

PD-AAZ-411

Improved Rural Technology Project

AID/AFR/RA--698-0407

ANNUAL REPORT

FY 1982

FINAL REPORT

FY 1979-1982

submitted to:

Agency for International Development

Bureau for Africa

Office of Regional Affairs

Contract No. AID/AFR-c-1471

November 12, 1982



EXPERIENCE, INCORPORATED

MINNEAPOLIS, MINNESOTA 55402

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(reader response to <u>Rural Technology Bulletin</u>)	

ANNUAL REPORT
FY 82

A. Introduction

This is the final Experience, Incorporated (EI) report for the Improved Rural Technology Project (IRT) -- AID/AFR/RA-698- 0407. As a separate section, we have also included the contractor's Annual Report for FY 82. EI has been the technical support contractor to the project since it began in October of 1978. During its four years, the IRT Project has been managed by the Office of Regional Affairs of the AID Africa Bureau.

IRT is a small-sum funding mechanism that was made available to USAIDs in sub-Saharan Africa on an experimental basis. Twenty-six USAIDs were eligible to apply for these funds and fourteen made use of them. The IRT funding limit was \$50,000 per activity at the outset of the project in 1978. This limit was increased to \$100,000 in January 1981 and has continued at this level.

As IRT contractor, the Experience, Incorporated role has been to technically qualify or otherwise assist USAIDs and beneficiaries requesting IRT-funded technology transfers. Our substantive participation in IRT activities has varied from none at all to comprehensive technical and documentation support for design and implementation. This report indicates the level of contractor involvement in each of the activities. Our report necessarily reflects a greater awareness of those activities in which we have have participated more fully.

The IRT "small funding window" was intended to assist USAIDs in introducing useful technologies to rural African communities. The project was designed to determine the utility of AID/W "quick response" small grants in addressing village-level needs previously identified by AID, such as the lack of potable water; post-harvest grain loss, inadequate farming tools and practices and limited income earning opportunities outside the agricultural sector. AID also identified alternate energy and low-cost housing materials as problem areas that would respond to the self-help efforts of African communities and their sponsors.

B. Statistical Report
and
Obligated Activities by Category

IRT PROJECT STATISTICAL REPORT
(1978 - 1982)

FY SUMMARIES
Amount Obligated

Country	IRT No.	Title	Date Approved AID/W	Date Oblgtd	Date Evtld	(FY 79)	(FY 80)	(FY 81)	(FY 82)	TOTALS
SIERRA LEONE	.01	Fishpond Outreach	8/31/79	9/17/79	1/29/81	25,000				
		Phase II	7/26/80	9/02/80	1/29/81		26,000			51,000
LIBERIA	.02	Fired Brick Housing	9/02/79	9/29/79		50,000				50,000
TOGO	.03	Prim. Sch. Ag. Ed.	11/01/79	11/28/79	6/16/81		40,000			40,000
KENYA	.04	Fam. Grain Storage	12/19/79	3/24/80			14,500			14,500
TANZANIA	.05	Handmade Paper	12/28/79	11/03/80				48,800		48,800
BURUNDI	.06	Peat Maceration	12/27/79	deallotted			00,000			00,000
LIBERIA	.07	Micro-Hydro	2/28/80	9/15/80			50,000			
		Amendment I	1/14/81	2/24/81				20,000		
		Amendment II	8/27/82	9/21/82					25,000	95,000
BOTSWANA	.08	Sorghum Milling	3/04/80	4/03/80	2/18/82		41,000			
		Amendment I	1/28/81	2/24/81				13,000		
		Amendment II	3/18/82	4/27/82					46,000	100,000
TOGO	.09	Rural Solar Tech'y	3/05/80	6/10/80			50,000			
		Amendment	6/25/82	6/30/82					25,000	75,000
ZAIRE	.10	4H Youth Farming	3/06/80	5/15/80			17,500			17,500
TANZANIA	.11	Traditional Pottery	1/25/80	9/29/80			25,000			
		Amendment	5/ ?/81	7/15/81				33,000		58,000
CAR	.12	Inland Fisheries	3/12/80	4/25/80			50,000			50,000
SEYCHELLES	.13	Low-Cost Housing	3/21/80	8/26/80			50,000			50,000
BOTSWANA	.14	Small Craft Dvlpt	7/08/80	9/08/80	2/19/82		50,000			50,000
ZAIRE	.15	CEPAS	7/09/80	9/30/80			27,300			27,300
SWAZILAND	.16	WID Outreach	7/11/80	8/29/80			50,000			50,000
SWAZILAND	.17	Water Filtration	7/17/80	9/ ?/81	7/07/82		29,000			29,000
SIERRA LEONE	.18	Royeima Water	12/09/80	3/04/81				50,000		50,000

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FY SUMMARIES
Amount Obligated

Country	IRT No.	Title	Date Approved AID/W	Date Oblgtd	Date Evtld	(FY 79)	(FY 80)	(FY 81)	(FY 82)	TOTALS
RWANDA	.19	Boy Scout Tech'y	12/22/80	4/07/81				50,000		50,000
TOGO	.20	Spring Water	3/20/81*	5/27/81				60,000		
		Amendment	7/19/82	8/06/82					15,000	75,000
TANZANIA	.21	Seaweed Farming	3/21/81*	5/29/81				87,000		87,000
TANZANIA	.22	Photovol. Refrig.	4/27/81*	5/29/81				32,000		32,000
KENYA	.23	Env'l Liaison Ctr	4/21/81*	5/22/81	7/82			75,000		75,000
ZAIRE	.24	Small Ag. Tools	3/23/81*	8/28/81				55,000		55,000
RWANDA	.25	Giciye Water Supply	6/05/81*	9/24/81				60,000		60,000
TOGO	.26	Farming Skills Dev.	7/23/81*	9/29/81				45,000		45,000
ZAIRE	.27	Kionzo Water	8/27/81*	8/26/82					25,000	25,000
SOMALIA	.28	AT Demonstration	9/28/81*							
		Amendment	7/19/82	deallotted						
KENYA	.30	Sololo Dams	10/21/81*	9/27/82					49,000	49,000
UGANDA	.31	Charcoal Briquettes	? *	9/24/82					95,000	95,000
TANZANIA	.32	Ruvuma Fish Farming	12/12/81*	4/23/82					57,000	57,000
BURUNDI	.33	Farm Dryers	1/20/82*	7/31/82					73,000	73,000
BOTSWANA	.34	Building Materials	2/12/82*	5/12/82					100,000	100,000
ZAIRE	.35	Solar Transceivers	6/11/82*	8/26/82					64,500	64,500
KENYA	.36	Lo-Cost Housing	8/04/82	9/30/82					100,000	100,000
FY TOTALS						75,000	520,300	628,800	674,500	
TOTAL FUNDS OBLIGATED										1,898,600

* These dates pertain to the approval of the AIC by AID/W. All other dates in this column indicate the approval of the activity paper under the old Guidelines.

OBLIGATED IRT ACTIVITIES ARRANGED BY CATEGORY

	I Ag'l Sys.	II Rural Water	III Nutri- tion	IV Renew. Energy	V Tools & Equip.	VI Housing Mat'ls	VII Food Systems	VIII Access Roads	IX Sani- tation	X Public Health	XI Income Gen'n	XII Trans- port	XIII* A.T. Prom'n	Total
Botswana					.08	.34					.14			3
Burundi					.33									1
Cameroon														0
CAR			.12											1
Djibouti														0
Ghana														0
Guinea														0
Kenya		.30				.36	.04						.23	4
Lesotho														0
Liberia				.07		.02								2
Malawi														0
Rwanda		.25			.19									2
Seychelles						.13								1
Sierra Leone		.18	.01											2
Somalia														0
Sudan														0
Swaziland		.17			.16									2
Tanzania			.32	.22							.05			
											.11			
											.21			5
Togo	.03 .26	.20		.09										4
Uganda				.31										1
Zaire	.10	.27		.35	.24								.15	5
Zambia														0
Zimbabwe														0
Obl'd per Category	3	6	3	5	5	4	1	0	0	0	4	0	2	33

* Category XIII, "A.T. Promotion" does not appear in the IRT Guidelines.

C. Rural Technology Bulletin '82

IRT has published three bulletins in FY 82, the last of which was a double issue of thirty-two rather than the usual sixteen pages. This brings IRT up to quota for bulletin publication. The bulletins have featured articles on organic food production (based on the Santa Barbara conference of October 1981), the environment, IRT activities, storage of perishable crops and grain and the design of a handpump lever system.

There has been a substantial jump in the number of subscribers in FY 82. Last year at this time, we reported 2,064 subscribers. This number has grown to approximately 2,875 in FY 82 distributed among 104 countries. A substantial proportion of this new interest has come from Zaire, we believe as a result of the Practical Concepts seminars held there. Interest has grown elsewhere as well: the Ministère de la Jeunesse of Rwanda requested 100 copies, Agritex (agricultural extension) of Zimbabwe twenty and the Appropriate Technology Center of the University of Port Elizabeth in South Africa fifty. The nature of these organizations suggests that the bulletins are being used for instructional purposes or distributed by organizational headquarters to field workers. This last is particularly true of Zaire.

The previous annual report mentioned that USAID Missions would be asked to contribute to mailing lists in their countries as a means of assuring that the bulletin served the proper clientele. Lists were sent out accordingly. Three Missions requested a reduction in the number of bulletins mailed. The others have continued to receive the usual thirty. The AID mailing list now numbers 915.

Bulletin costs have remained within reasonable levels taking into account the increases that accompany a wider distribution (greater production and mailing costs). We have taken steps to reduce costs for the last bulletin (Number 12) by changing printers.

D. Resource Collection/Information Dissemination

Bibliographies: In FY 81 it was decided to put the IRT resource collection to better use by compiling annotated bibliographies on appropriate technology topics. Certain of the entries were offered free of charge. The bibliographies, or resource briefs, were to be judged by the response they evoked. Five have been produced (Wood and Charcoal Burning Stoves, Forestry, Solar Cookers, Environment and Organic Food Production), advertised in and distributed with the bulletin.

During the past year we have received sixteen requests for materials and twenty-one requests for the resource briefs themselves. They have a mailing list of twenty-eight.

Library: The recataloguing of the IRT library is well under way. All new materials are listed using the new system of classifiers and will be entirely cross-referenced by subject area and author. Upon termination of the IRT Project the library will be transferred to the Institute of Cultural Affairs which will continue to make its resources available to field workers.

E. Activity Summaries

IRT .01
Fishpond Outreach
SIERRA LEONE

Activity Profile

Proposer: Peace Corps

Grantee: Ministry of Natural Resources, Fisheries Division

Contractor Role: Activity Paper critique

Phase I:

AID funding:	\$25,000	AID/W Approval:	8/31/79
Non-AID funding:	<u>\$51,500</u>	ProAg:	9/17/79
	\$76,500	PACD:	10/81

Phase II:

AID funding:	\$26,000	AID/W Approval:	7/26/80
Non-AID funding:	<u>\$49,050</u>	ProAg:	9/02/80
	\$75,050	PACD:	10/82

TOTAL COST: \$151,550

The contractor was asked by USAID/Freetown to critique the original IRT Activity Paper presented to the Mission by Peace Corps. The contractor suggested that the outreach component be strengthened and that the activity be implemented in two stages. The second phase would be contingent upon a successful performance in Phase I.

The project proposed to deal with protein deficiencies in rural areas by supporting government interest in introducing fish farms to rural farmers. The activity was implemented with an original goal of five farmers and five fishponds for the first year. The Peace Corps and the Fisheries Division technicians were motivated by early successes to implement thirty-three fish farms by April of 1980.

In April 1981 the activity was favorably evaluated by a team

from the International Center for Aquaculture at Auburn University in Alabama. This evaluation was based on the first phase (9/79 to 9/80) and included four months of the second phase (9/80 to 9/81). The evaluators noted that significant economic and nutritional effects were still limited due to the brief history of the activity. It was anticipated, however, that a continuation of this work would further increase the amount of available protein in rural areas. The activity was also reported by the evaluators to have provided clear evidence that inland aquaculture in Sierra Leone was technically feasible. The evaluators suggested continued attention to site selection, availability of inputs and extension support. Both the Mission and Peace Corps have been very supportive of this activity.

IRT .02
Fired Brick Housing
LIBERIA

Activity Profile

Proposer/Grantee: Partnership for Productivity

Contractor role: Activity Paper critique

AID funding:	\$50,000	AID/W Approval:	9/02/79
Non-AID funding:	<u>\$30,000</u>	ProAg:	9/20/79
TOTAL COST:	\$80,000	PACD:	

Partnership for Productivity (PFP) is a U.S private voluntary organization registered with USAID/Monrovia and a recipient of a USAID/M operational program grant (OPG). The PFP operation is located in the northeast corner of Liberia at Yekepa where the Liberian American Mining Company (LAMCO) runs an iron mining concession. LAMCO provides funds to PFP to stimulate the development of local entrepreneurs while PFP provides credits, technical and commercial training and assistance in product marketing.

In 1978 PFP presented USAID with a proposal for using laterite soils to make fired brick. The Yekepa area is heavily forested. Wood wastes from local sawmill operations would be an environmentally benign and economical fuel source for limited brick kiln operations. Local entrepreneurs would eventually own and operate these facilities. To this end, an EI team visited Yekepa and provided technical recommendations for semi-mechanized kiln construction. The contractor was further concerned with identifying a market for the brick products. PFP resolved this matter by gaining mining company and government approval for the use of fired brick in LAMCO-subsidized housing for mine workers. PFP had previously constructed

demonstration houses to illustrate that larger, cleaner and more permanent homes were possible through the use of brick rather than mud and straw. As a further effort, PfP proposed to establish three non-mechanized, small-scale brick and fired clay enterprises.

In January 1982 the contractor was advised by AFR/RA that because of the difficulties arising from political changes in Liberia, PfP had abandoned the brick making activity. They proposed instead to develop other housing materials with the IRT funds that had been granted.

A report on the status of the project was prepared by Development Associates in March of 1982. This report recommended closer attention by USAID/M to activity oversight with regard to budget allocations and reporting.

IRT .03

Primary School Agricultural Education

TOGO

Activity Profile

Proposer: Peace Corps

Grantee: Ministry of Education

Contractor role: Activity Paper critique

AID funding:	\$39,300	AID/W Approval:	11/01/70
Non-AID funding:	<u>5,025</u>	ProAg:	11/28/79
TOTAL COST:	\$44,325	PACD:	5/31/82
		Extended:	6/30/82
		Self-Evaluation	6/15/81

This activity was proposed to USAID/Togo by the Peace Corps in 1979 to support an ongoing Peace Corps primary school education program. The program was designed to develop agricultural instruction manuals for the training of Togolese teachers and provide practical agricultural demonstrations on school plots. The contractor was not a participant in the development of this activity but was routinely requested by AFR/RA to review the IRT Activity Paper prepared by the Peace Corps. The contractor noted that the intent of IRT funding was results-oriented and that the Peace Corps should supply to AID a list of ten schools as evaluation indicators. They would be used to determine whether the IRT-funded tasks had been completed and their degree of success. The Grant Agreement makes provision for this, but the information was not included in the evaluation prepared by the Peace Corps.

IRT .04
Family Grain Storage
KENYA

Activity Profile

Proposer/Grantee: Catholic Relief Services (CRS)

Contractor role: Activity Paper critique

AID funding:	\$14,500	AID/W Approval:	12/19/79
Non-AID funding:	<u>4,000</u>	ProAg:	3/24/80
TOTAL COST:	\$18,500	PACD: (extended)	3/31/82

This activity was developed and submitted by CRS to USAID/Nairobi in 1979. CRS proposed to assist villages in northern Kenya to deal with post-harvest food loss by training Kenyan farmers in the construction of low-cost cement storage jars. This technology had been previously introduced in Kenya at the UNICEF demonstration center at Karen. The project amount was modest and at \$14,500 represents the smallest IRT grant.

CRS had some difficulties implementing this activity. The drought of 1980-81 in northern Kenya eliminated most of the harvest and hence the immediate need for grain storage. A breakdown of water pumps at the project site added to the difficulties. The original CRS field officer who was to manage the work left Kenya at the end of his contract, but before the activity could begin due to delays in funding. His replacement was medically evacuated shortly thereafter.

CRS reported to USAID (5/82) that despite the constraints imposed by weather and water supply, some 700 grain storage jars had been completed. They report their satisfaction that the technology has been successfully introduced into the area.

IRT .05
Handmade Paper
TANZANIA

Activity Profile

Proposer/Grantee: Nyumba ya Sanaa (House of Art)
in affiliation with the Maryknoll Sisters
Contractor role: Activity Paper critique

AID funding:	\$48,800	AID/W Approval:	12/28/79
Non-AID funding:	<u>62,100</u>	ProAg:	11/03/80
TOTAL COST:	\$110,900	PACD:	12/31/81

This project was developed in 1979 by Sister Jean Pruitt of the Maryknoll Order. For many years Sister Jean has been concerned with occupational skills training for Tanzanian youth. The activity proposed to create a small factory for the manufacture of "handmade paper" from cotton and other wastes as demand increased. The facility would provide employment to school leavers and a source of high quality paper for Tanzania. The paper is currently used for greeting card production and school art work.

The implementation of this activity was marked by extensive delays in funding. USAID reported having difficulties with the Government of Tanzania in arranging foreign exchange transfers to the grantee. With this matter resolved and the activity under way, the results have been excellent. Interim reports and accounts from visitors to the activity indicate that successful commercial production is progressing well. The contractor views this effort as exemplary of useful technology transfer and the activity itself as an excellent performance in employment generation.

The final report was submitted by the proposer in March 1982. USAID/Dar es Salaam is to provide an evaluation of this activity in 1983.

IRT .06
Peat Maceration
BURUNDI

Activity Profile

Proposer/Grantee: Catholic Relief Services
Contractor role: Activity Paper critique

AID funding:	\$50,000	AID/W Approval:	12/27/79
Non-AID funding:	<u>21,000</u>	ProAg:	none
Deallottment:	- 50,000	Deallottment:	5/24/80
TOTAL COST:	-----		

This activity was developed by USAID/Bujumbura to provide additional equipment support (purchase of a peat macerator) to an ongoing CRS project concerned with the development of peat resources in Burundi. Shortly after AID/W approved funding for this work, USAID/Bujumbura requested deallottment because of a hiatus in project management.

IRT .07
Micro-Hydro Power Generation
LIBERIA

Activity Profile

Proposer: Peace Corps
Grantee: Ministry of Planning and Economic Affairs
Contractor role: Activity Paper critique

AID funding:	\$50,000	AID/W Approval:	2/28/80
Amendment I:	20,000		1/14/80
Amendment II:	<u>25,000</u>		8/27/82
AID total:	\$95,000	ProAg:	9/15/80
Non-AID funding:	<u>37,035</u>	Amendment I:	2/19/81
TOTAL COST	\$132,035	PACD:	(revised)

Under Peace Corps management, this activity proposed to install a 20 to 30 kW micro-hydroelectric plant on the Yando River near the village of Yandohun. A grid was to bring electricity to a primary beneficiary population estimated at 1300 persons.

This activity was first brought to the attention of the contractor during travel in Liberia in November of 1978. The concept had been recently presented by the Peace Corps to USAID/Monrovia. The contractor discussed the idea with both parties and noted a need for on-site professional engineering design and management. The contractor is obligated to note that USAID/Monrovia and the Peace Corps did not and to date still have not responded to this or similar recommendations from AID/W AFR/Engineering, i.e. to provide an engineering plan concurrently with a qualified engineer to supervise installation.

Concern was expressed by AFR/DR during the AID/W approval process that per capita costs exceeded cost/benefit acceptability.

AID/AFR/RA concluded, however, that the experimental nature of the activity and the experiences to be gained by African technicians justified the undertaking. The contractor concurred.

Beyond a general involvement, the contractor has had no direct, on-site access to this activity since its approval. The facility is not yet operational after three and one half years. During FY 81, the activity was reviewed by Development Associates (DA) as part of the AFR/RA evaluation process. They confirmed USAID/Monrovia's continued displeasure with the Experience Incorporated role in the activity. It was the belief of the evaluation team, however, that this attitude was unjustified particularly in light of the revisions made in IRT operating procedures.

In FY 81 a formal evaluation of the project was conducted for USAID/Monrovia by the National Rural Electric Cooperative Association (NRECA). This professionally executed work concluded with recommendations for technical alterations and redesign as well as competent on-site installation under qualified engineering supervision. The contractor is not to date aware of the decisions made by USAID/Monrovia in response to the NRECA evaluation and recommendations. We were advised that USAID/Monrovia had requested and received AID/W approval for an additional \$25,000 (8/27/82) for the purchase of equipment. This follows an earlier funding amendment of \$20,000 (2/24/81). Without information on the Mission response to the NRECA recommendations (with which we fully concur), we cannot support the propriety of increased funding to this activity.

It needs to be said that the contractor's relations with the Liberia Mission have been unique. Our firm insistence on the need for engineering inputs was perceived by both the Mission and Peace Corps as undue interference in their work. We regret this response to our technical direction which derived from professional and field experience. We could do no less than advise USAID/Monrovia, Peace Corps and AID/W of the serious nature of this undertaking and of the need for sound engineering inputs.

After four years of IRT involvement in sub-Saharan Africa, the contractor is able to view the Liberian response as both unfortunate and uncharacteristic of area USAIDS. Despite the relatively small size of IRT activities, USAIDS have generally understood and appreciated the need for qualitative examination of small-sum grants and have been most eager to avoid technical pitfalls.

IRT .08
Sorghum Milling
BOTSWANA

Activity Profile

Proposer/Grantee: Rural Industries Innovation Centre (RIIC)

Contractor role: participation in activity design

AID funding:	\$41,000	AID/W Approval:	3/04/80
Amendment I:	13,000		1/28/81
Amendment II:	<u>46,000</u>		3/18/82
AID total:	\$100,000	ProAg:	4/03/80
Non-AID funding:	<u>46,000</u>	Amendment I:	2/24/81
TOTAL COST:	\$146,000	Amendment II:	4/27/82
		PACD:	3/31/83

In 1979, the Rural Industries Innovation Centre (RIIC), a non-profit organization, requested support from USAID/Gaborone to produce sorghum dehullers for village use. RIIC had received earlier funding from the IDRC of Canada to develop dehullers for small-batch operations. This support permitted the development and field testing of a small-scale sorghum milling package.

In 1979, RIIC requested USAID assistance in developing the manufacturing capacity necessary to produce and market the dehullers. Five sets (hammer mill, dehuller and Lister engine) were to be produced and sold to rural entrepreneurs. The contractor was asked to provide on-site technical guidance and to assist in Activity Paper development. An Activity Paper was prepared and subsequently approved by AID/W.

With USAID funding, RIIC reconstructed and extended their workshops and purchased needed machine tools. By 1980, they had begun to market sorghum dehullers made in Botswana. The demand for the equipment grew rapidly and some 22 mills were manufactured and in-

stalled within two years. The activity exceeded its goals but also developed the cash flow problems that accompany rapid expansion. These problems have been brought to light and are being dealt with.

The USAID/Gaborone interim evaluation of this activity (3/31/82) notes that this technology has proven its ability to provide low-cost, labor-saving milling services to rural Botswana. Inquiries into the transfer of this technology have been received from Zimbabwe, Zambia, Kenya, Nicaragua, Tanzania and Senegal. USAID/Gaborone's continuous and effective support of the RIIC managers of this activity has been valuable, and in the contractor's judgment, important to the success of this activity.

IRT .09
Rural Solar Technology
TOGO

Activity Profile

Proposer/Grantee: University of Bénin
Contractor role: activity design critique

AID funding:	\$50,000	AID/W Approval:	3/05/80
Amendment:	<u>25,000</u>		6/25/82
AID Total:	\$75,000	ProAg:	6/10/80
Non-AID funding:	<u>25,000</u>	Amendment:	6/30/82
TOTAL COST:	\$100,000	PACD:	12/82

Under the direction of Dr. Messan GNININVI, the University of Bénin proposed to install solar water heaters in rural maternity clinics and experimental solar grain dryers in regional markets to determine their suitability. The activity was evaluated by AID/REDSO/WA in June of 1982 (with EI assistance) and found to have progressed well. Four solar water heaters had been installed and were functioning as prescribed. The project implementation group at the university continues to monitor and modify these devices. In time, they will make a technical recommendation to the GOT for their wider use. We believe that this recommendation will be sound based upon the results of the experiment.

The solar dryer portion of the activity has had to be modified because of a change in objectives. Rather than install the dryers in regional markets, it was decided to locate them on cooperative farms instead. This change necessitated a greater load capacity and consequently the redesign of the dryer. A recent telephone call (10/21/82) to AID Representative John Lundgren confirmed that the test dryer is in operation at the university. Equipment for the manufacture of the additional two dryers has been ordered with funds

from the 1982 amendment. Installation has been delayed by unusually heavy rains and by a financial reorganization taking place at the university. The PACD date has therefore been extended and Lundgren expresses confidence that the activity will be satisfactorily completed.

The contractor considers the research and development done by the university to be of excellent quality and USAID support clearly effective. This is the only IRT activity for which the contractor has participated in the on-site evaluation.

IRT .10
4H Youth Farming
ZAIRE

Activity Profile

Proposer/Grantee: Salvation Army

Contractor role: activity design critique

AID funding:	\$17,500	AID/W Approval:	3/06/80
Non-AID funding:	<u>\$49,500</u>	ProAg:	5/15/80
TOTAL COST:	\$67,000	PACD:	12/31/82

To address the problem of rural food supply, the Salvation Army (S.A.) proposed to develop better agricultural skills among the youth of Zaire. The original plan was to train students in small-plot agricultural practices including field and vegetable crop management, small animal raising, composting, etc. The primary objective of the activity was to increase food self-sufficiency among activity participants.

The S.A. submitted a first-year report in May of 1981 stating that the activity was behind schedule. This was attributed to procurement and personnel recruitment delays, a lack of enthusiasm on the part of students and transportation difficulties. To correct these problems it was decided to reorient the activity to school leavers and reduce the number of clubs, allowing the Peace Corps and S.A. managers to spend more time with each group.

As of this writing, the contractor is unaware of any more recent developments.

IRT .11
Traditional Pottery
TANZANIA

Activity Profile

Proposer: Ali H. Sherif

Grantee: Small Industries Development Organization (SIDO)

Contractor role: activity design critique

AID funding:	\$25,000	AID Approval:	1/25/80
Amendment:	<u>33,000</u>		5/-- /81
AID total	\$58,000	ProAg:	9/29/80
Non-AID funding:	<u>39,000</u>	Amendment:	7/15/81
TOTAL COST:	\$97,000	PACD: (extended)	3/82

This activity was proposed by a Tanzanian entrepreneur, Ali H. Sheriff. Mr. Sheriff is an "appropriate technologist" known to USAID/Arusha as an active developer of labor-intensive industries. The Sheriff operations are adapted to village environments and stress both product development and marketing. In areas where little opportunity exists for anything other than agricultural income, the potential advantage of this type of activity to villagers is clear.

In 1979, Mr. Sheriff proposed to develop a small-scale clay processing and firing facility suitable for Tanzanian villages. He requested USAID assistance in providing and importing equipment to improve upon traditional pottery making methods. The contractor was able to visit the proposer during the course of the activity (as was the Project Officer, Ms. M. A. Riegelman). Mr. Sheriff and his associates were found to be competent technicians with good commercial backgrounds.

In his final report submitted on March 19, 1982, Mr. Sheriff requested an extension of the completion date to December 1982. We

later received word (DAR 03543) that this extension had not been granted by the USAID on the grounds that all goods and services had already been provided.

USAID/Dar es Salaam plans to include this activity in an overall IRT evaluation slated for 1983.

IRT .12
Inland Fisheries
CENTRAL AFRICAN REPUBLIC

Activity Profile

Proposer: Peace Corps
Grantee: Ministry of Development
Contractor role: Activity Paper critique

AID funding:	\$50,000	AID Approval:	3/12/80
Non-AID funding:	<u>25,000</u>	ProAg:	4/25/80
TOTAL COST:	\$75,000	PACD:	12/31/80

This activity was presented by Peace Corps/CAR as a continuation and expansion of fishpond programs already developed under PC management. The contractor has had no active involvement in this work and is unaware of the quality or status of activity performance. An evaluation of previous work was requested and provided before the activity was approved.

Inland fisheries projects undertaken by the Peace Corps in Africa have generally yielded positive results. We therefore look forward to the soonest possible evaluation of this effort. An evaluation summary (which is overdue) was requested by AFR/RA in June of 1982. In the absence of a USAID office in the CAR, the request was made to USAID/Yaoundé.

IRT .13
Low-Cost Housing
THE SEYCHELLES

Activity Profile

Proposer: Peace Corps
Grantee: Ministry of Planning and Development
Contractor role: Activity Paper critique

AID funding:	\$50,000	AID Approval:	3/21/80
Non-AID funding:	<u>100,000</u>	ProAg:	8/26/80
TOTAL COST:	\$150,000	PACD:	12/31/82

This activity was proposed by Peace Corps to REDSO/EA in 1979 to establish a low-cost (construction) block making facility on the Island of Praslin in the Seychelles. The contractor did not visit the island and was not involved in the activity design or the selection of a technical approach to the problem. The review committee's comments on the original submission were not well received by Peace Corps/Seychelles and REDSO/EA, but were nevertheless responded to.

The contractor is unable to comment further on this activity as we have had no communications from the field since August of 1980.

IRT .14

Craft Industries Employment Generation

BOTSWANA

Activity Profile

Proposer/Grantee: Pelegano Village Industries

Contractor role: activity design participation

AID funding:	\$50,000	AID Approval:	7/08/80
Non-AID funding:	<u>39,390</u>	ProAg:	9/08/80
TOTAL COST:	\$89,390	PACD:	?
		PES:	2/19/82

This two-year activity proposed to strengthen the craft-related capacities of the non-profit Pelegano Village Industries (PVI) complex at Gabane, Botswana. This was to be accomplished through a mix of building construction, material purchases and technical assistance, in line with PVI's general objectives of entrepreneurial skills training and small business start-up. In the area of craft production, PVI has targeted the development of craft products, village manufacture of these products and increased local and export marketing.

USAID/Gaborone observed the PVI performance over a number of years and concluded that with appropriate support, it had the ability to increase craft incomes over a wide geographic area. USAID requested the contractor to support PVI in developing a workable craft industry outreach program.

This activity has received invaluable assistance from Mr. Holland Millis, a crafts specialist recruited by the contractor. Mr. Millis has increased the product line by seven items and has introduced new production techniques. He has been invited back to Botswana by PVI to develop new crafts with a varied raw material base.

The activity was evaluated by Development Associates on February 19, 1982. Their evaluation was generally positive. Craft and workshop construction was found to be 95% complete and operational and craft producers reported substantial increases in income from an average of \$600 in 1980 to a current annual average of \$3,000.

IRT .15
Extension and Counseling in Appropriate
Rural Technology
ZAIRE

Activity Profile

Proposer/Grantee: Centre pour l'action sociale (CEPAS)

Contractor role: activity design critique

AID funding:	\$27,300	AID Approval:	7/09/80
Non-AID funding:	<u>26,500</u>	ProAg:	9/30/80
TOTAL COST:	\$53,800	PACD:	12/31/82

The Centre d'études pour l'action sociale (CEPAS) is affiliated with the Institut africain de développement économique et social (INADES). INADES is a French-language information dissemination network based in Abidjan which has been awarded an AID Operational Program Grant and has a cooperative agreement with the Non-Formal Education Center at Michigan State University.

CEPAS assists village development specialists to acquire the information and technical assistance they need. This IRT grant was made by USAID/Kinshasa to increase CEPAS' data retrieval and dissemination capacity and to provide engineering support to field activities. The activity paper also called for more involvement in technology training through the services of an engineer.

CEPAS has completed its procurement of audio-visual and reproduction equipment and has now added substantially to its data resources. They have recently published a compendium of appropriate technology activities and contacts in Zaire as well as a list of publications available for distribution. The major stumbling block has been in hiring a qualified engineer to carry out field work because of the low salary they have been forced to offer. This problem has resolved itself in that funds not previously spent on the

engineer have been used to augment the salary offered for this final year of the activity. Discussions in May 1982 between the IRT engineer and CEPAS staff revealed that an engineer had been hired. At that time, USAID/Kinshasa expressed interest in expanding CEPAS' ability to support rural development activities. According to a recent note from proposer Didier de Failly, s.j., negotiations are under way with USAID/Kinshasa for an operational program grant. If these are successful a second engineer will be hired to expand the outreach capability of the organization.

IRT .16
Women in Development -- Outreach
SWAZILAND

Activity Profile

Proposer: Village Technology Program (VTP)
Grantee: Ministry of Agriculture and Cooperatives
Contractor role: activity design participation

AID funding:	\$50,000	AID Approval:	7/11/80
Non-AID funding:	<u>20,100</u>	ProAg:	8/29/80
TOTAL COST:	\$70,100	PACD:	2/28/82
			extended to 2/27/83

For the past several years, the Ministry of Agriculture and Cooperatives has conducted a Village Technology Program (VTP) with personnel and material support from UNESCO. The VTP has operated as an alternative technology demonstration project located in the northern part of the country.

In 1980, the VTP discussed with USAID/Mbabane its interest in duplicating their experience in southern Swaziland. USAID solicited the contractor's assistance in the development of an activity. VTP agreed to reorient its strategy toward outreach, i.e. the placement and use of "working devices" in some 200 Swazi homes over the life of the activity.

According to the latest information available to the contractor, the PACD was extended to February 27, 1982 because of difficulties with financial procedures and procurement delays.

IRT .17
Rural Water Filtration
SWAZILAND

Activity Profile

Proposer: Government of Swaziland

Contractor role: activity design participation

AID funding:	\$29,000	AID Approval:	7/17/80
Non-AID funding:	<u>12,493</u>	ProAg:	9/ ?/81
TOTAL COST:	\$41,493	PACD:	3/ /82
		Evaluation:	7/07/82

In this activity, IRT funds were used to purchase construction materials and equipment for the installation of a gravity-flow water system to supply some eighty-four rural homesteads. The Government provided design inputs, heavy equipment, engineering supervision and local salaries. The beneficiaries themselves donated the installation labor. A Peace Corps volunteer coordinated the construction activity. The completed water system was dedicated on March 12, 1982 with the U.S. Ambassador and the USAID Mission Director present.

This activity fully accomplished its goal of providing safe, reliable drinking water to eighty-four homesteads at low cost. Some 730 residents have benefitted. An additional 360 students at a local school will also have access to clean water. The activity provided a successful community self-help experience and has generated an awareness that other community efforts are possible.

In an unusual occurrence, actual construction costs were less than anticipated and \$8,290 was deobligated and returned to AID/W. Water was therefore delivered for a cost of \$29.54 per beneficiary (on the basis of 1,090 beneficiaries).

IRT .18
Royeima Water Supply
SIERRA LEONE

Activity Profile

Proposer: Catholic Relief Services (CRS)
Grantee: Ministry of Energy and Power (MEP)
Contractor role: project design critique

AID funding:	\$49,966	AID Approval:	12/09/80
Non-AID funding:	<u>22,200</u>	ProAg:	3/04/81
TOTAL COST:	\$72,166	PACD:	6/30/82

The IRT contribution to this activity was directed to local procurement of supplies. The activity called for the construction of a gravity-flow water system affecting some 2,500 beneficiaries including installation of a 60,000 imperial gallon capacity holding dam and a water distribution and chlorination system.

The activity has an extended pre-IRT history involving varied technical approaches to the problem. Under the constraints of the pre-1981 IRT Guidelines, the contractor was unable to participate in technical planning and merely reviewed plans after they had been drawn up. Although attempted, no site visits were made. The contractor has no current information on the status of this activity.

IRT .19
Boy Scout Technology
RWANDA

Activity Profile

Proposer/Grantee: Association des scouts du Rwanda
Contractor role: activity design participation

AID funding:	\$50,000	AID Approval:	12/22/80
Non-AID funding:	<u>16,700</u>	ProAg:	4/07/81
TOTAL COST:	\$66,700	PACD:	10/31/82

In this activity, AID funds have been used for the local purchase of construction material (for pigsties, rabbit hutches, poultry houses, stables and fishponds), bicycles, motorbikes, a grain mill and small livestock. These items have permitted the practical training of rural (Boy Scout) extension agents at the Centre de formation scoute in Butare. All activity management and construction has been carried out by the Scouts themselves.

This activity was reviewed by the World Scout Headquarters (Kilbridge, 2/82) and found to be effective. It has also been twice visited by the contractor (8/03/81 and 2/07/82) and judged to be progressing as planned for the most part. There was some concern as to the self-sustaining nature of the operation since there appeared to be a negative cash flow resulting from the purchase of feed supplements and because the scouts were not growing their own food, but were instead dependent on the PL 480 program.

Exploitation of Spring Water in Canton Lavie
TOGO

Activity Profile

Proposer/Grantee: Canton Lavie

Contractor role: activity design participation

AID funding:	\$60,000	AID Approval:	3/20/81
Amendment:	<u>15,000</u>		7/19/82
AID Total:	\$75,000	ProAg:	5/27/81
Non-AID funding:	<u>26,345</u>	Amendment:	
		PACD:	3/83
TOTAL COST:	\$101,345		

This activity provides funds for the construction of a gravity flow water system for the villages of Huimé and Apédomé in Canton Lavie. Some 5,500 people are affected. When complete the system will supply thirteen standpipes through an underground piping network. This closed system was chosen for reasons of security and hygiene. Construction work has been undertaken by the villagers under the direction of a Togolese engineer and a Peace Corps volunteer living in the Canton.

Both the contractor and REDSO have contributed engineering assistance to the activity. The contractor has had the opportunity to participate in project design and documentation. Questions have been raised by REDSO/WA engineering regarding flaws in system design and cost overruns. The responsibility for these setbacks has been assigned to the contractor. We believe, however, that these allegations have been ably refuted in IRT Engineer Robert Martin's memorandum of May 2, 1982. We stand by his conclusions.

An October 21 telephone conversation with AID Representative John Lundgren revealed that construction plans had been redesigned to respond to REDSO/WA concerns regarding the use of PVC pipe. With newly obligated funds, the necessary materials have been ordered to complete construction. The health and sanitation education program will be handled as part of a nationwide campaign managed by the Peace Corps. It has not yet begun.

IRT .21
Seaweed Farming
TANZANIA

Activity Profile

Proposer/Grantee: University of Dar es Salaam

Contractor role: activity design participation

AID funding:	\$87,000	AID Approval:	3/21/81
Non-AID funding:	<u>46,125</u>	ProAg:	5/29/81
TOTAL COST:	\$133,125	PACD:	12/31/82

This activity encourages "farming" of the Eucheuma variety of seaweed in the coastal waters of Tanzania. It provides for the training of Tanzanian extensionists in the Philippines and the establishment of three pilot operations on the islands of Pemba and Zanzibar and on the mainland at Kigombe. The activity is managed by the University of Dar es Salaam in conjunction with the Tanzanian Bureau of Fisheries. Implementation was initially delayed by foreign exchange difficulties encountered by USAID.

In May of this year, the contractor had the opportunity to speak directly with the project proposer, Dr. Keto Mshigeni, when he visited the U.S. Dr. Mshigeni reported additional delays caused by typhoons in the Philippines which wiped out installations at which Tanzanian counterparts were scheduled to train. With this setback out of the way the activity is progressing well.

If successful, this experimental effort will introduce "village-level" technology and a significant new source of income to coastal farmers. The activity will be evaluated by USAID in 1983.

IRT .22

Photovoltaic Solar Refrigeration

TANZANIA

Activity Profile

Proposer/Grantee: University of Dar es Salaam

Contractor role: project design participation

AID funding:	\$32,000	AID Approval:	4/27/81
Non-AID funding:	<u>14,000</u>	ProAg:	5/29/81
TOTAL COST:	\$46,000	PACD:	8/31/82

This activity will attempt to provide refrigeration and a small amount of lighting to rural villagers through the use of photovoltaic energy generation. Tanzanian scientists and engineers associated with the University's Faculty of Engineering are seeking to test and disseminate workable solar energy equipment where alternate sources of energy are not available. The University participants have already had some useful training through their participation in similar projects. Two university representatives travelled to the U.S. in February 1982 and gained further experience by visiting solar energy R&D centers and equipment suppliers. When complete, the activity will demonstrate the feasibility of solar energy for remote African communities.

The implementation of the activity has been delayed by both foreign exchange difficulties and staffing problems at the University. According to an August cable from the Mission, however, the personnel problem has been resolved and the activity is back on track. Updated proforma invoices have been requested from suppliers and a PACD extension to September 1983 is under consideration.

IRT .23
Environment Liaison Center
KENYA

Activity Profile

Proposer/Grantee: Environment Liaison Center (ELC)

Contractor role: none

AID funding:	\$75,000	AID Approval:	4/21/81
Non-AID funding:	<u>55,000</u>	ProAg:	5/22/81
TOTAL COST:	\$133,000	PACD: (extended)	8/31/82
		Evaluation:	7/82

The ELC is a Kenyan non-governmental organization concerned with the promotion of alternative energy in Kenya. The grant was made by AID/REDSO/EA for the purpose of supporting the ELC in 1) compiling a sourcebook of African NGOs, 2) preparing a booklet on deforestation and reforestation in Africa, 3) disbursing small grants to other NGOs and 4) supporting NGO attendance at the UN Conference on New and Renewable Energies.

This use of IRT funds departs somewhat from the substantive village-level activities which have been the rule for IRT. REDSO has evaluated this activity and reports that the book and booklets have been printed and distributed. Educational forums have been held and are reported by the REDSO evaluator to have had a strong positive impact on the participants

The non-technical nature of the activity required no contractor inputs.

IRT .24

Small Agricultural Tool Production

ZAIRE

Activity Profile

Proposer/Grantee: Institut professionnel de Katoka (IPK)

Contractor role: activity design participation

AID funding:	\$55,000	AID Approval:	3/23/81
Non-AID funding:	<u>55,000</u>	ProAg:	8/28/81
TOTAL COST:	\$110,000	PACD:	12/31/82

This activity proposes to increase the production of agricultural handtools in Zaire by training local blacksmith-entrepreneurs in scrap metal conversion. The IPK is a secondary school under the direction of the the Catholic Church. IRT funds are being used to purchase tools for the training of blacksmith-entrepreneurs, refurbish the Institute's facilities and open rural centers. Students will learn to economically hand fashion machetes, hoes, saws, shovels, axes, work knives and similar basic tools. The Peace Corps will provide training and management assistance.

A progress report received in March 1982 related that renovation of the urban center was nearly finished, selection of sites for rural centers would be complete in June, new PCVs were expected in September and major commodities had not yet arrived with the exception of two motorcyles. The EI procurement officer reports that due to the cancellation of the June voyage, the items were shipped in July. IRT Engineer R. Martin spoke with PCV Diderich in April/May of this year who was pleased with the activity's progress.

IRT .25
Giciye Water Supply
RWANDA

Activity Profile

Proposer/Grantee: Compagnons fontainiers de Rwanda (COFORWA)
Contractor role: activity design participation

AID funding:	\$60,000	AID Approval:	6/05/81
Non-AID funding:	<u>25,000</u>	ProAg:	9/24/81
TOTAL COST:	\$85,000	PACD:	3/83

This activity calls for the capping of a spring and the piped delivery of potable water to seven cisterns which will in turn feed fourteen public standpipes. The beneficiaries, numbering some 4,500, are providing the labor for terracing, excavating, hauling and bricklaying. The work is being overseen by local technical management and is meant to demonstrate the feasibility of using village labor to provide potable water. If successful, local duplications of the process are anticipated.

IRT Engineer Peter Buijs visited the site on two occasions in August 1981 and February 1982. He reported fairly satisfactory progress but indicated that more could be accomplished with the cooperation of the burgomaster who must endorse checks and organize the local population for self-help labor. The proposer, COFORWA, has suggested a more structured work plan to offset this problem. COFORWA has also indicated a possible need for more funding.

A more recent AAO cable reports that COFORWA has begun excavation, two payments have been made and AAO plans to conduct a socio-economic study of the system's impact on the local population.

IRT .26
Farming Skills Development
TOGO

Activity Profile

Proposer: Peace Corps

Grantee: Ministry of Education

Contractor role: participation in drafting of AIC

AID funding:	\$45,000	AID Approval:	7/23/81
Non-AID funding:	<u>55,000</u>	ProAg:	9/29/81
TOTAL COST:	\$100,000	PACD:	9/30/83

This IRT activity is an extension of the work accomplished under IRT .03, Primary School Agricultural Education. Its approval was made contingent upon a satisfactory evaluation of the previous activity. It is, however, directed to secondary school level farming skills training.

The contractor was a marginal participant in the development of IRT .03 and was not involved extensively in the design of this activity. We do, however, have a fairly complete trip report submitted by Robert Martin after his visit to Togo in April 1982. He reports that five (instead of eight) Peace Corps volunteers (PCVs) are currently involved in the program. Curriculum development has proved to be more difficult than anticipated and will probably not be completed on schedule. The most serious obstacle to achieving activity goals appears to be the Ministry of Education's failure to assign Togolese counterparts. In visiting PCV Don Borkelheide at his school in Woamé, Martin found these same concerns. Borkelheide feels that he cannot expand his program without assistance and receives little support from school administrators and teachers. He is, however, gratified by the enthusiasm and effort his student volunteers and school leavers invest in the gardens.

PC/Togo has taken steps to remedy the counterpart problem and construction of an agricultural teacher training school is now under way. Martin reports plans to train eight Togolese during the summer along with incoming PCVs. The PCVs and Togolese will be sent to the field as teams in an experimental approach.

In speaking with AID Representative John Lundgren on October 21, he confirmed that incoming Peace Corps volunteers had been trained and that work on the manuals was progressing satisfactorily. There has been a change in the Minister of Education, but the new appointee has expressed even more enthusiastic support than his predecessor. Lundgren could not shed any light on whether the counterpart problem had been resolved.

IRT .27
Kionzo Water Supply
ZAIRE

Activity Profile

Proposer/Grantee: Catholic Diocese of Matadi
Contractor role: system design review

AID funding:	\$25,000	AID Approval:	8/27/81
Non-AID funding:	<u>22,000</u>	ProAg:	8/26/82
TOTAL COST:	\$47,000	PACD:	2/28/84

This activity proposes to supply water to ten small villages at a medical center in Kionzo in Bas Zaire. Hydraulic rams will be used to pump water into two water towers that will serve six stand-pipes.

The contractor has had several opportunities to assist the activity proposers. Robert Martin writes that during his TDY in May 1982, he was able to discuss technical aspects of the activity with USAID engineer Cit. Mulamba and Anne Williams, reiterating Peter Buijs' earlier remarks. He also provided a lengthy list of comments on the Activity Paper itself.

Obligation of funds for the activity was held up pending resolution of the Brooke Amendment, but we have recently received notification that the grant agreement has been signed.

IRT .28
Appropriate Technology Demonstration
SOMALIA

Activity Profile

Proposer/Grantee: National University of Somalia
Contractor role: activity design participation

AID funding:	\$ 90,000	AID Approval:	9/28/81
Amendment:	<u>10,000</u>		7/19/82
AID Total:	\$100,000	ProAg:	-----
Non-AID funding:	<u>33,415</u>	PACD:	-----
TOTAL COST:	\$133,415	(deallotted)	

The original activity concept was presented to USAID in 1981 by the Faculty of Engineering of the National University of Somalia. The university proposed to purchase a mix of appropriate technology devices and display them in Somalia to stimulate local interest in their use. The contractor noted that it would be more useful for the university to deal professionally with village development. This could be done through university-managed technology transfers.

USAID/Mogadishu responded positively to this recommendation and requested that university proposers provide a more substantive approach. In December of 1981, the contractor participated in the redesign of the activity. This provided for installing and refurbishing windmills in several locations and recording performance data. It also enabled the experimental use of windmills for water lifting. The information gathered from these tests would be used to judge the advisability of further investment in wind energy.

In its redesigned form, the Activity Paper called for long-term technical assistance of the type not usually permissible under the IRT Project. The contractor therefore investigated the possibility

of having Volunteers in Technical Assistance (VITA) provide this assistance. This idea was later dropped in favor of using the services of a German advisor already in the country.

EI was recently informed that USAID/M had decided not to fund this activity.

IRT .30
Sololo Dams
KENYA

Activity Profile

Proposer/Grantee: CARE/Kenya

Contractor role: activity design participation

AID funding:	\$49,000	AID Approval:	10/21/81
Non-AID funding:	<u>17,790</u>	ProAg:	9/27/82
TOTAL COST:	\$66,790	PACD:	?

This activity will provide access to potable water for some 4,500 people in a nomadic area of northern Kenya. The development plan includes the drilling of boreholes and the construction of infiltration galleries at dam sites to improve water quality.

The contractor participated in a field evaluation of the original technical plan in February 1982. A number of changes were suggested and the Activity Paper and IEE were revised accordingly. A funding amendment from \$35,000 to \$49,000 was proposed and approved. USAID/Nairobi reports that further technical adjustments had to be made to the Activity Paper in June 1982.

IRT .31
Charcoal Briquetting
UGANDA

Activity Profile

Proposer:

Grantee: Ministry of Cooperatives and Marketing

Contractor role: none

AID funding:	\$95,000	AID Approval:	?
Non-AID funding:	<u>23,750</u>	ProAg:	9/24/82
TOTAL COST:	\$118,750	PACD:	-----

This activity proposes to implement a pilot plant for the production of charcoal from coffee wastes. The Mission elected to use the services of a Kenyan consulting firm, Gordon Melvin Partners (GMP) of Nairobi. Experience, Incorporated provided GMP with a scope of work and IRT documentation and agreed to pay them under a product delivery contract. This process was undertaken in March 1982.

In July of 1982, the contractor received a draft Activity Paper and submitted its review of that document. Upon notification of USAID/Kampala's acceptance of the Activity Paper (9/23/82), EI initiated payment to GMP.

IRT .32
Ruvuma Fish Farming
TANZANIA

Activity Profile

Proposer: Peace Corps
Grantee: Ministry of Natural Resources
Contractor role: none

AID funding:	\$57,000	AID Approval:	12/10/81
Non-AID funding:	<u>55,000</u>	ProAg:	4/23/82
TOTAL COST:	\$112,000	PACD:	9/30/83

The purpose of this activity is the establishment of fish culture facilities in twelve rural communities. The activity promises to complete forty-eight ponds under the management of three Peace Corps volunteers. A 6/30/82 progress report from the Mission states that a vehicle has been procured and funds to purchase other items have been requested.

The contractor did not participate in the development of this activity.

IRT .33
Farm Dryers
BURUNDI

Activity Profile

Proposer/Grantee: University of Burundi

Contractor role: activity design participation

AID funding:	\$73,000	AID Approval:	1/20/82
Non-AID funding:	<u>25,600</u>	ProAg:	7/31/82
TOTAL COST:	\$98,600	PACD:	4/30/84

The Center for Alternative Energies Research at the University of Burundi proposes to develop, test and disseminate solar devices for the drying of crops. In February of 1982, the contractor visited the country and assisted the proposers in selecting a technical approach and in preparing IRT funding documentation. The contractor was particularly concerned that outreach be a major component of the activity.

The activity has only recently been funded and is not likely to produce results until 1983.

IRT .34
Building Materials Production Unit
BOTSWANA

Activity Profile

Proposer/Grantee:

Southern Rural Development Association (SRDA)

Contractor role: activity design participation

AID funding:	\$100,000	AID Approval:	2/12/82
Non-AID funding:	<u>33,352</u>	ProAg:	5/10/82
TOTAL COST:	\$133,352	PACD:	11/31/83

The SRDA is a non-profit development organization which, through this activity, will produce construction materials from local resources and for the local market. This work currently includes 1) clay brick production, 2) lime production, 3) pigment collection and 4) slate quarrying.

The contractor was requested by USAID to support the SRDA in the development of a sound technical and economic approach to these efforts. EI therefore contracted with consultant Edward Arata to assist in the preparation of IRT funding documents for this activity. Mr. Arata had previously worked in Botswana and in Papua New Guinea in the area of low-cost housing construction.

This is a recently approved project that, in the contractor's judgment, will realize its objectives by the planned completion date in 1983.

IRT .35
Solar Transceivers
ZAIRE

Activity Profile

Proposer: Communauté évangélique du Centrafrique (CECA)

Grantee: Eglise du Christ au Zaire (ECZ)

Contractor role: activity design participation

AID funding:	\$64,500	AID Approval:	6/11/82
Non-AID funding:	<u>10,000</u>	ProAg:	8/26/82
TOTAL COST:	\$74,500	PACD:	2/28/84

Among the services provided by CECA in Haut-Zaire are those of a flying doctor. This is often the only health care available in the region. Much of the work is managed through the use of small aircraft linked by a radio network.

The wide geographic distribution of CECA medical operations make reliable communication imperative. The purpose of this activity is to provide a dependable and economical radio system to some twenty-three CECA rural centers that either have no two-way radios or are unable to guarantee communications because of power supply deficiencies.

The activity will provide funds for the installation of solid-state transceivers powered by photovoltaic panels. This work is expected to take one year to complete. The contractor was able to visit the CECA facility in Haut-Zaire, advise the proposers on technical matters and assist in the drafting of activity documents.

Obligation was delayed until late August due to the Brooke Amendment.

IRT .36
Low-Cost Housing
KENYA

Activity Profile

Proposer/Grantee: Housing Research & Development Unit (HRDU)
University of Nairobi
Contractor role: none

AID funding:	\$100,000	AID Approval:	8/04/82
Non-AID funding:	<u>35,000</u>	ProAg:	9/30/82
TOTAL COST:	\$135,00	PACD:	12/83

Activity objectives include the selection of low-cost construction techniques for use in rural Kenya. The proposers will seek to encourage self-help construction in housing by building twelve affordable, yet desirable, demonstration units as primary school staff housing. Primary School Housing Cooperative Societies will be formed to mobilize local populations to provide self-help labor, select sites, etc. The implementation of this work is planned as a joint effort by HRDU and the Peace Corps.

The activity is viewed as well-conceived by the contractor. Its success will, however, be dependent on the outreach skills of the activity managers.

F. Conclusions for FY 82

Eight IRT activities were obligated by participating USAIDs in FY 82. The statistical growth of IRT activities is indicated below:

<u>FY</u>	No. of IRT activities <u>obligated</u>	<u>% of total (35)</u>
1979	2	6%
1980	12	34%
1981	13	37%
1982	<u>8</u>	<u>23%</u>
TOTAL:	35	100%

In FY 1982, there was a reduction in IRT activity obligations over previous years. This reduction occurred despite AFR/RA attempts to streamline IRT administrative procedures in January FY 81.

We conclude that the decline in IRT activities in FY 82 results from increased USAID reluctance to commit management resources to small grant activities. In early years (FY 80 and FY 81) this reluctance was less evident even in view of the more complex IRT approval procedures. These higher volumes also occurred during the project years when less contractor technical support was available to the Missions for the approval and implementation of IRT activities.

In FY 82 some nineteen of twenty-six eligible USAIDs failed to be persuaded that participation in the IRT Project was valuable to their country programs. With this position taken by so large a number of eligible USAIDs, the contractor concludes that the IRT experiment in FY 82 clearly indicates the management difficulties encountered by USAIDs when dealing directly with relatively small-sum technical projects.

FINAL REPORT
FY 1979-1982

A. Summary of Contractor Tasks Completed

The contractor undertook five tasks at the outset of the project:

- 1) to encourage USAID Missions and host country governments to consider appropriate technology concepts,
- 2) to provide written guidelines to USAID Missions for the selection and presentation of ideas for funding,
- 3) to publicize innovative solutions to problems through the use of bulletins, bibliographies, etc.,
- 4) to review activity papers submitted by USAID Missions and assess each for technical and social soundness,
- 5) to provide, if needed, supplementary short-term technical consultant services.

Task four was amended in September 1981 to read:

- 4) to participate in the field design, drafting and review of Activity Papers as requested by USAID Missions.

These tasks were undertaken by the contractor to assist the project managers (AID/Africa Bureau, Office of Regional Affairs) to reach the stated objectives of the IRT Project, i.e.:

to support the improvement of small-scale agricultural and other rural-related technology in African countries. The project activities will promote innovation in utilization of local technology systems in such areas as agriculture, food processing, village water supplies, energy, construction, and health as well as exchange of information pertaining to application by participating African countries through design and implementation of small-scale demonstration activities. The project will be focussed on LDCs in the Sub-Saharan region of Africa.*

*excluding the Sahel

Contractor support began on October 1, 1978 and continues to the present time. In FY 1981, after three years of operation under the original contract, the contractor was granted an extension of eighteen months (until March 30, 1983) for continuing IRT contract support. In the weeks prior to the preparation of this report, the management of the Africa Bureau decided that the IRT Project would be terminated early. The basis for the Bureau's decision included its perception that IRT tended to "encourage a proliferation of small activities requiring Mission and AID/W management attention which might be more appropriately concentrated on bilateral priorities" (State 12065).

Task Completion

- 1) Encourage USAIDs and host country governments to consider appropriate technology concepts.

Where USAIDs were receptive, the contractor encouraged and substantively supported effective use of the IRT funding mechanism. Experience, Incorporated responded to all REDSO and USAID invitations to discuss IRT with the Missions. In the unique case of Zaire the contractor was permitted to conduct workshops for potential IRT grant applicants (which spurred USAID/K to later expand on the idea and stage a series of workshops throughout the country).

Early in the project, the contractor became aware that Mission Directors not disposed to small grant funding simply avoided IRT involvements. Those Directors having some interest in the project permitted EI to enter their jurisdictions. With the exception of Cameroon, all the Missions that invited the contractor to discuss and promote the use of IRT submitted at least one activity.

- 2) Provide written guidelines for use by AID Missions in selecting and presenting ideas for funding.

At the outset of the IRT Project, the contractor was instructed

to develop an IRT grant management technique. This technique was to provide a framework within which Africa-based applicants for small technology-related grants could approach participating USAIDs for assistance. The IRT window was to be a relatively quick access mechanism for use by USAIDs willing to respond to small grant applicants. The procedure which resulted was incorporated into the Guidelines for Preparing and Approving IRT Activities.

The Guidelines were prepared in the early months of the project and stressed a non-doctrinaire approach to appropriate technology and use of IRT funds. The Missions were urged to consider IRT grants when, in their judgment, a competent grant proposer clearly identified a specific beneficiary population and sought to improve the local quality of life through technology transfer and community self-help.

The Guidelines stressed completion of activities in one to two years and discouraged support for non-beneficiary related technology experiments, appropriate technology advocacy programs and non-out-reach demonstration projects. They prohibited the use of IRT funds for expatriate salaries and instead provided a separate budget for limited consulting support. The intent was to reserve funds for the purchase of needed materials and supplies and the attendant costs of delivery to the work site.

The Guidelines resulted from contractor travel to sub-Saharan Africa in the opening months of the project (October-November 1978). In early 1979, they were submitted to AFR/RA, approved and forwarded to all African USAIDs including Missions in the Sahel. At that time AFR/RA and the Sahel Bureau were negotiating a joint IRT Project with the Sahel providing separate funding. These negotiations continued through most of 1979 with no success. The Sahel Bureau declined to participate in IRT thereby restricting the Project to the twenty-three USAIDs under the AFR/RA umbrella.

AFR/RA pouched the Guidelines to sub-Saharan USAIDs and REDSOs accompanied by advisory cables on the contractor's availability to discuss possible Mission or REDSO interest in the project. Substantive responses were received from some 50 percent of the eligible

USAIDs. This response level continued throughout the four-year life of the program with ten of these USAIDs declining any involvement whatsoever.

- 3) Publicize innovative solutions to problems by use of bulletins, bibliographies, etc.

In conformance with task three, the contractor has published twelve issues (including one double issue) of the Rural Technology Bulletin in English and French and has distributed them to Africa and to organizations and individuals active in appropriate technology. The mailing list currently numbers 2,875 subscribers in 104 countries. The focus of the bulletin has been to chronicle IRT activities and to publish articles on technologies suitable for adoption in sub-Saharan Africa. In this last regard, the bulletin has filled a gap in the existing literature. Many similar publications exist but few generate the original technical material featured in the RTB. Instead they perform a networking function: that is, they either reprint or report. Several of our articles have been picked up by publications of this kind, effectively expanding our own circulation and attesting to the appropriateness of the material.

It is difficult to determine the impact of the bulletin on inspiring actual IRT activities. A judgment of this kind can be only speculative at best, particularly where the feedback mechanism to make such a determination simply does not exist. We do know, however, that there is a market for this material in Africa and around the world by the comments we receive from readers (see examples in Annex I) and by the increasing subscription rate.

One of the major assets of the bulletin is the fact that it is published in both English and French. Few publications of its kind can compete in this respect. It adds substantially to the credibility of the project and bulletin alike. This feature has enabled IRT to reach virtually all of sub-Saharan Africa and particularly the French-speaking countries where the American presence is not strongly felt, in part because of the language barrier. It should be

realized, however, that any bilingual publication involves significantly more expense and complexity.

The bibliographies called for in task three have taken two forms during the course of the project. They were first issued as an acquisitions list divided into the twelve IRT categories. This proved to be a cumbersome document and one unsuitable for distribution. In 1981, after the in-house IRT evaluation, the procedure was changed in favor of resource briefs, short annotated bibliographies on appropriate technology subjects. The five that have been produced to date have been advertised in the bulletin and mailed to USAIDs with each issue.

Response to the briefs has been meager. This can be attributed to several factors: 1) they have not had time to catch on, 2) restrictions were imposed on the amount and type of material that could be requested and 3) other organizations are better equipped to carry out such a program. There was an inherent inconsistency in the idea from the start: had the response ever attained our expectations, it would have far outstripped our ability to respond. A program of this nature must be supported by an appropriate commitment in staff time, equipment and funding, none of which were available to the contractor at the necessary level.

- 4) Review Activity Papers submitted by USAID Missions and assess each proposal for technical and social soundness.

During the initial twenty-seven months of the project, the contractor was restricted to reviewing IRT proposals submitted to AID/W for approval. These reviews were made in concert with concerned officials from the Africa Bureau. During this phase of the project the contractor's role can therefore be characterized as one of "promotion and review".

The original intent of the AFR/RA project managers was to stimulate grantees to design and develop their own activities in conjunction with USAID staffs. As the project advanced through 1979 and 1980 it became increasingly clear that few if any USAIDs could or

would provide the time and technical attention needed to assure the development of a quality proposal. USAIDs that did attempt to support an IRT grant generally did so without providing adequate assistance to the grantee in designing and implementing the activity. In only a few cases over the four-year history of this work, did USAIDs establish an effective small grant support mechanism.

As a result of the USAIDs' lack of background in supporting small grant work, the resulting activities were generally unresponsive to the IRT Guidelines. Activity Papers, poorly prepared by grant proposers, were at times received without critical review by USAIDs and were quickly passed on to AID/W for analysis and approval. Submissions of this nature were invariably challenged by Africa Bureau specialists and by the contractor as not in conformance with the Guidelines, technically unacceptable or contrary to AID procedural, legal or policy mandates. Under these circumstances, awkward and time-consuming exchanges caused friction between AID/W and the field. The Missions expressed frustration that AID/W was not able to respond quickly as had been promised and AID/W remained disappointed in the quality of the proposals submitted. This prompted AFR/RA to redesign the IRT approval procedure, at which time the contractor proposed that its services be used in the field to support Missions in developing and implementing IRT activities.

PP-level In 1980, AFR/RA sought to deal with this problem by transferring the approval process from AID/W to the Missions and by making the contractor available to USAIDs for field support. This change proved to be a turning point for the project. After January 1, 1981, the contractor was increasingly summoned by USAIDs to support the preparation of workable activities. However, half of the eligible USAIDs were still not persuaded to utilize IRT funds. Those that did use the IRT window began, with contractor support, to process small grant requests promptly and efficiently.

Two major changes were made in the IRT approval process. First, Project Paper-level authority for approving IRT activities was shifted from AID/W to the Mission Directors or, in the case of AID Representatives and AID Affairs Officers, to the REDSOs. Second, the

contractor was freed to perform a much broader range of services including participation in the design of activities, preparation of required AID documentation, support during implementation and evaluation and assistance with procurement.

- 5) Provide, if needed, supplementary short-term technical consultant services.

During the life of the project the contractor was required to provide non-staff consulting services on four occasions. In three cases these were related to activities in Botswana (IRT .14 -- Small Crafts and IRT .34 -- Building Materials) and in the fourth to a product contract for a Charcoal Briquetting Activity Paper in Uganda. Consultants were not required during the early years of the project because USAIDs were expected to produce viable activities using their own resources and presupposing a certain amount of expertise on the part of the proposer and the Missions. After the procedural changes of 1981, the contractor staff was generally adequate to support the technical needs of USAIDs.

Initial AFR/RA limitation to African and Africa-based consultants severely tied the contractor's hands. Later easing of these restrictions yielded productive results, the prime examples being the consultancies of Holland Millis and Edward Arata in Botswana.

B. IRT Accomplishments

- thirty-three activities approved under the IRT Project in thirteen African countries.
- a comprehensive set of Guidelines for activity approval explaining the IRT methodology and giving step-by-step instruction on how to write an Activity Paper.
- twelve issues of the Rural Technology Bulletin published and mailed to 2,875 subscribers in 104 countries.

- five annotated bibliographies on appropriate technology compiled and distributed to the field. Twenty-one requests for the bibliographies and sixteen requests for materials answered.
- collection and cataloguing of a 1,500 volume multilingual research library on appropriate technology

C. IRT Impact and Replication

The chart in Section I.B. indicates the placement of thirty-three IRT grants by thirteen participating USAIDs. To the contractor's knowledge, the only activity which has been replicated in another country is IRT .08 -- Sorghum Milling. This occurred through the efforts of the Canadian International Development Agency (CIDA), a co-supporter of the Sorghum Milling Project. The Peace Corps has duplicated projects funded by IRT, but these had been previously tested elsewhere and were themselves replications. We have recently learned that the Peace Corps fish farming activity in Sierra Leone was expanded to an Accelerated Impact Project.

As the IRT project was originally conceived, the contractor was to have had a catalytic role in the regional promotion of activities. This task was suspended by AFR/RA in 1980, a decision which the contractor finds regrettable. As determined by an AFR/RA-sponsored IRT evaluation, this role was appreciated by some USAIDs and directly related to the number and type of activities envisioned in the Project Paper. It is quite possible that replications of IRT work occurred outside the framework of the project, instigated by the bulletin or by word of mouth. Again, there is no established mechanism to route this information back to the contractor.

D. Evaluation of IRT in March 1982 by Development Associates

In early 1982, AFR/RA retained the services of Development Asso-

ciates, Inc. (DA), a Washington area consulting firm, to evaluate three projects under AFR/RA management: The Accelerated Impact Program (698-0410), Improved Rural Technology (698-0407) and African Women in Development (698-0388). The projects are related in their goal of providing relatively small amounts of funds via USAIDs to quick impact efforts. The purpose of the evaluation was to develop recommendations for combining the three into a larger regional project to begin in FY 1983.

In the course of evaluating IRT, the DA team visited Liberia, Togo, Zaire and Botswana and spoke with the REDSOs in East and West Africa. Their study resulted in the following findings and recommendations:

1) Impact of IRT Activities (Sub-Projects):

The number of activities and the lack of data on the progress of these activities precluded an evaluation of the project's impact or success.

2) Peace Corps Utilization of IRT Funds:

Peace Corps has been actively involved in the IRT Project which it considers to be an excellent resource for technology transfer activities at the village level.

3) Project Management:

The adjustment of the IRT approval process (1/1/81) permitted use of the contractor for more effective IRT activity development although some Missions were unaware that this change had taken place.

4) Activity Evaluations:

Evaluations of IRT activities had been neglected by USAIDs.

5) Contractor Role:

With a single exception (Liberia), USAIDs expressed satisfaction with the contractor's support. The role of the contractor as envisioned in the Project Paper was, however, unduly restricted. The contractor was not permitted to visit USAIDs to support approved IRT activities or promote replications of specific IRT work in the same or other African countries. Neither did the contractor play an active role in evaluations.

6) Conclusion:

The evaluation team concludes that conditions that led Congress to request greater AID action in the intermediate technology area still exist. The Agency and cooperating countries have scarcely begun to understand, let alone obtain the potential benefit of appropriate rural technologies to the achievement of development objectives. It makes better development sense to maintain and strengthen the IRT project than to eliminate its identity and, most likely in the process, bring about a reduction in its funding.....The IRT Project should be given a chance to achieve its objectives. The simplest and most expeditious way to do this is to extend the project.

The evaluation team also noted:

....only seven out of thirty-three IRT activities were in the renewable energy field. Thus, if all of this kind of IRT activity were to be funded from the new energy project (Energy Initiatives for Africa), it would not lessen to any great degree the need for the IRT Project.

E. Conclusions

In some respects the IRT Project may be viewed as an experimental or pilot effort. Although AID has previously been involved in funding small projects, IRT stands apart in the methodology it created to process small grants. Rather than delegate this function to a PVO or retain it within the AID structure, IRT made use of a contractor as technical filter. This role took on several different

forms during the course of the project including promotion, design, evaluation and technical assistance. With the exception of promotion, the contractor eventually became involved at all levels of activity development and implementation. This cradle to grave approach was seen as necessary to ease the administrative burden on Missions and to ensure the consistent quality of the proposals. Had circumstances allowed, the contractor role could have been further expanded to encompass active promotion by encouraging replication of "proven" technologies in other countries. This was the original intent of the Project Paper.

The IRT Project has thus created a body of experience to which future small projects can refer. Most importantly it has contributed a procedure that has proved functional in helping Missions and proposers alike to obtain funds for activities that might have been otherwise overlooked. This procedure includes the following:

- Guidelines, a document defining the parameters of the project, how to apply and how to write an Activity Paper. Written in simple English and French, it was meant as a do-it-yourself guide to small activity proposals. It has been particularly effective when reinforced by discussions with AID or project personnel.

- The Activity Paper, a brief (6-10 page) and concise form of the longer AID Project Paper in which all the salient information necessary for activity approval can be covered. Close collaboration with proposers has demonstrated that writing the Activity Paper, while representing a minor though not insurmountable obstacle, does force the proposer to present his/her ideas in an organized fashion taking into account all major aspects of activity implementation including possible social and environmental disruption, evaluation criteria, optional technical solutions, budgets, work plans management, etc.

- The Activity Identification Cable, originally introduced by the Accelerated Impact Program, was a late addition to the IRT procedure. It is a cable synopsis enabling Washington to be involved in the approval process without requiring excessive documentation

from Missions and proposers. In this way, AFR/RA ensured that general conformance to project intent was adhered to while at the same time leaving details to be resolved in country by those most familiar with local circumstances.

- Contractor assistance proved the distinguishing feature of the IRT methodology. It permitted a staff member, well-versed in appropriate technology and intimately familiar with project procedure, to work directly with proposers not accustomed to the funding requirements of international donors. With this kind of assistance, proposers could be guided around potential pitfalls in procurement, technology, legal and environmental considerations and Missions could be reassured that a quality product would be delivered without an excessive administrative drain on their resources. Under the revised Guidelines, the contractor was at the disposal of the Mission Director to perform virtually any activity-related task. Approval often took place while the contractor was still in country and in some instances, the EI engineer provided assistance in drafting grant agreements and disbursement plans. On return visits the contractor was available to iron out problems that arose during implementation or assist in evaluating a completed activity.

Despite the streamlining of the IRT procedure, several obstacles remain which are worthy of discussion for those who will be involved in small grant projects in the future. As pointed out by the Development Associates evaluation team, the Project Paper calls for the contractor to be a promoter in addition to its other responsibilities -- to locate potential activities and facilitate the replication of successful ones. The latter task would obviously call for a project of longer duration in which completed activities could be evaluated and successful examples chosen for replication. Lack of opportunity to carry out this function effectively negates the long-term usefulness of a project such as IRT. Publications are not enough. Active promotion is needed to convert good intentions into funding proposals.

In an effort to streamline IRT further, the Development Associates team also suggested the elimination of the Activity Paper. Based on numerous experiences working with proposers to draft this document, the contractor must support the Activity Paper as a valuable exercise. Time and again it has been demonstrated that the very act of setting down ideas within a prescribed framework has helped proposers to crystallize vague intentions into concrete plans of action. There is a real danger in making the process, any process, too easy. If the Agency is perceived as not demanding, it will serve only to invite substandard work.

Procurement has shown itself to be another stumbling block, particularly when proposers are not conversant with intricate AID procedures and when buying from unfamiliar sources (e.g. in the U.S.). In this situation they must rely on the Missions and this does constitute a burden on staff time. In the recent past, the contractor has procured commodities for IRT activities outside the project contract. It might prove useful in the future to include this element in a contractor's scope of work. Blanket waivers are another possible means of reducing the frustrations associated with this phase of implementation.

After four years of experience, and albeit from a biased viewpoint, we regard the use of a technical contractor as a viable and expedient means of administering a regional small grant project. An undertaking of this complexity requires constant backstopping to keep abreast of numerous and diverse small activities. In a project structured like IRT, the contractor, through travel and continuous correspondence with the field, (in most cases), becomes the repository for up-to-date information on the project. It is the contractor who meets with proposers and Mission officials, visits worksites, contributes to Activity Papers, etc. His or her judgment must therefore be relied upon as the best-informed and often the only technical expertise involved. This points to a more autonomous role for the contractor working collaboratively with AID personnel knowledgeable in the subject matter of the project.

The contractor has seen first-hand the usefulness of the "small" approach to project funding. Its worth lies in the fact that it is quick, direct and involves the community in implementation. Its impact is dramatic because the size of the beneficiary population is often small. If successful, the experience can be a valuable asset to AID: with relatively little staff time and no country funds committed, the Mission can point to tangible results achieved at low cost over the short term. A minor investment can reap a disproportionate amount of good will.

Although it is true that Missions can elect to fund small projects from operating budgets, it is not to their advantage to do so and more importantly many simply cannot spare the manpower. A mechanism like IRT, by providing technical assistance and a separate source of funds, encourages Missions to venture into an area they may previously have been constrained to ignore. As the small activities funded in this way come to fruition and begin to speak for themselves, their potential and actual contribution to the AID program will be reinforced.

APPENDIX I

Intermediate Technology Publications Ltd.

(A Subsidiary of the Intermediate Technology Development Group Ltd.)

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AUG 9 1982

2 August 1982

Adriane Wodey
Rural Technology Bulletin
Experience, Incorporated
1725 K. Street NW
Washington DC 20006
USA.

Dear Adriane Wodey,

Your December 1982 - February 1982 issue was packed with interesting ideas - well done! I wonder whether you would allow us to follow up some of the projects reported on in future issues of Appropriate Technology. The article on Peat Extraction in Burundi which we reprinted from the Bulletin several issues ago was very well received.

I am particularly interested in the following:

- Small Agricultural Tool Production in Western Kasai.
- Sorghum milling and dehulling in Botswana
- Housing materials production in Botswana.

Would it be possible to send me further details of these projects with a view to publication in Appropriate Technology?

Yours sincerely,

Chris D'Souza

Chris D'Souza
Journal Editor

MPAMYABIGWI Origène
B.P 31 CYANGUGU
RWANDA Afrique centrale

Kibogora le 30.9.1980

*pusker
11/14/80*

RURAL TECHNOLOGY BULLETIN

Cher Editeur,

Permettez-moi de me présenter auprès de votre édition et auprès de vous même.

Je suis Rwandais agé de 22ans né en 1958 dans une région sud-ouest du pays. J'ai fait mes études de section d'électricité industrielle pendant 5 ans et après je travaille dans un Bureau de développement d'une Eglise ici au Rwanda en qualité de Technicien. La technique dont je veux parle n'est rien autre que l'étude et la planification des projets de développement. Parfois il m'arrive de faire des recherches documentaires dans différents organismes qui se sentent souciés du sous développement qui règne dans certains pays notement, ceux de l'Afrique

Presque tout mon temps libre est passé sur la lecture des journaux écrits en français d'où un jour je suis tombé sur votre bulletin " RURAL TECHNOLOGY BULLETIN " je vous ~~ai~~ signalé que ce bulletin m'a fort intéressé d'où l'idée de vous écrire m'est parvenue. En effet, l'objet principal de ma requête: se résume en ces quatre questions suivantes: - Est ce que il est possible de recevoir régulièrement ce BULLETIN? - Comment est ce que je peux le recevoir? - Auriez-vous les possibilités de me donner assez de renseignements de votre noble projet (IMPROVED RURAL TECHNOLOGY PROJECT)

Cher Editeur, je me sens obliger de m'arrêter par ici en reserve de recevoir vos suggestion à la prochaine. Du reste, je vous souhaite le meilleur du temps.

MPAMYABIGWI Origène



FURUKHA MAKALI ESQ.,
P.O. BOX 184,
BUNGOMA,
KENYA.
July 29, 1980.

AUG 11 1980

*Done
8/11/80*

RURAL TECHNOLOGY BULLETIN
EXPERIENCE, INCORPORATED
1725 K ST. NW 312
WASHINGTON D.C. 20006
U.S.A..

Dear Sirs,

RE: HIGH QUALITY PAPER MANUFACTURE

I came across your address when reading an article by Mr. Donald Farnsworth on the manufacture of high quality paper from cotton waste, saw dust, canvass, old rope, gunny sacks, waste paper, wood shavings, etc., etc.

The idea fascinated me profoundly as this can do well as a small scale rural industry. I come from an area where such raw materials are readily available but the type of industry is non-existent. I would therefore be very grateful for the following information:

1. Plant and Machinery required for a small to medium size factory;
2. Technical specifications;
3. Capital requirements;
4. End uses and other useful information.

There is a giant pulp and paper factory in the district from which much experience can be drawn.

Hoping to read from you as soon as possible, I remain,
Yours very truly,


J.F. MAKALI.

AUG 10 1982

le 2 août, 1982

To/ à :
Rural Technology Bulletin
Experience, Incorporated
1725 K St., NW, No. 312
Washington, DC 20006
USA

*Justin
8/16/82*

I am currently working at an agricultural research station here in Sénégal on a project which is jointly financed by the government of Sénégal and US AID. My program is concerned primarily with farm tools and implements, appropriate technology and training of blacksmiths and farmers. I have on several occasions had the opportunity to read, with great interest I might add, the Rural Technology Bulletin, and I'd very much like to share it with my colleagues here at the research station. Please permit me to thank you in advance for entering my name on your mailing list to receive this fine publication on a regular basis.

Nom/Titre
Name/Title : Donald G. Smock Section-Machinisme Agricole
Organisation
Organization: ISRA Centre de recherches rizicoles de Djibelor
Adresse
Address: B.P. 34, Ziguinchor
Etat et pays
State and country: République du Sénégal- Sénégal

Nombre d'Exemplaires
Number of copies: 2 (New subscriber)

Merci bien,
Donald G. Smock
Donald G. Smock

Dear Sirs/Ladies,

I recently received your excellent Sept-Nov '81' issue and would like to receive the Bulletin on a regular basis.

Please send to:

Stuart Simon, Peace Corps Volunteer
Peace Corps
Box 707
Monrovia, LIBERIA
WEST AFRICA

Proton
5/20/82

MAY 19 1982

1 copy, New subscriber

I am ~~stationed~~ stationed in a rural town where I teach vocational education including farming and help organize/supervise various appropriate technology projects. ~~He~~ I was able to put your information on organic fertilizers (issue #10) immediately to use in ~~both~~ my classroom and in my demonstration garden.

Thank you

Sincerely,

- 77 - Stuart J. Simon