698040-7(2)
PD-AAF-503-B1

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS PART I

1. TRANSACTION CODE: A (A = ADD, C = CHANGE, D = DELETE)

PAF

2. DOCUMENT CODE: 5

3. COUNTRY/ENTITY: Africa Regional

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER (7 digits): 698-0407

6. BUREAU/OFFICE: A. SYMBOL: AFR; B. CODE: 01

7. PROJECT TITLE (Maximum 40 characters): Improved Rural Technology

8. PROJECT APPROVAL DECISION: A (A = APPROVED, D = DISAPPROVED, DE = DEAUTHORIZED)

9. EST. PERIOD OF IMPLEMENTATION: YRS. 05 QTRS. -

10. APPROVED BUDGET AID APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. GRANT	PRIMARY TECH. CODE D. LOAN	E. 1ST FY ___ F. GRANT	E. 1ST FY ___ G. LOAN	H. 2ND FY ___ I. GRANT	H. 2ND FY ___ J. LOAN	K. 3RD FY ___ L. GRANT	K. 3RD FY ___ M. LOAN
(1) FN	750S	875	-	1000	-	1300	-	1300	-
(2)									
(3)									
(4)									
			TOTALS	1000	-	1300	-	1300	-

A. APPROPRIATION	N. 4TH FY 81 O. GRANT	N. 4TH FY 81 P. LOAN	Q. 5TH FY 82 R. GRANT	Q. 5TH FY 82 S. LOAN	LIFE OF PROJECT T. GRANT	LIFE OF PROJECT U. LOAN
(1)	1300	-	1200		6100	
(2)						
(3)						
(4)						
TOTALS	1300	-	1200		6100	

11. PROJECT FUNDING AUTHORIZED (ENTER APPROPRIATE CODE(S)) 1 = LIFE OF PROJECT, 2 = INCREMENTAL, LIFE OF PROJECT: A. GRANT 1; B. LOAN

C. PROJECT FUNDING AUTHORIZED THRU FY 82

12. INITIAL PROJECT FUNDING ALLOTMENT REQUESTED ($000)

A. APPROPRIATION	B. ALLOTMENT REQUEST NO. ___ C. GRANT	D. LOAN
(1)		
(2)		
(3)		
(4)		
TOTALS		

13. FUNDS RESERVED FOR ALLOTMENT

TYPED NAME (Chief, SER/FM/FSD)

SIGNATURE

DATE

14. SOURCE/ORIGIN OF GOODS AND SERVICES: [X] 000 [X] 941 [X] LOCAL [ ] OTHER ___

15. FOR AMENDMENTS, NATURE OF CHANGE PROPOSED

FOR PPC/PIAS USE ONLY	16. AUTHORIZING OFFICE SYMBOL	17. ACTION DATE MM DD YY	18. ACTION REFERENCE (Optional)	ACTION REFERENCE DATE MM DD YY

AID 1330-8 (7-78)

DEC 22 1977

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR

FROM:: AFR/RA, E.Dennis Conroy

Problem: We would like your approval of a Project Paper which establishes an Africa-wide regional project to promote appropriate technology activities in rural Africa.

Discussion: Although A.I.D. has been involved in various aspects of appropriate or improved rural technology activities before (notably in the 1950's), the current era of interest began formally in December 1975, when Congress called for A.I.D. to take new action to promote "intermediate technology. While A.I.D.'s written response in June 1976 largely took the form of a proposal for a new organization (now A.T. International), the basis was also laid for an expanded technology effort within A.I.D.'s own programs.

In March 1976, Africa Bureau transmitted a circular airgram to missions which asked for their comments on a regional effort to support African institutions working in this area. Responses confirmed that there was considerable interest by African countries in intermediate technology. Three Project Identification Documents (PIDs) emerged from this review. Their purpose was to: (1) improve the living standard of the rural poor in Tanzania; (2) stimulate development and use of appropriate technologies in Ghana; and (3) provide training, informational services and coordination of country sub-projects under an umbrella regional project.

In January 1977, a review of a Project Review Paper (PRP) which recommended this option uncovered serious AFR/BUR and field concern about the need to include what turned out to be two relatively long-term, large scale country activities under a regional project. After additional dialogue it was decided to detach the Tanzania and Ghana components from the project and retain the appropriate technology promotional functions as a regional project. (See pp. 5-6 for Project History narrative).

After extensive dialogue in various fora, AFR/RA drafted a Project Paper in October 1977 which was reviewed and approved by the Project Committee on November 28, 1977. The attached Paper, slightly revised by the Project Commitee, provides seed money for experimental and pilot activities which would adapt technologies to local needs in rural Africa. Limited amounts of capital (up to $50,000) will be made available to implement proposals received from African countries through AID missions. If the pilot activity proves feasible regular procedures may be employed for establishing the activity as a full-scale, bi-lateral country project. If the activity is not feasible, the country will have those insights gained from an actual experiment, rather than a mere study, for redefining its proposal toward another objective.

DEC 22 1977

In sum, the project as envisaged by the Project Committee, would be an AFR/BUR - managed project which would react quickly to field proposals for experimental adaptation of technologies to local needs. It would also promote regional/national interest in the state-of-the-art of various technologies by disseminating bulletins, conducting workshops/seminars, etc. A contractor, competitively selected, would serve as the AFR/BUR primary advisor in project implementation, (see pp 11-14). Within the 5-year lifespan of the project, sufficient publicity and hopefully national regional acceptance of appropriate technology concepts would have been gained to enable A.I.D. financing to be withdrawn, leaving the regional appropriate technology function to now nascent African organizations.

There is a waiver which needs your approval for this project. It involves the utilization of African experts, or in some cases, expatriate experts resident in Africa, for services related to the design of rural technology projects where mission or host country expertise is lacking. The justification is summarized more particularly on page 21a of the Project Paper and in paragraph a.3 on page 2 of the PAF, Part II, attached after the facesheet of the Project Paper. Approval is also requested for the financing of local cost expenditures estimated at $5,000,000.

Recommendation: That you approve the attached Project Paper for the Improved Rural Technology project, number 698-0407.

Attachment:

Project Paper, 698-0407

Approved: _____

Disapproved: _____

Date: 12/29/77

AFR/RA:JHill:pcz:12/1/77:X28964

Clearance:
AFR/RA:JRuoff(subs)
AFR/DR:JBlumgart(subs)
AFR/DR:DDibble(subs)
GC/AFR:EDragon EAD
AFR/CAWA:DGriffiths
AFR/SFWA:DShear DS (CH)
AFR/SA:TQuimby (draft) 12/9/77
AFR/EA:HJohnson (phone) 12/6/77
AFR/DP:CWard (phone) 12/7/77
AFR/DR:JWithers (phone) 12/9/77
PPC/DPRE:EHogan (phone) 12/6/77
SER/COM:PHagan (phone) 12/7/77
TAB/ATI:AFirfer(subs)
DAA/AFR:HNorth (subs) 11/22/77

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C. 20523

OFFICE OF
THE ADMINISTRATOR

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

PART II

COUNTRY : Africa Regional

PROJECT : Improved Rural Technology

PROJECT NO. : 698-0407

Pursuant to Part I, Chapter I, Section 103 of the Foreign Assistance Act of 1961, as amended, I hereby authorize grant financing in Fiscal Year 1978 of not to exceed One million United States Dollars ($1,000,000) (the "Authorized Amount") to help in financing certain foreign exchange and local currency costs of goods and services for the project as described in the following paragraph.

The project consists of the financing of activities in support of improved rural technology in African countries. The project activities will promote innovation in local technology systems in such areas as agriculture, food processing, village water supplies, energy, construction, health and information exchange. The project will assist in the promotion, design and exchange of information concerning improved rural technology. The project will endeavor (1) to establish wide understanding and acceptance of the concepts of "appropriate rural technologies" among African countries (2) to accumulate considerable field experience with various technologies, and (3) to provide a positive impact on the direct beneficiaries of project activities, such impact to be measured in terms of production, personal incomes, employment and quality of village life.

I approve a total of A.I.D. appropriated funding planned for this project of not to exceed six million, one hundred thousand, United States Dollars ($6,100,000), including the funding authorized above during the period FY 1978 through FY 1982, and increments during that period of grant funding up to $5,100,000, subject to the availability of funds in accordance with A.I.D. allotment procedures.

I hereby authorize the initiation of negotiation and execution of project and other agreements by the officers to whom such authority has been delegated in accordance with A.I.D. regulations and Delegations of Authority, subject to the following essential terms, covenants and major conditions;

together with such other terms and conditions as A.I.D. may deem appropriate:

a. Source and Origin of Goods and Services.

1. General

Except as authorized in paragraph a.2 and a.3 below, and except as A.I.D. may otherwise agree in writing, goods and services financed by A.I.D. under the project shall have their source and origin in the United States. Ocean shipping financed under the project shall be procured in any elegible source country except the participating country in which a specific activity takes place.

2. Special Rule for Relatively Least Developed Countries

Goods and services financed by A.I.D. under the project for activities in the Relatively Least Developed Countries shall have their source and origin in countries included in A.I.D. Geographic Code 941, except as A.I.D. may otherwise agree in writing. Ocean shipping financed under the project for activities in the Relatively Least Developed Countries shall be procured in any eligible source country except the participating country in which a specific activity takes place.

3. Based on the justification set forth in the project paper (at page 21a) I hereby (a) determine that it is in the best interests of the United States to permit the procurement of expert services, from time to time, from A.I.D. Geographic Code 935 countries; (b) hereby waive the requirements of A.I.D. Handbook 11, Section 1D; and (c) authorize Geographic Code 935 as the authorized source for expert services in a total amount of $100,000 during the life of the project.

b. Authorization of Project Activities.

The Director, Office of Africa Regional Affairs (AFR/RA) is authorized to approve the financing of specific activities under this project. Such authority will be exercised in accordance with A.I.D. and Africa Bureau regulations policies and procedures and such other directives or policies that I may prescribe.

c. Evaluation.

1. The Director, AFR/RA shall provide a summary evaluation of the project on an annual basis.

2. The Director, AFR/RA, upon completion of activities under the project for three years, shall provide for an independent review and evaluation of the project. The report of the review and evaluation of the project shall contain such recommendations as the Director, AFR/RA deems necessary.

d. Local Currency Costs

There is hereby approved, the financing of local currency costs in the approximate amount of $5,000,000.

DATE: 12/29/77

Goler T. Butcher
Assistant Administrator
Bureau for Africa

Clearances: AFR/DP, CWard
DAA/AFR, HNorth
SAAA/AFR, DWachholz
SER/COM, PElissabide (phone)
GC/AFR, EDragon

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT PAPER FACESHEET

1. TRANSACTION CODE: A (A - ADD, C - CHANGE, D - DELETE)

PP

2. DOCUMENT CODE: 3

3. COUNTRY/ENTITY: Africa Regional

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER (7 digits): 698-0407

6. BUREAU/OFFICE: A. SYMBOL: AFR; B. CODE: 01

7. PROJECT TITLE (Maximum 40 characters): Improved Rural Technology

8. ESTIMATED FY OF PROJECT COMPLETION: FY 83

9. ESTIMATED DATE OF OBLIGATION: A. INITIAL FY 78; B. QUARTER 1 (Enter 1, 2, 3, or 4); C. FINAL FY 82

10. ESTIMATED COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY B. FX	C. L/C	D. TOTAL	LIFE OF PROJECT E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	175	825	1000	1100	5000	6100
(GRANT)	(175)	(825)	(1000)	(1100)	(5000)	(6100)
(LOAN)	( )	( )	( )	( )	( )	( )
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY						
OTHER DONOR(S)						
TOTALS	175	825	1000	1100	5000	6100

11. PROPOSED BUDGET APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. GRANT	D. LOAN	E. 1ST FY 78 F. GRANT	G. LOAN	H. 2ND FY 79 I. GRANT	J. LOAN	K. 3RD FY 80 L. GRANT	M. LOAN
(1) FN	750S	875		1000		1000		1200	
(2)									
(3)									
(4)									
TOTALS				1000		1000		1200	

A. APPROPRIATION	N. 4TH FY 81 O. GRANT	P. LOAN	Q. 5TH FY 82 R. GRANT	S. LOAN	LIFE OF PROJECT T. GRANT	U. LOAN
(1) FN	1400		1500		6100	
(2)						
(3)						
(4)						
TOTALS	1400		1500		6100	

12. IN-DEPTH EVALUATION SCHEDULED: MM 12 YY 79

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

1 (1 = NO, 2 = YES)

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE: E. Dennis Conroy *E. Dennis Conroy*

TITLE: Director, AFR/RA

DATE SIGNED: MM 12 DD 01 YY 77

15. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM 11 DD 29 YY 77

AID 1330-4 (3-76)

TABLE OF CONTENTS

	Page
Summary and Recommendations	
A. Recommendations	1
B. Summary Description of the Project	1
C. Project Issues	
I. Project Background	
A. The Development Issue	3
B. Project History	5
II. Project Description	
A. Context - The Rural Technology System	7
B. Activities	9
C. Technical Support Contract	11
III. Project Analyses	14
A. Social Analysis	15
B. Environmental Examination	15
C. Economic Justification	16
D. Technical Analysis	17
IV. Implementation	
A. The Activity Paper	17
B. The Activity Approval Process	20
C. Financial Plan (Budget)	21
V. Evaluation Plan	
A. Missions	22
B. Contractor	22
C. AFR/RA	22
Annexes	
A. Logical Framework	24
B. Initial Environmental Examination	25
C. Statutory Checklist	28
D. Draft Authorization (to be issued)	

SUMMARY AND RECOMMENDATIONS

A. RECOMMENDATIONS

- Small Activity Grant	$5,000,000
- Technical Support Contract	1,100,000
Total AID Obligations	$6,100,000

B. SUMMARY DESCRIPTION OF THE PROJECT

This project will provide a vehicle through which AID Missions in Africa can finance activities in support of improved rural technology. Working through local technology systems, these activities will promote innovation in such areas as agriculture, food processing, village water supplies, energy, construction, health, and information exchange. Implementation will be carried out in cooperation with government agencies, PVOs, or locally-based groups concerned with such issues.

To provide necessary technical support services, a contract will be signed with a U.S. organization having specific competence in improved (or "appropriate") rural technologies. The contractor will act in various ways to help promote, design, and exchange information concerning activities within this project, as well as providing technical review of proposals from the field and periodic evaluations of the project as a whole.

Since specific activities will emerge only as the project is implemented, details of "inputs" and "outputs" cannot now be provided. In general, however, the expectation is that the project will lead to:

- greater understanding and acceptance of the concepts of "appropriate rural technologies" on the part of African governments;

- a considerable accumulation of field experience with various technologies, providing valuable guidance for future development of more sweeping technology projects; and,

- positive impact, if only in relatively modest terms, on these Africans who are the direct beneficiaries of these activities, such impact to be measured in terms of production, personal incomes, employment, and the quality of village life.

C. PROJECT ISSUES

Four major issues have been raised in the course of project development: location of the technical support contractor, relationship of the project to the Accelerated Impact Program, relationship to A.T. International, and the nature of activities to be financed under the project.

1. Location of Contractor. The PRP suggested that contractor services in support of the project be split between two primary institutions: an African Regional Information and Documentation Center," to be located in Ghana; and a U.S. group to provide "Appropriate Technology Support Services." In its review of the PRP, however, the Project Committee concluded that "Only if the regional effort is assumed to be a permanent requirement, capable of attracting regional financial support, should it be located in Africa. That case hasn't been made." In line with these findings, subsequent project development has assumed that necessary support services would be provided by a single contractor, to be located in the U.S.

2. Relationship to AIP. To a limited extent, the Accelerated Impact Program parallels this project in providing a mechanism for rapid implementation of relatively small-scale efforts on behalf of rural Africans. The question has therefore arisen as to whether matters of "improved rural technology" might not be dealt with within the existing AIP framework, without requiring approval of a new project. On three major counts, however, this project is distinct from AIP:

- Unlike AIP, this project is exclusively concerned with "improved (appropriate) rural technologies." Given Congressional encouragement of new appropriate technology programs within AID, it seems useful to highlight the specific efforts the Africa Bureau is making in this area.

- AIP primarily supports activities whose life-of-project costs range from $100,000 to $500,000. To be adequately responsive to the dispersed and local nature of the need for improved rural technologies, however, activities in this area often must be carried out on a considerably smaller scale. This project therefore concentrates on activities whose life-of-project costs normally would be no more that $50,000.

- Most important, this project provides for a Technical Support Contractor to carry out work that AIP is simply not designed to perform: preparation of specialized guidelines for project selection and evaluation, pursuit of a significant program of information exchange, establishment of a network of consultants in Africa and the U.S., etc.

Conceptually and organizationally, this project therefore has a life of its own, distinct from AIP, and is deserving of support in its own terms.

3. Relationship to A.T. International. During the course of FY 1977, AID established and provided initial financing for A.T. International (ATI), a private organization which will support small-scale appropriate technology activities around the world. The question here is whether ATI might not be able to carry out the work outlined in this Project Paper as part of its own activities. Any response now must be preliminary, since ATI has not yet drafted its long-term operating program. Nonetheless, ATI's basic orientation suggests at least three ways in which it is likely to diverge from the activities proposed below:

- ATI intends to concentrate on institutional development of appropriate technology organizations in various countries. The present project, on the other hand, typically will act directly to expand use of improved technologies in specific rural areas.

- ATI's relatively limited resources are to be used throughout the developing world. It will therefore be unable to give the kinds of attention to specifically regional needs that will be offered within this project through bulletins, bibliographies, consultants' rosters, etc.

- ATI was explicitly established to operate in significant ways outside of normal AID channels. The present project, on the otherhand, will emphasize the role of Mission personnel in working with host-country technology groups and the Technical Support Contractor to develop, implement and evaluate project activities.

4. Nature of Project Activities. Some participants at the Project Committee review meeting felt that support should be given primarily to agricultural activities. More recently, on the other hand, there has been serious discussion of using project funds for a wide variety of experiments with alternative sources of village energy. There seems no particular reason, however, to make judgments in advance as to which areas are most in need of support. Funds should remain generally available for assistance to "improved rural technologies," as outlined below. Specific emphases will emerge over time out of actual needs at the local level, as expressed in activity proposals submitted from the field.

I. PROJECT BACKGROUND

A. THE DEVELOPMENT ISSUE

Over the past few years, the international development community has given increasing attention to the specific needs of the world's "poor majority." Inevitably, this approach has concentrated on problems of rural areas. The underlying logic is clear. First, since most of the poor live in the countryside, the issues of poverty must centrally be joined there. Second, any success in improving rural conditions will also act to relieve pressure on the cities, to which large numbers of unskilled workers would otherwise migrate in search of a better life. Finally, a prospering countryside implies expanding markets for urban products, giving greater hope for balanced and self-sustaining national growth.

If the need for rural development is obvious, the means for achieving this are less so. As experience with the technologies of the "Green Revolution" demonstrates, sweeping approaches to transforming the countryside may lead to increased production only at the cost of unemployment,

inequalities in income distribution, and social instability. In such cases, the benefits of "growth" may simply bypass the poor. If only as a complement to larger-scale development efforts, it has therefore come to seem necessary to support technologies designed to meet specific needs of the rural poor themselves.

In particular, this implies development of improved devices or techniques to help the poor to:

- increase personal incomes, in a way that distributes benefits equitably among the people affected;

- increase production, especially of goods needed for adequate food and nutrition;

- increase employment and spread work more evenly through the year; and,

- take other steps needed to improve the quality of village life, and therefore to reduce the pressure for migration to urban areas.

To meet these objectives requires attention to (1) the nature of devices or techniques to be developed, and (2) the ways in which such development takes place.

1. Characteristics of Improved ("Appropriate") Rural Technologies. There is no single, universally-accepted way of defining appropriate rural technologies. As a rule of thumb, however, it may be assumed that these will tend to be:

- labor-intensive in manufacture and use;

inexpensive enough for the poor but;

- simple enough for the relatively unskilled to use and maintain;

- sparing in the use of scarce or imported resources; and,

- well adapted to local social contexts;

- repairable in the villages or nearby.

The implication here is that "technology" is a matter of hardware, and hardwares in fact are likely to be at the center of most activities within this project. More broadly defined, however, "technology" simply refers to the means by which various economic and social functions are carried out. In this sense, a public health delivery mechanism or an approach to non-formal education is "technology," as is a village's system for deciding upon activities for community support. At least in theory, improvements in such areas could represent an advance in the state of "rural technologies" and so be considered for financing within this project.

2. The Development of New Technologies. There is broad agreement that effective development of these technologies is a highly "location-specific" process. A technology appropriate for a village in the Amhara highlands of Ethiopia, for example, may not be appropriate for the social and environmental conditions of a nearby Oromo area, much less for farmers in Ghana and Tanzania. To take this fact adequately into account, improved rural technologies must be developed in ways that allow:

- involvement of local populations in project design, implementation, and evaluation;

- expenditure of money in relatively small amounts, in response to specific local or regional needs; and,

- support for institutions working at the village level to make technology choices and carry out technology activities.

A number of development objectives converge here. The provision of a new technology should increase the material well-being of its recipients. To ensure that a particular technology is appropriate for a particular place requires local participation in its selection, a process assumed to be desirable in itself. And participation in decision-making is likely to improve a village's capacity for carrying out further development activities. Clearly, the pursuit of improved rural technologies has development implications which go far beyond simple improvements in the performance of specific mechanical tasks.

B. PROJECT HISTORY

Although AID has been in the improved rural technology business before (notably in the 1950s), the current era of systematic interest in the subject formally began in December 1975, when Congress called for AID to take new action to promote "intermediate technology." While AID's written response in June 1976 largely took the form of a proposal for a new organization (now A.T. International), the basis was also laid for an expanded technology effort within AID's own programs. An internal Working Group on Appropriate Technology was created, a two-person Appropriate Technology Liaison Unit was formed within TAB, and project initiatives were solicited from missions and regional bureaus.

By this time, the Africa Bureau had begun its own process of project development. In March 1976, a circular airgram on improved rural technology had asked for mission comments on local rural equipment centers, relevant activities of various African institutions, and possibilities for a regional effort to support additional work. Although no consensus emerged on specific next steps, responses from the field confirmed the existence in many African countries of considerable interest and activity in this area along with a desire for further action.

As a result of this process, three PIDs emerged for Africa Bureau review. These were designed respectively (1) to improve the standard of living of the rural poor of Tanzania through intermediate technology; (2) to stimulate the development, manufacture and use of such technologies in Ghana; and, (3) to provide training and information services on a regional basis. In August 1976, these proposals were approved as a consolidated regional project, "Improved Rural Technology."

At the end of 1976, a team from Development Alternatives, Inc. visited Africa to prepare a PRP for this project. In addition to country-specific proposals for Ghana and Tanzania, the DAI team recommended support for two primary institutions to meet regional needs:

- an "African Regional Information and Documentation Center," to be attached to Ghana's Council for Scientific and Industrial Research (CSIR) in Accra; and,

- a U.S.-based group to provide "Appropriate Technology Support Services," including technical review of mission proposals for small technology grants and specialist assistance for project design and implementation.

On January 31, 1977, the Project Committee met to discuss the DAI proposals. In reviewing the regional component of the project, the Committee generally agreed that a persuasive case had not been made for locating support functions within Africa. Serious difficulties were anticipated in arranging long-term regional financing for any new Center to be attached to CSIR. On the other hand, although various efforts were underway within Africa to develop a regional capacity for technological development, no institution then in existence seemed fully prepared to undertake these particular tasks. Under the circumstances, it seemed prudent to allow services in support of this project to be provided initially by the U.S.-based contractor, even though an African institution might yet emerge to which such responsibilities could ultimately be transferred.

The components for Ghana and Tanzania were subsequently detached from the project and included as separate activities within the programs for those two countries. The "Improved Rural Technology" project therefore took on a specifically regional character, as described below.

II. PROJECT DESCRIPTION

In general, this project will provide a vehicle through which Africa Missions can finance small-scale activities in support of improved rural technology. A U.S. contractor will help in various ways to promote, design, and exchange information concerning these activities, as well as providing technical review of proposals from the field and periodic evaluations of the project as a whole.

A. CONTEXT - THE RURAL TECHNOLOGY SYSTEM

In practice, to develop improved rural technologies is an extremely complex and demanding process. In the past, problems have often resulted from introducing such technologies without adequate regard for cultural and technical patterns at the local level. As an additional problem, even culturally "appropriate" technologies may face difficulties in terms of testing and demonstrating prototypes, producing and financing equipment and so on.

In other words, an effective project for improved rural technology may have to deal less with new "hardware" than with creation of supporting "software": institutions, systems, approaches to problem-solving on the part of both outside experts and rural peoples. Such activity will take place within what we can call the 'Rural Technology System." Whatever its degree of formal organization, this system involves five major functions, all of which must be performed adequately if rural technology projects are to succeed:

1. Determination of Needs. The first job of this system is to determine in preliminary fashion what technology needs exist at the local level. To make such a judgment, information is required on:

   - existing technological patterns;

   - local social patterns within which technologies are used and technology choices made;

   - major opportunities for improved conduct of economic or social activities within the villages concerned; and,

   - the extent to which "opportunities," as perceived from outside, correspond to "needs," as felt by the villagers themselves.

   Since missions are likely to lack time and money to acquire this information in any detail, especially for the sorts of small-scale activity to be funded under this project, part of the design process will involve working with local groups that do possess such information. To be useful, such groups (agricultural extension services, PVOs, etc.) should have significant numbers of workers living or spending much of their time in the areas where improved technologies are to be developed.

2. Design and Testing. The next step is to experiment with various innovations to determine whether these are appropriate to local conditions in terms of effectiveness, durability, cost, ease of repair, social soundness, etc. Such innovations may be adapted from existing techniques, whether traditional or modern, or may be

invented for this particular application. Where possible, the testing of prototypes should be carried out by the people for whom the innovations are ultimately intended.

3. Production. While even village-level technologies may have to be imported, in whole or in part, it is preferable to look to local entrepreneurs, craftsmen, blacksmiths, or manufacturers to make or adapt the equipment required. Such production cannot be taken for granted, however, requiring as it does a combination of materials, tools, management abilities, access to financing, and technical skills that may not be readily available. Careful attention should therefore by given this issue as part of the project design process.

4. Distribution. This function of the technology system includes marketing, transport, provision of credit, extension, and other services required to move technologies from manufacturer to the point of final use.

5. Evaluation. "Evaluation" consists in part of a continuing process of adaptive feedback, allowing project managers to sense and respond to important developments at any point in the technology process. Also necessary, however, is an accurate assessment of results at or following the project's formal conclusion. Especially in terms of impact on social institutions, actual effects may not be clear until some time after the technology is introduced. Only when these results are known, can valid judgments be made about the activity's success and the lessons it may carry for similar projects elsewhere.

Any activity carried out within the framework of this project will have to begin by examining each of these components of the rural technology system, even if support for particular elements proves not to be necessary. As a basis for conducting such review, three summary points should be stressed:

- The greatest need is to institutionalize a continuing interplay throughout the system between local groups and outsiders seeking to help them improve their technological situation. If there are not participating organizations with deep roots in rural areas, this interplay cannot exist and the project cannot succeed.

- To provide a flexible structure within which such productive interaction can take place, projects should incorporate as little advance "programming" as possible. The process of carrying out technology activities is at least as important as the development of particular items, and attempts to anticipate results in great detail are likely to freeze the process in patterns that would jeopardize the project's success.

- The admonition to "think small" in rural technology development applies to institutions as much as to machinery. As a general rule, people designing activities in this area should resist any temptation to support creation of large new institutions, or to assist empire-building on the part of existing ones.

B. ACTIVITIES

Acting through different rural technology systems, this project will support a variety of specific activities, each one of which should normally cost no more that $50,000. Emphasis will therefore be on small-scale, short-term activities of the following types:

1. Innovation. Activities of this sort would allow testing and demonstration of new devices or processes. An example might be field testing of an experimental pyrolytic converter to determine its efficiency using African raw materials in an African setting.

2. Start-Up. A start-up activity would provide information or meet conditions necessary prior to undertaking a particular long-term development project. For example, a sample survey might be taken of village energy uses to determine the desirability of proceeding to a large-scale project to provide alternative sources of energy.

3. Pilot. These activities would support field testing and demonstration of technologies whose characteristics, cost-effectiveness, and replicability are generally known. The assumption here is that other donors or the host government might choose to continue the program on a broader scale. As an example, several dozen copies of the "dragonfly" pump developed in Southeast Asia might be bought for demonstration in Sahelian river basins, given a preliminary judgment that the pump could be responsive to African needs.

4. Roadblock Removal. Small barriers at one point in a technology system can impede functioning of the system as a whole. A correspondingly small intervention could remove such "roadblocks" and return the system to health. For example, progress in supporting village soap-making in Upper Volta could be halted by uncertainties about how to address a particular design problem. The issue might be rapidly resolved if personnel could simply be sent for a time to work with Ghanaian experts who had been pursuing similar questions.

Technologies whose development might be pursued in these ways include:

- agriculture: animal-drawn implements and carts; hoes, threshers
  backyard poultry incubators
  rabbit hutches and chicken coops
  irrigation pumps

- aquaculture: village fish ponds or tanks

- food processing and preservation:	maize shellers vegetable oil presses improved ovens cassava peelers food dryers grain mills storage bins
- energy:	village wood lots pyrolytic converters methane digesters windmills peat processors
- water:	pumps for village water systems
- manufactures:	extraction of oils for soap, cosmetics and perfume small-scale paper plants brick-making
- prototype development	
- construction	labor-intensive methods for constructing roads, public buildings, dams, etc.
- crafts:	handlooms carpentry pottery basket-making
- health:	training,in maternal and child care rural health delivery systems
- non-formal education	
- village organization:	support for PVO work in local institution-building
- information:	data collection on food production and other rural issues mechanisms for information exchange

Because all the activities are broadly agriculture-related, money for this project should therefore be provided out of the portion of AID's budget allocated to Food and Nutrition.

C. TECHNICAL SUPPORT CONTRACT

This project will raise questions and produce answers through a great variety of small-scale activities scattered widely through Africa. To get best results from such a diffuse effort, however, will require a central point through which information can pass:

- from the field, in terms of technical inquiries activity proposals, reporting of results, requests for consultant assistance, etc.; and,

- to the field (including non-AID rural technology groups), in terms of technical advice, summaries of current activities in the region and elsewhere, guidance on project development, etc.

Given the kinds of expertise and the amount of staff time involved in these tasks, outside assistance will be required to carry out necessary work. In accord with recommendations of the PRP, as modified by the Project Committee, this implies concluding a technical support contract with an independent organization having specific skills in the area of improved rural technologies.

1. Services. Services to be provided under this contract will be of

a. Guidelines for Activity Selection. As a supplement to guidance included in this Project Paper, the Contractor will provide written information for use by missions (or other groups interested in improved rural technologies) in selecting and presenting ideas for funding. In general, this will give a sense of the "state of the art" in development of appropriate technologies for rural Africa. More specifically, it will provide guidelines for considering key aspects of proposed technology activities. Emphasis will be on ways of looking at the technical and social issues which form the core of each Activity Paper.

b. Information Exchange. A central part of the Contractor's work will be the exchange of information. This will encourage consideration of appropriate technology concepts by missions and governments, publicize innovative solutions to problems of countries within the region, and help bring the skills of creative professionals to bear on issues at the local level. Specific services will include:

- Bulletin. This will provide a monthly summary of current information, with emphasis on specific technology needs (as identified by Missions or various local groups), ideas (drawn from traditional African practices or from contemporary research by ITDG, VITA, Brace, NCAT, etc.), and activities (from whatever source). The bulletin will be distributed to Missions, African rural technology groups, appropriate units within host governments, interested AID/W offices, and other concerned organizations.

- Bibliographies. The Contractor will distribute a short bibliography of introductory materials, possibly accompanied by selected reprints, for general use by Missions and governments. A more detailed bibliography will be made available to groups actively working on development of improved rural technologies. These bibliographies will be updated annually.

- Consultants'Roster. A roster will be maintained of experts available to consult on technical, economic, or social aspects of rural technologies. Emphasis will be on identifying people within Africa who can perform these functions.

- Workshops. At the request of Missions or African groups, the Contractor may organize national or international workshops on specific technology issues. Funds for this purpose would be drawn from those available for project activities.

c. Response to Inquiries. At the request of Missions or African groups, the Contractor will provide technical advice or other information on specific technology issues.

d. Review of Proposals. As outlined in Sections IV. A-B, below, the Contractor will review Activity Papers forwarded by Missions to AFR/RA for approval. This process will involve:

- dialogue with missions on points raised in the Activity Paper, as necessary;

- suggestions for refinements or ideas to be considered in final development and implementation of the activity; and,

- a recommendation to AFR/RA as to whether the proposal should be approved, rejected, or returned to the Mission for additional work.

e. TDYs. The Contractor will supply or find experts as required for TDYs to help design or implement activities within this project. Funds for this purpose will be drawn from activity money available through the project.

f. Evaluation. The Contractor will coordinate an annual evaluation of project activities, including:

- preparation of a reporting format for use by missions in evaluating activities, with emphasis on ways of assessing technical and social results:

- on-site inspection of a selected group of activities; and,

- submission to AFR/RA of a written evaluation of the project.

2. Timing

Services during the first year will be generally completed in line with the following schedule:

End of Month	Services
0	Contract signed by AID and Contractor
1	Bulletin #1 issued.
2	Guidelines for project selection to field. Bulletin #2 issued.
3	Short bibliography to field. Bulletin #3 issued.
4	Consultants' roster to field. Bulletin #4 issued.
5	Detailed bibliography to field. Bulletin #5 issued.
6	Review of Activity Papers, etc. Bulletin #6 issued.
7	Review of Activity Papers, etc. Bulletin #7 issued.
8	Evaluation guidelines to field. Bulletin #8 issued.
9	Bulletin #9 issued.
10	Preliminary review of field evaluations.* Bulletin #10 issued.
11	On-site inspection of activities.* Bulletin #11 issued.
12	Submission to AID of project evaluation.* Bulletin #12 issued.

(* - In the first year of the project, the evaluation process will naturally consist more of preliminary progress reports than of formal assessments of results. This process will nonetheless be important as a means of refining guidelines for further work under the project.)

In addition to the above, the following activities will be carried out when necessary during the year:

- review of Activity Papers;
- response to inquiries;
- TDYs;
- workshops;
- revision of consultants' roster.

3. Staff

In order to perform necessary services as outlined above, the Contractor will need to provide a full-time staff consisting of a Project Manager, an Assistant Project Manager, and a secretary. This staff will write project selection guidelines, carry out information exchange functions, and with Mission assistance prepare the annual evaluation of project activities. With consultant support as necessary, the staff will also be responsible for replying to inquiries from the field, arranging TDYs, and reviewing Activity Papers.

Between them, members of the project staff will therefore need to have the following capabilities:

- strong knowledge of technical aspects of improved rural technologies,
- strong knowledge of important relationships between such technologies and their social contexts;
- strong knowledge of experts working on rural technology questions in the U.S. and Africa;
- broad awareness of activities being pursued by rural technology groups, in the world generally and Africa specifically; and;
- strong writing skills.

III. PROJECT ANALYSES

The precise shape this project will take depends on the particular activities approved for funding in the course of its implementation. As a result, many details of the project's social, environmental, economic and technical impact are now unavailable. In general, however, the project can be expected to raise certain predictable questions in these areas, as outlined below. In every case, satisfactory answers to these questions will be required before specific activities are approved for project funding.

A. SOCIAL ANALYSIS

Attempts to introduce appropriate technologies in rural areas can "fail" in three major ways:

-A technology can simply be rejected by its intended users.

-If adapted, the technology in practice can prove to have little impact (or even negative impact) on employment, productivity, or income distribution.

-Adoption and use of the technology can have a sufficiently shattering impact on local social organization that the community's ability to carry out subsequent development activities is materially damaged.

These are not simply theoretical possibilities. Any development practitioner, for example, can tell anecdotes of windmills, pumps, or methane generators standing unused in rural areas of LDCs. Available evidence indicates in fact that most past attempts at transfer of village-level innovations may ultimately have failed in one or more of the ways listed above. The evidence also suggests strongly that failure commonly has followed from inadequate understanding of the local social contexts within which technological change was expected to occur.

An important emphasis in developing specific activities within this project will therefore be on consideration of those activities in social context. As indicated in Section IV.A, below, this implies giving particular attention in activity proposals to:

- social determinants of the technology's adoption;
- impact on employment, productivity, and income distribution; and,
- impact on social organization.

Within the limits of the possible, this process should ensure a proper "fit" between technologies developed under this project and the social environments in which they are placed.

B. ENVIRONMENTAL EXAMINATION

Again, since specific activities will be determined only in the course of project implementation, details of environmental impact cannot now be itemized. Nonetheless, there is reason to assume that such impact will be extremely limited:

- A significant part of the project ($175,000 FY 1978) will consist of technical support services having no environmental impact.
- Of the remaining funds ($825,000 FY 1978) much will be used for

specific activities also having no environmental impact. Possible examples would be training programs, controlled field experiments confinded to small areas, workshops and meetings, document and information transfer, etc.

- A small proportion of project funds may be used for activities having discernible effects in such areas as land clearing, use of water, cultural tradition, and employment patterns. Since the emphasis in selecting activities is on adapting to existing local conditions and needs, however, such effects should be generally benign. In any case, the total cost of each activity is limited to $50,000, making it extremely unlikely that a significant environmental impact of any sort will result.

To ensure that the above assumptions prove correct in practice, approval of each separate activity will be contingent upon the preparation of Initial Environmental Examinations and discrete threshold decisions made in accordance with regulation 16. Such threshold decisions will be made by the official authorizing the activity.

C. ECONOMIC JUSTIFICATION

Hard economic data on the effects of specific intermediate technologies are largely unavailable, leaving an information gap that TAB's "Appropriate Technology Research" project is designed to fill. Nonetheless, a strong general argument for such technologies can be made along the following lines:

- In AID's "Proposal for a Program in Appropriate Technology," Dr. Howard Pack demonstrates at length that market interventions by governments of developing countries typically distort factor prices in such a way as to raise the cost of labor and lower the cost of capital. In terms of technology choice, this has the effect of encouraging the purchase of inappropriately capital-intensive equipment. If actual factor availabilities were taken into account, on the other hand, there would be considerable pressure to use the kinds of labor-intensive methods this project seeks to support.

- Dr. Peter Timmer and others have provided evidence that capital-intensive development approaches also result from a variety of non-market considerations, including a systematic bias toward "modern"methods and the administration convenience of planners and foreign assistance agencies. Again, the result is a violation of efficiency according to conventional economic measures, which would dictate the use of smaller-scale, more labor-intensive devices.

- One result of the above pressures is to limit growth in the demand for labor as development takes place. The resulting unemployment represents a major waste of valuable resources. As Congressman Clarence Long has put the case, an important goal of small-scale technology programs is "to harness the vast reserves of labor time which exist in all developing nations, enabling poorer nations to generate their own capital."

- Economists such as Lawrence White (quoted in the AID "Proposal" mentioned above) have also shown that a large number of labor-intensive technologies either are already available or can be readily developed. A project such as the present one is therefore in line with economic opportunity as well as economic need.

As Prof. White summarizes the case, use of intermediate technologies in general "can mean an improvement in the allocation of resources in LDCs perhaps a slightly higher growth rate, a better distribution of capital resources across the economy and probably a slightly more equitable internal distribution of income, and more and better employment opportunities." While awaiting the results of careful research such as that to be carried out by TAB, it seems safe to assume that the economic effects of intermediate technology programs can only be salutary.

D. TECHNICAL ANALYSIS

Few generalizations can be made in advance about the project's technical content, since this will depend entirely on the nature of activities selected and the specific technologies available to implement them. To provide the basis for technical review as proposals are advanced for funding, however, the Activity Paper (Section IV.A) requires Missions to include details of technologies to be used, the basis for their selection, and their implications for such project concerns as production and employment.

IV. IMPLEMENTATION

Three major issues are covered below: the format for the Activity Paper, which is to provide the basis for AID/W approval of Mission proposals for funding; an outline of the process by which proposals are to be developed, reviewed, and approved; and the project's budget.

A. THE ACTIVITY PAPER

Activities proposed for funding under this project will first be presented by Missions to AID/W through an Activity Paper. The Activity Paper, which is roughly the equivalent of a PID in terms of project development, has two major functions. First,it serves as the basis for a determination by AFR/RA, on behalf of AID/W, that the proposed activity can legitimately be funded under the terms of this project. Second, it provides information needed by the Technical Support Contractor for review of the activity's technical and social soundness.

In accord with the limited scale of the activities in question, the Activity Paper format outlined here reduces documentation to the minimum needed for AFR/RA and the Contractor to perform necessary review functions. Although

there is no formal requirement as to length, a normal Activity Paper might cover approximately six to eight single-spaced pages.

Before submitting Activity Papers, Missions will conduct their own preliminary reviews of activities to be proposed for funding. This process may be relatively informal, but it should give a strong sense of the shape of major elements normally covered in project reviews, including: project background and description; technical, financial, economic, and social analysis, to the extent appropriate; implementation processes; and policy issues, such as human rights and involvement of women in the activity.

Once the activity has been generally defined along these lines, the Activity Paper can be prepared for submission to AFR/RA. Although the Mission may include whatever material it feels to be especially significant, the usual format will simply be:

- Activity Description
- Technical Analysis
- Social Analysis

1. Activity Description. Enough information should be provided to show how the proposed activity falls within the scope of this project, as outlined in Section II, above. Since other organizations may be notified of the proposal by the Technical Support Contractor, the Activity Description should also be sufficiently complete to stimulate contact by groups feeling they have information to share or questions to ask. Included here should be the activity's budget and a schedule of work to be undertaken.

2. Technical Analysis. This section of the Activity Paper should:

   a. provide specifications of the devices or techniques to be used within the activity;

   b. show the reasons for choosing these technologies over other designed to perform similar functions; and,

   c. indicate how the specific technologies selected can be expected to meet central objectives of the project, especially with respect to increases in production and employment.

   In addition, a brief Initial Environmental Examination should be included as outlined in Handbook 3, Appendix 5C. Except under unusual circumstances, we would expect this to consist of a negative determination, based on a "Threshold Decision" that the proposed activity would not be a major action having a significant effect on the human environment.

3. Social Analysis. As indicated in Section III.A, above, failure in developing and applying innovative technologies for rural areas most often follows from inattention to local social realities.

This "Social Analysis" section is therefore likely to be the most important part of the Activity Paper. Given problems in acquiring and interpreting relevant data, it is also likely to be the most difficult to prepare. Nonetheless, the Mission's best efforts should be applied to providing the following information:

a. Social Determinants of Technology Adoption. Basically, the issue here is whether the technology "fits" in the local social environment to the extent that it will be accepted and used. Questions that might be raised include: Are comparable technologies (in terms of skills, ownership, etc.) already in use? If not, is there any evidence that such technologies have been tried and rejected? Is the proposed technology consistent with local attitudes toward sex roles, family relationships, credit, control over resources, patterns of community decision-making and authority, etc.?

b. Impact on Employment, Productivity and Income Distribution. It cannot be assumed that effects on these variables will be appropriate simply because the technology is labor-intensive and relatively cheap. Unless cultivated areas can be expanded, for example, a tool to make harvesting more efficient will simply throw harvesters out of work. If men are able to expand the area they harvest, on the other hand, women may be forced to leave other productive activities to carry out the additional weeding required. And their preferential access to such supporting services as credit may make the relatively wealthy the primary beneficiaries of the activity in any event. The Activity Paper should indicate that effects such as these will not in fact lead to negative impact on employment, productivity, and income distribution.

c. Impact on Social Organization. Depending on their nature and the ways in which they are introduced, "appropriate technologies" may have negative effects on a whole range of local social patterns: credit and marketing systems, traditional "social security" mechanisms, role models governing leadership and family relationships. For example, to exceed the capacity of traditional credit sources would require that support be provided by some sort of central banking mechanism. This could serve to undermine a formerly personalized credit system, while forcing borrowers and central institutions into relationships for which neither party might be adequately prepared. At best, the result would be an erosion of local self-reliance in favor of an uneasy dependence on government. Here again, the Activity Paper should indicate that such effects have been considered and that they are not likely to have serious negative impact on the community's capacity to carry out further development activities.

d. Use of Local Organizations. Although the issues above should be addressed as fully as possible in the Activity Paper, complete answers cannot be expected given the limited time and resources that Missions will be able to apply to the exercise. To provide a

reasonable hope of project success, Missions should therefore plan also to solicit the continuing cooperation of organizations already having an intimate knowledge of local social realities. Such organizations - village councils, PVOs, extension services, etc. - will need to be involved in both design and implementation of the proposed activity, in order that a thorough sensitivity to social context be brought to bear throughout this process. The Activity Paper should indicate the organizations to be involved and the nature of their involvement. (see p. 21 a)

B. ACTIVITY APPROVAL PROCESS

Activities to be financed under this project will be approved through the following process:

1. Initial Mission Review. Activity ideas from whatever source (government agency, PVO, Peace Corps, Mission, etc.) will first be subject to Mission review. This review should be carried out with sufficient care that the activity's outlines are well defined and clearly understood by all parties to be involved in its implementation. Special attention should be given to the proposal's technical and social dimensions, which will form the core of the Activity Paper.

2. Activity Paper. Missions will initiate the formal approval process by submitting to AFR/RA an Activity Paper. The format for this document, which should be relatively brief, is outlined in Section III, below.

3. Contractor Review. Upon receipt of the Activity Paper, AFR/RA will immediately forward copies to the Technical Support Contractor. If asked to do so by the Mission, or upon concurrence of AFR/RA, the Contractor may then contact the Mission directly to provide advice or pursue questions raised by the Activity Paper. Whether or not such contact is required, the Contractor will conclude its review of the Activity Paper by submitting to AFR/RA:

- an assessment of the proposal's feasibility, with emphasis on technical and social soundness;

- any suggestions or comments to be considered in further development or implementation of the activity;

- a recommendation as to whether AFR/RA should approve the proposal, reject it, or return it to the Mission for additional work. If dialogue with the Mis 'on is not required, this material should normally be submitted to AFR/RA within ten working days of receipt by the Contractor of the Activity Paper.

4. AFR/RA Action. Subject to appropriate Bureau clearances, AFR/RA will then formally approve, disapprove, or suggest revision of the Activity Paper, cabling this information to the Mission within five working days after receipt by the Contractor's recommendations. If the Paper is

approved, AFR/RA at the same time will arrange for an allotment to the field of funds necessary to carry out the activity.

5. USAID Action. Assuming approval by AFR/RA of the Activity Paper, authority for final approval of the activity rests with the Mission Director or equivalent officer. In line with current A.I.D. policy, Mission Directors, CDOs, and RDOs may waive standard requirements for U.S. or local procurement in amounts not exceeding $25,000 per transaction.

6. Grant Agreement. This is the obligating agreement, which will be negotiated with the recipient government. after approval of the first Activity Paper. This agreement will be an umbrella agreement. Subsequent activities will be implemented by an implementation letter. The format for this agreement is provided in Handbook 3, Chapter 10, Appendix 1-2 or A-4 (as appropriate).

C. FINANCIAL PLAN (BUDGET)

The life of this project will be five years (FY 1978-1982). An illustrative annual cost of $1,000,000 (for FY 1978) is broken down as follows:

Project activities (approximately 25 separate activities, with average cost of $34,000; breakdown below is only approximate, with actual figures depending on activities approved)		$825,000
- Personnel (experts, local staff)	$300,000	
- Training (seminars, 3rd country training, personnel exchanges)	150,000	
- Commodities (small tools, prototypes, machines and equipment)	300,000	
- Other Costs (conferences, publications, revolving funds, etc.)	75,000	
U.S. Contractor - Technical Support Services (funds may be transferred between line items as necessary)		$175,000
-Project Manager (salary and benefits)	37,500	
-Assistant Project Manager	27,000	
-Secretary (salary and benefits)	15,500	
-Technical Consultants (200 days at average of $150 @ day)	30,000	
-Travel	25,000	
-Operating Expenses (phone, duplication, mailing etc.)	15,000	
-Overhead	25,000	

Implementation of the project will encourage the utilization of African experts, or in some cases, expatriate experts resident in Africa, for services related to the design of rural technology projects where mission or host country expertise is lacking. Recourse to experts located in Africa is preferable in many cases to utilization of U.S. experts because of (a) lower travel and compensation costs, (b) the benefit of spreading demonstrated technology which has already proved itself from one locality in Africa to another, thus helping to strengthen an appropriate technology "network" within the area.

With respect to the eligibility of African experts, current A.I.D. geographic source rules provide that Code 941 countries are eligible sources for goods and services for activities financed by A.I.D. in the relatively least developed countries. The eligible source code for the lesser developed countries is code 000 (United States only).

In order to permit the procurement of expert services for the RLDCs from non-Code 941 countries, it is necessary to request a waiver for such eligibility to Code 935. For the least developed countries, in order to obtain services from both lesser developed and developed countries, it is necessary to request a waiver to Code 935.

We believe that the best interests of the United States will be served by authorizing A.I.D. Geographic Code 935 for the procurement of expert services. We estimate that such costs will not exceed $100,000 over the lifetime of the project and suggest that a limitation in the amount be set.

V. EVALUATION PLAN

The small scale and often experimental nature of activities within this project will allow for a certain number of relatively high-risk ventures. As a result, some activities can be expected to fall short of unqualified success. The evaluation process will therefore seek to find lessons in setbacks as well as triumphs, in order to provide guidance for improved performance in the development of rural technologies.

Overall responsibility for this process will be shared by Missions, the Contractor, and AFR/RA.

A. MISSIONS

Missions will be responsible for making on-site inspections of activities funded within this project. Such inspections should be carried out at least quarterly, with observations forwarded to AFR/RA and the Contractor. At the end of each year, Missions will prepare a summary evaluation of progress within each activity, according to a format to be prepared by the Contractor.

B. CONTRACTOR

As noted in Section II.C1.f, above, the Contractor will:

- prepare a standard format for Mission evaluation of activities;

- carry out on-site inspections of its own, to the degree felt necessary for the purpose of this project; and,

- on the basis of the above, submit to AFR/RA an annual evaluation of the project.

C. AFR/RA

The AFR/RA Project Officer will have under continual review:

- informational materials and other documents produced by the Contractor;

- Activity Papers submitted by Missions, and the Contractor's written responses to these;

- quarterly and annual activity evaluations by Missions; and,

- the Contractor's annual evaluation of the project as a whole.

If issues arise during the year, the Project Officer may produce special evaluations of the problems involved. The Project Officer will also

write a summary evaluation once each year. This document, which will include an assessment of the Contractor's performance, will be prepared following submission by the Contractor of its annual evaluation report.

At the end of the third year, the Project Officer will arrange for an independent study of the project. This will generally review the results of activities financed within the project, as well as evaluating the work of the Technical Support Contractor.

AID 1020-20 (11-70)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: From FY 78 to FY 82
Total U. S. Funding $5,000,000
Date Prepared:

Project Title & Number: Improved Rural Technology (698-0407)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes: (A-1) To improve the standard of living of rural African communities.	Measures of Goal Achievement: (A-2) Increases in: - production - income - employment - quality of life	(A-3) Sample surveys.	Assumptions for achieving goal targets: (A-4) Expanded use of low-cost technologies will increase production, income, employment, and quality of life.
Project Purpose: (B-1) To expand awareness and use of improved ("appropriate") rural technologies. This will be done through a series of small-scale activities to be developed by Missions and funded through this project.	Conditions that will indicate purpose has been achieved: End-of-Project status. (B-2) Improved technologies in use in rural areas. Missions and Governments more conversant with technology possibilities. Details will depend on activities approved.	Verification will be achieved through: - Mission evaluations (quarterly and annual) of specific activities - Contractor documentation and annual evaluation report - Africa Bureau end-of-year project evaluation	Assumptions for achieving purpose: (B-4) Missions will be able to develop sound proposals for small-scale project activities.
Project Outputs: (C-1) Outputs, details of which will depend on activities to be funded, might include: technology prototypes (developed, adapted, tested); technology centers (strengthened as necessary); workshops; etc.	Magnitude of Outputs: (C-2) To be determined, depending on activities approved.		Assumptions for achieving outputs: (C-4) Appropriate technologies are available or can be designed for conditions prevailing in specific areas of Africa.
Project Inputs: (D-1) (a)Experts, training, commodities, etc. in line with requirements of specific activities. (b)Technical Support Contract - staff - consultants - operating expenses, etc.	Implementation Target (Type and Quantity) (D-2) (a)Total annual cost $850,000; details to emerge as activities are approved. (b)Annual cost $150,000. - Project Mgr., Asst. Project Mgr., Secy ($80,000) - 140 work days ($21,000) - ($49,000)	Basic data to be used in these processes will vary depending on activities approved.	Assumptions for providing inputs: (D-4) Contractor can be found with technical skills necessary to provide support for this project.

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Africa Regional (various areas, to be determined in course of project implementation)

Project Title: Improved Rural Technology, 698-0407

Funding: FY 1978-82; average 1.2 million each year

Life of Project: $6.1 million

IEE Prepared By: James E. Hill
Chief, Projects Division
AFR/RA

Date: 17 October 1977

Environmental Action Recommended: Negative Determination. See narrative on following pages for full statement of Recommendation for Environmental Examination.

Concurrence: J. E. Hill
for E. Dennis Conroy
Director
Office of Regional Affairs
Bureau for Africa

Date: 12/1/77

Assistant Administrator's Decision:

Date: 12/29/77

APPROVED: [illegible]

DISAPPROVED: _____

INIITAL ENVIRONMENTAL EXAMINATION

I. EXAMINATION OF NATURE, SCOPE, AND MAGNITUDE OF ENVIRONMENTAL IMPACTS

A. DESCRIPTION OF PROJECT

This project will provide a vehicle through which AID Missions in Africa can finance activities in support of improved rural technology. Working through local technology systems, these activities will promote innovation in such areas as agriculture, food processing, village water supplies, energy, construction, health, and information exchange. Implementation will be carried out in cooperation with government agencies, PVOs, or locally-based groups concerned with such issues.

To provide necessary technical support services, a contract will be signed with a U.S. organization having specific competence in improved (or "appropriate") rural technologies. The contractor will act in various ways to help promote, design and exchange information concerning activities within this project, as well as providing technical review of proposals from the field and periodic evaluations of the project as a whole.

B. IDENTIFICATION AND EVALUATION OF ENVIRONMENTAL IMPACTS

Since specific activities will be determined only in the course of project implementation, details of environmental impact cannot now be itemized. Nonetheless, there is reason to assume that such impact will be extremely limited:

- A significant part of the project ($175,000 annually) will consist of technical support services having no environmental impact.

- Of the remaining funds ($825,000 annually), much will be used for specific activities also having no environmental impact. Possible examples would be training programs, controlled field experiments confined to small areas, workshops and meetings, document and information transfers, etc.

- A small proportion of project funds may be used for activities having discernible effects in such areas as land clearing, use of water, cultural tradition, and employment patterns. (See following Impact Identification and Evaluation Form.) Since the emphasis in selecting activities is on adapting to existing local conditions and needs, however, such effects should be generally benign. In any case, the total cost of each activity is limited to $50,000, making it extremely unlikely that a significant environmental impact of <u>any</u> sort will result.

II. Recommendation for Environmental Action

As indicated above, the project is not expected to result in a significant impact on the environment. To ensure that this assumption proves correct in practice, approval of each separate activity will be contingent upon the preparation of Initial Environmental Examinations and discrete threshold decisions made in accordance with regulation 16. Such threshold decisions will be made by the official authorizing the activity.

A Negative Determination for the overall project in accordance with the above is recommended.

6C(2) - PROJECT CHECKLIST

Listed below are, first, statutory criteria applicable generally to projects with FAA funds, and then project criteria applicable to individual fund sources: Development Assistance (with a subcategory for criteria applicable only to loans): and Security Supporting Assistance funds.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? IDENTIFY, HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

GENERAL CRITERIA FOR PROJECT.

1. App. Unnumbered; FAA Sec. 653(b)

   (a) Describe how Committees on Appropriations 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 plus 10%)?

   (a) Project is included in FY 1978 Submission to the Congress (Africa Programs, p. 259).

   (b) Yes.

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?

   Specific activities to be financed through this project are expected to require obligations of less than $100,000.

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?

   Not applicable.

4. FAA Sec. 611(b); App. Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per Memorandum of the President dated Sept. 5, 1973 (replaces Memorandum of May 15, 1962; see Fed. Register, Vol 38, No. 174, Part III, Sept. 10, 1973)?

   Not applicable.

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 the country's capability effectively to maintain and utilize the project?

   Not applicable.

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6. FAA Sec. 209, 619. 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. If assistance is for newly independent country, is it furnished through multilateral organizations or plans to the maximum extent appropriate?

Project is regional in scope. Several components will allow for cooperation between African countries in carrying out specific activities.

7. FAA Sec. 601(a); (and Sec. 201(f) for development loans). 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.

Details depend on specific activities financed. In general, the project will work especially to foster private initiative, discourage monopolistic tendencies, and improve technical efficiency of industry and agriculture.

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).

Private U.S. participation will follow from extensive use of consultants and from possible encouragement of export of appropriate U.S. technologies.

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 utilized to meet the cost of contractual and other services.

National governments will help meet local costs in line with separate activity agreements.

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

Not applicable.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Sec. 102(c); Sec. 111; Sec. 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, spreading investment out from cities to small towns and rural areas; and (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?

Project's primary purpose is to assist the rural poor to expand ownership and use of small-scale, labor-intensive technologies. Emphasis is on cooperative local effort in support of such activities.

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b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available: [include only applicable paragraph -- e.g., a, b, etc. -- which corresponds to source of funds used. If more than one fund source is used for project, include relevant paragraph for each fund source.]

(1) [103] for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; [103A] if for agricultural research, is full account taken of needs of small farmers;

Larger part of project is to be devoted to food and nutrition technologies designed to increase productivity, income, and employment among rural poor.

(2) [104] for population planning or health; if so, extent to which activity extends low-cost, integrated delivery systems to provide health and family planning services, especially to rural areas and poor;

Not applicable.

(3) [105] for education, public administration, or human resources development; if so, extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, or strengthens management capability of institutions enabling the poor to participate in development;

Not applicable.

(4) [106] for technical assistance, energy, research, reconstruction, and selected development problems; if so, extent activity is:

Project will also address selected non-agricultural technology problems; e.g., experimental aporoaches to production and use of energy.

(a) technical cooperation and development, especially with U.S. private and voluntary, or regional and international development, organizations;

(b) to help alleviate energy problem;

(c) research into, and evaluation of, economic development processes and techniques;

(d) reconstruction after natural or manmade disaster;

(e) for special development problem, and to enable proper utilization of earlier U.S. infrastructure, etc., assistance;

(f) for programs of urban development, especially small labor-intensive enterprises, marketing systems, and financial or other institutions to help urban poor participate in economic and social development.

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(5) [107] by grants for coordinated private effort to develop and disseminate intermediate technologies appropriate for developing countries.

Although project concentrates on intermediate technologies in line with intent of Sec. 107, funds are available through Secs. 103, 106.

c. FAA Sec. 110(a); Sec. 208(e). Is the recipient country willing to contribute funds to the project, and in what manner has or will it provide assurances that it will 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)?

Statutory requirements will be met as specific activities are developed for financing through the project.

d. 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?

Not applicable.

e. FAA Sec. 207; Sec. 113. Extent to which assistance reflects appropriate emphasis on; (1) encouraging development of democratic, economic, political, and social institutions; (2) self-help in meeting the country's food needs; (3) improving availability of trained worker-power in the country; (4) programs designed to meet the country's health needs; (5) other important areas of economic, political, and social development, including industry; free labor unions, cooperatives, and Voluntary Agencies; transportation and communication; planning and public administration; urban development, and modernization of existing laws; or (6) integrating women into the recipient country's national economy.

Emphasis is on self-reliant development activities, based on participatory approach to local decision-making in activity selection and implementation. Productive technologies specifically relevant to women should be a significant component of the project, although details will depend on activities selected.

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

The "appropriateness" of technologies to be supported is measured in terms of specific needs, desires, and capacities at the local level.

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g. FAA Sec. 201(b)(2)-(4) and -(8); Sec. 201(e); Sec. 211(a)(1)-(3) and -(8). 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; or of educational or other institutions directed toward social progress? Is it related to and consistent with other development activities, and will it contribute to realizable long-range objectives? And does project paper provide information and conclusion on an activity's economic and technical soundness?

The project is designed to enhance local capacities for self-sustaining growth. Information on the project's soundness is provided by the Project Paper itself or will be submitted as part of proposals for specific activities.

h. FAA Sec. 201(b)(6); Sec. 211(a)(5), (6). Information and conclusion on possible effects of the assistance on U.S. economy, with special reference to areas of substantial labor surplus, and extent to which U.S. commodities and assistance are furnished in a manner consistent with improving or safeguarding the U.S. balance-of-payments position.

The only direct effects of the project on the U.S. economy will be those associated with purchase of goods and services from private U.S. suppliers.

2. Development Assistance Project Criteria (Loans only)

Not applicable.

a. FAA Sec. 201(b)(1). Information and conclusion on availability of financing from other free-world sources, including private sources within U.S.

b. FAA Sec. 201(b)(2); 201(d). Information and conclusion on (1) capacity of the country to repay the loan, including reasonableness of repayment prospects, and (2) reasonableness and legality (under laws of country and U.S.) of lending and relending terms of the loan.

c. FAA Sec. 201(e). If loan is not made pursuant to a multilateral plan, and the amount of the loan exceeds $100,000, has country submitted to AID an application for such funds together with assurances to indicate that funds will be used in an economically and technically sound manner?

d. FAA Sec. 201(f). Does project paper describe how project will promote the country's economic development taking into account the country's human and material resources requirements and relationship between ultimate objectives of the project and overall economic development?

e. FAA Sec. 202(a). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources?

f. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete in the U.S. with U.S. enterprise, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan?

3. Project Criteria Solely for Security Supporting Assistance — Not applicable.

FAA Sec. 531. How will this assistance support promote economic or political stability?

4. Additional Criteria for Alliance for Progress — Not applicable.

[Note: Alliance for Progress projects should add the following two items to a project checklist.]

a. FAA Sec. 251(b)(1), -(8). Does assistance take into account principles of the Act of Bogota and the Charter of Punta del Este; and to what extent will the activity contribute to the economic or political integration of Latin America?

b. FAA Sec. 251(b)(8); 251(h). For loans, has there been taken into account the effort made by recipient nation to repatriate capital invested in other countries by their own citizens? Is loan consistent with the findings and recommendations of the Inter-American Committee for the Alliance for Progress (now "CEPCIES," the Permanent Executive Committee of the OAS) in its annual review of national development activities?