348.5	665.6
6. Cooperatives/Credit	1,083.5	188.6	1,272.1
7. Extension	595.4	236.3	831.7
8. Infrastructure	-	633.8	633.8
Sub-Total	11,280.4	3,412.0	14,692.4
Contingency	751.2	607.3	1,358.5
Total	12,031.6	4,019.3	16,050.9

1/ A total of LS 2.04 million will be provided in PL 480 Title III local currency resources for administrative support, extension activities and infrastructure.

2/ Farmers' contribution to cooperatives of \$226,000 is not included as it is not a GOS input.