PDBAJ 440

698-0410.3C

Regional

Tanzania

Rift Valley Pilot Rice Production

Project Paper

FY 80

RIFT VALLEY PILOT RICE PRODUCTION

(693-0410.30)

PROJECT PAPER

Submitted: September 29, 1980

RIFT VALLEY PILOT RICE PRODUCTION
(693-0410.30)

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AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A (A = Add, C = Change, D = Delete) — Amendment Number: _____ — DOCUMENT CODE: 3

2. COUNTRY/ENTITY: United Republic of Tanzania

3. PROJECT NUMBER: 698-0410.30

4. BUREAU/OFFICE: Africa — 06

5. PROJECT TITLE (maximum 40 characters): Rift Valley Pilot Rice Production

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 09 DD 30 YY 82

7. ESTIMATED DATE OF OBLIGATION (Under "B." below, enter 1, 2, 3, or 4): A. Initial FY 80 — B. Quarter 4 — C. Final FY 80

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY 80 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total	470	30	500	470	30	500
(Grant)	(470)	(30)	(500)	(470)	(30)	(500)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1. U.S. Peace Corps	30		30	60		60
Other U.S. 2.						
Host Country	75	56	131	150	58	208
Other Donor(s)						
TOTALS	575	86	661	680	88	768

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	2. Loan	D. OBLIGATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
(1) FN	122	071				500		500	
(2)									
(3)									
(4)									
TOTALS						500		500	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 021 | 022 | 064

11. SECONDARY PURPOSE C: 182

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	BS						
B. Amount	500						

13. PROJECT PURPOSE (maximum 480 characters)

The purpose of this project is to test the feasibility/suitability of alternative assistance interventions to increase rice production in a four village area of the Rift Valley in central Tanzania and to facilitate the design of a larger scale rice production project with cost effective and manageable interventions.

14. SCHEDULED EVALUATIONS: Interim MM 05 YY 82 — Final MM 05 YY 83

15. SOURCE/ORIGIN OF GOODS AND SERVICES: ☐ 000 ☒ 941 ☐ Local ☐ Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment)

17. APPROVED BY — Signature — Title: Director, USAID/Tanzania — Date Signed MM DD YY

18. DATE DOCUMENT RECEIV IN AID/W, OR FOR AID/W DO MENTS, DATE OF DISTRIBUT MM DD YY

AID 1330-4 (8-79)

ACTION MEMORANDUM FOR THE MISSION DIRECTOR

THRU: Dr. Michael Fuchs-Carsch, Agriculture Development Officer

FROM: Tim Miller, IDI/AGR

SUBJ: Authorization of Rift Valley Pilot Rice Production Project (698-0410.30)

Problem: Your approval is required for a grant of $500,000 from Section 103, Agriculture, Rural Development and Nutrition appropriation to Tanzania for Rift Valley Pilot Rice Production (698-0410.30).

Discussion: In February 1979 the USAID Mission received a request from the Prime Minister's Office (PMO) for assistance to villages in the Rift Valley area of Manyoni and Dodoma districts of Dodoma and Singida regions. Mission, REDSO and AID/W personnel conducted several field trips to the project area to assess the technical feasibility of the project and to discuss project implementation arrangements with PMO, regional and district representatives.

Agreement was reached to undertake a pilot activity rather than full development of the Rift Valley. Over a two-year period AID and the TanGov will test the viability of interventions which could increase rice production in four villages in the project area, monitor an environmental impact of these interventions, assess the impact of the project on the intended beneficiaries, and allow the Mission to determine the effectiveness of providing resources directly to district and regional entities. The lessons of this project will enable the TanGov to better plan the components of a large-scale rice project in the same area.

The TanGov will provide agricultural extension staff to supervise and assist in implementation of project activities; the District governments will provide housing for technicians; Muhimbili Medical Center will assist in environmental monitoring; the Ilonga Agriculture Research Institute will assist in establishing and supervising the agronomic trials and will provide the services of an agricultural engineer on a consultancy basis and the villages will contribute labor and operating costs for the machinery. The U.S. Peace Corps will provide two full time volunteers to assist in establishing a maintenance program for the equipment and vehicles and to supervise the establishment of agronomic trials. AID will provide financing for machinery, tools, vehicles, housing renovation and other local currency costs. A summary of AID assistance follows:

1.	Technical Assistance	145,000
2.	Commodities	315,000
3.	Inflation and Contingency	40,000
	TOTAL	500,000

The Mission Project Committee (PC) met on August 19, 1980 and raised the following issues and recommended actions.

1. Critical Nature of Peace Corps Volunteers

The PC recognized the need for full time advisors to assure effective utilization of AID resources. The PC agreed to a condition precedent which would require the TanGov to request two U.S. Peace Corps Volunteers prior to disbursement of any AID project funds.

2. Project Support from TanGov Entities

The PC believed the support arrangements with Ilonga ARI and Muhimbili had not been sufficiently described in the PP. It was agreed that draft letters of understanding would be prepared and included in the PP annexes.

3. PID Review Issues

The PC asked the project officer to summarize the AID/W PID review issues and discuss how the project was designed to address the issues.

Issue Number 1

The AID/W Project Committee recommended that the agricultural engineer be an experienced professional with work experience in Africa and be assigned to the project on a twelve-month continuous basis.

The PP design team decided that it would not be possible to obtain the services of a PCV agricultural engineer and that funding a contract staff engineer would not be suitable because of the high salary and the need to construct housing.

A capability in agricultural engineering has been identified in-country at the Ilonga Research Institute and at the Faculty of Agriculture in Morogoro. The agricultural engineer at Ilonga will visit the project site on a monthly basis throughout the life of the project. Agricultural engineers at the Faculty of Agriculture, Morogoro, will provide up to nine months consultancy to the project in the areas of heavy machinery repair and irrigation, drainage and hydrology. A full time PCV agro-mechanic also will be assigned to the project to supervise use, maintenance and repair of the heavy land development equipment.

Issue Number 2

The AID/W Project Committee recommended the following Budget Revisions:

(a) Technical assistance for an AIP project should be held to 20 percent of the total budget.

Balancing this concern with the need to provide professional technical expertise as explained in issue number one above, has resulted in a funding level of slightly more than 20 percent for technical assistance of the land development component of the project.

(b) Confirm price of land development equipment.

The Mission has decided to purchase two excess property D-6 caterpillar-type tractors. Prices shown in the PP Financial Plan have been supplied by AID Excess Property in Cumberland, Pennsylvania.

(c) Currently available hand tools may have to be supplemented by externally procured tools and the price of these should be reflected in the budget.

The amount budgeted for hand tools is based on an estimate for externally procured tools; however, the project will utilize local sources when available.

(d) Cost versus reliability in rice bund construction.

The PP addresses the issue of cost versus reliability in the technical analysis. It was found that even though it is often cheaper to construct bunds by hand it is not physically possible to do so because of the properties of the vertisol soils. Bunds constructed to proper specifications should be of equal durability whether constructed by hand or by machine.

(e) The cost of house construction should be confirmed by the REDSO engineer.

There will be no new house construction under the project. Estimates for the renovation of the TanGov supplied housing for the U.S. Peace Corps Volunteers have been furnished by the design team agricultural engineer and the Singida Regional Engineer.

(f) The PP should specify and the ProAg should commit the TanGov to specific contributions of at least 25 percent of the total budget.

The PP specifies TanGov and U.S. Peace Corps inputs. The Limited Scope Grant Agreement includes a detailed project budget and commits the TanGov to an amount which is approximately 26 percent of the total budget.

Justification to Congress:

This sub-project is funded under the African Regional Accelerated Impact Program (698-0410) which was presented to congress on page 476 of the FY 1980 Congressional Presentation Annex I, Africa. Advice for this sub-project was forwarded to Congress on August 8, 1980 and expired without question on August 23, 1980.

Recommendation:

That you authorize a two-year project in the amount of $500,000 for the Rift Valley Pilot Rice Production Project under the authority delegated to you in AID 141 by signing the attached project authorization.

Attachments: A. Project Authorization
B. Project Data Sheet
C. Project Paper

PROJECT AUTHORIZATION

NAME OF COUNTRY: United Republic of Tanzania

NAME OF PROJECT: Rift Valley Pilot Rice Production

NUMBER OF PROJECT: 698-0410.30

1. Pursuant to Part I, Chapter I, Section 103 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Rift Valley Pilot Rice Production Project for the United Republic of Tanzania involving planned obligations of not to exceed $500,000 in grant funds over a two-year period from date of authorization, subject to the availability of funds in accordance with the AID OYB/allotment process, to help in financing foreign exchange and local currency costs for the project.

2. The project is a pilot endeavor which will test the feasibility/ suitability of alternative assistance interventions to increase rice production in a four village area of the Rift Valley in Central Tanzania and facilitate the design of a larger scale rice production project with cost effective and manageable interventions.

The project consists of:

(a) A system for the use, maintenance and repair of land development machinery.

(b) On-the-job training of Tanzanians in the maintenance and repair of heavy machinery and in rice extension.

(c) The clearing, levelling and bunding of approximately 400 ha of potential rice land.

(d) The establishment of observation/demonstration trials of rice varieties and cultivation techniques.

(e) An environmental assessment to monitor potential threats to human health posed by the project.

(f) The financing of commodities and technical assistance related to the above.

3. The Project Agreement which may be negotiated and executed by the Officer to whom such authority is delegated in accordance with AID regulations and Delegations of Authority shall be subject to the following essential terms and conditions, together with such other terms and conditions as AID may deem appropriate.

Clearances:

		Office	Date	Initial
A.	M. Bonner	PRM	9/29	
B.	RMDepp	CDPO	9/29	
C.	IPeterson	CON	9/30	
D.	RJohnson	EXO	9/25	
E.	AHenn	HPN	9/30	
F.	MFuchs-Carsch	AGO	9/30	
G.	BRiley	ADIR	9/30	

Signature: James E. Williams
James E. Williams
Director

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RIFT VALLEY PILOT RICE PRODUCTION

I. INTRODUCTION

A. Project Background

In January 1979 a request was made by two District Development Councils in the Dodoma and Singida regions to their respective Regional Development Councils for heavy equipment to construct bunds and establish rice paddies on the flood plains of the Rift Valley lying in parts of both regions. Bunds had been constructed for farmers in the area with heavy equipment borrowed from the Ministry of Works. The request came shortly after the equipment was returned for use in other regional projects. The request was forwarded by both regional directors to the Prime Minister's Office in Dodoma, which is responsible for coordination of all regional development projects and for obtaining donor resources in support of these projects. In February 1979 the request for machinery was passed to USAID/T.

The rice area was visited by the Mission ADO and an agronomist/soil scientist in February. A draft proposal was prepared by the Mission and distributed for comments to villagers and district and regional officials. Mission officers conducted a follow-up trip to the area in August to discuss and finalize the document. The PID was submitted to Washington in September 1979.

Washington felt additional information was needed before a decision could be made on the PID and consequently a team of experts visited the site in late October. On the basis of their report the PID was approved pending submission of the IEE.

In June 1980 a Project Paper team composed of the Mission ADO and the Project Officer; an agricultural engineer and a soil physicist from the International Institute of Tropical Agriculture in Ibadon, Nigeria, and an agricultural economist visited the site.

This accelerated impact project represents a concensus amongst all parties concerning the most feasible way to design a rice development project for the Rift Valley area while obtaining rapid increases in rice production with specific short run interventions to increase production and by testing and demonstrating other appropriate technologies.

B. Relation to Mission's FY 82 CDSS

The Mission's FY 82 CDSS stresses the need to increase the productivity and well-being of the rural poor so that they may contribute and

share more in the growth of the national economy. At the same time the CDSS identifies the Central Zone in which the project is located as the lowest income zone. This condition has been caused by a variety of factors among which is the fact that there is no cash crop grown extensively.

Rice production, even on the modest scale envisioned by this project, represents an opportunity to provide a cash crop for some of the people of the zone and possibly to increase their income.

C. TanGov Policy

Tanzania imports approximately 40,000 tons of rice annually, even though the TanGov does not recognize rice as a primary foodstuff, to insure that supplies are always adequate. Demand for rice (production plus imports) is estimated at 227,000 tons in 1980; 430,000 tons in 1990; and 739,000 tons in the year 2000. For imports to be held to a minimum, rice production will have to increase considerably over the next 10 to 20 years.

Recently, KILIMO (Ministry of Agriculture) surveyed rice production areas of Tanzania and identified six top priority investment areas, among which is the project area, the Bahi Depression in the Rift Valley.

D. Project Design Issues

The AID/W Project Committee (PC) which reviewed and approved the PID, identified the following items to be investigated and, if necessary, addressed in the project paper.

1. Technical Assistance

The PC suggested that the agricultural engineer be an experienced professional with work experience in Africa and be assigned to the project on a twelve-month continuous basis.

Discussion:

The PP design team investigated the possibility of requesting a full time PCV agricultural engineer or funding a regular staff engineer. Investigations revealed it would be extremely difficult to obtain the services of a PCV agricultural engineer because people with the necessary qualifications are few and do not readily volunteer their services. A full time staff agricultural engineer would require an outlay of $200,000 over the two-year project plus building a new house in the project area.

Further investigation revealed that the Ilonga Research Institute which is partially funded by the AID Agriculture Research Project has recently obtained the services of a full time agricultural engineer. The person filling the position at the present time has had extensive experience

with rice paddy cultivation in India and has worked with heavy land development equipment at the International Institute for Semi-Arid Crop Research (ICRISAT) in Hyderabad, India. The Ministry of Agriculture has agreed to allow the agricultural engineer to visit the project site on a monthly basis over the life of the project and to be available on a standby basis to respond to urgent project needs. A draft letter of agreement between the Ministry of Agriculture and the Prime Minister's Office, Dodoma, concerning the assistance of the agricultural engineer is contained in Annex G of this PP.

An agricultural engineering capability has also been identified at the Faculty of Agriculture, University of Dar es Salaam in Morogoro. Provisions have been made in the project for the funding of one or two of these professionals for up to nine months of consultancy at the project site. At the present time one of the agricultural engineers has extensive knowledge of heavy machinery use and repair, and another is a specialist in irrigation, drainage and hydrology.

The project has also requested the services of a PCV agro-mechanic to supervise use, maintenance and repair of the heavy land development equipment.

2. Budget Revisions

(a) The PC recommended that the technical assistance component for an AID project be held to 20 percent of total budget.

Discussion:

This item has been discussed above. Technical assistance for the land development component is slightly more than 20 percent of the total budget (See Summary Cost Estimate and Financial Plan, page 13).

(b) Confirm price of land development equipment.

Discussion:

The Mission has decided to purchase two excess property D-6 caterpillar-type tractors according to the rationale explained in the technical analysis (page 18). Prices shown in the Cost Estimate and Financial Plan (page 13) have been supplied by AID Excess Property in Cumberland, Pennsylvania.

(c) Currently available hand tools may have to be supplemented by externally procured tools.

Discussion:

The amount budgeted for hand tools is based on an estimate for externally procured tools; however, the project will utilize local sources when available.

(d) The PP should address the issue of cost versus reliability in rice bund construction.

Discussion:

The PP addresses the issue of cost versus reliability in the technical analysis (page 18). It was found that even though it may be cheaper to construct bunds by hand, it is not physically possible to do so during much of the year because of the properties of the vertisol soil. Bunds constructed to proper specifications should be of equal durability whether constructed by hand or by machine.

(e) The cost of house construction should be confirmed by the REDSO engineer.

Discussion:

There will be no new house construction under the project. Estimates for renovation of Peace Corps housing have been furnished by the design team agricultural engineer and the Singida Regional Engineer.

(f) The PP should specify and the ProAg should commit the TanGov to specific contributions, which should be at least 25 percent of the total budget.

Discussion:

The PP specifies the amount of the TanGov and Peace Corps inputs. The Limited Scope Grant Agreement includes a detailed project budget and commits the TanGov to an amount which is approximately 26 percent of the total budget.

The Mission Project Committee met to review the PP on August 19, 1980. A discussion of those issues and their resolution is contained in the action memorandum to the Mission Director.

II. PROJECT DESCRIPTION

A. Project Goal

The goal of the pilot project is to increase agricultural production and incomes of farmers in four villages in Dodoma and Singida regions.

B. Project Purpose

The purpose of the pilot project is to test the feasibility/suitability of alternative assistance interventions to increase rice production in the Bahi Depression Area of Central Tanzania and to facilitate the design of a large scale rice production project with cost effective and manageable interventions.

C. Project Area

This pilot project will be confined to a four-village area on the north side of the Bahi Depression, latitude 5.8-6.2 south and 35.0-35.5 east. The villages are Ngaiti and Kintinku in Manyoni District and Bahi Sokoni and Bahi Makulu in Dodoma District. The project area includes approximately 225 sq. km or 22,500 ha, of which 3,000 ha is suitable for rice production. The villages are inhabited primarily by Gogo people, but there has been some in-migration of Nyamwezi from the Northwest and other groups from the North over the years. It is believed that rice cultivation was introduced by the immigrants to the Gogos who were essentially pastoral. Total population of the project area is 8,501, divided into 2,432 families.

The Bahi Depression is an extensive inland drainage area for much of Kondoa and Dodoma Districts in Dodoma Region and for Singida and Manyoni Districts in Singida Region. The rainy season extends from December to April with high variability in the average annual precipitation of 400-600 mm. The area also has a high annual average potential evaporation resulting in high evapo-transpiration ratios.

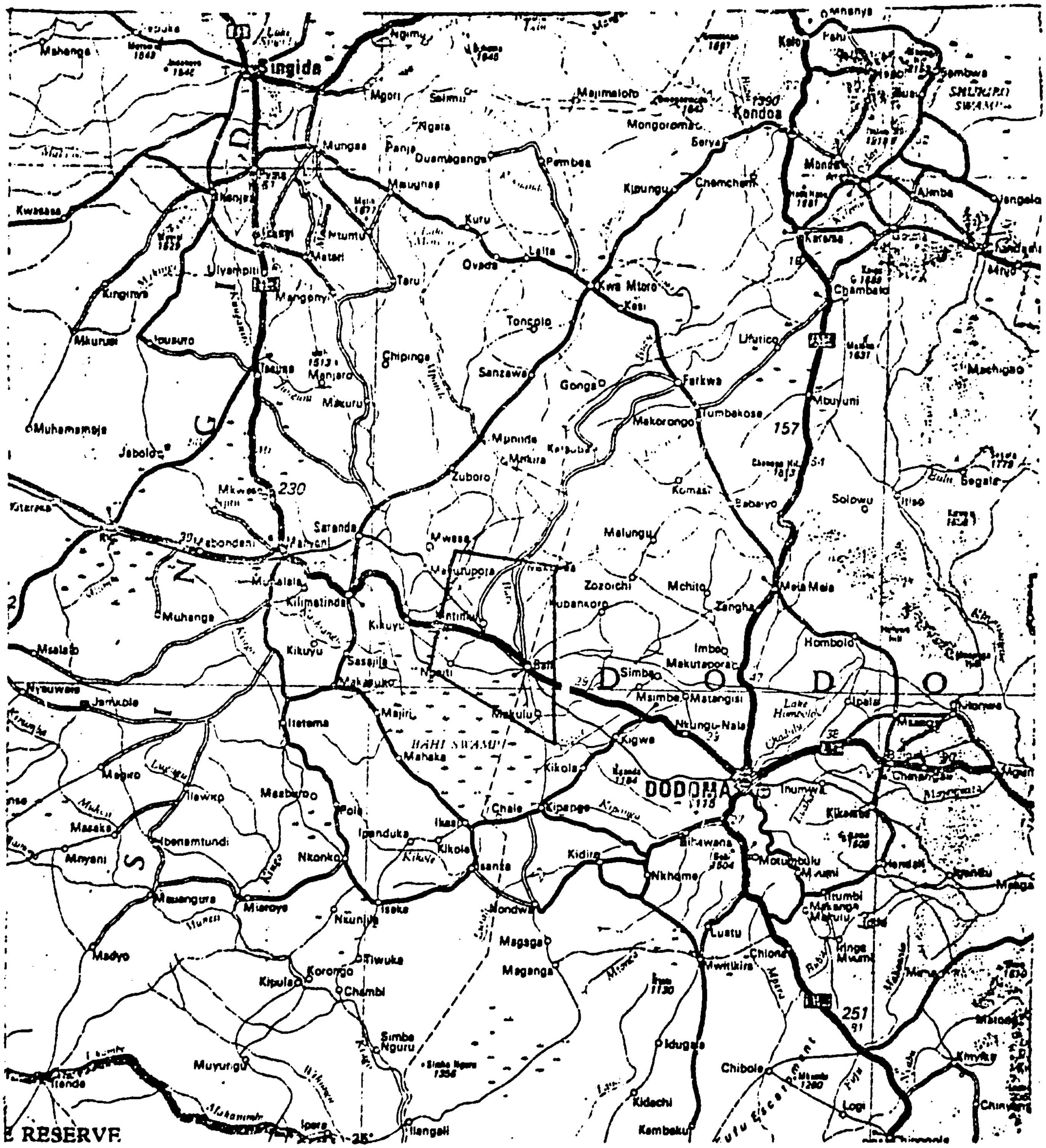
The soils of the project area consists largely of vertisols, locally called "mbugas" on a flat to depressed topography with natural slopes estimated to be less than 1 percent. The surface soils vary in texture from sandy clay loam to clay loam. The vegetation is classified as "dry season savannah."

The Gogo people are primarily pastoralists growing subsistence type crops. Sorghum and bullrush millet (pearl millet) are grown successfully with other less drought-tolerant crops such as maize and groundnuts achieving less success. Rice has been cultivated for about thirty years on a small scale where there is suitable runoff or flood water.

D. Rice Production

Rice cultivation in the project area commences in December with the beginning of the rains and the planting of nurseries. The nurseries are established near homesteads and seedlings are transplanted in January or February depending on the arrival of sufficient flood water. Paddies in the past have been constructed by hand or by machine with bunds varying in height from 25 to 100 cm. Simple provisions are made in the bunds of each paddy for easy water entry and outlet of excess water. The paddies depend on rain and particularly natural runoff and flood water for their water supply and not water diversion. During the growing season the water level of the paddies is maintained at about 30 cm since deeper water results in lodging.

Crop residue is usually burned in the dry season and plots hand weeded before transplanting.



Map of parts of Dodoma and Singida Regions in Central Tanzania. The four-village project area is blocked out in the center of the map.

Rice varieties grown in the area are all tall and late maturing and include Super India, Kibawa, Kahogo and Faya. Respectable yields of 3 tons of paddy/ha are not unusual.

Farm yard manure, generally is not used in rice cultivation although large supplies are available in most of the compounds. Chemical fertilizers have not been tried. Chemicals are not used to control insects or diseases.

Harvest generally occurs in April or May. Panicles are harvested individually and laid in the sun to dry. Panicles are threshed by hand and the paddy is sometimes milled using a mortar and pestle.

Paddy and rice may be sold to the National Milling Corporation (NMC) through the village, sold locally or exchanged for a food crop such as maize.

As a cash crop, the resources for and from the rice cultivation are controlled by the men of the village; however, women and children contribute most of the labor by transplanting, weeding, harvesting, threshing and milling.

E. Project Strategy

The project will be implemented by the District Development Directors (DDD) of Dodoma and Manyoni Districts with the respective District Agriculture Development Officers (DADO) serving as project managers.

Technical assistance will be provided by two U.S. Peace Corps Volunteers (PCV) working in conjunction with district and village staff. One PCV will have a background in agro-mechanics while the other should have knowledge of rice extension. There will also be up to 12 pms of short term technical assistance in the area of agricultural engineering utilizing in-country agricultural engineers whenever possible. The agricultural engineer of the Ilonga Research Institute, Ministry of Agriculture will make monthly trips to the project site to provide advice on appropriate water and land management practices and to help the PCV agro-mechanic and project managers set up a system for the use, maintenance and repair of heavy equipment. (See Draft Letter of Agreement, Annex G). Engineers from the Faculty of Agriculture will provide approximately 9 pms of consultancy to help design irrigation and drainage facilities for the rice land to be developed and to investigate the hydrology of the area. In the event that engineers from the Faculty of Agriculture are unavailable during periods of project need, funds have been budgetted to hire an "out of country" agricultural engineer.

The project will have access to the technical expertise of the new USAID-funded Farming Systems Research Project and the rice research capability of the Ministry of Agriculture.

Each region will make available the services of their topographic survey teams, and each district will provide drivers and mechanics.

The project will coordinate activities with the zonal irrigation unit to be established by the Ministry of Agriculture at Tabora. The unit is being established to survey, plan and design irrigation projects, primarily for village irrigation.

F. Outputs, Inputs and Activity Description

1. Total potential rice acreage of the four village areas topographically surveyed

Topographic surveys are necessary to determine and plan proper levelling and water management in the project area. Singida and Dodoma regions will make available their land planning units to topographically survey all potential rice acreage. The project will provide survey equipment as needed and two Landrovers for transportation to and from village sites. Sites selected for survey will be based on physical reconnaisance and aerial photographs. The two regions will be encouraged to continue with survey efforts outside of the project area to facilitate the design of a follow-on rice production project.

2. Four hundred hectares of cleared, levelled and bunded rice land with appropriate water entry and drainage facilities

It is estimated that two D-6 caterpillar-type tractors and one wheel-type tractor, all with land development accessories, will be able to clear, level and bund over four hundred hectares of rice land during the two-year project period. The machinery will be managed initially by the PCV agro-mechanic, who together with the project managers, will set up a system for its use, repair and servicing. AID will provide a Landrover for the transportation of fuel, spare parts and mechanics to the project area. Drivers and mechanics will be supplied by the two districts involved.

3. Test and recommend various types, quantities and combinations of machinery and equipment necessary for establishment of rice paddies and flood plain control

The project will purchase two used, reconditioned D-6 caterpillar-type tractors, a rome plow, a land plane, a 100 hp wheel-type tractor, a disc-type bund former and a terrace blade for the land development activities mentioned above. Hand tools will be purchased for resale to farmers to facilitate bund construction by hand and to make manual labor used in rice cultivation more efficient.

The performance of the heavy equipment will be monitored by the PCV agro-mechanic and the agricultural engineer consultants relative to ease of servicing and repair, suitability for the development of the rice land and durability. The relative mix of hand labor versus machinery in land development/rice production will also be investigated.

4. System for management of heavy land development equipment

The project managers, under the guidance of the agro-mechanic and agricultural engineer will be responsible for setting up a system to manage land development equipment procured by the project. This system could include the creation of a new entity responsible for the maintenance of a spare parts inventory, for the hiring of trained mechanics and skilled operators and for the establishment of service and maintenance schedules for all heavy equipment. This entity would establish rates for use of the equipment based upon actual owning and operating costs, but taking into account users' ability to pay. This entity also will be responsible for the equitable allocation of this machinery among project recipients.

Maintenance and servicing of the heavy machinery will take place on site except in the case of major overhaul when the machines will be transported by rail to the Ministry of Works' repair facilities in Dodoma or Singida. The spare parts inventory will be maintained at the District Stores in Manyoni.

5. Traditional and improved rice varieities and production interventions tested in the project area through observation trials and/or demonstration plots

Traditional and improved rice varieties will be tested for yield, tolerance to insects, diseases and other pests and hardiness under the soil and water conditions found in the project area. Also tested will be the suitability of and receptivity of farmers to various interventions in traditional rice cultivation. Possible interventions include use of farm yard manure; animal traction to till paddies and/or transport inputs to field and crops to market, increased cultivation before transplanting and use of sickles to harvest rice.

Rice varieties and other interventions will be evaluated according to:

(a) their acceptance by farmers;
(b) their accessibility to farmers, especially women;
(c) the impact on rice yields and labor productivity; and
(d) the effect on the human and physical environment.

The PCV rice extensionist will coordinate these trials in the project area with the National Rice Variety Observation Trials which were organized by the Ministry of Agriculture and the International Institute of Tropical Agriculture (IITA) during the 1980 rice growing season. The PCV will receive rice varieties and instructions from the IITA rice specialist and the rice research coordinator of the Ministry of Agriculture.

6. Training of personnel in the operation, maintenance and repair of machinery and rice extension

The two PCVs will set up on-the-job training programs for personnel involved. Mechanics and drivers will receive instructions in the operation, repair and maintenance of machinery. Instruction for extension personnel will include paddy construction, seed bed and nursery preparation, non-chemical controls against pests including weeds and harvesting and processing techniques.

7. Environmental assessment

The environmental assessment will investigate possible threats to human health posed by the project and the implications of these threats for any on going or proposed follow-on activities in an expanded rice cultivation project.

The investigations in the project area will include:

(a) baseline data gathering on incidences of diseases thought to be exacerbated by projects with an irrigation component;
(b) periodic mosquito and snail counts; and
(c) periodic monitoring of villagers.

The environmental assessment will include recommendations for the control of problems encountered in the pilot project and for the feasibility of a much larger project in rice cultivation, given the severity of threats to human health encountered.

Muhimbili Medical Center in Dar es Salaam has been identified as an institution with the capability to conduct this environmental assessment. The Center has indicated they will use third year medical students to conduct the baseline survey and monitoring. Project funds will be used to cover Medical Center expenses such as transportation, board and room and supplies. In addition the DADOs, PCVs, and other project staff will assist the Center in its investigations.

8. Further planning activities

The pilot project will also examine a series of unresolved issues and questions. Design of a follow-on activity will require further analyses of these questions.

(a) What is the villagers' commitment to rice cultivation?
(b) How accessible and reliable are markets?
(c) Will labor availability within villages allow continued expansion of rice cultivation?
(d) What is the impact of increased labor needs on women?
(e) How might women share more in the benefits of rice cultivation?

(f) What capability has the TanGov demonstrated in the management of resources provided by the project?

These questions will be explored by North Carolina A&T State University (NCATSU) and the Economic Research Bureau (ERB) of the University of Dar es Salaam as part of their village-level surveys and project monitoring and evaluation responsibilities. TanGov project managers, PCVs and the AID project officer will review and report on their findings and recommendations throughout the life of the project.

G. Summary of Inputs

	USAID	TanGov	Peace Corps
1. Technical Assistance			
1 PCV Agricultural Mechanic (24 pms)			X
1 PCV Rice Extensionist (24 pms)			X
4 Heavy Equipment Operators (96 pms)		X	
3 Landrover Drivers (72 pms)		X	
Agricultural Engineer(s) (12 pms)	X	X	
2 Survey Crews	X		
4 Village Extension Workers		X	
2 DDDs and Staff		X	
2 DADOs and Staff		X	
1 Environmental Assessment Team	X	X	
2. Training			
On-the job Training of Mechanics, Drivers and Extension Workers			X
3. Commodities			
2 D-6 Caterpillar-Type Tractors	X		
1 Rome Plow	X		
1 Land Plane	X		
1 Wheel-Type Tractor	X		
1 Disc-Type Bund Former	X		
1 Terrace Blade	X		
1 Arc Welder and Generator	X		
1 Cargo Trailer and Tank	X		
3 Landrovers	X		
2 125 cc Motorcycles	X		
Equipment Repair Tools	X		
Hand Tools	X		
Surveying Equipment	X		
Fuel, Oil and Filters		X	
4. Other			
Housing for PCVs		X	
Renovating of PCV Housing	X		
Village Labor		X	

III. PROJECT ANALYSES

A. Summary Cost Estimates and Financial Plan (Dollars)

USAID

	FX	LC	Total
1. Technical Assistance			
Agriculture Engineer(s)(12 pms)	120,000	-	120,000
Environment Assessment Team Expenses	5,000	20,000	25,000
Sub-Total	125,000	20,000	145,000
2. Commodities			
2 D-6 Caterpillar Tractors (Exprop) plus 20% spare parts	160,000	-	160,000
1 100-hp wheel-type tractor	35,000	-	35,000
1 Rome Plow	14,000	-	14,000
1 Land Plane	14,000	-	14,000
1 Disc-Type Bund Former	2,000	-	2,000
1 Terrace Blade	2,000	-	2,000
1 Arc Welder and Generator	4,000	-	4,000
1 Cargo Trailer and Fuel Tank	3,000	-	3,000
Equipment Repair Tools	2,000	-	2,000
3 Land rovers plus 10% Spare Parts	48,000	-	48,000
2 125-cc Motorcycles	3,000	-	3,000
Hand Tools	10,000	-	10,000
Surveying Equipment	2,000	-	2,000
Miscellaneous	6,000	-	6,000
Sub-Total	305,000	-	305,000
3. Other--Remodeling of PCV Housing	2,500	7,500	10,000
4. Contingency and Inflation	37,600	2,400	40,000
TOTAL AID	470,100	29,900	500,000

TanGov

1. Technical Assistance	FX	LC	Total
a. Project			
4 Heavy Equipment Operators	-	7,000	7,000
2 Survey Crews (60%)*	-	10,000	10,000
4 Village Exten. Workers (50%)*	-	3,500	3,500
2 DDDs and Staff (5%)*	-	5,000	5,000
2 DADOs and Staff (20%)*	-	10,000	10,000
2 Mechanics	-	3,500	3,500
3 Landrover Drivers	-	5,000	5,000
Sub-Total		44,000	44,000

*Percentage work time devoted to project over a two-year period

b. Environmental Assessment			
1 Parasitologist (1 pm)	-	1,000	1,000
1 Specialist in Community Medicine (1 pm)	-	1,000	1,000
1 Regional Medical Officer (1 pm)	-	800	800
Baseline Study and Mon. Teams	-	400	400
Sub-Total		3,200	3,200
2. Commodities			
Fuel, Oil and Filters	150,000	-	150,000
3. Other			
2 Houses for PCVs	-	10,000	10,000
TOTAL TANGOV	150,000	57,200	207,200

U.S. Peace Corps (Anticipated Contribution)

1. Technical Assistance			
1 PCV Agro-Mechanic	30,000	-	30,000
1 PCV Rice Extensionist	30,000	-	30,000
TOTAL PEACE CORPS	60,000	-	60,000
GRAND TOTAL	680,100	87,100	767,200

B. Economic Analysis

A benefit/cost analysis was done on the land development component of the pilot project. Capital costs included purchase of heavy machinery and equipment. Operations and maintenance costs included fuel and technical expertise. With production costs it was assumed land developed would be planted to rice and these costs included seeds, labor, hand tools and processing equipment. An inflation and contingency factor of 15 percent/pa was added to project costs for the life of the project.

Benefits were based on an expected production of 2 tons of rice per hectare for the 400 hectares at a price of $2.30/kg. A 12 percent increase in the rice price was added each year based on the average annual increase over the last ten years. There was no attempt to project increases in rice yields because of improved varieties and/or production interventions. It is reasonable to expect that yields will improve with suitable interventions; however, the magnitude cannot be anticipated at this time. Studies show a return to labor of 5.5 shs/p.d. for traditional cultivation and 14.6 shs/p.d. using improved production techniques (See Annex E).

The analysis yielded a benefit/cost ratio of 1.2 using a discount factor of 12 percent. This means that the project is economically viable and has the potential to yield 1.2 dollars for every dollar invested.

C. Technical Analysis

Farmers in the four-village area have been growing rice on a small scale for the past thirty years. Presently there are approximately 254 ha bunded for rice with a potential for expansion of 3000 ha. Respectable paddy yields of between 2.0 and 4.0 tons/ha are achieved with zero cash inputs.

Vertisol soils of the kind found in the project area are among the most fertile rice growing soils. Many years of rice cultivation are necessary before yields are seriously reduced due to nutrient depletion. Vertisol soils are not easily worked which probably explains why farmers do not work paddies before transplanting nor use oxen. Incorporation of farm yard manure and/or rice stubble could improve soil texture and workability.

Flood water from the Bubu River makes rice cultivation possible in the project area. The Bubu River has a considerable catchment area of 9,030 square kilometers in Kondoa, Singida, Manyoni and Dodoma districts. The average annual precipitation of the catchment area is about 600 mm.

During the pilot project emphasis will be to develop land for rice cultivation and to test specific interventions which might increase yields and incomes of farmers rather than to alter significantly the

BENEFIT-COST ANALYSIS
(Dollars)

	PROJECT COSTS				PROJECT BENEFITS		
Year	Capital Costs	Operations & Maintenance Costs	Production Costs	Total Costs	Rice Production	Sale of Capital Equip.	Total Benefit
1	292000	112250	62000	466250	115000	-	115000
2	57500	129088	139150	325738	257600	-	257600
3	-	2314	160022	162336	288512	93060	381572
4	-	2661	184025	186686	323133	-	323133
5	-	3060	211628	214688	361909	-	361909
6	-	3519	243372	246891	405338	-	405338
7	-	4047	279878	283925	454028	-	454028
8	-	4654	321860	326514	508511	-	508511
9	-	5352	370139	375491	569532	-	569532
10	-	6155	425660	431815	637876	-	637876
11	-	7078	489509	495587	714421	-	714421
12	-	8140	562935	571075	800152	-	800152
13	-	9361	647375	656736	896170	-	896170
14	-	10765	744481	755246	1003710	-	1003710
15	-	12379	856153	868532	1124155	-	1124155
16	-	14236	984575	998811	1259053	-	1259053
17	-	16371	1132261	1148632	1410139	-	1410139
18	-	18827	1303100	1320927	1579356	-	1579356
19	-	21651	1497415	1519066	1768879	-	1768879
20	-	24899	1722027	1746926	1981144	-	1981144

BENEFIT-COST ANALYSIS (CONT.)

(Dollars)

A N A L Y S I S				
Year	Cash Flow	P.V. of Cash Flow	P.V. of Total Costs	P.V. of Total Benefits
1	-351250	313666	416361	102695
2	- 68138	54306	259613	205307
3	219236	156096	115583	271679
4	136447	86780	118732	205513
5	147221	83474	121728	205202
6	158497	80358	125071	205506
7	170103	76887	128334	205222
8	181997	73528	131872	205438
9	194041	70489	135552	205601
10	206061	66352	139044	205396
11	218834	62805	142233	205039
12	229077	58873	146766	205639
13	239434	54830	150393	205223
14	248464	50935	154825	205761
15	255623	46779	158941	205720
16	260242	42419	162806	205226
17	261507	38180	167700	205880
18	258429	33596	171721	205316
19	249831	28980	176212	205190
20	234218	24359	181680	206039
			3305167	4072592

Benefit/Cost Ratio = 1.2

traditional cultivation of rice. Interventions will be recommended only after they are shown to be technically sound and readily available to most farmers.

Issues which surfaced during the technical analysis were analyzed and resolved as follows:

1. Use of heavy machinery versus hand labor to clear and level land and to construct bunds

At issue was a feeling that a project of this size could not justify spending 60% of its total budget for heavy machinery which would be placed in an outlying area where repair facilities are insufficient and where acquisition and use costs would be prohibitive for farmers.

Investigations revealed that:

(a) Farmers have been paying a considerable part of the running costs of such machines in the past.

(b) In much of the project area heavy brush makes clearing by hand or with oxen impractical, if not impossible.

(c) The properties of vertisol soils make construction of bunds by hand or animal power practical during only a two to three-month period following the end of the rainy season. Labor during the two to three-month period is not readily available due to harvesting and processing demands of various crops and livestock herding.

It was concluded that bunds constructed by hand are probably less costly and last as long as those constructed by machine; however, because of the short period of time when construction by hand is possible and shortage of labor during this optimum time, machines will be used. Machines will not be needed for maintenance of the bunds.

2. Size and quantity of heavy machinery

Size and quantity of heavy machinery was investigated with the decision made to purchase two D-6 or D-7 caterpillar-type tractors from excess property, and a new 100 hp wheel-type tractor, all with appropriate land development accessories based on the following considerations.

(a) Higher horsepower tractors are more effective than smaller tractors at clearing the heavy brush.

(b) Two tractors of the same size would facilitate interchangeability of spare parts and would be more compatible working together on big jobs.

(c) Excess property tractors cost approximately half as much as new tractors of the same type. There are two USAID-supported projects in Tanzania utilizing excess property with good results. Delivery time for excess property equipment is substantially shorter than for new equipment. Higher horsepower tractors are more readily available from excess property than smaller models.

(d) The wheel-type tractor is relatively less costly to purchase and is cheaper to run than the track-type tractors and should greatly facilitate construction of bunds because of its maneuverability.

3. Availability of PCVs with appropriate skills

Discussions with the U.S. Peace Corps Director in Tanzania convinced the design team that there was a reasonably good chance of the timely posting of well-qualified volunteers.

He explained that upon receiving the request for volunteers from TanGov, he would send a circular to Peace Corps offices throughout Africa in search of volunteers with the necessary skills who were completing their tours and wanted to extend for an additional tour. At the same time he would request Peace Corps/Washington to begin recruiting two PCVs with the desired skills through the normal recruitment channels.

The first method, if successful, is preferred because there would be no need for a training program other than Swahili language, and it would considerably speed up bringing the volunteers on board.

In the event that the services of Peace Corps Volunteers are not obtained, reliance will be placed on host country technical expertise with increased use of short term consultants paid for by the contingency fund, and also experts from other AID-supported projects.

4. Environmental concerns

(a) Exacerbation of apparent saline problem

The soil physicist on the project design team conducted pH and electrical conductivity tests at various locations in the four-village project area. Soil pH in established rice paddies ranged from 6.2 to 6.5 with less than 1 mm ohm/cm^2 electrical conductivity indicating no salt problem.

A few locations in the project area which were not planted to rice showed a heavy concentration of salt. The cause of the salt build-up was probably interflow from salt-bearing rock formations with movement to the soil surface through evapo-transpiration. A well managed rice paddy with adequate water and suitable drainage will not experience a salt build-up of this nature.

(b) Increased threat to human health

Discussions with the Dodoma Regional Medical Officer, Muhimbili Medical Center Specialists in Dar es Salaam and Mission Health Officers convinced the design team that the pilot project could constitute a threat to human health by providing a breeding ground for the snail which is the intermediate host of the Bilharzia schistosome and for vectors of ARBO (Arthropod Bourne) diseases. They felt the exact magnitude of the problem was unknown, but that it should not stop development of the pilot project. They recommended a baseline survey of school children before the project commenced with periodic monitoring and examination of school children during the project. Populations of arthropods and snails will also be monitored.

5. Availability of rice markets

Presently villagers dispose of their paddy and/or rice production by:

(a) Selling to the NMC with the village serving as middleman and receiving a commission;
(b) Selling locally; and
(c) Exchanging for other commodites such as maize.

Annual imports of rice into Tanzania exceed 40,000 tons. Substantial demand exists for any in-country rice production beyond the 40,000 tons because rice importation is given a low priority by the TanGov.

The ability of NMC as an efficient buying and selling agent is less certain and movement of rice from farm to market is a question which project managers will have to address during the project and before the design of any follow-on activity. With the location of the National Capital at Dodoma and resulting development, suitable local markets already exist for increased rice production.

D. Social Soundness Analysis

1. Socio-cultural Feasibility

(a) Setting

The four-village project area is inhabited primarily by Gogo people with smaller numbers of Nyamwezi, Turu, Hehe and Kimbu. The Bantu-speaking Gogo are the fourth most populous ethnic group in Tanzania and occupy parts of Dodoma, Mpwapwa, Manyoni and Kondoa districts in Central Tanzania. The Gogo are traditionally pastoralists who in recent times have been growing crops, primarily on a subsistence basis.

Animals are the "tools" with which the Gogo utilize a harsh environment, an environment of uncertain rains, low producing soils and

frequent crop failures. In the Central Zone nearly half of the years between 1923 and 1969 were considered substantially below normal and 13 percent of those years were considered famine years. During the 1960's rains were relatively good, but the drought of 1973-74 was devastating. Even in years of good rains, crop failure may result from floods or damage by pests.

Livestock suffer also when the rains fail; however, livestock represent a movable asset which may be herded to better grazing areas or where water is more plentiful. Livestock may be exchanged for grain and are the required medium of exchange for marriage and other social relationships. Livestock provide manure for soils, and milk and food when crops fail. Livestock serve as a medium of surplus accumulation. Surplu grain which cannot be stored indefinitely is exchanged for livestock.

The livestock cycle is essentially separate from the cultivation cycle in Gogo economy. Although cultivation provides a basis of subsistence in Gogo society, rights and obligations over the exchange of livestock may provide the very important and effective kinship relationships. Crops may be abandoned, but cattle must be kept as part of the family continuum. Although the price of livestock may vary considerably on the commercial market, it remains relatively constant in terms of bride wealth or other kinship transactions.

Land in modern day Tanzania is owned communally. Permission to use land, e.g., for cultivation, house building, etc., may be granted by the village council. Land in Gogo society was traditionally, and perhaps even today, the property of the clan with expansion being into unused bush. Formal permission to take up land was obtained from clan elders who were responsible for a specified segment of territory. When land was left to revert to bush, it was free for anyones use. Grazing lands in Gogo society are held communally. Livestock may graze any land as long as they do not damage crops.

The cultivation practised by the Gogo is extensive with long fallow periods and the extensive use of land relative to small labor and capital inputs. Bull-rush (pearl) millet and sorghum are grown successfully by the Gogo. Other crops such as maize and groundnuts, although preferred by the Gogo, are less drought tolerant. Cassava does well but has achieved little acceptability. Rice has been cultivated on a small scale for more than thirty years. Rice is consumed locally; however, perhaps more important is its value as a cash crop or in exchange for maize.

Women in Gogo society are responsible for repairing the homestead, feeding and clothing the family, collecting water, and cultivating of subsistence-type crops. Women do not own cattle but are not restricted in handling cattle and may herd them. Since rice is a cash crop, men control its cultivation; but women and children do most of the transplanting, weeding, harvesting, threshing and milling.

(b) The project effects

The labor needs of rice cultivation in the project area are not entirely known although it is estimated that 125 person days are needed to cultivate 1 hectare. Since rice is cultivated during the rainy season, men are not off herding cattle and are available to help cultivate. District and village officials maintain there is "suitable" labor for the increase in rice cultivation anticipated by the project. They say that plans call for the establishment of a village near the rice growing area of Kintinku because of both real and anticipated movement into the area.

Land to be developed for rice cultivation is too wet in the rainy season for production of maize, sorghum, millet or groundnuts. Its present use is as dry season grazing for livestock and represents only a very small part of available grazing land.

Farmers in the project area have a keen interest in growing rice. This is evidenced by their request for assistance, their relatively weed-free fields and their care in harvesting and processing. They grow rice for home consumption, for a cash crop, and perhaps more importantly, for exchange for other foodstuffs such as maize. Farmers recognize that growing rice, which is dependent on flood waters from a large catchment area represents less of a risk than the growing of rain dependent maize.

A successful project does not necessitate changes in the traditional cultivation of rice in the project area. The project will provide a means whereby acreage may be expanded. During the course of the project, interventions will be considered and implemented on a trial basis to make labor more efficient and traditional rice cultivation more productive. In all cases, care will be taken to insure that innovations are accessible to both men and women in the project area.

2. Spread Effects

(a) Successful technical improvements

Although new technology will not be introduced on a wide scale, interventions such as better yielding varieties and better cultivation techniques will be tried. As explained previously, interventions will be accessible to most farmers (men and women). Successful interventions should spread throughout the rice producing area of the Bahi Depression just as the rice technology itself has spread.

(b) The project as a model for assistance

The pilot project could serve as a successful model for responding to requests for assistance. That is, villagers identify problems and request assistance; district and regional officials

relay request to PMO; and PMO, serving as a clearing house, identifies suitable funding sources and is responsible for coordinating inputs. Local officials in villages where requests originate are responsible for implementation.

(c) Follow-on activity

There are approximately 30,000 ha of potential rice cultivation area in the Bahi Depression. If the pilot project determines that rice may be cultivated profitably with minimum harm to the human and physical environment, a much larger follow-on activity will be designed. The follow-on activity will be designed by PMO in coordination with regional and district planning officers and will draw upon reports and experiences of project managers, PCVs, agricultural engineers and the environmental assessment team.

(d) Facilitate design of PL 480 Title III funded rice projects

Local currency generated by PL 480 Title III is to be utilized to improve the production, protection and utilization of food, and to increase the well being of the poor. This pilot project could serve as a model to facilitate the design of PL 480 Title III funded rice production projects which would help make Tanzania self-sufficient in rice.

3. Benefit Incidence

Given the project size it is estimated that at least 400 families of the 2,432 in the area will benefit directly by the project. In addition, improved varieties and interventions tested by the project will be accessible to most rice farmers. The increased need for labor as a result of the project will probably fall disproportionately on women and children because men are engaged full time with the herding and care of livestock. The NCATSU Team in their Farm Management Surveys will explore means of including women in the management and planning of rice production as well as sharing in the marketing and income derived from the rice.

IV. IMPLEMENTATION

A. Administrative Arrangements

The project will be implemented by the DDDs of Dodoma and Manyoni Districts with the respective DADOs serving as project managers. Funds will be released by AID to the Treasury which in turn will release these funds to the regions within thirty days. The pilot activity will be identified as a line item in regional and district budgets. Coordination will be affected informally, primarily by the relationship

among the USAID project officer, the two PCVs and the two DADOs. Foreign exchange costs of AID-funded offshore procurement and technical assistance will be disbursed directly by the USAID.

B. Responsibilities of Project Staff

TanGov Officers:

The DADO/Project Managers will:

(1) monitor achievement of project purpose and outputs;
(2) establish a system for machinery and equipment allocation, use, repair and maintenance;
(3) identify, design and organize complementary activities which will help to sustain increases in rice production in the project area. This could include arrangements for credit from TRDB for sale and processing of paddy by NMC, for research and demonstrations of improved varieties and for consulting services in the design of other assistance activities related to rice;
(4) assist PMO and USAID in the evaluation of this project and in the design of a follow-on program; and
(5) supervise the work of the PCVs and other project personnel and coordinate their work with the planning, agricultural and other staff of both districts.

Peace Corps Volunteers:

The PCV agro-mechanic will:

(1) set up a training program in the use, repair and maintenance of machinery and equipment;
(2) assist in the procurement of spare parts and the management of a spare parts inventory;
(3) help devise a machinery hire program which will be equitable and meet with village approval; and
(4) submit biannual reports to the project managers describing activities, implementation constraints and accomplishments.

The PCV rice extensionist will:

(1) establish appropriate observation and demonstration trials;
(2) make recommendations on possible interventions in the traditional cultivation of rice;
(3) set up on-the-job training programs for extension workers in rice cultivation; and
(4) submit biannual reports to the project managers, describing activities, implementation constraints and accomplishments.

Agricultural Engineer

The Agricultural Engineer from the Ilonga Research Institute will make monthly trips to the project site to provide:

(1) advice on appropriate water and land management practices based on topographic surveys, aerial photographs and the observations of other project staff;
(2) make diagrams and models of simple threshing and milling equipment; and
(3) file a written report on the suitability of project heavy equipment with recommendations for follow-on activity..

The Agricultural Engineer from the Faculty of Agriculture will make periodic field trips to help design a program for the use, maintenance and repair of heavy equipment; to design irrigation and drainage facilities for the rice land to be developed; and to investigate the hydrology of the area.

Mission Project Officer

The Mission Project Officer will:

(1) prepare Project Implementation Orders (PIO);
(2) prepare Project Implementation Letters;

(3) oversee posting of PCVs and agricultural engineers and transportation of commodities to project site;
(4) make regular field trips to the project site and prepare quarterly implementation reports; and
(5) assist in project evaluation.

C. Implementation Plan

Action	Responsible Person or Entity	Date
Mission Project Paper Review	Project Committee	August 18, 1980
Mission Project Paper Approval	Mission Director	Sept. 26, 1980
Signing of Limited Scope Grant Agreement	Mission Director, Minister of Finance	Sept. 30, 1980
CPs to disbursement met:		Oct. 31, 1980
Signatures of TanGov Reps	TanGov	
Letter of Request for PCVs	Min. Manpower Develop.	
Letters of Understanding	PMO	
Farm Management Surveys	NCATSU, ERB	October 1980
Procurement Documents to Washington	Project Officer	November 1980
Recruitment of PCVs begins	PC/Tanzania	November 1980
Renovation of PCV Housing Begins	DADO, Manyoni	November 1980
Baseline Study for EA	Muhimbili Med. Center	February 1981
CP on EA met. PIL issued	Mission	April 1981
PCVs in-country to begin 1 month Swahili Training	Morogoro Training Inst.	May 1981
PCV's assigned to Field	PC/Tanzania	June 1981
Heavy Equipment Arrives	Coordinated by PCV Agro-Mechanic	July 1981
First Land Development Season Begins	DADO Project Managers	July 1981
First Land Development Season Ends	DADO Project Managers	November 1981
First Rice Cultivation Season Begins	DADO Project Managers	November 1981
Observation Trials Established	PCV Rice Extensionist	Jan-Feb 1982
First Growing Season Ends	DADO Project Managers	May 1982
Second Land Development Season Begins	DADO Project Managers	May 1982
Evaluation	USAID/Tanzania	May 1982
PACD Date		September 30, 1982
Second Land Development Season Ends	DADO Project Managers	November 1982
Second Rice Cultivation Season Begins	DADO Project Managers	November 1982
Final Evaluation	NCATSU and ERB	May 1983
Second Rice Cultivation Season Ends	DADO Project Managers	May 1983
PCV's Depart Country	PC/Tanzania	May 1983

V. MONITORING AND EVALUATION

North Carolina A & T State University (NCATSU) and the Economic Research Bureau (ERB) of the University of Dar es Salaam will assist the Mission to carry out project monitoring and evaluation. Funds will be available through NCATSU's 211D grant activity.

A. NCATSU and ERB will develop:

(a) a benchmark data system in the four project villages to generate farm budgets, village profiles, farmer profiles with potential impact on beneficiaries including women and information on soil and water problems;

(b) a schedule for feedback from villagers and farmers in subsequent time periods; and

(c) a system for communication between TanGov, USAID/T and project technicians.

B. NCATSU and ERB will help the Mission monitor the effectiveness of the parties involved in the project according to the following criteria:

1. USAID

(a) Effectiveness of project officer and mission support
(b) Identification of constraints to project performance
(c) Funds expended appropriately, e.g., who has benefitted, have women been beneficiaries of project inputs, have bottlenecks in funding process been identified and resolved
(d) Performance of AID-funded project personnel, e.g., are personnel qualified, are project goal, purpose and outputs being achieved.

2. TanGov

(a) Adequacy of staff
(b) Ability to fulfill project obligations including:
  (i) number and qualifications of staff supplied
  (ii) trial plots maintained
  (iii) funding of supplies on timely basis.

3. Contract and TanGov Technicians

(a) Development of annual work plans to:
  (i) evaluate current activities;
  (ii) introduce change and activities; and
  (iii) schedule coming activities.

(b) Quality of supporting project staff employed

(c) Adequacy of briefings so that all employees know the project objective and their responsibility
(d) Supervision and evaluation of employees
(e) Ability to identify problems and constraints to achievement of project objective.

C. The Mission and project staff using information developed by the benchmark data system will monitor:

(a) the environmental impact including erosion, soil and water quality, dangers to human health and changes in water use rights;
(b) the economic impact including changes in cropping patterns changes in livestock grazing requirements, price analysis, changes in income and needs for storage, marketing and transportation of increased rice output;
(c) the project impact on the role of women;
(d) equipment appropriateness, equipment maintenance, capability of operators and inventory control on parts and equipment; and
(e) adequacy of on-the-job training programs.

D. Evaluation

There will be an interim evaluation of the project by the Mission evaluation officer and appropriate agriculture office staff. A final evaluation in May of 1983 will be conducted by NCATSU and ERB.

1. The evaluations generally will consist of:

(a) evaluation of progress toward attainment of the objectives of the project;
(b) identification and evolution of problem areas or constraints which may inhibit such attainment;
(c) assessment of how such information may be used to overcome such problems; and
(d) evaluation of the overall development impact of the project.

2. The interim evaluation will cover:

(a) appropriateness of resources made available to the project;
(b) effectiveness with which resources were managed;
(c) achievement of purpose and goal of project; and
(d) adequacy of data system.

3. The final evaluation will cover:

(a) the results (impact, effects, benefits, costs, etc.) of the project on the rice growers in the target area and the population in general; and
(b) the accomplishment of the purpose of the pilot project.

VI. CONDITIONS AND COVENANTS

A. Conditions Precedent

1. The Project Agreement shall contain a condition precedent providing in substance that prior to disbursement of any AID project funds, the U.S. Government shall have received a written request for two U.S. Peace Corps Volunteers.

2. The Project Agreement shall contain a condition precedent providing in substance that prior to disbursement for any activities which might have a negative impact on the environment, or the issuance of any commitment documents authorizing such disbursement under the project, the Environmental Assessment called for in the Initial Environmental Examination shall have been performed and recommendations contained therein made a part of project design.

3. The Project Agreement shall contain a condition precedent providing in substance that prior to disbursement of AID project funds, the Grantee will provide to AID letters of understanding indicating the support which will be provided to the project by the Ministry of Agriculture and Muhimbili Medical Center.

B. Covenants

1. The TanGov will covenant to provide suitable housing in the project area for the two U.S. Peace Corps Volunteer technical advisors.

2. The TanGov will covenant to release AID project funds to the regions within thirty days after these funds have been received by the Treasury and at the currency rate existing when AID provided the funds.

ANNEX A

PID AND PID APPROVAL CABLES

ACTION AID-31

INFO OCT-01 AF-10 EB-08 /038 W

------------------005158 281918Z /51

P 281207Z AUG 79
FM AMEMBASSY DAR ES SALAAM
TO SECSTATE WASHDC PRIORITY 3492
INFO AMEMBASSY NAIROBI

UNCLAS SECTION 01 OF 04 DAR ES SALAAM 4866/01

AIDAC

NAIROBI FOR REDSO/EA

E.O. 12065 N/A
SUBJECT: ACCELERATED IMPACT PROJECT - PID CABLE FOR THE PROPOSED DODOMA/SINGIDA RICE DEVELOPMENT PILOT PROJECT

1. MISSION HEREWITH SUBMITS PID FOR FUNDING THROUGH AIP PROJECT FOR ATTENTION AFR/RA. PID FACESHEET POUCHED AFR/EA FOR DELIVERY APPROPRIATE ACTION OFFICER AFR/RA

2. TEXT FOLLOWS:

I. BACKGROUND

IN JANUARY 1979 A REQUEST WAS MADE BY TWO DISTRICT DEVELOPMENT COUNCILS IN THE DODOMA AND SINGIDA REGIONS TO THEIR RESPECTIVE REGIONAL DEVELOPMENT COUNCILS FOR HEAVY EQUIPMENT TO CONSTRUCT SMALL DIKES AND ESTABLISH RICE PADDIES (SIZE. 3 TO 1.8 HECTARE) ON THE FLOOD PLAINS IN THE RIFT VALLEY SWAMP AREA LYING IN PARTS OF BOTH REGIONS. DIKES HAD BEEN CONSTRUCTED TO ABOUT A METERS HEIGHT FOR FARMERS IN 4 VILLAGE WITH HEAVY EQUIPMENT BORROWED FROM THE MINISTRY OF WORKS. THE PROJECT WAS SUCCESSFUL AFTER THE EQUIPMENT WAS RETURNED FOR USE IN OTHER REGIONAL PROJECTS. THE REQUEST WAS FORWARDED BY BOTH REGIONAL DIRECTORS TO THE PRIME MINISTER'S OFFICE IN DODOMA WHICH IS RESPONSIBLE FOR CO-ORDINATION OF ALL REGIONAL DEVELOPMENT PROJECTS AND FOR OBTAINING DONOR RESOURCES IN SUPPORT OF THESE PROJECTS. IN FEBRUARY 1978 THE REQUEST FOR MACHINERY WAS PASSED TO USAID/T:

IN THE SAME MONTH THE MISSION'S AGRICULTURAL DEVELOPMENT OFFICER ACCOMPANIED BY AN AGRONOMIST/SOIL SCIENTIST VISITED THE PROJECT AREA AND DISCUSSED THE REQUEST WITH FARMERS, VILLAGERS, DISTRICT AND REGIONAL OFFICIALS. THE RIFT VALLEY SWAMP AREA IS A VAST ARE. IT COVERS ABOUT 15000 SQ. KM. AND ITS HEAD WATERS ARE AFFECTED BY A COMPLEX CONFLUENCE OF RIVERS AND STREAMS INCLUDING THE RUN-OFF FROM MOUNT KILIMANJARO IN THE NORTH. THE IMMEDIATE PROJECT AREA IS CONFINED TO THE LOWER REACHERS OF THE FLOOD PLAINS IN THE SOUTH AND TO ABOUT 30 VILLAGES ACCESSIBLE TO THE DODOMA/SINGIDA TRUNK ROAD. THE FLOOD WATER RECEDE SLOWLY AFTER THE RAINS WHICH BEGIN IN NOVEMBER AND END IN MARCH. THE WATER IS IMPOUNDED IN SMALL PADDIES ENCLOSED BY DIKES CONSTRUCTED TO ABOUT ONE METER HEIGHT. DURING NORMAL RAINFALL YEARS THE IMPOUNDED WATER IS SUFFICIENT TO BRING TRADITIONAL VARIETIES TO MATURITY AFTER 150 DAYS. ABOUT 80 PADDIES OF VARIOUS SIZES WERE ESTABLISHED LAST YEAR. MOST PADDIES ARE CULTIVATED INDIVIDUALLY BY FARM FAMILIES. A FEW LARGE PADDIES ARE CULTIVATED COMMUNALLY BY VILLAGE GROUPS. DISCUSSION FOCUSSED ON THE USE AND MAINENANCE OF APPROPRIATE EQUIPMENT FOR MAKING ADDTIONAL DIKES, INCLUDING THE USE OF ANIMAL (OXEN) TRACTION. TRAVEL TO PARTS OF THE FLOOD PLAINS APPREARED TO CONFIRM THE VIEW OF TANGOV OFFICIALS AND FARMERS THAT THE SOILS, IN MANY PLACES ARE TOO HEAVY TO BE MOVED BY HAND OR BY OXEN. DISCUSSIONS THEN CENTERED ON THE NEED TO FIND MORE SUITABLE EQUIPMENT FOR MANAGEMENT AND CONTROL OF THE FLOOD PLAINS SO THAT THE CONSIDERABLE POTENTIAL FOR RICE, AND IMPORTANT CASH CROP FOR MANY SMALL FARMERS, COULD BE MORE FULLY EXPLOITED.

SINCE VILLAGERS CONTRIBUTED TO MACHINERY RUNNING COSTS OF THE BORROWED EQUIPMENT, THE POSSIBILITY FOR A HIRE SERVICE ORGANIZED BY A CONTRACTOR OR ANOTHER SUITABLE ENTITY WAS ALSO CONSIDERED. THIS ISSUE WAS STRESSED TO ASSURE THAT ANY EQUIPMENT PROVIDED UNDER THE PROPOSED PROJECT WOULD BE PROPERLY USED, MAINTAINED AND REPAIRED.

THIS PROPOSED ACCELERATED IMPACT PROJECT REPRESENTS A CONSENSUS AMONST ALL PARTIES ABOUT THE MOST FEASIBLE WAY OF JOINTLY DESIGNING A RICE DEVELOPMENT PROJECT FOR THE RIFT VALLEY WASMP AREA WHILES OBTAINING RAPID INCREASES IN RICE PRODUCTION WITH SPECIFIC SHORT RUN INTERVENTIONS AND BY SESTING AND DEMONSTRATING OTHER APPROPRIATE TECHNOLOGIES AND TECHNIQUES. THIS CONSENSUS WAS DERIVED WHEN THE MISSON'S AGRICULTURAL DEVELOPMENT AND DESIGN OFFICERS WERE INVITED TO THE PRIME MINISTER'S OFFICE IN DODOMA, AUGUST 1979, FOR MEETINGS WITH THE REGIONAL DEVELOPMENT DIRECTORS OF BOTH REGIONS. SENIOR PMO STAFF AND REGIONAL/DISTRICT AGRICULTURAL AND PLANNING OFFICIALS. THE PURPOSE OF THESE MEETINGS WAS TO MODIFY AND FINALIZE A DRAFT PROPOSAL PREPARED BY THE MISSION IN MAY 1979 WHICH WAS DISTRIBUTED AND REVIEWD BY VILLAGERS, DISTRICT AND REGIONAL OFFICIALS. THIS PROPOSAL ENVISAGED THE LONG TERM SERVICES OF A DEVELOPMENT PLANNING ADVISOR IN ADDITION TO THE INPUTS DESCRIBED BELOW. IT IS LIKELY THAT THESE SERVICES WILL BE PROVIDED IN A FOLLOW-ON TO THIS PROJECT OR UNDER A DIFFERENT PROJECT NOW BEING DISCUSSED WITH PMO.

IT SHOULD BE STRESSED THAT TANGOV GIVES HIGH PRIORITY TO INCREASED RICE PRODUCTION SINCE ANNUAL IMPORTS EXCEED 50,000 M.T. ALSO, THE OFFICERS SEE OPPORTUNITY FOR A HIGH CROP NOT ENJOYED BEFORE BY VILLAGERS OF THE CENTRAL PLATEAU OF TANZANIA'S SEMI-ARID REGIONS.

42 X 1

ACTION AID-31

INFO OCT-01 AF-10 EB-08 /050 W
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P 281200Z AUG 79
FM AMEMBASSY DAR ES SALAAM
TO SECSTATE WASHDC PRIORITY 3453
INFO AMEMBASSY NAIROBI

UNCLAS SECTION 02 OF 04 DAR ES SALAAM 4056/02

AIDAC

NAIROBI FOR REDSO/EA

THIS PROJECT IS THE MISSION'S S FIRST PROJECT PROPOSAL CONSISTENT WITH AID/W CRITIQUE OF THE CDSS WHICH STRESSED MORE AID ASSISTANCE TO PROJECTS INCREASING PRODUCTION AND PRODUCTIVITY OF CROPS IMPORATANT TO THE NATIONAL ECONOMY.

THE MISSIONWOULD APPRICIATE RAPID AID/W REVIEW AND APPROVAL OF THIS AIP/PID CABLE SO THAT ALL PARTIES CAN PROCEED WITH THE PREPARATION OF THE AIP/PP DURING OCTOBER, ONE MONTH BEFORE THE BEGINNING OF THE RAINING SEASON WHEN THE FLOOD PLAINS WILL STILL BE ACCESSIBLE FOR FIELD SURVEY.

11. PROJECT DESCRIPTION

A. THE OBJECTIVE OF THE PILOT PROJECT IS TO FACILITTATE THE DEVELOPMENT OF LARGE SCCALE ASSISTANCE PROJECT TO INCREASE RICE PRODUCTION AND INCOMES AMONG SMALL FARMERS IN THE RIFT VALLEY SWAMP AREA OF THE DODOMA AND SINGIDA REGIONS.

B. THIS WILL BE DONE BY IDENTIFYING AND TESTING ALTERNATIVE TECHNOLOGIES AND ORGANIZATION APPROACHES WITH VILLAGERS TO DETERMINE DURING FIELD OPERATIONS THE MOST SUITABLE.

1. TYPE OF MACHINERY AND EQUIPMENT FOR THE ESTABLISHMENT OF RICE PADDIES AS WELL AS MANAGEMENT AND CONTROL OF THE FLOOOD PLAINS:

2. WAYS IN WHICH APPROPRIATE MACHINERY AND EQUIPMENT CAN BE ALLOCATED, OPERATED, MAINTAINED AND REPAIRED;

3. MACHINERY/EQUIPMENT CONTRACTING TO ARRANGEMENTS FOR VILLAGES;

4. ON-THE-JOB TRAINING PROGRAMS FOR OPERATION, REPAIR AND MAINTENANCE OF MACHINERY AND EXTENSION STAFF;

5. MACHINERY/EQUIPMENT USER CHARGE TO VILLAGES;

6. OTHER INTERVENTIONS SUCH AS DEMONSTRATIONS OF IMPROVED, SORT MATURING VARIETIES TESTED AND DEMONSTRATED WITH RESOURCES PROVIDED UNDER THIS PILOT PROJECT AND/OR OTHER USAID/T PROJECTS: AND,

7. OTHER COMPONENTS OF A LARGER RICE DEVELOPMENT PROGRAM AS FOLLOW-ON TO THIS PILOT PROJECT.

C. THE SPECIFIC OUTPOTS OF THIS PILOT PROJECT ARE:

A. ANSWERS AND/OR MODALITIES TO 1) THROUGH 7) IN B ABOVE UNDER OPERATIONAL/FIELD CONDITIONSL AND TO FACILITATE THE DESIGN OF A FOLLOW-ON PROGRAM;

2. INCREASED RICE PRODUCTION BY ESTABLISHING NEW PADDIES FOR SMALL FARMERS IN 30 VILLAGERS IN THE RIFT VALLEY SWAMP AREA LOCATED NEAR THE BORDER OF DODOMA AND SINGIDA ALONG THE MAJOR TRUNK ROAD RUNNING THROUGH THOSE REGIONS.

3. SOLVING ONE OF THE MOST INTRACTABLE PROBLEMS OF DEVELOPMENT IN OUTLYING RURAL AREAS- THE PROPER OPERATION, MAINTENANCE AND REPAIR OF APPROPRIATE MACHINERY FOR FARM AND OFF-FARM USE.

D. THE RESOURCES PROVIDED UNDER THIS PROPOSED PILOT PROJECT ARE RECOMMENDED AS FOOLOWS:

1. THE SERVICES OF AN EXPATRIATE AGRICULTURAL ENGINEER WITH EXPERIENCE IN SOILD/WATER MANAGEMENT OF FLOOD PLAINS FOR RICE PRODUCTION: THE EXPERT WILL STUDY PROBLEMS AND MAKE RECOMMENDATIONS ASSOCIATED WITH MANAGEMENT OF FLOOD PLAINS FOR RICE PRODUCTIONS IN THE RIFT VALLEY SWAMP AREA AND ADVISE ON THE MOST APPROPRIATE TECHNOLOGIES TO ESTABLISH NEW RICE PADDIES AND FOR THE OBJECTIVE OF INCREASING RICE PRODUCTION AMONG SMALL FARMS IN THE 30 VILLAGES OF DODOMA AND SINGIDA IMMEDIATELY AFFECTED:

2. THE SERVICES OF AN EXPATRIATE MECHANIC SKILLED IN THE OPERATION, MAINTENANCE AND REPARI OF HEAVY, INTERMEDIATE AND LIGHT MACHINERY AND EQUIPMENT. THE MECHANIC WILL DESIGN AND IMPLEMENT A TRAINING PROGRAM FOR MACHINERY OPERATION, MAINENANCE AND REPAIR AS WELL AS FOR THE MAINTENANCE OF A SPARE

3. THE SERVICES OF A TANZANIA PROJECT OFFICER RESPONSIBLE FOR MANAGEMENT AND OVERAL CO-ORDINATION OF THE PROJECT. THE OFFICER SHOULD HAVE A BACKGROUND IN DEVELOPMENT PLANNING AND/OR AGRICULTURAL ECONOMICS. THE OFFICER WILL REPORT ON PROGRESS TO A SPECIAL COMMITTEE APPOINTED BY BOTH REGIONS. SPECIFICALLY, THE PROJECT OFFICER WILL:

A) IDENTIFY AND ASSIGN A NEW ENTITY RESPONSIBLE FOR MACHINERY AND EQUIPMENT PROCUREMENT ALLOCATION, USE, REPAIR AND MAINTENANCE FOR THIS PROJECT;

B) IDENTIFY, DESIGN AND ORGANIZE COMPLEMENTARY ACTIVITIES WHICH WILL HELP TO SUSTAIN INCREASES IN RICE PRODUCTION IN THE RIFT VALLEY SWAMP AREA. THIS COULD INCLUDE ARRANGEMENTS FOR CREDIT FROM TRDB: FOR SALE AND PROCESSING F OF PADDY FROM NMC; FOR REASEARCH AND DEMONSTRATION OF IMPROVED (SHORT MATURING) VARIETIES FROM KILIMO, FOR CONSULTING SERVICS IN THE DESIGN OF OTHER ASSISTANCE ACTIVITIES RELATED TO RICE ETC.;.

C) ASSIST STAFF OF RDD IN BOTH REGIONS TO REVIEW, EVALUATE AND RESPOND TO ASSISTANCE REQUESTS FROM OTHER VILLAGES IN THE RIFT VALLEY SWAMP AREA RELATED TO RICE PRODUCTION AND CONSISTENT WITH THE FOLLOWING CRITERIA:

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ACTION AID-31

INFO OCT-01 AF-10 EB-08 /050 W
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P 281208Z AUG 79
FM AMEMBASSY DAR ES SALAAM
TO SECSTATE WASHDC PRIORITY 3454
INFO AMEMBASSY NAIROBI

UNCLAS SECTION 03 OF 04 DAR ES SALAAM 4056/03

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NAIROBI FOR REDSO/EA

(I) ABILITY OF VILLAGES TO MANAGE THES ACTIVITIES;
(II) ABILIDYT OF INSTITUTIONS AT ALL LEVELS TO EFFECTIVELY SUPPORT THESE ACTIVITIES;
(III) THE DEGREE TO WHICH THESE PROJECTS INCREASE PRODUCTIVITY AND PRODUCTION OF RICE AS WELL AS FARMER INCOMES IN THE SHORT RUN;
(IV) THE MANNER IN WHICH A FEW EXTERNAL RESOURCES EFFECTIVELY COMPLEMENT AND MOBILIZE VILLAGE RESOURCES:
(V) THE WAY IN QHICK ACTIVITIES BENEFIT A SIGNIFICANT NUMBER OF VILLAGER, INCLUDING WOMEN;
(VI) THE WILLINGNESS OF VILLAGERS TO CONTRIBUTE TO THE COSTS OF THESE DEVELOPMENT ACTIVITIES.

D) ADMINISTER A SPECIAL RICE PROJECT FUND FOR THIS PROJECT (DISCUSSED BELOW);

E) ASSIST RDD STAFF IN BOTH REGIONS - PMO AND USAID IN THE EVALUATION OF THIS PILOT PROJECT AND IN THE DESIGN OF A FOLLOW-ON PROGRAM;

F) SUPERVISE THE WORK OF THE AGRICULTURAL ENGINEERN MECHANIC AND OTHER PRSONNEL, AND COODINATE THEIR WORK WITH THE PLANNING, AGRICULTURAL AND OTHER STAFF OF BOTH REGIONS.

4. THE SERVICES OF A TANZANIAN ADMINISTRATIVE ASSISTANT ALSO RESPONSIBLE FOR LOGISTIC SUPPORT, PROCUREMENT OF GOODS AND SERVICES AND PORT CLEARING OF IMPORTED MACHINERY AND EQUIPMENT;

5. A SPECIAL RICE PROJECT FUNDS WHOSE PROCEEDS WILL BE USED TO FINANCE:

A) PROCUREMENT OF APPROPRIATE MACHINERY, AND OTHER COMMODITIES; AND,

B) A REVOLVING FUND FOR VILLAGERS TO PROVIDE ADVANCES FOR MACHINERY HEIRE: START-UP CAPITAL FOR OTHER VILLAGE RICE PROJECTS (E.G. PROCESSING, MANUFACTURE OF TOOLS AND IMPLEMENTS BY VILLAGE BLACKSMITHS) AND WORKING CAPITAL FOR RICE PRODUCTION.

IT IS INTENDED THAT VILLAGERS BE CHARGED THE FULL (USER AND DEPRECIATION) COST OF MACHINERY THEY HIRE. HOWEVER, THE CHARGES WHOULD NOT EXCEED VILLAGERS ABILITY TO PAY, WHICH IS EXPECTED TO INCREASE AS A RESULT OF THIS PROJECT.

3. THE PILOT PROJECT WILL BE IMPLEMENTED OVER A TWO YEAR PERIOD UNDER HOST COUNTRY CONTRACTING ARRANGEMENTS. THE SERVICES OF TWO PEACE CORPS VOLUNTEERS HAVE BEEN SPECIFICALLY REQUESTED BY THE REGIONAL DEVEPMENT DIRECTORS OF BOTH REGIONS. IF THESE VOLUNTEERS HAVE TRAINING AND/OR EXPERIENCE IN AGRICULTURAL ENGINEERING/ SOILS MANAGEMENT AND AGRO-MECHANICS (HEAVY EQUIPMENT) RESPECTIVELY, THEN THE TECHNICAL ASSISTANCE COSTS WOULD BE REDUCED CONSIDERABLY. ALTERNATIVELY, IF THE BACKGROUND OF THE PCV'S IN THESE SKILL AREAS IS NOT SO STRONG THEY COULD BE SUPPORTED BY SHORT-TERM EXPATRIATE CONSULTANCIES IN THESE SKILL AREAS. THE TOTAL COST OF THE PILOT PROJECT IS ESTIMATED TO BE $700,000 OF WHICH AID'S CONTRIBUTION IS $500,000. THE TANZANIAN BUDGET CONTRIBUTION WILL BE SALARIES FOR THE PROJECT OFFICER AND THE ADMINISTRATIVE ASSISTANT. TANGOV MAY ALSO CONSIDER AN INCREMENTAL BUDGET REQUEST AS A CONTRIBUTION TO THE REVOLVING PORTION OF THE SPECIAL RICE PROJECT FUND.

THE ESTIMATED BUDGET CAN BE ILLUSTRATED AS FOLLOWS:
T

USAID INPUTS	
A) TECHNICAL ASSISTANCE	100,000
2 PEACE CORPS VOLUNTEERS	
12 PERSON MONTHS SHORT-TERM CONSULTANTS	
B) TRANSPORT	$80,000
3 LAND ROVER, 2 TRAIL BIKES AND ANNUAL OPERATING COSTS	
C) HOUSING	$30,000
RENOVATION OF TWO EXISTING HOUSES IN PROJECT AREA OR CONSTRUCTION OF DUPLEX	
D) SPECIAL RICE PROJECT FUNDS	$250,000
I. PROCURREMENT OF MACHINERY/ EQUIPMENT	220,000
II. REVOLVING FUND	30,000
E) OTHER COSTS/CONTINGENCIES	25,000
TANGOV INPUTS	
A) SALARIES	$30,000
PROJECT PERSONNEL-BUDGET CONTRIBUTION	
B) CONTRIBUTIONS TO REVOLVING FUND	[illegible]
INCREMENTAL BUDGET CONTRIBUTION	
C) STAFF TIME (IMPUTED VALUE)	$20,000
REGIONAL/DISTRICT AGRICULTURAL EXTENSION STAFF AND PLANNING PERSONNEL	
D) VILLAGE LABOR CONTRIBUTION- (IMPUTED VALUE)	$120,000

III. ENVIRONMENTAL EXAMINATION

THE PID DESIGN TEAM COULD NOT PREPARE AN IEE WITHOUT MORE INFORMATION ON THE TECHNOLOGIES TO BE UTILIZED AND TESTED. THE AGRICULTURE ENGINEER AND REDSO

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Department of State — INCOMING TELEGRAM

ACTION AID-31

INFO OCT-01 AF-10 EB-08 /050 W
------------------085178 281923Z /51

P 281208Z AUG 79
FM AMEMBASSY DAR ES SALAAM
TO SECSTATE WASHDC PRIORITY 3455
INFO AMEMBASSY NAIROBI

UNCLAS FINAL SECTION OF 04 DAR ES SALAAM 4066/04

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NAIROBI FOR REDSO/EA
ENVIRONMENTAL OFFICER ASSISTED BY OTHER MEMBERS OF THE PP DESIGN TEAM WILL PREPARE THE IEE AND ESTABLISH CRITERIA FOR THE TESTING OF ALTERNATIVE TECHNOLOGIES DURING THE IMPLEMENTATION OF THE PILOT PROJECT.

THE DESIGN TEAM SHOULD ALSO DETERMINE THE TYPE AND AMOUNT OF TECHNICAL SERVICES REQUIRED DURING PROJECT IMPLEMENTATIONS TO EXAMINE THE POSSIBLE ENVIRONMENTAL IMPACTS OF AN EXPANDED PROJECT FOR THE REGIONALS. IT IS THEREFORE PROPOSED THAT AN ADDITIONAL OUTPUT OF THE PILOT PROJECT WILL BE AN ANALYSIS OF THE ENVIRONMENTAL IMPACT OF FLOOD IRIGATED INCREASED PRODUCTION OF RICE IN SMALL PADDIES AND MAKE RECOMMENDATIONS FOR PROJECT INCPUTS AND ACTIVITIES IN AN EXPANDED PROJECT.

IT IS RECOMMENDED THAT THE ASSISTANT ADMINISTRATOR APPROVE DEFEREMENT OF PROPAPATION OF THE IEE TO THE PP DESIGN AND DELEGATE AUTHORITY TO THE USAID MISSION DIRECTOR TO REVIEW AND APPROVE THE IEE.

IV. DESIGN STRATEGY AND SCOPE OF WORK FOR THE AIP/PP TEAM

USAID PROPOSES THE PP DESIGN BE UNDERTAKEN IN OCTOBER OF 1979 FOR APPROXIMATELY THREE WEEKS TO AVOID DELAY WHICH WILL BE CAUSED BY THE BEGINNING OF THE HEAVY RAINS IN NOVEMBER. THE PP SHOULD BE COMPLETED IN NOVEMBER FOR REVIEW BY THE USAID PROJECT COMITTEE. THE DISIGN TEAM WILL INCLUDE THE MISSION AGRICULTURAL DEVELOPMENT AND PROJECT DESIGN OFFICERS: REDSO ENGINEERING, CONTRACTING, LEGAL, ENVIRONMENTAL AND CONTROLLERS ASSISTANCE, A RICE AGRONOMIST TO BE PROVIDED BY IITA FROM THE KATRIN AGRICULTURAL RESEARCH INSTITUTE: AND AN AGRICULTURAL ENGINEER TO BE RECRUTITED BY THE MISSION OR AID/W.

THE SCOPE OF WORK FOR THE DISIGN TEAM AD ISSUES INCLUDE THE FOLLOWING:

A. EXAMINE THE FEASIBILITY OF RENOVATING EXISTING HOUSES OR CONSTRUCTION OF NEW HOUSING;
B. ASSES THE APPROPRIATE MIX OR TECHNICAL ASSISTANCE. FOR EXAMBLE, DETERMINE WHETHER TWO PEACE COP VOLUNTEERS (PCV'S) COMPLEMENTED BY SHORT-TERM CONSULTANTS OR A LONG-TERM AGRICULTURAL ENGINEER AND ONE PCV MECHANIC IS REQUIRED: RECOMMEND THE LENGTH OF SERVICE; AND PREPARE THE TERMS OF REFERENCE FOR THESE INDIVIDUALS;
C. IDENTIFY POSSIBLE SOURCES OF TECHNICAL ASSISTANCE AND DETERMINE THE TANGOVE CAPABILITY FOR HOST COUNTRY CONTRACTING;
D. DETERMINE AND ASSESS THE VARIOUS TECHNOLOGIES WHICH ARE APPROPRIATE TO ACHIEVING THE PURPOSE OF INCREASED RICE PRODUCTION DURING THE PILOT PHASE AND PREPARE AN EQUIPMENT LIST AND ESTIMATE OF COSTS TO MEET THE MINIMUM REQUIREMENTS OF THE PILOT PHASE;
E. DETERMINE THE RELATIVE AMOUNTS TO BE ALLOCATED TO THE EQUIPMENT AND PROJECT REVOLVING FUND. THIS WILL INCLUDE RECOMMENDATIONS FOR USER CHARGES OF THE EQUIPMENT, I.E., WHETHER THE FEE SHOULD INCLUDE OPERATING AND MAINTENANCE COSTS AS WELL AS THE AMOUNT FOR DEPRECIATION OF THE EQUIPMENT. THE QUESTION OF WHETHER A SUBSIDY IS NECESSARY TO PROVIDE THIS EQUIPMENT OR WHETHER VILLAGE FARMERS CAN INCUR THE FULL COST SHOULD BE EXAMINED AND RECOMMENDATIONS DEVELOPED;
F. PREPARE A TESTING AND EVALUATION PLAN FOR THE PILOT PHASE WHICH WILL EXAMINE THE VIABILITY AND APPROPRIATENESS OF VARIOUS TECHNOLOGIES CONSIDERING SUCH FACTORS AS MAINENANCE CAPABILITY, COSTS AND FUEL REQUIREMNTS;

G. PREPARE AND IEE AND PROJECT IMPLEMENTATION PLAN FOR EXAMINING THE ENVIRONMENTAL IMPACT OF THE PILOT PROJECT AND POSSIBLE FUTURE EXPANSION.
THE PRIME MINISTER'S OFFICER AND PREPARATION OF THE PP WILL MAKE ARRANGEMENTS FOR ESTABLISHING A PROJECT COORDINATING COMMITTEE WITH REPRESENTATION FROM THE REGIONAL DEVELOPMENT DIRECTORS AND DISTRICT PLANNING

AND AGRICULTURE OFFICERS. IT WILL IDENTIFY A TAHZANIAN PROJECT OFFICER WHO WILL BE RESPONSIBLE FOR OVERALL PROJECT MANAGEMENT AND COORDINATION AND DEFINE HIS/HER RELATIONSHIP TO THE COORDINATION COMMITTEE. PMO WILL ALSO DETERMINE THE CLEVEL OF FINANCIAL SUPPORT WHICH THE TANGOV WILL CONTRIBUTE TO THIS PROJECT AND ASSURE PLANS ARE MADE FOR ALLOCATING THESE FUNDS IN THE REGIONAL/DISTRICT BUDGETS.
APPROXIMATELY $10,000 OF POS FUNDS WILL BE REQUIRED FOR THE SERVICES OF THE AGRICULTURAL ENGINEER. [illegible] TO REC[illegible] INDIVIDUAL FROM THE INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI) IN IBADAN, NIGERIA. IF THIS IS NOT POSSIBLE AID/W ASSISTANCE IN THE IDENTIFICATION OF AN APPROPRIATE CONSULTANT WILL BE REQUESTED.
WALKER

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[illegible] 256706
SEPT. 30, 1979
1450 HRL

TELEGRAM

USAID DISTR.(10/1/79)
PROJ: 698-0410(PID)

ACTION: ~~[illegible]~~ ASR
INFO: RF
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UNCLASSIFIED
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[illegible]: [illegible], DCM, ECON, ADM, CHRON, RF

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E.O. 12065: N/A

TAGS:

SUBJECT: ACCELERATED IMPACT PROGRAM (698-0410) PID REVIEW-DODOMA/SINGIDA RICE DEVELOPMENT PILOT PROJECT (TANZANIA)

REF: (A) DAR ES SALAAM 4066= (B) 77 STATE 266868= (C) 77 STATE 070354

1. PID SUBMITTED VIA REFTEL REVIEWED SEPTEMBER 13, 1979. WHILE PROJECT COMMITTEE ENDORSED IDEA OF CARRYING OUT PROJECT THAT ADDRESSES NEED TO INCREASE RICE PRODUCTION IN COUNTRY'S TWO POOREST REGIONS, PROJECT WAS NOT APPROVED FOR FUNDING UNDER ACCELERATED IMPACT PROGRAM (AIP).

2. REVIEW RAISED FOLLOWING PROBLEMS:

- - A. AIP PROJECTS ARE GENERALLY DEVELOPED IN ANTICIPATION OF FOLLOW-ON ACTIVITIES BUILDING ON THE EXPERIENCE OF THE AIP PROJECT AND BASED ON A MISSION'S PROGRAM STRATEGY. UNTIL THE FY 1982 CDSS IS SUBMITTED, IT IS UNCERTAIN WHETHER A FOLLOW-ON PROJECT WOULD BE FUNDED WHEN THIS PILOT ACTIVITY WAS COMPLETED IN FY 1982.

- - B. PROPOSED PROJECT IS LARGELY INCONSISTENT WITH AIP CRITERIA CONTAINED IN REFS B AND C, PARTICULARLY THOSE

REQUIRING PROJECTS TO: (1) ENCOURAGE LOCAL/RURAL PARTICIPATION AND SELF-HELP, OFTEN WORKING THROUGH LOCAL INSTITUTIONS (NOTE: USE OF LOCALLY AVAILABLE RESOURCES AND AVOIDANCE OF HEAVY RELIANCE UPON EXTERNAL TECHNICAL ASSISTANCE AND COMMODITIES IS FUNDAMENTAL TO AIP CONCEPT.) (2) PROVIDE RURAL PEOPLE WITH PRODUCTIVE SKILLS, INFORMATION AND KNOWLEDGE.

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TELEGRAM

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- - C. AIP PROVIDES FUNDS FOR SHORT-TERM (24 MONTH IMPLEMENTATION PERIOD) AND, BECAUSE OF LOCAL/RURAL PARTICIPATION REQUIREMENT, FOR MORE LABOR INTENSIVE ACTIVITIES. PROPOSED PROJECT WILL LIKELY REQUIRE A LONGER TERM AND SURELY MORE CAPITAL INTENSIVE EFFORT.

- - D. PID INDICATES SERVICES HAVE BEEN REQUESTED OF TWO PEACE CORPS VOLUNTEERS (PCVRS) WITH TRAINING AND/OR EXPERIENCE IN AGRICULTURAL ENGINEERING/SOIL MANAGEMENT AND AGRO-MECHANICS. PC REPRESENTATIVE PRESENT AT REVIEW POINTED OUT THAT PC WOULD NOT RECRUIT VOLUNTEERS UNTIL EQUIPMENT WAS IN PLACE AND COULD NOT GUARANTEE VOLUNTEERS WITH EXPERTISE REQUESTED. PIDRS STATED ALTERNATIVE OF SUPPORTING DIFFERENTLY SKILLED PCVRS WITH SHORT TERM EXPATRIATE CONSULTANTS LEAVES UNCLEAR THE RESPECTIVE TECHNICAL ASSISTANCE ROLES OF PCVRS AND SHORT-TERM CONSULTANTS.

3. WHILE PROPOSED PROJECT NOT APPROVED FOR AIP FUNDING AS SUBMITTED, PROJECT COMMITTEE MADE SEVERAL SUGGESTIONS AS TO HOW PID MIGHT BE MODIFIED FOR ADDITIONAL CONSIDERATION. SUGGESTIONS FOLLOW:

- - A. CLEARLY IDENTIFY GOT ENTITY RESPONSIBLE FOR PROJECT IMPLEMENTATION, INDICATING HOW INVOLVEMENT OF VARIOUS MINISTRIES IS TO BE COORDINATED.

- - B. ADDRESS PROJECTRS ENGINEERING REQUIREMENTS, E.G., THOSE INVOLVED IN MANAGEMENT AND CONTROL OF FLOOD PLAINS.

- - C. BUDGET SHOULD BE MADE MORE PRECISE AS FOLLOWS:

- - (1) TECHNICAL ASSISTANCE -- IS THE DOLS 100,000 BUDGETED TO COVER COST OF EXPATRIATE AGRICULTURAL ENGINEER AND EXPATRIATE MECHANIC? IF SO, DOES PEACE CORPS PAY COST OF ITS VOLUNTEERS? WHO PAYS COST OF SHORT-TERM CONSULTANTS?

- - (2) TRANSPORT -- WHAT IS COST OF EACH LANDROVER AND TRAIL BIKE? PIDRS PROJECT DESCRIPTION SHOULD INDICATE HOW AND BY WHOM EACH VEHICLE IS TO BE USED. ALSO, SOURCE/ORIGIN WAIVER REQUESTS SHOULD BE SUBMITTED IF VEHICLES ARE NOT OF U.S. MANUFACTURE.

- - (3) HOUSING -- WHO IS TO OCCUPY RENOVATED HOUSES?

UNCLASSIFIED

Classification

OPTIONAL FORM 151(H)
(Formerly FS-412(H))
January 1975
Dept. of State

50151-102

Classification

FOR WHAT PERIOD? WHAT ARE ALTERNATIVES, INCLUDING COSTS, TO RENOVATION OF HOUSES?

- - (4) SPECIAL RICE PROJECT FUNDS -- MACHINERY/EQUIPMENT TO BE PROCURED MUST BE IDENTIFIED AS SPECIFICALLY AS POSSIBLE WITH ESTIMATED COST PER ITEM INDICATED.

- - D. REVOLVING FUND OPERATION ~~XXXXX~~ AND CREDIT MECHANISM MUST BE MUCH MORE THOROUGHLY ADDRESSED IN PID PROJECT DESCRIPTION. QUESTION OF RESPONSIBILITY FOR MANAGEMENT OF CREDIT FUNDS IS ONE OF PRIME QUESTIONS TO BE CONSIDERED.

4. FINALLY, PROJECT COMMITTEE PREPARED REVIEW RESUBMISSION OF PID FOR AIP FUNDING IF USAID DEVELOPS PROJECT IDEA, COMPLYING WITH REFS B AND C AND CONSIDERING PROBLEMS NOTED PARAGRAPH 2 ABOVE AND SUGGESTIONS OFFERED PARAGRAPH 3 ABOVE. VANCE

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OCT 19, 1979 1300z

INDICATE: ☐ COLLECT ☒ CHARGE TO USAID

FROM: AMEMBASSY DAR ES SALAAM

CLASSIFICATION: UNCLASSIFIED

E.O.12065: N/A

TAGS:

SUBJECT: Accelerated Impact Program (698-0410) - Tanzania Dodoma/ Singida Rice Development Pilot Project.

ACTION: SecState WASHDC 4084-55-56

INFO: AMEMBASSY NAIROBI 1650x4-52

UNCLASSIFIED DAR ES SALAAM 5052

AIDAC

NAIROBI FOR REDSO/EA

REFS: (A) DAR 4066 (B) STATE 256706 (C) DAR 4791

AID
AMB
DCM
ADMN
ECON
CHRON
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SUMMARY: PID transmitted ref A. disapproved by AID/W ref B. primarily on grounds that proposed project appears inconsistent with AIP guidelines. Mission requests AA/AFR review of issues and determination regarding suitability providing AIP funding on basis of additional information given below related to issues raised ref B. Mission Directc. highly appreciates AA/AFR reconsideration of AID/W Position in ref B. End Summary.

. Issue: (ref B, para 2A) AIP funding is provided for rojects for which follow-on activities may be proposed.

DRAFTED BY: CDPO:RMDepp:sm

DRAFTING DATE: 10/19/79

TEL. EXT.:

CONTENTS AND CLASSIFICATION: DIR:HLStevenson

CLEARANCES: PRM:WHFaulkner(draft); ADO:MFuchs-Carsch(draft); AD:JTFrench

UNCLASSIFIED
CLASSIFICATION

50152-101

OPTIONAL FORM 1
(Formerly FS-41
January
Dept. of

Ref. A, para 2.II.A. states, Quote, the objective of the pilot project is to facilitate the development (i.e. design) of a large scale (i.e. region-wide) assistance project to increase rice production and incomes among small farmers. End Quote. Para 2.II.B.7 also states Quote this pilot activity will facilitate design of other components of a larger rice development program as a follow-on to this pilot project. End Quote. Para 2.II.C., again states, Quote, the pilot project will facilitate the design of a follow-on program. End Quote. These references should illustrate a clear mission intent to consider funding of a follow-on project based on the experiences of the pilot activity.

3. Issue (Ref B, para 2.B): Quote, Proposed project is inconsistent with AIP guidelines - specifically encouraging local/rural participation and self help working through local institutions and providing rural people with productive skills, information and knowledge. End Quote.

A. With respect to local/rural participation Ref.A, para 2.I. begins by stating, Quote, request was made by district development councils to their respective regional development councils. End Quote. It is unfortunate that procedures of decentralization in Tanzania were not explained in PC review and that the PID did not provide more details on how village-level requests are directed to donors for financing. The process requires projects be approved, undertaken and coordinated by village

activities
councils. This includes communal farming/and self-help projects such as building of schools and dispensaries. In this instance several villages had already organized a self-help project -- specifically, they borrowed machinery from other regional projects to build dikes in order to entrap flood waters to allow rice cultivation. When the machinery was recalled to the projects to which it was assigned a village request was passed to appropriate ward, district and finally regional authorities for new machinery. The RDDs passed this request to the Prime Minister's Office which then requested AID assistance. In essence, the PID was responding to a request from the villages themselves and PMO was only an intermediary. While the technology issues implied by the initial request for heavy machinery was problematic, we sought to identify an appropriate source of funding which would (1) allow a quick response to villages and (2) allow flexibility to identify alternative approaches to the capital intensive request in a meaningful hands-on manner. During field visits to the project sites mission representatives discussed the feasibility of alternatives with village district and regional officials and explored their willingness to examine and test alternative technologies. Based on receptivity to this approach USAID agreed to submit a PID to AID/W.

B. The proposed project will utilize existing institutions and assist in the development of at least one local institution. As described in ref A, para 2.II.D.3. the project would assist villagers to identify existing resources, such as credit through TRDB, rice varieties from KILIMO Ag Research Institute, Marketing services of NMC, etc. The project would thus attempt to provide villagers with a linkage to existing institutions and provide the skills and information these organizations can offer. In addition, the project would establish and assist development of allocal institution to be responsible for maintenance and repair of machinery. As AID/W knows, the lack of such entities in Tanzania has resulted in significant idle and wasted xx resources due to break-downs and inadequate maintenance. This problem currently subject intense parliamentary debate in context mid-term review Third 5-Year Plan implementation, as reported and editorialized in recent issues Daily News being pouched AID/W. Thus USAID assistance in finding solutions both appropriate and timely. USAID envisions follow-on support to development maintenance/repair capacity in Dodoma/Singida through Rural Access Roads project to be designed FY 80.

4. Issue: (Ref B, para 2.C): AIP provides funding for short-term (two year) labor intensive activities. PID cable should have conveyed Mission intent to identify in PP design most likely technologies (labor versus capital) to be appropriate

to needs of villagers in this project. Pilot phase is to test these technologies in order to make sound recommendations for expanded project. Mission does not wish to preclude choice of any particular technology at this stage, and believes it properly should be a PP design question when appropriate technicians will be present to make recommendations. Wish stress however that even if machinery intensive land preparation methods employed, actual rice cultivation by villagers on new land brought into production will be highly labor intensive. Without land leveling and bunding this additional cultivation will not take place.

5. Issue (Ref B, para 2.D.): Respective roles of PCV's and short-term consultants are not defined. Mission agrees and neither is there assurance that PCV's with necessary skills are nor can be made available. Both these questions should be addressed in PP design, however Mission does believe essential skills/expertise of PCV's should include ability to organize village requests, identify source and assist in obtaining services. In addition, based on discussions with PC Director/Tanzania, he believes PC could provide person with skills in equipment maintenance. Technical services such as engineering, equipment specialist, water management, rice agronomist would be sought through short-term consultants, and/or expert visits from other on-going Mission Projects.

6. Mission provides following additional information suggested Ref B, para 3:

-- A. TanGov entity responsible for implementation is a steering committee established by Prime Minister's Office. Members include two RDD's and officials and villagers of Districts covered by the Project area. The PMO has assigned Commissioner for Planning and Control and/or the Planning Officer for Dodoma/Singida to act as chairperson. PMO indicated they will assign a full time Manager for this project who is an Agricultural Field Officer (i.e. extension officer). Involvement of various councils will be coordinated by the Project Manager. The Project would seek improve this coordination.

[redacted]

-- B. Engineering requirements - assume AID/W question is which Tanzanian entity is involved in management and control of flood plains. Ministry of Water (MAJI) is responsible for survey and mapping and engineering assistance. For design assistance REDSO water engineer has been requested and plans travel Dodoma weeks 22 and 29 October to make assessment. Septel will follow.

C. Budget - In general [redacted] info requested ref B requires level of detail in PID which Mission cannot provide without further design.

Specifics provided to extent possible.

(1)	Technical Assistance	100,000
	2 Peace Corp Volunteers	PC furnishes salary
	12 pm consultants	100,000
(2)	Transport	80,000
	3 Landrovers @ $15,000 ea.	45,000
	2 Trail Bikes @ $ 1,500 ea.	3,000
	Operating Costs and Repair:	
	3 LR @ $5,000 p.a. x 2 yrs.	30,000
	2 bikes @ $ 500 p.a. x 2 yrs.	2,000

(3) Housing to be occupied by PCVs and consultants during pilot project and later by long-term technicians

or other activities envisioned in Dodoma/Singida Regions e.g. Farmer Systems Research or Rural Access Roads. provided by follow-on project/ Alternative to renovation is new construction which requires approximately Dols. 40,000 per unit plus two years construction period. USAID and PMO willing to consider this option, but ~~AID/W should not~~ it is unlikely ALP/project technicians would occupy these units during life of pilot project if this option choosen. USAID has also been investigating feasibility of pre-fab housing. Alternative still requires laying of foundation/slab to precise specifications. Mission is not certain this is viable option. Problems such as cement being in constant shortage and the necessity of locating local company need to be addressed. Costs are estimated at Dols. 40-45,000 per unit.

(4) ~~Tractor Equipment~~ Land preparation Machinery - Items cannot be itemized and costed. This Mission does not have the necessary skills to make such decisions regarding equipment needed at this time. However, new ~~Mission~~ REDSO technical officer will also travel Dodoma to make initial assessment. PP design team will include necessary skills. FYI. Two D6's ~~has~~ had been originally requested. End FYI.

-- D. Revolving Fund :-This fund would be established jointly by the two RDD's and utilize the same structure as TRDB's lending procedures. Villages are the basic economic unit in Tanzania and therefore the lending unit for such

activities as we propose. Requests are formulated by villa and forwarded by village councils to district and then regional offices. The project steering committee would hold funds in special project account. The committee would review and approve requests and make disbursements directly to village councils. Village councils are then responsible for disbursement of funds to village members and collection of funds from use of machinery or credit provided through fund. Para 2.IV.E. of ref A contains a description of the questions to be answered during the PP design effort with respect to revolving fund.

7. This project would contribute almost immediately to increasing domestic rice production. The project could be a forerunner and facilitate design of similar projects under Title III self-help in the future. Mission's essential concern now is to move as quickly as possible with positive response to the PMO. We prefer the quick response allowed by AIP and ref. C. para 3 notes Title III does not seem feasible for FY 80. The day before we officially transmitted to the TanGov the notice regarding the $5 million available in FY 80 (for 10 to 14 K.M.T) for Title I rice we received a letter request from Minister Malecela for 50,000 M.T. Hence, Tanzania's rice shortfall is a serious problem today for which our Title I capabilities are limited, and our Title III plans a little more useful long range than possible for

immediate assistance. Special consideration is requested of the fact that this is the first village level request that PMO has forwarded to AID. Our ability to do additional village level programming through PMO will be affected by the manner and speed with which we are able to respond to this request.

VIETS

TELEGRAM

PROJ: 698-0410(FIV)
INDICATE
— COLLECT
X CHARGE TO USAID

November 6, 1979

FROM	CLASSIFICATION
AMEMBASSY DAR ES SALAAM	UNCLASSIFIED

E.O. 11652: E.O. 12065: N.A.
TAGS:
SUBJECT: Accelerated Impact Program (698-0410) - Tanzania Dodoma/ Singida Rice Development Project

ACTION: SECSTATE WASHDC PRIORITY

UNCLASSIFIED DAR ES SALAAM 5316

AIDAC

NAIROBI FOR REDSO/EA

REF: A) DAR 4066, B) STATE 256706, C) DAR 5052

XX To AFR/RA E. D. Conroy and AA/AFR G. Butcher Pass to AFR/EA H. Johnson.

1.
XX Further to our request for reconsideration of the subject proposal per reftel C, TDYers Jones and McDermott, and H. Blank from REDSO/EA accompanied Mission personnel to Singida, Manyoni and Dodoma and hereby support said request. Following additional information transmitted to facilitate rapid and thorough review and approval of subject project, TDYers prepared to join re-convened review panel upon return to AID/W if necessary.

2.
XX The rice production potential of the area appears

DRAFTED BY:	DRAFTING DATE	TEL. EXT.	CONTENTS AND CLASSIFICATION APPROVED BY
AGR:MFuchs-Carsch/PRM:RMDepp/ H.Blank/K.McDermott/H.Jones:cjd	11/06/79		DIR:HLSteverson

CLEARANCES:
PRM:WHFaulkner (draft)
AD:JTFrench (draft)

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(Formerly FS-413(H))
January 1975
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to be substantial. We have only some detailed information on the extent of the area in which the soil and water resources are favorable for rice production but have reports of 30,000 hectares in Singida Region alone. The soils are heavy black clays that have an excellent water holding capacity that show potential for the production of a crop following rice. Yields of from 1.2 to 2.5 metric tons per acre were reported to us with use of zero fertilizer and folk technology which is not surprising from this type of virgin soil. However, as time goes on technology to maintain or improve productive capacity of soil will include interventions of existing research and growing research capacity being supported by AID and other donors.

3. Production is largely based on indigenous technology which is quite simple. By hand construction of bunds approximately one meter high farmers had been able to put about 400 acres under production of rice in Manyoni District of Singida Region since the early 1950's. With the help of Regional Government machinery 200 acres have been added in 1976/77 agricultural season. The same conditions exist in the Dodoma District which use similar practices. Rice is traded extensively and is a source of cash income. The development of Dodoma city will provide expanding local market for rice in addition to the good

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existing national market.

4. Farmers rely on annual flooding of at least three rivers which drain into the Bahi swamp, an internal drainage area. The rice production area is located generally along the northern fringe of this swamp where the rivers' channels are undefined. Water enters the bunds through natural flooding of the area, not through diversion. To date farmers appear to have located bunded areas where adequate flood waters exist. We were informed the flood water generally commences in December and water stays in the rice plots for three and one half to four months and starts drying out in May. Seedbeds are planted with the arrival of the first floods and seedlings are transplanted when about 6 inches tall and when water levels permit. (Under the present regime bunded areas are not drained and minor deposits of salts were observed.) NC Fields remain flooded until rice ripens. It is not known if water disappears by seepage or by evaporation. To some extent, water leaves by evaporation, and salinization could be a problem. Black soils have a tremendous water holding capacity and much of the moisture remains in the soil after the rice harvest. With proper and reasonable cultural practices it is probably enough to produce a second

suitable crop.

5A. Mission sees some danger in expanding production area too rapidly, (a) because we don't understand the folk technology and hydrology; (b) because rapid expansion will require the participation of many more farmers many of whom may not be familiar with rice production and (c) because of the need for an overall agricultural and water management plan for the area which will be required for major expansion program. All operations after land clearing and bund construction are by labor intensive methods and neither Mission nor Government have any thoughts of changing that pattern.

B. The issue of people's participation has been discussed with TanGov officials ~~are~~ FT several levels, i.e. PMO, Regional and District. There is a consensus that a high priority will be given to organizing village groups for total involvement at all stages from initial land preparation on through the crop production process. Only the heavy-duty tasks connected with initial land development will be performed by mechanical means. Much of the plot levelling and finishing of bunds will be done by hand. This will be facilitated through the use of existing hand tools together with the introduction of improved locally made types and supplemented by a few imported pieces

~~xxxx~~

which show high potential for enhancing the productivity of manual labor. Not only is it expected to enhance the output of the project activity but is expected to have a carry over impact on the villages' attitudes towards the need for change, so necessary to increased production.

6. Mission has developed the following ideas to use as criteria for developing the PP.

A. Initial efforts would be modest owing to the uncertainties with regard to the technological base and the rapidity with which new farmers would take up rice production. These efforts would involve some improvements in current practices such as surveying of terrain and bunds and land levelling, but would not involve substanital departure from the present technology. FYI. The regional land planning officer under the RADO has prepared detailed contour maps of two villages in Dodoma. End FYI. The PP team should establish the additional acreage which could be bunded during LOP.

B. The project would involve to the fullest the current organizational structure and would intend to build capacity within that structure. Regional and district governments have units responsible for water development, agriculture, landuse, machinery maintenance, and small scale industry,

With small amounts of assistance both technical and capital these units can be expected to handle the development of the production aspects and also the milling of the rice as production expands. The project will also aim to involve national institutions in the project in ways consistent with their national role. The PP team would, more precisely, define the management organization of the project, however, Mission is convinced of the availability of technical personnel at the regional and district levels who can plan, implement and manage the project with minimum technical support and equipment. We have also been assured by the PMO of regional cooperation in carrying out the project including budget support. We do feel, however, that a technical assistance team consisting of 12 person months services of an agricultural engineer, 2 PCVs having mechanic skills and several short term personnel (agronomist, hydrologist) are necessary to supervise and provide impetus and on-the-job training to the project team. The PP team should identify alternative sources for expertise from TanGov and/or other Mission projects if qualified PCVs not available.

C. The project will also coordinate with other donor projects. Most important is the Mission's

own project in agriculture research and its intended new project that emphasizes farming systems. The opportunity presented in their region is virtually the ideal type situation for a farming systems effort. Such effort would involve a field study to understand current technology, the system in which it fits, and the farming systems and technologies on areas not bunded and used by farmers not growing rice. On the basis of this understanding research would be planned to develop improvements in technology most relevant to farmer-needs and most likely to be adapted. The Mission intends to exploit this opportunity to the utmost.

D. In the Singida Region an Australian team is working with the Regional Water Development to collect hydrologic data in the Singida Region including rainfall stations in the drainage area of the project site and three stream gaging stations on rivers flowing into the site. This is essential information for developing the long run potential of the rice region, and the project would depend heavily on the Australian effort to build this measuring capacity of the Regional Government.

E. It seems reasonable to expect that rice production in this area would double within two years, this

doubling being from a rather small base. The PP team should refine this estimate. Results from them on are difficult to predict. Over ten to twenty years of truly remarkable changes are likely, depending on the technological progress. It is Mission strategy to help with a modest capital input to exploit current technology and at the same time to initiate the process of developing improved technology that would support a higher level of capital input.

F. The PP team should also refine requirements for technical assistance. Requirement of agricultural engineer for one year increases cost of technical assistance relative to previous budget included ref C. PP team should seek least cost alternative for team. Housing requirements were also discussed during field visit and agreement was reached to locate headquarters in project area. Several towns were discussed and it was decided to locate where existing housing can most readily be located with minimum renovation. If possible, given funding limitations of AIP projects, one new unit should be constructed. PP team should identify exact equipment requirements based on acreage expansion target and the determine final budget allocation of funds for each line item. To the extent that hand tools can be purchased locally

and the TanGov can provide them additional heavy equipment could be funded by AID. A revised budget follows:

U.S. Contribution:

1.	Technical Assistance	
	1 Ag Engineer (12 p/m)	$100,000
	1 TDY Agronomist (3 p/m)	25,000
	1 TDY Hydrologist (3 p/m)	25,000
	Sub-total	150,000
2.	Equipment	
	2 D-4's ($50,000 ea C.I.F.)	100,000
	Spares	20,000
	Hand tools	40,000
	Technical equipment (surveying, drafting and hydrological)	20,000
	Sub-total	180,000
3.	Transport (see ref C for breakdown of costs)	80,000
4.	Housing - one new unit and/or renovation of existing house	40,000
5.	Revolving fund	30,000
6.	Other Costs/Contingency	20,000
	TOTAL	$500,000

G. The possible TanGov contributions are given below. The PP team should determine these contributions in greater detail in a way that minimizes AID's local currency contribution to the proposed project. This will allow flexibility in the AID budget to finance additional foreign exchange requirements.

TanGov Contribution:

1. Technical Assistance

   1 or 2 Field Officers

   2 Surveyors

   2 Draftsmen

   6 Assistants/Drivers

   Regional Ag Officers

   District Ag Officers

   Regional Hydrologist

   Regional Land Officer

2. Equipment

   Hand tools

   Technical Equipment

3. Housing

   Make housing available for PCV's

4. Village Labor

H. Peace Corp has provided transport and housing for other volunteers. If transport can be provided by PC, AID transport costs could be reduced.

Peace Corp Contribution:

1. Technical Assistance

   2 Peace Corp Volunteers

2. Transport

   2 motorcycles and operating costs

3. Housing

   Monthly rental of housing.

7. Mission requests approval to proceed preparation of PP with following team composition: Design and Project Officer (Mission), Environmentalist and water resources engineer (REDSO), Ag Engineer (consultant using dols 10,000 of PDS).

VIETS

OFFICIAL FILE

USAID DISTR. (3/25/)
ACTION: AGR
INFO: PRM
RF CHRON

TELEGRAM

PROJ: 698-0410(PID)

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NO ACTION NECESSARY
REPLIED BY: MFC

INFO AIDAC= NAIROBI FOR REDSO/EA
AMB
DCM E.O. 12065: N/A
CHRON

TAGS:

Initials

SUBJECT: ACCELERATED IMPACT PROGRAM 698-0410.30 - DODOMA/ SINGIDA RICE PRODUCTION (TANZANIA)

REF: (A) DAR ES SALAAM 1086= (B) STATE 006138= (C) 79 DAR ES SALAAM 6247= (D) 79 STATE 323021= (E) 79 STATE 256706= (F) 79 DAR ES SALAAM 5346

1. PER REF D, PID FOR SUBJECT PROJECT REVIEWED AND APPROVED BY PROJECT COMMITTEE NOVEMBER 28, 1979. ASSISTANT ADMINISTRATOR'S APPROVAL TO DEFER IEE TO PP DESIGN STAGE GRANTED MARCH 6, 1980. THEREFORE, LOP FUNDING OF DOLS 500,000 IN AGRICULTURE, RURAL DEVELOPMENT AND NUTRITION FUNDING CATEGORY APPROVED. MISSION AUTHORIZED PROCEED WITH PP. AFR DELEGATION OF AUTHORITY 1.41 AUTHORIZES MISSION DIRECTOR TO APPROVE PROJECT AND SIGN PROJECT AUTHORIZATION. REGARDING FORMAT OF PROJECT AUTHORIZATION DOCUMENT, PLEASE NOTE THAT CIRCULAR AIRGRAM A-180 OF JULY 27, 1979 (CODIFIED IN A.I.D. HANDBOOK 3, CHAPTER 8) ELIMINATED FORM PAF II AND SUBSTITUTED A SIMILAR PROJECT AUTHORIZATION DOCUMENT, WHICH IS SIMPLER IN FORM. WE SUGGEST USAID CAN EASILY REVISE THE AUTHORIZATION DOCUMENT IN ACCORDANCE WITH THE NEW FORMAT. UPON COMPLETION, FORWARD FOUR (4) COPIES COMPLETE AUTHORIZATION PACKAGE TO AID/W, TWO (2) ATTENTION AFR/RA, ONE (1) ATTENTION AFR/DP, ONE (1) ATTENTION AFR/EA. ALSO FORWARD TO AFR/RA COPY OF IEE WHEN COMPLETED

2. PROJECT COMMITTEE ADVISED FOLLOWING ITEMS TO BE CONSIDERED AND, IF NECESSARY, ADDRESSED IN PP:

A. ROLE OF AGRICULTURAL ENGINEER WILL BE PIVOTAL IN PROJECT. SUGGEST AG ENGINEER BE ASSIGNED ON 12-MONTH CONTINUOUS BASIS RATHER THAN ON SHORT-TERM CONSULTANCIES. FURTHER, BELIEVE INCUMBENT OF THIS POSITION SHOULD BE EXPERIENCED PROF

Classification
UNCLASSIFIED

EXPERIENCED PROFESSIONAL WITH WORK EXPERIENCE IN AFRICA. IF PEACE CORPS VOLUNTEER IS USED, URGE PCV HAVE SUCH BACKGROUND.

B. BUDGET REVISIONS -

(1) AS NOTED REF E, PARAGRAPH 2B, AVOIDANCE OF HEAVY RELIANCE ON EXTERNAL TECHNICAL ASSISTANCE IS FUNDAMENTAL TO AIP CONCEPT. BUDGET PROPOSED REF F, PARAGRAPH 6F SHOWS TECHNICAL ASSISTANCE COST CONSTITUTES 30 PERCENT OF TOTAL BUDGET. COMMITTEE RECOMMENDS TECHNICAL ASSISTANCE COMPONENT OF AIP PROJECT BE HELD TO 20 PERCENT REPEAT TWENTY PERCENT. IN ORDER ACHIEVE NECESSARY REDUCTION IN EXTERNAL TECHNICAL ASSISTANCE COST, SUGGEST MISSION USE LOCAL AGRONOMIST AND HYDROLOGIST FOR SHORT-TERM REQUIREMENTS.

- - (2) REF F, PARAGRAPH 6F ALSO SHOWS PRICE OF ONE D-4 AS DOLS 50,000 C.I.F. SER/COMADVISES THAT PRICE WOULD BE DOLS 70,000 C.I.F. SUGGEST MISSION THEREFORE CONSIDER PROCURING ONLY ONE D-4.

- - (3) CURRENTLY AVAILABLE HAND-TOOLS MAY HAVE TO BE SUPPLEMENTED BY EXTERNALLY PROCURED TOOLS. IF SO, MISSION SHOULD ACCOUNT FOR IN BUDGET.

- - (4) PROJECT COMMITTEE ENGINEER OBSERVED THAT BUNDS BUILT BY MACHINE ARE MORE PERMANENT THAN HAND-CONSTRUCTED BUNDS. BUT, LATTER MUCH LESS EXPENSIVE. PP SHOULD ADDRESS ISSUE OF COST VS. RELIABILITY IN BUND CONSTRUCTION.

- - (5) SUGGEST DOLS 40,000 COST OF CONSTRUCTING HOUSE PROPOSED REF F, PARAGRAPH 6.F BE CONFIRMED BY REDSO ENGINEER.

(6) PP SHOULD SPECIFY FUNDING AMOUNTS OF TANGOV AND PEACE CORPS INPUTS LISTED REF F, PARAGRAPH 6G. PARAGRAPH REFERS TO +POSSIBLE TANGOV CONTRIBUTIONS.+ PP SHOULD SPECIFY AND PROAG SHOULD COMMIT TANGOV TO SPECIFIC CONTRIBUTIONS. FAA SECTION 110(A) AS IMPLEMENTED BY A.I.D. HANDBOOK 3, CHAPTER 3, APP. 3D, REQUIRES A TWENTY-FIVE PERCENT HOST COUNTRY CONTRIBUTION

3. BUDGET ITEMS NOTED PARAGRAPH 2B ABOVE MAY REQUIRE REVISIONS BY MISSION. PROJECT COMMITTEE URGES MISSION KEE IN MIND THAT BECAUSE AIP-PROJEC

ANNEX B

LOGICAL FRAMEWORK

PROJECT DESIGN SUMMARY

LOGICAL FRAMEWORK

Project Title and Number: Rift Valley Pilot Rice Production (698-0410.30)

Life of Project:
From FY 80 to FY 82
Total U.S. Funding $500,000
Date Prepared 9/80

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Goal:	**Measures of Goal Achievement**		
To increase agricultural production and income of farmers in the Bahi Depression of Central Tanzania	1. Rice production increases. 2. Farmer incomes increase.	1. NMC records 2. Evaluation and monitoring	1. Increasing rice production will increase agricultural production. 2. Increasing rice production will increase farmers' income.
Project Purpose:	**End of Project Status**		
To test the feasibility and suitability of assistance interventions to increase rice production in the Bahi Depression area of Central Tanzania and to facilitate the design of a larger scale rice production project with cost effective and manageable interventions.	Interventions to increase rice production are found to be feasible or unfeasible, e.g.: 1. a functioning system to manage equipment is set up, 2. land developed; 3. local officials able to manage project 4. design begins for larger scale follow-on activity, etc.	1. Evaluation and monitoring; regional and district records 2. Evaluation and monitoring; Regional, district, village and Kilimo records 3. Evaluation and monitoring 4. PMO, District and Regional records.	1. There are interventions which will increase rice production. 2. It is possible to increase rice production in Bahi Depression given limitations of the area.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs	**Magnitude of Outputs**		
1. Potential rice land of project area topographically surveyed	1. Land to be surveyed includes approx. 3,000 ha by EOP	1. Topographic maps	1. TanGov will make available survey units.
2. Four hundred hectares of cleared, levelled, bunded rice land with appropriate water entry and drainage facilities.	2. 400 hectares cleared, bunded and levelled. 200 ha by 11/15/81 400 ha by 11/15/82	2. Monitoring and evaluation PCV Reports	2 a. It is possible to develop 400 ha with available equipment b. Equipment is acquired in a timely manner. c. Weather does not severely hamper land development efforts
3. Test and recommend various types, quantities and combinations of machinery and equipment necessary for establishment of rice paddies and flood plain control.	3. 1 set of recommendations	3. Monitoring and evaluation	
4. System for management of heavy land development equipment	4. 1 system	4. Regional and District records, monitoring and evaluation	
5. Traditional and improved rice varieties and production interventions tested in the project area	5. Trials and demonstrations as needed	5. Trials records, Kilimo records PCV Reports	
6. Training of personnel in the operation, maintenance and repair of machinery and in rice extension.	6. Training for 4 machine operators, 2 mechanics, 4 village extension workers	6. Monitoring and evaluation	
7. Environmental assessment	7. Environmental assessment including: - identification of threats to human health, - incidence quantified, and - vector and intermediate host populations identified	7. Monitoring and evaluation; Baseline Survey Report, Final Report	

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs:	**Implementation Target**		**Assumptions for Providing Inputs**
A. USAID	**USAID**		
1. Technical Assistance	1. a. Agriculture Engineer (12pms) b. Expenses for EA team	1. Monitoring and Eval.	1.a. Resources will be provided b. Peace Corps Volunteers with the necessary skills can be recruited and trained.
2. Commodities	2. - 2 D-6 Caterpillar tractors - 1 100 hp wheel type tractor - 1 bund former and terrace blade - 1 rome plow - 1 land plane - 1 truck and transport trailer - equipment repair tools - 3 Landrovers - 2 125 cc motorcycles - hand tools - surveying equipment	2. PIOs, purchase orders, Project Agreement - USAID records - TanGov records - U.S. Peace Corps records	2.a. CP for volunteers and EA met. Excess property available
	3. Remodeling of PCV housing	3. Engineer's inspection report	3. TanGov identifies housing.
B. TANGOV	**B. TanGov**		
1. Technical Assistance	1. 4 Heavy equipment operators (96 pms) 2 Survey crews (60%)* 4 Village Ext. Workers (50%)* 2 DDD's and staff (5%)* 2 DADO's and staff (20)* 2 Mechanics (48 pms) 3 Land Rover drivers (72 pms) 1 EA Team	1. TanGov records Peace Corps Volunteer Reports AID Project Officer trip reports	1. Treasury releases AID funds to regions within 30 days.
2. Commodities	2. Fuel, Oil and Filters	2. Inventory records	2. Fuel and other materials for vehicles are locally available.
3. Other	3. 2 Houses for PCVs	3. Field visit	
C. U.S. PEACE CORPS	**C.**		
1. Technical Assistance	1.a. 1 PCV agro-mechanic (24 pms) b. 1 PCV rice extensionist (24 pms)	1.a. PC Director field visits b. AID Project Officer visit	1.a. TanGov requests PCVs b. Suitable candidates can be identified.

* Percentage work time devoted to project over two-year period.

Annex III Page 3

ANNEX C

INITIAL ENVIRONMENTAL EXAMINATION

AND SCOPE OF WORK FOR E.A.

25 AUG 1980

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR FOR AFRICA

FROM: AFR/RA, E. Dennis Conroy

SUBJECT: Accelerated Impact Program 698-0410.30 - Rift Valley Rice Production (Tanzania)

Problem: USAID/Tanzania has recommended in its Initial Environmental Examination (IEE) for the subject project a positive determination with an environmental assessment of the health related problem during the implementation of this pilot project.

Discussion: State 194172, paragraph 2, requests Mission cable Scope of Work for conducting the environmental assessment, and queries whether the Mission has allocated sufficient funds to do so within the approved project funding level. Dar Es Salaam 4219 responds.

A.I.D. Regulation 16, paragraph 216.2(a)(2) requires a threshold decision, based on the Mission's recommendation, by the Assistant Administrator.

Recommendation: That your threshold decision be a positive determination with an environmental assessment during the project as recommended by the Mission, and that you sign the attached IEE to so indicate.

Attachments:
1. Initial Environmental Examination
2. State 194172
3. Dar Es Salaam 4219

Clearance:
AFR/RA:JRose
AFR/RA:JWDawson
AFR/EA:BKline
AFR/DR:JHester
GC/AFR:BKBarrington
AA/AFR:WHNorth

Drafted by AFR/RA:EWYates:rg:8/6/80:X-22889

INITIAL ENVIRONMENTAL EXAMINATION

Project Location:	Tanzania
Project Title:	Rift Valley Pilot Rice Production
Funding:	FY 1980 $500,000/-
Life of Project:	$500,000/-
IEE Prepared by:	USAID/Tanzania **Date:** June 26, 1980

Environmental Action Recommended:

Positive Determination with Environmental Analysis during pilot project implementation (page 4)

Concurrence:

Mission Director: [signature] Date: 26 June 1980

Decision: Approved

Assistant Administrator: [signature] Date: 8/25/80

Initial Environmental Examination

I. Project Description

The objective of this pilot project is to test the feasibility/ suitability of assistance interventions to increase rice production in a four village area of the rift valley of central Tanzania.

The project will include on-the-job training of Tanzanians in the maintenance and repair of heavy machinery; the clearing, levelling and bunding of approximately 500 ha. of potential rice land and the establishment of observation/demonstration trials of rice varieties and cultivation techniques.

The four villages are inhabited by Wagogo people. Over the years some immigration of Nyamwezi from the west and Sukuma from the northwest has occurred. The Wagogo are herders and subsistence farmers, but recently have been searching for a cash crop which will do well in their semi-arid environment. The project area has an elevation of approximately 2700 m. and an average annual precipitation of 520 mm. Rice cultivation is possible because of flood water from the Bubu river drainage in the north and from several small river drainages in the northwest. Soils are classified as "vertisols" with "dryland savannah" type vegetation. Farmers in the area have been growing rice on a small scale for the past thirty years.

II. Possible Environmental Impact (see Attachment A)

A. Land Use

1. Changing the character of the land through

(c) Land Clearing

Land to be cleared and developed for rice production under this pilot activity is, at the present time, being used for the grazing of livestock, the growing of subsistence crops such as millet and sorghum and the cultivation of rice on a scattered basis. With clearing, this land could be subject to increased water erosion. It is expected that with the system of bunds and ditches envisaged by the project, erosion will be kept to a minimum.

(d) Changing soil character

It is anticipated that the character of the soil will change somewhat through the continuous use of irrigation/flood water and the monoculture of rice in the pilot project area. The pH of the soil as well as electrical conductivity indicating salinity should increase slightly over time due to the repeated application of irrigation water and subsequent evaporation and also by salts set down through use of chemical fertilizers. Without the addition of fertilizers or farm yard manure soil fertility will decline. Soil organic matter will also decline over time and soil structure may become less well defined leading to a possibility of soil compaction and decreased water percolation.

B. Water Quality

1. Physical State of Water

Rivers and streams will not be diverted or dammed by the project, but flood waters will have a greater opportunity to pick up silt and perhaps salts and deposit them in permanent water channels or bodies of water.

2. Chemical and biological states

Use of herbicides or insecticides is not anticipated in the project. As mentioned above, flood waters moving through the project area will have a greater opportunity to pick up silt and salts but it is not anticipated that this build-up will be of sufficient magnitude to affect the environment of plants and/or animals.

D. Natural Resources

1. Diversion, storage or increased use of water

Since the flood water to be utilized for irrigation purposes is only available when water is in greatest supply in the project area, it is not anticipated that increased use of water by the pilot project will result in water deprivation to plants and/or animals.

The project will provide a breeding ground for the mosquito vectors of malaria and other anthropod bourne diseases and a suitable environment for the snail which is the intermediate host of the bilharzia schistosome. More importantly, with the project more people

may come in contact with cercariae infested water leading to increased incidence of bilharzia. Discussions with the Regional Medical Officer in the project area, revealed that bilharzia is already a problem, even though there is very little standing water for six months out of the year. The medical officer indicated that the snail can burrow into moist soil and estivate for a period of nine to twelve months.

III. Recommendation for Environmental Action

Effects of the project on land use, water quality and soil characteristics will be monitored during the normal course of the project, since these effects will impact on project success, but it is not felt that they will be of sufficient magnitude to warrant separate investigation.

The increased threat to human health could have a more significant effect on the human and physical environment. For this reason a positive determination is recommended with an environmental assessment of the health related problem during the implementation of the pilot project. The project will make available funds to periodically survey villagers in the project area for incidences of disease and to propose means for decreasing the threat to human health. Results of this assessment will be used when designing the larger follow-on activity, if the pilot project is successful.

The Assistant Administrator is requested to approve the positive determination and the Mission proposal to undertake an environmental assessment during project implementation.

ATTACHMENTS:

A. Impact Identification and Evaluation Form.

B. State cable 117103

ATTACHMENT A

IMPACT IDENTIFICATION AND EVALUATION FORM

Impact Areas and Sub-areas 1/	Impact Identification and Evaluation 2/
A. LAND USE	
1. Changing the character of the land through:	
a. Increasing the population	N
b. Extracting natural resources	N
c. Land clearing	L
d. Changing soil character	L
2. Altering natural defenses	N
3. Foreclosing important uses	N
4. Jeopardizing man or his works	N
5. Other factors	
_____	_____
_____	_____
B. WATER QUALITY	
1. Physical state of water	M
2. Chemical and biological states	L
3. Ecological balance	N
4. Other factors	
_____	_____
_____	_____

1/ See Explanatory Notes for this form.

2/ Use the following symbols:
N - No environmental impact
L - Little environmental impact
M - Moderate environmental impact
H - High environmental impact
U - Unknown environmental impact

August 1976

C. ATMOSPHERIC

1. Air additives ——— N
2. Air pollution ——— N
3. Noise pollution ——— N
4. Other factors

_____ N

_____

D. NATURAL RESOURCES

1. Diversion, altered use of water ——— H
2. Irreversible, inefficient commitments ——— N
3. Other factors

_____

_____

E. CULTURAL

1. Altering physical symbols ——— N
2. Dilution of cultural traditions ——— N
3. Other factors

_____

_____

F. SOCIOECONOMIC

1. Changes in economic/employment patterns ——— N
2. Changes in population ——— N
3. Changes in cultural patterns ——— N
4. Other factors

_____

_____

G. HEALTH

1. Changing a natural environment _____ N

2. Eliminating an ecosystem element _____ N

3. Other factors

_____

_____

H. GENERAL

1. International impacts _____ N

2. Controversial impacts _____ N

3. Larger program impacts _____ N

4. Other factors

_____

_____

I. OTHER POSSIBLE IMPACTS (not listed above)

_____

_____

_____

MEMORANDUM

TO: AA/AFR, Goler T. Butcher

FROM: GC/AFR, Belinda K. Barrington BKB

SUBJECT: AID 698-0410.30 -- Rift Valley Rice Production (Tanzania) IEE

I have cleared the attached action memo requesting your approval of the IEE submitted by the Tanzania Mission in connection with the referenced project. The IEE calls for a positive determination as a threshhold decision and for an Environmental Assessment to be performed during the course of project implementation. Regulation 16 contemplates that an EA, if required, should be completed prior to authorization of a proposed project, and insofar as the recommendation in the IEE deviates from the framework of Regulation 16, I wish to address its legality.

AID Regulation 16, Section 216.3(a) states that the IEE shall be completed "in sufficient time to allow for the completion of an Environmental Assessment or Environmental Impact Statement, if required, before a final decision is made to provide AID funding for the project." The Regulation clearly contemplates that an EA, if required, shall be completed prior to project authorization in order that data acquired during the course of preparing the EA may be taken into account in project design so as to mitigate negative environmental consequences of the project.

The revisions to Regulation 16 which are currently being circulated for clearance within AID contemplate situations in which finalization of an EA, or even an IEE, before project approval may not be feasible. Thus, revised Reg. 16, Section 216.3(a)(7) contemplates instances where an environmental review of all aspects of the project may not be completed before financing for the project as a whole is authorized; the rule in such a case is to complete an environmental review of each aspect of the project before making an "irreversible commitment of resources" to such aspect of the project.

The referenced project contemplates activities which will presumptively have harmful effects on the environment, yet it also includes activities -- such as the procurement of farm machinery --which in themselves will not negatively impact on the environment. Regulation 16, as currently written and as amended, could be read so as to permit environmentally-neutral project activities to begin before preparation of an EA on environmentally-sensitive project activities. The IEE requests that an EA be performed during project implementation. Although an EA on

project activities such as site preparation and rice production which may affect the environment may not be delayed until those activities are underway, the project as a whole may be authorized and funds for the whole project obligated, provided that a condition precedent is included in the project authorization prohibiting disbursement for any project activities which might have negative impacts on the environment until an EA has been prepared on those aspects of the project and any recommendations made in the EA to ameliorate negative environmental effects made a part of project design.

cc: AFR/DR, JHester
AFR/RA, EDConroy
AFR/RA, JRose
AFR/RA, JDawson
AFR/EA, BKline

Clearance:
GC/AFR:EADragon EAD date 8/21/80

Department of State

OUTGOING TELEGRAM

PAGE 01 STATE 194172 032920 AID4814
ORIGIN AID-35

ORIGIN OFFICE AFEA-03
INFO AAAF-01 AFRA-03 AFDR-06 CH8-01 FM-02 AADS-01 DSAG-02
CH8-01 AGRI-01 HEW-09 RELO-01 MAST-01 ADHE-01
/033 A3 2

ORIGIN OFFICE NENA-03
INFO AANE-01 NEDP-01 PPCE-01 PPPB-02 PPEA-01 PDC-02 CH8-01
PVC-02 PDPR-01 /015 A4 12

INFO OCT-00 /035 R

DRAFTED BY AID/AFR/EA, B KLINE, CMW
APPROVED BY AID/AFR/EA, H JOHNSON
AFR/DR/SDP, J HESTER (PHONE)
AFR/RA, E YATES (PHONE)
AFR/EA, F PERRY
DESIRED DISTRIBUTION
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TO AMEMBASSY DAR ES SALAAM PRIORITY
INFO AMEMBASSY NAIROBI PRIORITY

UNCLAS STATE 194172

AIDAC NAIROBI FOR REDSO

E.O. 12065: N/A

TAGS:

SUBJECT: IEE FOR RIFT VALLEY PILOT RICE PRODUCTION PROJECT

REF: DAR 3966

1. IEE WAS DISTRIBUTED IN AID/W JULY 7 FOR REVIEW. ADO M. FUCHS-CARSCH HAS DISCUSSED IEE WITH AFR/DR/SDP AND AFR/RA.

2. ONE QUESTION REMAINS PRIOR TO TRANSMITTAL TO AA/AFR FOR APPROVAL. REQUEST MISSION CABLE TEXT OF SOW DEALING WITH HOW EA WILL BE CONDUCTED ALONG WITH PROJECT TOTAL BUDGET. HAS MISSION SET ASIDE ENOUGHTO FULLY FUND EA? MUSKIE

ACTION AID-35

ACTION OFFICE AFEA-03
INFO AAAF-01 AFRA-03 AFDR-06 CH6-01 PPCE-01 PDPR-01 PPPB-02
PPEA-01 FM-02 AADS-01 DS/A-02 DSHE-01 CH8-01 AGRI-01
HEV-09 RELO-01 MAST-01 AFDA-01 /039 A3 2

INFO OCT-01 /035 W
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FM AMEMBASSY DAR ES SALAAM
TO SECSTATE WASHDC PRIORITY 7347
INFO AMEMBASSY NAIROBI

UNCLAS SECTION 01 OF 02 DAR ES SALAAM 4219

AIDAC

NAIROBI FOR REDSO/EA

E.O. 12065 N/A
SUBJECT: IEE FOR RIFT VALLEY RICE PRODUCTION PROJECT

REF: (A) STATE 194172 (B) DAR 3966

1. PER REFTEL A SOW FOR EA AND PROJECT TOTAL
BUDGET ARE AS FOLLOWS:
A. SCOPE OF WORK
(1) IDENTIFY DANGERS TO HUMA HEALTH POSED BY PILOT PROJECT.
(A) LITERATURE REVIEW OF:
(I) SCHISTOSOMIASIS
(II) ARBO DISEASES SUCH AS MALARIA, DENGUE FEVER, ETC.
(III) OTHER HEALTH PROBLEMS RELATED TO PROJECTS WITH LAND
AND WATER DEVELOPMENT COMPONETS.
(B) BASELINE SURVEY:
(I) REPRESENTATIVE SAMPLING OF PRIMARY SCHOOL CHILDREN IN
FOUR VILLAGE PROJECT AREA.
(II) RANDOM SAMPLING OF RICE FARMERS AND FAMILIES.
(III) MOSQUITO AND SNAIL COUNTS.
(IV) EXAMINATION OF PROJECT AREEYE
LTH D SPENSARY RECORDS.

(2) YUANTIFY DANGERS TO HUMAN HEALTH
(A) BASED ON:/
(I) FOUR SQUARE KILOMETER AREA TO BE CLEARED AND BUNDED.
(II) 3,500 VILLAGERS IN PROJECT AREA.
(III) 2,600 VILLAGERS ACTIVELY INVOLVED IN RICE PRODUCTION.
(B) POSSIBILITY OF SPREAD OF DISEASE BY:
(I) HUMAN CONTACT
(II); -,85-589, I-2(8)583 I.E., OPEN PIT LITRINES,
CONTAMINATION OF WATER SOURCE ETC.

(3) MONITORING
-PERIODIC
(I) EXAMINATION OF PRIMARY SCHOOL CHILDRN
(II) RANDOM SAMPLING OF RICE PADDY WORKERS
(III) MOSQUITE AND SNAIL COUNTS.

(4) RECOMMENDATIONS

(A) FOR CONTROL OF PROBLEMS IDENTIFIED.
(B) SCOPE AND CONTROL OF PROBLMS ANTICIPATED FOR ANY
FOLLOW-ON ACTIVITY.
B. PROJECT BUDGET
----

(1) USAID
(A) TECHNICAL ASSISTANCE:

-AGRICULTURE ENGINEER (3 PMS)	42,000
-EA TEAM EXPENSES	25,000

DAR ES 04219 01 OF 02 291334Z 032930 AID

(B) COMMODITIES

-1D6 CATERPILLAR TRACTOR NEW	150,000
- WITH 20 PERCENT SPAR PARTS	
- 1 D6 CATERPILLAR TRACTOR (EXPROP)	80,000
-WITH 20 PERCENT SPARE PARTS	
-1 ROME PLOW	14,000
-1 LAND PLANE	14,000
-1 TRUCK WITH TRANSPORT TRAILER (EXPROP)	50,000
-EQUIPMENT REPAIR TOOLS	2,000
-2 125 SUZUKI MOTORCYCLES	3,000
-2 LAND ROVERS PLUS 10 PERCENT SPARES	32,000
-HAND TOOLS	10,000
- SURVEYING EQUIPMENT	2,000
-MATERIALS FOR PROCESSING EQUIPMENT	1,000
-MISCELLANEOUS	5,000

(C) OTHER

-REMODELING OF PCV HOUSING	10,000
(D)-CONTINGENCY PLUS INFLATION	60,000
(E) TOTAL	500,000

(2) TANGOV
(A) TECHNICAL ASSISTANCE
(I) PROJECT DOL

- 4 HEAVY EQUIPMENT OPERATORS	7,000
- 2 SURVEY CREWS (60 PERCENT)*	10,000
- 6 VILLAGE EXTENSION WORKERS (50 PERCENT)*	3,500
-2 DDOS AND STAFF (5 PERCENT)*	5,000
-2 DADOS AND STAFF (20 PERCENT)*	10,000
-2 MECHANICS	3,500
-2 LAND ROVER DRIVERS	3,500

(II) ENVIRONMENTAL ASSESSMENT

-1 PARASITOLOGIST (1 PM)	1,000
- 2 REGIONAL MEDICAL OFFICERS (5 PERCENT)*	100
-1 SPECIALIST IN COMMUNITY MEDICINE (1PM)	1,000
- BASELINE AND MONITORING TEAMS	400

* PERCENTAGE OF WORKS TIME DEVOTED TO PROJECT OVER TWO YEARS PERI

(B) COMMODITIES- FUEL, OIL AND FILTERS	150,000
(C) OTHER - 2 HOUSES IN KINTINKU	10,000
(D) TOTAL	203,700

(3) U.S. PEACE CORPOS
(A) TECHNICAL ASSISTANCE

- 1 PCV AGRO-MECHANIC	20,000

90x

PAGE 01 DAR ES 04219 02 OF 02 291416Z 032922 AID2679
ACTION AID-35

ACTION OFFICE AFEA-03
INFO AFRA-03 AFDR-06 CH8-01 PPCE-01 PDPR-01 PPPB-02 PPEA-01
FM-02 AADS-01 DSAG-02 DSHE-01 CHS-01 AGRI-01 HEW-09
RELO-01 MAST-01 AFDA-01 /038 A3 2

INFO OCT-01 /036 W
114875 291416Z /50

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FM AMEMBASSY DAR ES SALAAM
TO SECSTATE WASHDC PRIORITY 7352
INFO AMEMBASSY NAIROBI

UNCLAS FINAL SECTION OF 02 DAR ES SALAAM 4219

AIDAC

NAIROBI FOR REDSO/EA

-1 PCV WITH FARM BACKGROUND AND TRAINING IN RICE EXTENSION 20,000
(B) TOTAL 40,000

(4) GRAND TOTAL 745,700

2. MISSION HAS IDENTIFIED MUHIMBILI MEDICAL CENTER, UNIVERSITY OF DAR ES SALAAM AS INSTITUTION WITH CAPABILITY TO CONDUCT ENVIRONMENTAL ASSESSMENT OF POTENTIAL HUMAN HEALTH PROBLEMS. DETAILS HAVE NOT BEEN FINALIZED AS YET, BUT AS OF NOW MEDICAL CENTER WILL PROVIDE PERSONNEL WITH USAID COVERING EXPENSES SUCH AS TRANSPORTATION, BORAD AND ROOM AND SUPPLIES.

3. MISSION BELIEVES IT HAS IDENTIFIED THE LEAST COST AND MOST EFFICIENT MEANS FOR CONDUCTING A FULL SCALE ENVIRONMENTAL ASSESSMENT OF A PILOT PROJECT WHICH IS LIMITED TO $500,000. MISSION FEELS DOLLARS 25,000 WILL BE ADEQUATE TO COVER MEDICAL CENTER EXPENSES AND EMPHASIZES THE HIGH LEVEL OF EXPERTISE WHICH THE MEDICAL CENTER CAN PROVIDE AND WHICH WILL BE PART OF TANGOV CONTRIBUTION. MISSION ALSO POINTS OUT THAT OTHER PROJECT PERSONNEL SUCH AS PCVS, AG. ENGINEER, AND TANZANIAN PROJECT MANAGERS WILL BE ASSISTING IN EA. ADDITIONAL FUNDS FROM PROJECT CONTINGENCY FUND OF DOLLARSS 60,000 WILL BE AVAILABLE IF NEEDED.

4. GIVEN THE EXPERTISE AND INTEREST OF MEDICAL CENTER PERSONNEL, THEIR ABILITY TO MONITOR THE PROJECT THROUGHOUT THE TWO YEARS AND THE DESIRE TO INVOLVE TANZANIAN IN TANZANIAN PROJECTS, MISSION FEELS ENVIRONMENTAL CONCERNS WILL BE APPROPRIATELY ADDRESSED.

5. MISSION HAS COMPLETED DRAFT OF PP AND PLANS MISSION REVIEW IN NEARFUTURE. PROJECT DESIGN EMPHASIZES UTILIZATION OF IN-COUNTRY TECHNICAL EXPERTISE AND PCVS WITH USAID PROVIDING LAND DEVELOPMENT EQUIPMENT. PROJECT RELIES HEAVILY ON LONG-TERM TECHNICIANS FROM THE ILONGA RESEARCH STATION WHICH IS SUPPORTED BY THE USAID AG. RESEARCH PROJECT AND WILL UTILIZE PERSONNEL OF THE NEW FARMING SYSTEMS RESEARCH PROJECT IN ADDITION TO THE SHORT TERM CONSULTATIONS MENTIONED IN THE PROJECT BUDGET. THESE TECHNICIANS WILL ALSO CONTRIBUTKE TO THE ON-GOING EA.
FISCHER

OF' ICIAL FILE 17103
MAY 4, 1980
1020 HRS

USAID DISTR: (5/5/80)
ACTION: AGR
INFO: PRM
RF
CHRON

TELEGRAM

PROJ: 698-0410(Evaluati

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INFO RUQMNI/AMEMBASSY NAIROBI 6141
BT
UNCLAS STATE 117103

NO ACTION ... REPLIED TO: Cable 6/26/80
DAR 3624

AIDAC: FOR NAIROBI, PLEASE PASS TO REDSO/EA

E.O. 12065: N/A

TAGS:

SUBJECT: ACCELERATED IMPACT PROGRAM 698-041___

REF: (A) DAR ES SALAAM 1911= (B) DAR ES SALAAH 1787= (C) DAR ES SALAAM 1708= (D) STATE 075291= (E) DAR ES SALAAM 1252

1. IN RESPONSE REF A, PARAGRAPH 4, REGARDING NEED FOR ENVIRONMENTAL ASSESSMENT (EA) FOR SUBJECT PROJECT, INITIAL ENVIRONMENTAL EVALUATION (IEE) MUST FIRST BE DONE. IF THE IEE CONFIRMS THE RECOMMENDATION OF THE REGIONAL ENVIRONMENTAL OFFICER, MENTIONED REF C, PARAGRAPH 1, THEN THE EA WOULD BE NECESSARY. PROPOSE, HOWEVER, THAT THIS EXPERIMENTAL PROJECT COULD BE MODIFIED TO INCLUDE WITHIN IT AN ASSESSMENT OF THE ENVIRONMENTAL IMPACT OF THE EXPERIMENTAL EFFORT, AS WELL AS THAT OF A LARGER, FOLLOW-ON RICE PRODUCTION PROJECT FOR THE REGION. THIS WOULD ELIMINATE NEED FOR SEPARATE EA BEFORE APPROVAL OF AIP PROJECT AND REDUCE DESIGN EFFORT FOR FOLLOW-ON PROJECT. LOP COST WOULD HAVE TO REMAIN WITHIN THE DOLS 500,000 APPROVED. REQUEST REDSO AND USAID COMMENTS THIS PROPOSAL.

2. IN RESPONSE REF E, EQUIPMENT SPECIALIST MOSELY NOT AVAILABLE FOR SUBJECT PROJECT IN NEAR FUTURE. REGARDING SALINE ENVIRONMENTAL IMPLICATIONS, SALINITY HAZARD, ACCORDING TO GILL COREYRS LIMITED KNOWLEDGE OF THE PROJECT, WOULD BE MINIMAL TO NON-EXISTENT. ANNUAL FLOODING OF SOIL ITH QUANTITIES OF GOOD QUALITY WATER SUFFICIENT FOR RICE PRODUCTION PRECLUDES POSSIBILITY OF SALINITY PROBLEMS. ONLY POSSIBILITY OF SALINITY PROBLEM WOULD OCCUR IF RIVER

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Classification

WATER WAS SALINE AND THE SOILS WERE HIGHLY SALINE. THIS SELDOM OCCURS WITH FLUVIAL SOILS. UNDER GOOD MANAGEMENT THESE WOULD BE VERY GOOD AGRICULTURAL SOILS.

3. WILL CONTINUE EFFORTS TO IDENTIFY SUITABLE AG ENGINEER/SOIL CONSERVATIONIST AS REQUESTED REF B. PARAGRAPH 4. WILL ADVISE. NEWSOM
BT
£7103

NNNN

UNCLASSIFIED
Classification

TELEGRAM

PROAG:PROJ: 698-0410

USAID DISTR. (8/28/80) AMEMBASSY DAR ES SALAAM
ACTION: PRM
INFO: REN
RF
CHRON

ACTION
AID-5

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STATE 228785

AUG 28, 1980
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FM SECSTATE WASHDC
TO AMEMBASSY DAR ES SALAAM IMMEDIATE 4274
BT
UNCLAS STATE 228785

AIDAC

E.O. 12065: N/A

TAGS:

SUBJECT: AIP(698-0410.30)RIFT VALLEY RICE PRODUCTION

1. THE I.E.E. FOR SUBJECT PROJECT WAS APPROVED ON AUGUST 25, SUBJECT TO CONDITIONS SET FORTH BELOW.

2. PRIOR TO DISBURSEMENT FOR ANY ACTIVITIES WHICH MIGHT HAVE A NEGATIVE IMPACT ON THE ENVIRONMENT, OR THE ISSUANCE OF ANY COMMITMENT DOCUMENTS AUTHORIZING SUCH DISBURSEMENT UNDER THE PROJECT, THE ENVIRONMENTAL ASSESSMENT CALLED FOR IN THE I.E.E. SHALL HAVE BEEN PERFORMED AND RECOMMENDATIONS CONTINUED THEREIN MADE A PART OF PROJECT DESIGN.

3. ALLOTMENT FOLLOWS SEPTEL. AID/W URGES AUGUST OBLIGATION. CHRISTOPHER
BT
#8785

UNCLASSIFIED
Classification

OPTIONAL FORM 161(H)
(Formerly FS-412(H))
January 1978
Dept. of State

50161-102

Scope of Work - Environmental Assessment.

Rift Valley Pilot Rice Production Project

1. Identify Danger to Human Health Posed by Pilot Project.

   A. Literature Review of

      (1) Schistosomiasis
      (2) Arbo diseases such as malaria, dengue fever, etc.
      (3) Other health problems related to projects which include land and water development.

   B. Baseline Survey

      (1) Representative sampling of primary school children in the four village area.
      (2) Random sampling of rice farmers and families.
      (3) Mosquito and snail counts in project area
      (4) Examination of area health dispensary records.

2. Quantify Dangers to Human Health

   A. Based on

      (1) four square kilometer area to be cleared and bunded
      (2) 8,500 villagers in project area
      (3) 2,000 villagers who will be actively involved in rice production.

   B. Possibility of spread of disease by

      (1) human contact
      (2) sanitation facilities i.e. open pit latrines, contamination of water source etc.

3. Monitoring

   - Periodic

      (1) examination of primary school children
      (2) random sampling of rice paddy workers
      (3) mosquito and snail counts.

4. Recommendations

   A. Control of problems encountered in pilot project

   B. Scope and methods for control of problems anticipated in any follow-on activity.

ANNEX D

DESIGN TEAM TRIP REPORTS

Proposed "Rift Valley Rice Project" Pilot Area on Lake Bahi, Tanzania, June 16-19, 1980.

I. Purpose

The district development councils of the Dodoma and Singida regions made a request in January 1979 to USAID Dar es Salaam for assistance in development of dikes for establishment of more rice paddies on the flood plains of the rift valley swamp area of Lake Bahi which is located in parts of both regions. To further assess some of the potential and constraints of the area for increasing rice production and particularly for the purpose of developing a two years pilot project proposal that will be financed by USAID with a grant of $500,000 under the Accelerated Impact Program, a team visit to the area was arranged by USAID office in Dar es Salaam between June 16-19.

Following are the team members that visited the proposed pilot area:

- Dr. Michael Fuchs-Carsch, team leader, agricultural economist and head of USAID agricultural division in Dar es Salaam
- Mr. Tim Miller, agronomist and officer in charge of the rice pilot project, USAID Mission in Dar es Salaam
- Dr. R. D. Robbins, agricultural economist, North Carolina A&T University, Greensboro
- Mr. Chitti Babu, agricultural engineer, ICRISAT, on temporary assignment to IITA/USAID, Ilonga project, and
- Dr. B. T. Kang, soil scientist, IITA, Ibadan, Nigeria.

II. Some Physical Features of Lake Bahi

Lake Bahi is located east of Dodoma, between approximately latitudes 5.8 - 6.2 South and 35.0 - 35.5 East. It is a seasonal inland swamp with an area of approximately 155 km^2 1/ The rainy season in the area extends from December to April, with high variability in the average annual precipitation ranging from 400-600 mm 2/. The area also has a high annual average potential evaporation ranging from 2200-2400 mm 3/, resulting in high evapo-transpiration ratios

1/ Morgan, W.T.W., 1969, East Africa: Its people and resources. Oxford Univ. Press, Nairobi

2/ Tomsett, J.E., 1969. Average monthly and annual rainfall maps of East Africa. E.A.M.D. Tech. Mem. No. 14, Nairobi

3/ Woodhead, T., 1968. Studies of potential evaporation in Tanzania. Min of Lands, Settlements and Water Development, Dar es Salaam

of between 7-9 indicating the arid condition of the area.

It was mentioned that annual flooding of the lake commences in December and water starts receding in May. The main body of water comes from flood water from a number of rivers and streams and run-off water, the lake is also a major drainage basin of the Bubu river in the North. The lake water depth is rather shallow, with a maximum depth of 2m[1].

Despite the semi arid conditions of the area (classified as dry season savannah by Morgan[4]), however, due to the seasonal flooding, the lower part of the lake shows luxurious grass vegetation, with the higher parts of the lake showing a mixture of shrubs and small trees mainly Combretum, Terminalia and Accacia spec. We noticed in much of the visited area signs of overgrazing.

The soil of the Lake Bahi area consists for a greater proportion of Vertisols, locally called "mbugas", on a flat to slightly depressed topography with natural slopes estimated to be less than 1%. The soils are formed from transported quartenary alluvial and colluvial sediments. From the few locations tested (see part III), the surface soils vary in texture from vandy clay loam to clay loam. Though normally these Vertisols are placed among the more fertile soils for rice growing, workability of these Vertisols sometimes poses some problems. Seedbed preparations of these Vertisols has to be done under exactly the right moisture conditions e.g., neither too wet nor too dry, because in both cases the workability of the soil is unfavourable. Although salinization under certain conditions can be a problem for the use of the Vertisols for rice production, however, random testing of some of the traditional farmer's paddies in the project area (see part III) did not as yet indicate any salinity problems.

The Vertisols in Lake Bahi can be grouped in the usterts sub group. These are Vertisols with cracks that open for more than 90 days unless the soil is irrigated, but close during the wet season for more than 60 consecutive days.

III. Notes on Traditional Farming Systems

1. During its visit to Dodoma and Singida districts the team members met with (1) Mr. P.O. Chikira, Assistant Commissioner for Planning and Information in the Prime Minister's Office at Dodoma and (2) Mr. T.A. Kamugisha, Regional Agricultural Development Officer, Dodoma Region.

4/ Morgan, W.T.W., 1973. East Africa. Longmans, London

2. June 16 and 17 accompanied by Mr. M. Mayega (Land Planning Officer in Dodoma RADO office) the team visited Chali Isungha and Bahi Makulu (see map) both in Dodoma district.

a) Chali Isungha and Chali Makulu (not visited) are important rice growing areas in the south-eastern corner of the lake. According to Mr. Mayega, over 20 ha of rice is grown in both villages with an area of 250 ha for possible expansion (part of this area has been surveyed and contour maps with 50 cm intervals are available with Mr. Mayega). Mr. Makasi (Chali Isungha village head) mentioned that rice cultivation was first introduced in the early 1950s to the local Gogo people in the area by Nyamwezi settlers from Tabora.

The few paddies we have seen in Chali Isungha were all well prepared and well laid and contoured. Sizes are variable and generally small ($\ll$0.25 ha). Bunds are hand made (using dug out soil from around the paddy field) and vary in height (25-100 cm). Simple provisions are made in the bunds of each paddy for easy water entry and outlet of excess water.

The paddies depend on rain and particularly natural run-off and flood water for their water supply, and not through any water diversions. During the growing period the water level is "maintained" at about $\pm$30 cm depth since deeper water resulted in lodging. It should be noted, that since there is no levelling done inside the paddies, water level within each plot is expected to be variable. This was noticed as poorer rice growth in the depressions within the paddies.

Rice nurseries are usually established near the compounds in December, and the seedlings transplanted in January-February depending on the arrival of sufficient flood water in the paddies. There is no soil preparation in the paddies before transplanting. Crop residue is usually burned in the dry season and the plots hand weeded before transplanting. Tranplanting was done at random with no proper spacing.

Several varieties are grown in the area e.g., Kibawa, Kahogo, Fire and Super India which is commonly grown. These are tall and late maturing varieties. We were told, that they obtained respectable yields of 26 bags paddy (x75 kg) per acre.

Inputs are normally not used in rice production. Though large supply of animal manure is available in kraals in some of the compounds. Mr. Makasi mentioned that application of manure to the paddy followed by burning increased rice yield, but this is

not a common practice. Use of manure without burning improved rice growth, but at the same time also increased weed infestation.

Because of the late and low rainfall this year, many of the plots in Chali Isungha were not cropped during the last season. Soil test of some of these uncultivated plots showed that the surface soils are slightly acid with pH-H_2O (1:1 soil:water ratio)runs from 6.2-6.5 and with soil conductivity of saturation paste below 0.5 mohm/cm.

The IITA varietal test at Chali Isungha suffered from drought. Plants were small, dark green with poor tillering. Some varieties already headed most showing straight heads.

On the upland, millet, sorghum, groundnuts and some maize and sweet potatoes are grown in traditional farming.

b) Bahi Sokoni and Bahi Makulu (not visited) are important rice growing areas in the North-eastern section of the lake. According to Mr. Mayega the total rice area in the villages is about 22 ha, with a possible area of 600 ha for expansion.

The same type of traditional rice cultivation is practiced in this area, though the few fields we saw in Bahi Sokoni are not as well prepared and laid as in Chali area. In this area, the paddies obtain their water mainly from run-off and flood water from the Bubu river. Super India is the most widely grown variety.

During our visit, most of the rice plots are ready for harvest. The plant stand is generally low and tillering is also poor. Large variability in growth was observed within paddies with poorer growth in the depressions.

The IITA varietal test in Bahi Sokoni also suffered from drought. Plants were small, dark green with poor tillering. Many of the varieties showed straight head.

In Bahi Sokoni we also visited the area that the district intends to use for expansion of rice production. This area which is located closer to the edge of standing water in the lake, showed more salt problems. pH-H_2O of surface soils ranges from 7.2-8.5 and soil conductivity from 1.5 to 10 mohm/cm. Expansion in this area should be taken more cautiously.

3. June 16 and 17 accompanied by Mr. D.C. Izina (Manyoni District Development Director) and his assistants Messrs. T.M. Sahili, H.M. Tazima and L.H. Getangiha visited major rice growing areas in Manyoni district; Kintinku, Chibumagwa, Chikuyu and Ngaiiti, all located in the North-western sector of the lake.

Mr. Izina mentioned that Manyoni district has over 330 ha of rice land and a potential area of 30,000 ha that can be developed into rice paddies. Bunding of the rice fields in the Manyoni district were partly done with the aid of bulldozers.

a) Kintinku division has very large are suitable for rice production. Out of 16 villages in the division, 13 are now growing rice. Rice production in Kintinku, Lusilile, Kitalalo villages mainly depends on flood water from Bubu river.

Kintinku village has over 35 ha of rice with 120 rice farmers. Rice has been grown in this area for a long time, using the traditional system as discussed earlier. The village has large rice plots, some estimated over ½ ha in size, surrounded by high bunds. The rice crop which is being harvested looks very good, with good stand and tillering. (This is the best rice crop we have seen during our tour.) It appears from the harvested plots that the variety Super India shows a high degree of shattering, which is probably not a good property, since individual panicle harvesting is practised, which extends the harvesting period. It should also be noted, that transplanting and bunding are done as community efforts.

Soil testing of some spots shows that the surface soils have fairly clay loam texture, with pH-H_2O ranging from 6.2 to 6.5 and a clay loam subsoil.

b) Chibumagwa-Chikuyu. Paddy bunds in this area were built manually or with the aid of bulldozer. We noticed a different way of bund preparation in one location at Chibumagwa, in which the farmer dug out the entire surface soil to a depth of about 20 cm, and use the soil blocks for building the bunds.

Rice paddies in this area are generally small. The paddies are also rather scattered. Some of the paddies were also developed in rather sandy soils. The rice crop in this area, generally, shows poor stand and poor tillering. It appears that this area is rather marginal for rice production.

Soil testing also shows that the soils in this area has rather high soil pH and conductivity. Spot tests at Chibumagwa show that the surface soil pH-H_2O ranges from 7.2 to 8.2 with soil conductivity of up to 1.4 mohm/cm, while surface soil pH at one location at Chikuyu was 7.40.

c) Ngaiiti. This area shows well developed paddy plots and good rice crop. Soil testing of some spots shows that the surface soil has a sandy clay loam texture with pH-H_2O of 6.2.

IV. Remarks and Recommendations

1. For increasing rice production in the Lake Bahi area, during the pilot project phase attention should not only be given in providing additional services for construction of additional bunds for increasing the rice acreage, but equal attention should also be given in improving rice production system including better water management.

2. For increasing rice production acreage, the pilot project should do a better job than what the traditional farmers have already achieved thusfar in constructing their paddies. It should also be realized that the farmers may already have utilized the best areas with adequate water supply. Proper planning in and selection of additional areas is therefore essential; this may include the following essential steps: gathering of information as to location, actual acreage and water supply status of the existing paddies. Based on aerial photographs, information on soils and hydrology and after consultation with local authorities, select potential areas suitable for expansion. This needs to be followed up with topographic survey before finally engaging in development of additional paddies. In developing these new paddies water diversion measures may be needed.

3. Though some concern has been expressed on the possibility of formation of salt deposits in the paddy plots resulting from poor drainage, limited observations during the team's visit did not give any indications of the above problem. However, I would like to suggest that piezometers be installed at selected locations to monitor the periodic ground water movements, which may be useful in predicting potential salt build up areas.

4. Though some scope exist for improving the traditional rice production system, this should be done after better assessment and understanding of the traditional technology as the farmers have already done a good job in utilizing the limited/restricted environmental resources in their rice production system. The North Carolina team that will conduct village level micro-economic survey can probably assist in obtaining more baseline information on to the reasons of some of the traditional technology. Areas of improvement may include better varieties, better water management, and cultural practices (including use of manure). It was also noticed, that after the rice crop, the soil still has residual moisture. This can probably be utilized by growing a second suitable crop. Mr. Izina (RDD from Manyoni) also mentioned that in Chikuyu area groundnuts and sorghum are being planted following rice..

5. I fully support the suggestions made by Mr. Tim Miller that the pilot project phase be limited to Bahi Sokoni and Bahi Makulu in Dodoma district and in Kintinkun and Ngaiiti in Manyoni district.

6. With regard to staffing, the pilot project should have an experienced land development expert to help with the selection and execution of acreage expansion. Among the two Peace Corp members to be recruited, one should have proper knowledge on rice agronomy.

7. IITA can assist in providing seed of selected number of semi-tall to tall varieties for testing in the Kintinkun and Bahi Sokoni areas. IITA can also assist in developing the rice based cropping systems.

8. I would like to suggest that the following simple demonstration be initiated in Kintinkun and Bahi Sokoni in the coming season to compare the following treatments:

1. Traditional system of rice production
2. Transplanting in rows at 25 cm spacing
3. Transplanting in rows mentioned under (2) with manure applied before transplanting.

B. T. Kang

June 23, 1980

Trip Report on "Rift Valley Rice Project" from 16/6/80 to 20/6/80

Land Development programs, particularly large scale projects of this nature, require careful planning and execution. Although the scope of this report does not cover every aspect of an entire development plan, it does point out some of the factors affecting the entire project.

Factors that affect the land use and size of undertaking can be grouped into four major areas - (1) environmental, (2) social or institutional, (3) cost-price and (4) the end use.

(1) Environmental Factors:

(a) Land: soils, topography, size and shape of land
(b) Temperature: annual extremes and length of growing season or seasons
(c) Water Control: rainfall amount and distribution, availability of irrigation water and distribution of natural water sheds
(d) Location: access roads, markets and seryice areas
(e) Vegetative Cover: type and density, possibility of re-growth after initial clearing.

(2) Social or Institutional Factors:

The place accorded land development in the overall scope of national growth.

Willingness and/or ability of the government to support agriculture through fiscal and tax policies; adequate transportation policies, favorable policies on land tenure, land reform and settlement project development.

Willingness and/or ability of the government to conduct research, interpret findings and disseminate information on the various aspects of land development.

Availability and willingness of the government to provide training at all levels, to foster extension programs and to use mass media such as radio and press in helping to attain these objectives.

(3) Cost-price Factors:

Return on investments: i.e., prices received by farmer for the crops he produces

Cost of inputs required such as: land development machinery and tools, hired labor, buildings, etc.

Availability and cost of credit:

(a) Long term credit to finance construction of major buildings or land purchase
(b) Intermediate terms credit to finance establishment of crops, major land preparation such as clearing and levelling; specialized marketing facilities.

Availability and cost of transport, storage, processing, and marketing facilities.

Benefits available from the government such as subsidies, price supports, and assured markets.

(4) The end use:

Owner or Manager's ability to make proper use of newly cleared land.

Level of owner or Manager's specialized training in the rice, land use and production.

Success of the project, be it large or small, depends on favorable cost/price relationships, favorable environmental factors and owner or manager's skills. Since a wide range of factors must be considered by those involved in land development project, a sufficient amount of information must be gathered before undertaking the project.

Types of terrain to be cleared:

(a) Dodoma District:

(i) Scattered bushes, usually thorny, woody vegetation with cactus plants. It is covered with annual and perennial grasses.

(b) Manyoni District: Dense thorny brush with scattered large hard and soft wood vegetation. When not over grazed with livestock, it is covered with perennial grasses.

Many factors affect production and cost of land development. The method and equipment choice will determine the degree of soil disturbance that can be expected to ensure that the land will be productive after being cleared. Since the land is to be developed for rice, cutting the trees and brush flush to the ground or three to four inches below ground level is all that is required. The under foot conditions of the tractor is good, at both districts, since the traction. flotation and slope are not a problem for the tractor even after repeated passes in the same track. Topography is almost flat, in both the project areas. The rainfall and climate usually affect the land development in all stages

of operation. Rainfall and the resultant water table effects the flotation. In the project area the working period is about six months. To develop a good rice farm the following operations in general are required: (1) vegetation clearing (2) harrowing (3) land levelling (4) building of irrigation and drainage ditches and road.

To Determine Cost and Production

1. Total area to be developed - 400 ha.
2. Time available for job - 2 years
3. Time available in hours per year per tractor or machine hours availabe = (%) Machine availabe for work x hours worked/day x working days per year.

(1) Keeping in view the weather, transportation, repairs, etc., the efficiency of machine available is assumes as 70%.

(2) Working hours per day is on average 10 by running the machine on double shift (time laps in daily servicing, operators, efficiency, etc.)

(3) Taking into consideration the factors of (a) rainfall, (b) water table (c) under foot conditions only six months are considered as effective working monthes - i.e., leaving Sundays and holidays only 150 days are working days.

- Machine hours per year per tractor
  .65 x 12 x 150 = 1170

- Total machine hours available in Project Period of two years
  1170 x 2 = 2340

- Two machines will work 4680 hours in two year project

Approximate Production Rates of D6D pr D5

Time required per hectare in terms of machine hours.

	A. Manyoni District	B. Dodoma District
1. Land clearing		
Cutting	2.0 hours	0.75
piling	1.0	0.25
2. Land levelling		
Harrowing	2.0	2.0
levelling	3.0	3.0
3. Bund forming		
Bunds	3.0	3.0
Irridation, Drainage, Roads	1.0	1.0
Total	12.0	10.0

Total machine hours required for 400 ha development:
200 ha in Manyoni and 200 in Dodoma
200 x 12 = 2400
200 x 10 = 2000
4400

Land Development Machinery and attachments to meet the task of completing 400 ha rice land development in 2-year period.

Machinery

1. two track type tractors of 105 to 160 hp
one with attachments such as an angle dozer, rear mounted ripper and the other with an angle dozer and drawbar.
Ex: (1) D6D or D5 Track type tractor with angle dozer and ripper
(2) D6D or D5 track type tractor with bulldozer and drawbar.

2. One Rome TRCH Harrow for D6D or D5
(a) Width of cut is 7 feet
(b) 10 discs
(c) 36 in diameter discs with thickness of 3/8"
(d) Mechanical angling control

3. One land leveller

(a) Bucket width 10'
(b) Length of leveller 30'
(c) Transport
(d) Steel wheels

4. 5 ton truck tractor with 25 tone low bed trailer

5. Machinery repair tools

Other desirable equipment

(a) One wheel tractor of 100 hp
(b) Disc type fund former
(c) One terrace blade
(d) General maintenance equipment
(e) Portable weld set with generator

Feature of Truck type Tractors:

1. Engine: (a) Caterpillar heavy duty, four cycle diesel
(b) Turbo-charged - force running for D6D)
(c) Adjustment face fuel system
(d) Naturally aspirated(in case of D5)

2. Transmission:

   (1) Direct Drive; (a) sliding gear design (b) caterpillar oil clutch - oil filtered and cooled

3. Steering clutches and brakes: standard model of caterpillar.

4. Final Drive: Standard model of caterpillar

5. Undercarriage: standard

Local owning and Operating Costs

I. Depreciation Value D6D

Delivered price	115,000
Resale value after 3000 hrs.	80,000
Net value for depreciation	35,000

Owning Cost: $\frac{\text{Net Depreciation value}}{\text{Depreciation period in hrs.}} = \frac{35,000}{3,000}$

Total hourly owning cost = $11.60

II. Operating Costs D6D

1. Fuel = Concumption/hr x Unit price
   = 18 x 4.5 = 81.0 shs. or $8.00
2. Lubricants = 0.5 x 12 = 6.0 or $0.75
3. Filters = 0.12 x 8 = 1.0 or $0.12
4. Repairs: $\frac{\text{Factor x Del Price}}{1000}$ = 11.5 = $11.50
5. Special items
   a) Ripper tips $\frac{3 \times 45 \times 8}{150}$ = 7.2 shs.
   b) Shank protectors $\frac{3 \times 90 \times 8}{450}$ = 4.8
   c) Dozer Cutting Edges = $\frac{200 \times 8}{500}$ = 3.2
   = 15.2 shs. = $2.00

III. Operators Hourly Wage
Assuming 600 shs. per month, Annual wage 600 x 12 = 7200
Hourly cost = $\frac{7200}{360}$ = 2.0 = $0.25

IV. Overhead cost per hour 5.0 = $0.60

Total hourly owning and operating cost = $34.82/hour

Equipment	Estimated Cost $	Source	Remarks
1. D7E, Dozer 7A, DD - Ripper	54,000	Exprop	Reconditioned cost of op will be more
2. D6D Dozer. DD-Ripper	113,000	Caterpillar Tractor Co. U.S.A.	Optimum
3. D5 Dozer DD - Drawbar	80,000	Caterpillar Tractor Co.	Optimum
4. MF - 1105 100 h.p D.D.	30,000	MF, USA	Efficient and low cost operation
5. Rome Harrow	14,000	Rome Industries	
6. Rome Land Plane	14,000	"	
7. John Deere Disc Bedder	1,500		
8. Bush Hough Terracer Blade	1,500	Exprop	
9. Portable Welder & Generator	5,000	Exprop	
10. Portable lubricating van		Exprop	
11. Truck tractor 5 ton 25 trailor, lowbed	50,000	Exprop	
12. Snap on tools	2,000		
13. Chains and slings	200		
14. Survey equipment	2,000	David Brown USA	NABCO Catalog

Submitted by:

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ANNEX E

TABLE SHOWING RETURN TO LABOR

FOR RICE CULTIVATION

Annex E

Estimated Smallholder Production Costs and Returns for Paddy under Traditional and Improved Conditions 1977/78 - 1980/81

(per hectare)

Crop Year	1977/78		1978/79		1979/80		1980/81	
Paddy Price (c/kg)	120		150		175		200	
	Traditional (1)	Improved (2)	Traditional	Improved	Traditional	Improved	Traditional	Improved
Yield (kg/ha)	400	3,600	400	3,600	400	3,600	400	3,600
Gross Income (Shs)	480	4,320	600	5,400	700	6,300	800	7,200
Production Costs (Shs)								
Trad Seed (30 kg)	36	-	36	-	45	-	53	-
Imp Seed (100 kg)	-	300	-	325	-	360	-	400
Fertilizer	-	175	-	206	-	206	-	206
Total Cash Costs	36	475	36	531	45	566	53	606
Net Income (Shs)	444	3,845	564	4,869	655	5,734	747	6,594
Labour Inputs (man days)								
Soil Prep + Sowing	62	-	62	-	62	-	62	-
Nursery, Soil Prep	-	-	-	-	-	-	-	-
+ Transplanting	-	169	-	169	-	169	-	169
Weeding	40	41	40	41	40	41	40	41
Irrigation	-	4	-	4	-	4	-	4
Bird-Scaring	-	60	-	60	-	60	-	60
Harvesting	18	54	18	54	18	54	18	54
Thresh/Winnow	-	64	-	64	-	64	-	64
Transport/Market	-	2	-	2	-	2	-	2
Total Labour	120	394	120	394	120	394	120	394
Net Return per man day of Smallholder Labour (Shs)	3.7	9.8	4.7	12.4	5.5	14.6	6.2	16.7

Notes: (1) Traditional rice production under rainfed conditions.

(2) Improved production utilising irrigation, improved varieties and fertilizer.

From: "The Market Outlook for Rice in Tanzania." Marketing Development Bureau, FAO/UNDP Project SF Tan 27, Min. of Ag.

ANNEX F

PROJECT CHECK LIST

PROJECT CHECK LIST

A. GENERAL CRITERIA FOR PROJECT

1. FY 80 App. Act Unnumbered; FAA Sec. 634A; Sec. 653 (b); (a) Describe how authorizing and appropriations Committees of Senate and House have been or will be notified concerning the project; (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than $1 million over that figure)?

Congress was notified on August 8, 1980 of AID's intent to obligate $500,000 for the project. The waiting period of 15 days expired on August 23, 1980 without comment from Congress.

2. FAA Sec. 611 (a) (1). Prior to obligation in excess of $100,000 will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

(a) A financial plan and economic feasibility have been completed for the subject project.
(b) Cost to the U.S. of this assistance is by law limited to $500,000.

3. FAA Sec. 611 (a) (2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

No Tanzanian Government legislative action is required.

4. FAA Sec. 611 (b); FY 80 App. Act. Sec. 501. If for water or water related land resource construction, has project met the standards and criteria as per the Principles and Standards for Planning Water and Related Land Resources dated October 25, 1973?

A benefit-cost benefit analysis has been done for this pilot project (Page 15). In the event that a large scale follow-on activity becomes feasible a much more detailed analysis will be done.

5. FAA Sec. 611 (e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed $1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?

All U.S. assistance for the project will not exceed $500,000.

6. FAA Sec. 611 (e). Is project susceptible of execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.

This is a small pilot project which is not susceptible to execution as part of a regional or multilateral project.

7. FAA Sec. 601 (a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.

(a) The project will finance the importation of approximately $300,000 of commodities from several different countries.
(b) Under the project farm families will be developing their own rice paddies and will be paying for the use of appropriate land development equipment. Tanzania is a socialist country and therefore it is not possible for individuals to have title to the land and for competition to occur among private land development contractors.
(c) The development and use of cooperatives, credit unions and savings and loan associations is not a component of this project. Farmers in the project area may want to form a cooperative or credit union to take advantage of loans for commodities from the Tanzanian Rural Development Bank (TRDB).
(d) Tanzanian as a socialist country provides essential services through state-owned businesses. Some of the rice production from the project will be sold to the National Milling Corporation (NMC).
(e) The project will provide technical assistance to test interventions which will increase the efficiency of rice production.
(f) Labor union activities are outside the scope of this project.

8. FAA Sec. 601 (b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

Commodities such as hand tools and land development equipment will be purchased from the United States.

9. FAA Sec. 612 (b); Sec. 636 (h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are entitled to meet the cost of contractual and other services.

The TanGov will pay salaries of project managers and staff, vehicle and machinery operators, mechanics and extension workers.

10. FAA Sec 612 (d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?

The U.S. Government does not own excess Tanzanian Shillings.

11. FAA Sec. 601 (e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?

A contractor will not be used to implement this project.

12. FY 80 App. Act Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?

The project provides assistance to increase food crop production for domestic consumption.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec 102 (b); 111; 113; 281a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economics of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

(a) Subsistance farmers are the primary recipients of project inputs. The project will enable rice farmers to improve their yields and develop more rice land. The project will give training to extension workers serving these farmers and will put the villages in touch with the agriculture research institutes.
(b) The project does not involve the development of cooperatives; however, project managers will be encouraged to explore cooperatives as a means for channeling resources to the people.
(c) The project is basically a self-help effort providing commodities which cannot be purchased because of scarce foreign exchange but utilizing host country technical expertise and labor.
(d) Women at the present time provide a substantial part of labor

necessary for rice cultivation. The project should relieve some of this burden with interventions to make labor more productive. In addition the farm management surveys will explore the position of women within the farm production cycle and explore methods whereby women might share more in the profits of their efforts.
(e) This is a small pilot effort which will not effect or involve other developing countries.

b. FAA Sec. 103. Is assistance being made available for agriculture, rural development or nutrition; if so, (a) extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, full account shall be taken of the needs of small farmers, and extensive use of field testing to adapt basic research to local conditions shall be made; (b) extent to which assistance is used in coordination with programs carried out under Sec. 10 to help improve nutrition of the people of developing countries through encouragement of increased production of crops with greater nutritional value, improvment of planning, research, and education with respect to nutrition, particularly with reference to improvement and expanded use of indigenously produced foodstuffs; and the undertaking of pilot or demonstration programs explicitly addressing the problem of malnutrition of poor and vulnerable people; and (c) extent to which activity increases national food security by improving food policies and management and by strengthening national food reserves, with particular concern for the needs of the poor, through measures encouraging domestic production, building national food reserves, expanding available storage facilities, reducing post harvest food losses, and improving food distribution.

(a) The goal of this project is to increase agricultural production and incomes of farmers in four villages in Dodoma and Singida regions.
(b) Section 104 is not applicable to this project.
(c) Rice is in extremely short supply in Tanzania with over 40 million tons being imported each year. The project should increase rice supplies by the development of potential rice lands and by interventions to increase rice yields.

c. (107) Is appropriate effort placed on use of appropriate technology? (relatively smaller, cost-saving, labor using technologies that are generally most appropriate for the small farms, small businesses and small incomes of the poor.)

This is a pilot project which has as part of its strategy to develop small, cost-saving labor using interventions in rice production.

d. FAA Sec. 110 (a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least developed" country)?

Although Tanzania is a relatively least developed country, the TanGov will provide approximately 26% of total project costs.

e. FAA Sec 110 (b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made and efforts for other financing, or is the recipient country "relatively least developed"?

Grant capital assistance will not be disbursed for the project over more than 3 years.

f. FAA Sec. 281 (b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people in the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective particpation in governmental processes essential to self-government.

The project is the result of a request for assistance from the villagers who will benefit from the project. The project utilizes technical assistance from regions, districts and villages and hopes to develop a local capability for managing the heavy equipment supplied to the project.

g. FAA Sec. 122 (b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

The project aims to develop the potential of the Bahi Depression for rice cultivation and as such will substantially increase rice production of the area.

C. COUNTRY CHECKLIST

The country checklist for Tanzania has already been prepared for FY 1980 and can be found in Resources for Village Production and Income Project Paper (621-015.5) Volume I, Annex F.

ANNEX G

DRAFT LETTERS OF UNDERSTANDING

LETTER OF AGREEMENT

BETWEEN

THE MINISTRY OF AGRICULTURE

AND

THE PRIME MINISTER'S OFFICE, DODOMA

The Ministry of Agriculture agrees to make available the services of the Rice Research Coordinator attached to the Ifakara Research Institute (Katrin) and the Agricultural Engineer attached to the Ilonga Research Institute for the purpose of providing consultancy to the USAID supported Rift Valley Pilot Rice Production (RVPRP) Project located in Manyoni and Dodoma Districts of Central Tanzania.

The rice Research Coordinator will provide seeds and assistance as needed in the establishing rice observation/demonstration trials. The Agriculture Engineer will make monthly trips of 2 to 3 days each to the project site to provide advice on appropriate water, land and machinery management practices. The Engineer will also provide diagrams and models of simple threshing and milling equipment and report on the suitability of heavy project equipment to be recommended for planned follow-on project. The RVPRP Project will provide for transportation and per diem as needed.

Signed: _____
Ministry of Agriculture

ENG. RESEARCH OFFICER — Title

19/9/80 — Date

Signed: _____
Prime Minister's Office

_____ — Title

_____ — Date

LETTER OF AGREEMENT

BETWEEN

MUHIMBILI MEDICAL CENTER

AND

PRIME MINISTER'S OFFICE, DODOMA

Muhimbili Medical Center agrees to make available qualified staff to conduct an assessment of possible threats to human health which might be caused by the Rift Valley Pilot Rice Production Project. The environmental assessment will consist of a brief literature review, a baseline survey of villagers in the project area prior to the start of the project, monitoring of threats to human health during the two year project and recommendations both for the pilot project and for a large follow-on activity.

The RVPRP Project will pay for expenses, such as per diem, transportation and supplies of the environmental assessment team.

Signed: _____ Date: _____

Muhimbili Medical Center

_____

Title

Signed: _____ Date: _____

Prime Minister's Office

_____

Title

ANNEX H

REQUEST FOR ASSISTANCE FROM PRIME MINISTER'S

OFFICE DODOMA

" Not U.S. Government Classification "

CONFIDENTIAL

OFFICIAL FILE

PRM 1-5(Proposed Rice Pilot Scheme Project)

Anwani ya Simu: "WAZIRIMKUU", DODOMA.

Simu Namba: 20511.

Unapojibu tafadhali taja:

Kumbukumbu Namba: PMO/E.50/3/137

OFISI YA WAZIRI MKUU NA MAKAMU WA PILI WA RAIS,
S.L.P. 980,
DODOMA.

27th March, 1979

ACTION COPY
NO ACTION NECESSARY
REPLIED BY: 2 Apr 4/10

DAL 1651 Initials

Director,
U S A I D,
P.O. Box 9130,
D'SALAAM.

Dear Mr. French,

Re: RICE PROJECT - SINGIDA AND DODOMA REGION

Thank you very much for your letter of 6th March, 1979.

After some briefings from my colleagues who accompanied Mike and Charles and our discussion, I would like to respond to some of the issues raised concerning short term and long term programme in the Rice Project.

DEST	ACT	INF
DIR		
AD		
[illegible]		
PRM		X
FFB		
MCH		
EHP		
EXO		
CON		
AGR	X	
TRC		
GSO		
CAR		
RF		X
CHR		X
[illegible]		

1. Short term Programme: It was agreed that USAID assistance would be sought in the areas of:

   a) Heavy Machinery - to be used in the expansion of the area under cultivation already identified i.e. from 237 to 2,600 hectas involving 21 villages.

   b) Maintainance of equipments - as (a) above would be a need of recruiting a mechanic to train local staff in the maintenance of equipments.

   c) Storage facilities - with the expansion of the areas under cultivation the present storage facilities would be inadequate. Thus, the short term programme should have an element of increasing the present storage facilities by the building of godowns which could act as service centres for storing agricultural inputs, equipments etc.

   d) Credit facilities - arrangements could be made whereby rice growers could get financial assistance to finance project related activities in the fields of transport, grain milling, purchase of farm inputs etc.

The understanding during the trip and our subsequent discussion Chikira/French later on was that concerted efforts could be made between USAID and our side so that some aspects of the short term programme could be financed during financial year 1979/80. Our letter PM/A.120/15/14 of 18.1.79 indicated programme costs as follows:-

- Machinery	-	12,830,000/=
- Vehicles	-	530,000/=
- Storage Facilities	-	700,000/=
- Initial Soil Survey and Sampling	-	50,000/=
	Total	14,110,000/=

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C & E
9/2/79

CONFIDENTIAL

" Not U.S. Government Classification "

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-/22

It is envisaged that farmers would be required to contribute money to meeti fuel costs for the equipments. The Tanzanian government and in the case the two regions would meet the cost of the extension staff involved in the project area and paying the drivers salaries.

2. Long term Programme: While implementation of the short term shade programme is underway, USAID would also be requested to assist in conducting studies and investigations in the Rift Valley swamp area covering about 400 square miles in the field of:-

Soil survey

- Topgraphical survey
- Hydrological survey and
- Land use determination.

USAID could undertake these surveys by using existing local institutions like SRALUP or Engaging other consultancy firms as will be agreed later.

During the trip USAID members had raised the question of possible duplication of work taking into consideration work which was envisaged to be done by the Australian team currently in Singida region. I would like to re-emphasise that as far as we are aware no external donor has been requested to undertake detailed survey work in the Rift Swamp area. It is true that during Phase One of the preperation of regional Integrated Development Programme, the Indian Team recommended that further surveys be conducted but this was for subsequent teams.

The subsequent Australian Team did not do much either, apart from pointing out that further surveys were needed.

In view of the above, there is no possibility of duplication of efforts since our request to USAID is very specific - Rice production in the Rift Valley area. I have discussed this matter with the respective Regional Development Directors.

I am taking the liberty of coping this letter to the Ministry of Finance and Planning in order to process a request on behalf of our government.

In the meantime, I hope you will proceed to prepare a Draft project identification document for discussion between PMO, RDDs and USAID as agreed.

Yours sincerely.

(P.O. Chikira)
for: PRINCIPAL SECRETARY

c.c. Principal Secretary,
Ministry of Finance and Planning,
P.O. Box 9111, D'SALAAM. (Att: Mr. Issa)
- Copy of PMO/E.50/3/124 of 30.11.78 attached. Your necessary action need

c.c. Regional Dev. Director,
SINGIDA.

c.c. Regional Dev. Director,
DODOMA.

OFFICIAL FILE
FM 1-5(Proposed Rice Pil
Scheme)

JURI YA MUUNGANO WA TANZANIA

Anwani ya Simu: "WAZIRIMKUU", DODOMA.
Simu Namberi: 20511.
Unapojibu tafadhali taja:

OFISI YA WAZIRI MKUU NA
MAKAMU WA PILI WA RAIS,
S.L.P. 980,
DODOMA.

Kumbukumbu Namberi PM/A.120/15/14

18th January, 1979

ACTION COPY
NO ACTION NECESSARY
REPLIED BY:

Initials

Mr. J. French,
Assistant Director - USAID,
P.O. Box 9130,
DAR ES SALAAM.

PROPOSALS ON RICE PILOT SCHEMES FOR SINGIDA AND DODOMA REGIONS

Attached to this letter is a preliminary but indicative simple Rice program for Singida and Dodoma Regions. As I have indicated above this a simple write-up, because we believe the final program write-up awaits physical assessment of the proposed project areas, and indeed some technical advices from the Rice Agronomist whom we expect during the inspection tour - as earlier proposed, and discussions to be held with RDDs.

DIST	ACT	
DIR		
AD	X	W/ATCH
P/Econ		
PRM		X
MCH		
EXO		
CON		
AGR		X
TRG		
CSO		
C&R		
RP		X
CHR		X

You may recall that the two project areas are in one and the same Rift valley. What differentiates them is the administrative boundary. Hence for, both historical and geographical perspectives seem to resemble.

Once again, we appeal to you to regard this write-up as preliminary.

Thanks in Advance,

(A.J. Yessayah)
for: PRINCIPAL SECRETARY

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1/22/79