

**AGENCY FOR
INTERNATIONAL
DEVELOPMENT**



ANNUAL BUDGET SUBMISSION

FY 1978

ROCAP

**DEPARTMENT
OF
STATE**

JUNE 1978



Table of Contents

FY 1978 Annual Budget Submission
ROCAP

	<u>Page</u>
1. Mission Certification of the continued validity of the DAP	1
2. Summary Table I	2
3. Summary Table II	3
4. Fiscal Data and Narrative Progress Statements for Ongoing Grant Activities	
<u>Food and Nutrition</u>	
Agricultural Research & Information System	5
Soil Fertility	7
Small Farm Cropping Systems	9
Regional Nutrition	11
Regional Agricultural Marketing Authority	13
Technical Support	15
<u>Education and Human Resources Development</u>	
SIECA Institutional Assistance	16
Transfer of Technology	18
Rural Sector Management Improvement	20
Technical Support	22
<u>Section 106 Development Activities</u>	
Housing Technical Assistance	23
Special Development Activities - Belize	25
Technical Support	27
5. FY 1978 New Projects, Alternative Funding Levels and Narrative	28

	<u>Page</u>
6. Long-Range Program Plan, FYs 1978-1982, Narrative and Funding Requirements	30
7. Evaluation Plan	32

Appendices:

- A. PID: Regional Basic Grains Buffer Stock
- B. PID: Regional Horticultural Development
- C. PID: Regional Seismic Instrumentation Network

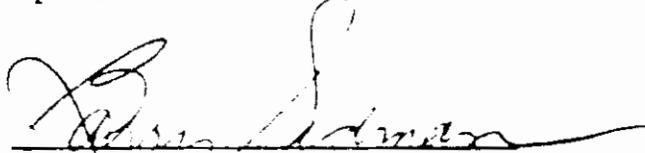
MISSION CERTIFICATION OF THE CONTINUED
VALIDITY OF THE DEVELOPMENT ASSISTANCE PROGRAM

The ROCAP revised DAP was reviewed in AID during December 1975. It remains valid in all essential respects.

Since it was submitted, ROCAP has followed the strategy outlined, viz. to continue support for activities 1) which further regional integration, 2) which support bilateral AID programs and which lend themselves to regional applications because of potential economies and efficiencies, or 3) which provide centralized services to the bilateral missions.

Progress has been slower than anticipated in starting the cost/benefit analysis and policy recommendation study on Central American Agricultural Trade. This delay is partially attributable to the greater priority SIECA has placed on the completion of the Draft Central American Treaty for Economic and Social Integration which was completed and released in March. This draft represents a significant effort by SIECA and the High Level Committee (CAN) to bring together its ideas on the appropriate direction and framework of Central American integration. These ideas are wholly consistent with ROCAP's proposed initiatives in the area of increased intra-regional trade.

Based on its current assessment of Central American interests and capabilities, ROCAP believes it now timely to submit a PID for FY 1978 funding for a Regional Grains Buffer Stock Loan Project in lieu of the Regional Agricultural Marketing project earlier proposed for FY 1977 authorization.



Barry Sidman
Acting Director

Country/Program ROCAP

SUMMARY TABLE I^{1/}

Funding Levels for FY 1976, IQ, FY 1977, FY 1978

	<u>FY 1976</u>	<u>I.Q.</u>	<u>FY 1977</u>	<u>FY 1978</u>
<u>Food/Nutrition</u>				
Grants	1,674	726	1,913	2,225
Loans			15,000	20,000
<u>Education</u>				
Grants	549	385	415	630
Loans				
<u>Section 106</u>				
Grants	164	10	75	590
Loans				
Total	2,387	1,121	17,403	23,445

^{1/} Includes Technical Support

AGENCY FOR INTERNATIONAL DEVELOPMENT						1. TRANSACTION CODE			2. ABS/CP			
ABS/CP SUMMARY						A A = ADD C = CHANGE D = DELETE			DOCUMENT CODE 6			
3. COUNTRY/ENTITY				4. DOCUMENT REVISION NO.		5. OPERATIONAL YEAR FY		6. BUREAU/OFFICE		7. GEOGRAPHIC CODE		
ROCAP				<input type="checkbox"/>		77		LA [3]		[596]		
8. TYPE DATA						9. TYPE ASSISTANCE						
1 1 = ABS 2 = ABS REVISION 3 = CP 4 = CP NOTIFICATION						1 1 = PROJECT 2 = PROGRAM						
10. PROJECT SEQUENCE NO.	11. PROJECT TITLE (40 CHARACTERS MAXIMUM)	12. QTR. FOR OBLIG.	13. EST. FY AUTH. OBLIG. FINAL	14. APPROPRIATION	15. PRIMARY PURPOSE CODE	16. LOAN PROGRAM INDICATOR	17. BUDGETS (IN \$000)					
							AY	TQ	OY	BY	LOP	
	<u>Food and Nutrition Ongoing Activities</u>											
0048	Agricultural Research and Information System*	2/2	78	FN	180	GC	424	371	557	311	1703	
0063	Soil Fertility*	1/	77	FN	121	GC	198	70	296		700	
0064	Small Farm Cropping Systems	1/1	78	FN	121	GC	380		570	490	1580	
0065	Regional Nutrition	2/1	79	FN	384	GC	500	250	30	500	1600	
0068	Regional Rural Agri-business Development	NA	76	FN	180	L			15000 ^{1/}			
0071	Regional Agricultural Marketing Authority*	1/1	79	FN	130	GC			260	330	780	
000	Technical Support	1/1	NA	FN		GC	172	35	200	200		
	<u>New Activities</u>											
0073	Regional Horticultural Crop Development (2)	/1	80	FN	141	GN				394	1182	
0074	Regional Basic Grains Buffer Stock (1)	/1	78	FN	139	L				20000	20000	
1/ Congressional notification being prepared to enable FY 1976 authorization.												
								18. DATE DOCUMENT RECEIVED IN AID/W			MM DD YY	

AGENCY FOR INTERNATIONAL DEVELOPMENT		1. TRANSACTION CODE		2. ABS/CP	
ABS/CP SUMMARY		[A] A = ADD C = CHANGE D = DELETE		DOCUMENT CODE 6	
5. COUNTRY/ENTITY		4. DOCUMENT REVISION NO.	5. OPERATIONAL YEAR FY	6. BUREAU/OFFICE	
ROCAP		[]	[77]	A. SYMBOL LA	B. CODE [3]
8. TYPE DATA			9. TYPE ASSISTANCE		
[1] 1 = ABS 2 = ABS REVISION 3 = CP 4 = CP NOTIFICATION			[1] 1 = PROJECT 2 = PROGRAM		

10. PROJECT SEQUENCE NO.	11. PROJECT TITLE (40 CHARACTERS MAXIMUM)	12. QTR. FOR OBLIGATION	13. EST. FY AUTH. OBL. FINAL	14. APPROPRIATION	15. PRIMARY PURPOSE CODE	16. LOAN PROGRAM INDICATOR	17. BUDGETS (IN \$000)				
							AY	TQ	OY	BY	LGP
	<u>Education and Human Resources Development</u> <u>Ongoing Activities</u>										
0040	SIECA Institutional Assistance	3/3	79	EH	797	GC	361	180	185	300	2590
0066	Transfer of Technology	1/1	78	EH	750	GC	100	120	200	300	720
0067	Rural Sector Management Improvement		IQ	EH	180	GC	75	75			150
000	Technical Support	1/1	NA	EH		GC	13	10	30	30	
	<u>Section 106 Development</u> <u>Activities</u> <u>Ongoing Activities</u>										
0058	Housing Technical Assistance	1/	77	SD	722	GC	150		35		309
0060	SDA - Belize.	2/	NA	SD	700	GC	5		10		
000	Technical Support	1/1	NA	SD		GC	9	10	30	30	
	<u>New Activity</u>										
0072	Regional Seismic Instrumentation Network (3)	/1	79	SD	754	GN				560	755

18. DATE DOCUMENT RECEIVED IN AID/W	MM	DD	YY

NARRATIVE PROGRESS STATEMENT

Agricultural Research and Information System (596-11-140-048). An evaluation report was submitted in June 1976. The project is on schedule. Deviations from the funding levels shown in the FY 1977 CP reflect 1) the proposed addition of Panama to the project requiring increases of \$114,000 in FY 1977 and \$189,000 in FY 1978 (see CAPTO A-34), and 2) the presentation in this ABS of the Agricultural Marketing Authority (596-0071) project as a discrete activity, reducing funding for this activity by \$260,000 in FY 1977. In April, 1976, a single ROCAP project manager (based in San Jose, Costa Rica) was designated for the Soil Fertility, Small Farm Cropping Systems, and Agricultural Research and Information System projects. This action has provided strengthened coordination and administration of these three interrelated projects.

NARRATIVE PROGRESS STATEMENT

Soil Fertility (596-11-140-063). Progress to date reflects some deviations from schedule. Although no deviation in the total funding levels is foreseen, the project financial plan will be altered. Delays described below have necessitated reprogramming \$68,000 from obligation in FY 1976 to FY 1977. FY 1977 funding required will increase from \$228,000 shown in the CP to \$296,000. Total cost of project remains \$700,000. Delays were occasioned by the relocation of the project manager from Guatemala to San Jose, Costa Rica and of the principal technical advisor from Guatemala to Turrialba, Costa Rica. Further delay was experienced in the change of the principal contractor.

On April 1, 1976, North Carolina State University (NCSU), which had been providing technical services in Central America, was replaced by Agricultural Environmental Systems Incorporated (AES) of Raleigh, N.C. AES is charged with institutionalizing at the Central American Institute for Tropical Agricultural Research (CATIE) of Turrialba, Costa Rica, the NCSU techniques and methodologies in soil fertility research. AES is presently providing a soils and soil fertility advisor who is resident in Costa Rica. A second advisor will be stationed in Honduras.

CATIE has employed an experienced laboratory director, and the renovating and equipping of the soils laboratory is progressing satisfactorily. The PASA team whose task was to identify soil management units (analogs) completed its studies in April and submitted its report. This information is being used to identify sites to be tested with field trials or demonstration plots. Host country soil fertility personnel are being trained in the selection of appropriate experimental sites on fields of small farmers. Laboratory equipment and materials have been delivered to the Governments of Honduras and El Salvador and to the Panamerican Agricultural School in Zamorano, Honduras. In April, 1976, a single ROCAP project manager (based in San Jose, Costa Rica) was designated for the Soil Fertility, Small Farm Cropping Systems, and Agricultural Research and Information System projects. This action has provided strengthened coordination and administration of these three interrelated projects.

NARRATIVE PROGRESS STATEMENT

Small Farm Cropping Systems (596-11-140-064). Progress to date is on schedule for three of five Central American countries; the continued non-participation of El Salvador and Guatemala in this activity may result in reduced financial requirements in FY 1977. AID will be advised when a decision regarding future participation of these two countries is made. Rebudgeting has resulted in savings to the project, obviating any requirement for Interim Quarter financing. These funds (\$180,000) will be obligated and disbursed during FY 1978.

Project activities were initiated following the execution of a contract with the Central American Institute for Tropical Agriculture Research (CATIE) in June 1975. The CATIE contract was amended in January, 1976 to permit full-scale project implementation in the three participating countries. Although there are few professionals with the requisite training and background for this relatively new approach to interdisciplinary research into cropping systems for small farmers, CATIE was successful in recruiting a group of talented and dedicated young scientists who are pursuing project activities with vigor.

A bibliographic review of applicable cropping systems research has been initiated, and training materials have been developed and utilized for training CATIE's personnel as well as researchers from the participating countries. CATIE's central research satellite experiments were planted on schedule. Baseline surveys were conducted in the three cooperating countries to provide agronomic, cropping systems and socio-economic data. This information is being utilized to guide the development and execution of cropping systems research on farms and in the research stations of the participating countries. In April, 1976, a single ROCAP project manager (based in San Jose, Costa Rica) was designated for the Soil Fertility, Small Farm Cropping Systems, and Agricultural Research and Information System projects. This action has provided strengthened coordination and administration of these three interrelated projects.

NARRATIVE PROGRESS STATEMENT

Regional Nutrition (596-11-560-065). This project was reviewed and approved by AID/W in March, 1976. A project agreement was signed with PAHO on behalf of the Nutrition Institute of Central America and Panama (INCAP) in May 1976. INCAP has initiated discussions with the Governments of Honduras, Nicaragua, El Salvador and Panama to further refine technical assistance requirements designed to complement USAID activities in these four countries.

NARRATIVE PROGRESS STATEMENT

Regional Agricultural Marketing Authority (596-0071). This project is scheduled for initial funding in FY 1977. AID/W combined first year funding of \$260,000 in the Agricultural Research and Information System budget in the FY 1977 Congressional Presentation pending a ROCAP review of the Agricultural Information project and completion of the SIECA study on benefits of and policies which can promote intra-regional agricultural trade. The study was initiated in June 1976.

ROCAP's evaluation (June 1976) of the Agricultural Information project concluded that the Marketing Authority was not integrally related to the Information Activity and recommended that the Authority be developed as a discrete project. In this ABS the Marketing Authority is presented separately with estimated FY 1977 obligations of \$260,000 matching a reduction by that amount in the estimated FY 1977 obligations for the Agricultural Information project. ROCAP will submit a PP in FY 1977 for the Marketing Authority project.

FORMAT FOR FISCAL DATA
ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION

Project Name Technical Support F & N Initial Obligation FY 1975 Date PROP/Revision N/A
 Project Number 596-000 Final Obligation Open Date Last PAR N/A
 Appropriation 72-11X1023 Total Cost Open Date Next PAR N/A

U.S. DOLLAR COST (IN THOUSANDS)

Actual FY 1976	FY Obligations	FY Expenditures	Unliquidated as of:	FY 1977 and FY 1978	
				6/30/76 inc. prior year funds	9/30/77
172	172	160	12	21	5
Estimated	35	30	17	5	5
Interim Qtr.					
Estimated	200	217	9/30/77	20	25
FY 1977	200	200	9/30/78	139	150
Proposed	200	200		40	40
FY 1978				45	45
				200	200

Contract/PASA Funding Periods

Name of Contractor	FY 1976 Obligations mo/yr-mo/yr	Int. Qtr. Obligations mo/yr-mo/yr	FY 1977 Obligations mo/yr-mo/yr	FY 1978 Obligations mo/yr-mo/yr	On Board Personnel
PASA/ USDA	7/75 - 8/76 43	9/76-10/76 10	10/76-9/77 40	10/77-9/78 45	6/30 1976
Short-term Consultants		7/76- 9/76 15	59	65	9/30 1976
Contracts		10	60	60	9/30 1977

Obligations by Cost Component/MOI

Cost Component	Direct Hire	Direct Aid	Contract	PASA	Total
U.S. Tech.	77	78	77	78	77 78
Local & Ten			119	125	159 170
Participants	21	5			21 5
Commodities					
Other Costs			20	25	20 25
Total	21	5	139	150	40 45

On Board Personnel

Direct Hire	6/30 1976	9/30 1976	9/30 1977	9/30 1978
PASA				
Contract				
Participants				

Country/Program ROCAP

**FORMAT FOR FISCAL DATA
ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION**

Project Name SIECA Institutional Assistance Initial Obligation FY 1972 Date PROP/Revision Feb. 1974
 Project Number 596-0040 Final Obligation FY 1979 Date Last PAR March 1976
 Appropriation 72-11X1025 Total Cost \$2,590,000 Date Next PAR April 1977

U.S. DOLLAR COST (IN THOUSANDS)

FY	Obligations	FY Expenditures	Unliquidated as of 6/30/76	FY 1977 and FY 1978			
				Obligations by Cost Component/MOI	On Board Personnel		
				Direct Hire	Contract	PASA	Total
FY 1976	361	46	250	77	77	77	231
Estimated	180	201	229				
FY 1977	185	334	80	100	150		250
Proposed	300	361	19	100	150	85	335
FY 1978							
				Total	100	150	185

Contract/PASA Funding Periods

Name of Contractor	FY 1976 Obligations	Int. Qtr. Obligations	FY 1977 Obligations	FY 1978 Obligations	On Board Personnel
Brookings	7/75 - 12/76 112	mo/yr-mo/yr	7/77-12/77 85	1/78-12/78 150	6/30 1976 9/30 1976 9/30 1977 9/30 1978
To be determined		1/77-6/77 100	7/77-12/77 85	1/78-12/78 150	5 5 5 5

NARRATIVE PROGRESS STATEMENT

SIECA Institutional Assistance (596-11-755-040). See evaluation report dated May 5, 1976 forwarded under CAPTO A-36. A Project Paper will be prepared during the Interim Quarter which will discuss the future of this activity.

Country/Program ROCAB

FORMAT FOR FISCAL DATA
ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION

Project Name Transfer of Technology Initial Obligation FY 1976 Date ~~PROF/Revision~~ May 1976
 Project Number 596-11-690-066 Final Obligation FY 1978 Date Last PAR
 Appropriation 72-11X1025 Total Cost \$720,000 Date Next PAR October 1977

U.S. DOLLAR COST (IN THOUSANDS)

Name of Contractor	FY Obligations mo/yr-mo/yr	FY Expenditures mo/yr-mo/yr	Unliquidated as of:	FY 1977 and FY 1978				
				Obligations by Cost Component/MOI				
			6/30/76	Cost	Direct Aid	Contract	PASA	Total
Intermediate	120	100	9/30/76	Contract	7	77	70	74
Contracted	200	260	9/30/77	Local & Ten	10	25		10
Proposed	300	300	9/30/78	Participants	100	175		100
				Commodities	100	175		175
				Other Costs	110	200	90	100
				Total	110	200	90	100
								200
								300

Contract/PASA Funding Periods

Name of Contractor	FY 1976 Obligations mo/yr-mo/yr	Int. Qtr. Obligations mo/yr-mo/yr	FY 1977 Obligations mo/yr-mo/yr	FY 1978 Obligations mo/yr-mo/yr	On Board Personnel				
					Direct Hire	Contract	Participants	6/30 1976	9/30 1976
DRI	25	20	30	38					
ITRI	26	21	30	38			2		
CODOT	25	20	18	24					
Blackledge		9/76	10/76-12/77						
		3	12						

NARRATIVE PROGRESS STATEMENT

Transfer of Technology (596-11-690-066). AID/W approved phase one of this two-phase project in May, 1976. Phase one is an 18 month operational feasibility study designed to determine if appropriate technology can be transferred in a systematic manner. If phase one is successful, a second eighteen month activity (phase two) may be undertaken after submission and review of a new Project Paper. Phase one approval limited financing to \$310,000 of which \$100,000 was allotted and obligated during FY 1976. Interim Quarter requirements remain \$120,000 as indicated in the FY 1977 CP and Project Paper. The Fiscal Data Table for this project reflects funding for phase one and phase two, therefore FY 1977 funding is shown as \$200,000 (vice \$90,000) and FY 1978 as \$300,000 for LOP funding of \$720,000. A Project Agreement was signed with the Central American Institute for Industrial and Technological Investigations (ICAITI) on May 28, 1976. ICAITI is currently in the process of hiring field representatives and contracting U.S. firms and individuals to assist in project implementation.

Country/Program ROCAB

**FORMAT FOR FISCAL DATA
ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION**

pp

Project Name Rural Sector Management Initial Obligation FY 1976 Date ~~RROR/Revisions~~ May 1976
 Project Number 596-11-110-067 Final Obligation T.O. Date Last PAR -
 Appropriation 72-11X1025 Total Cost \$150,000 Date Next PAR September 1977

U.S. DOLLAR COST (IN THOUSANDS)

FY Obligations	FY Expenditures	Unliquidated as of:	FY 1977 and FY 1978					
			6/30/76	9/30/76	9/30/77	9/30/78	Total	
Actual FY 1976	75	4	6/30/76	9/30/76	9/30/77	9/30/78	Total	
Estimated Interim Qtr.	75	13	Pre prior year fund	133			78	
Estimated FY 1977	-	91		42				
Proposed FY 1978		42		0				
			Obligations by Cost Component/MOI					
			Cost Component	Direct Aid	Contract	PASA	Total	
			U.S. Tech	77	77	77	77	78
			Local & Ter					
			Participants					
			Commodities					
			Other Costs					
			Total					

Contract/PASA Funding Periods

Name of Contractor	FY 1976 Obligations	Int. Qtr. Obligations	FY 1977 Obligations	FY 1978 Obligations	On Board Personnel					
					6/30 1976	9/30 1976	9/30 1977	9/30 1978		
	mo/yr-mo/yr	mo/yr-mo/yr	mo/yr-mo/yr	mo/yr-mo/yr	Direct Hire					
					PASA Contract Participants					

NARRATIVE PROGRESS STATEMENT

Rural Sector Management (596-11-110-067). This project was reviewed and approved by AID/W in late April 1976 and a project agreement was signed with the Central American Institute of Business Administration (INCAE) in May to initiate the project. INCAE is beginning discussions with host government officials in Nicaragua and Honduras to further define rural sector management problems as a basis for the seminars to be given in both countries in the coming months.

Country/Program ROCAP

FORMAT FOR FISCAL DATA
ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION

Project Name Technical Support - E&HR Initial Obligation FY 1975 Date PROP/Revision N/A
 Project Number 596-000 Final Obligation Open Date Last PAR N/A
 Appropriation 72-11X1025 Total Cost Open Date Next PAR N/A

U.S. DOLLAR COST (IN THOUSANDS)

Contract	FY 1976 Obligations	FY 1976 Expenditures	Unliquidated as of 9/30/76	FY 1977 and FY 1978 Obligations by Cost Component/MOI	
				FY 1977 Obligations	FY 1978 Obligations
Actual FY 1976	13	13	year funds		
Estimated Interim Qtr.	16	10	9/30/76		
Estimated FY 1977	30	30	9/30/77		
Proposed FY 1978	30	30	9/30/78		
				Total	30 30

Contract/PASA Funding Periods

Name of Contractor	FY 1976 Obligations	Int. Qtr. Obligations	FY 1977 Obligations	FY 1978 Obligations	On Board Personnel
Contracts	4/76-5/76	mo/yr-mo/yr	mo/yr-mo/yr	mo/yr-mo/yr	6/30 1976
ITPRI	2				9/30 1976
DRI	2				9/30 1977
A. Rubenstein	6/76-7/76				9/30 1978
A. Coleman	7	7/76-9/76	10/76-9/77	10/77-9/78	
To be determined		8	20	20	

On Board Personnel

Category	6/30 1976	9/30 1976	9/30 1977	9/30 1978
Direct Hire				
PASA				
Contract Participants	1			

NARRATIVE PROGRESS STATEMENT

Housing Technical Assistance (596-11-830-058). See evaluation report dated May 13, 1976 forwarded under CAPTO A-46.

Country/Program ROCAP

**FORMAT FOR FISCAL DATA
ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION**

Special Development
Project Name Activillea - Belize
Project Number 596-15-998-060
Appropriation 72-11X1026

Initial Obligation FY 1976
Final Obligation Continuing
Total Cost Continuing

Date PROP/Revision N.A.
Date Last PAR
Date Next PAR October 1977

U.S. DOLLAR COST (IN THOUSANDS)

Actual FY 1976	Estimated Interim Qtr.	Estimated FY 1977	Proposed FY 1978	FY 1977 and FY 1978		Obligations by Cost Component/MOI						
				FY Obligations	FY Expenditures	Unliquidated as of:	Cost Component	Direct Aid	Contract	PASA	Total	
5	0	10		6/30/76	inc. prior year funds	U.S. Tech.	77	78	77	78	77	78
				9/30/76		Local & Ten Participants						
				9/30/77	0	Commodities						
				9/30/78		Other Costs						
						Total		10				10

Contract/PASA Funding Periods

Name of Contractor	FY 1976		FY 1977		FY 1978		On Board Personnel							
	Obligations mo/yr-mo/yr	Int. Qtr. Obligations mo/yr-mo/yr	Obligations mo/yr-mo/yr	Obligations mo/yr-mo/yr	Obligations mo/yr-mo/yr	Obligations mo/yr-mo/yr	Direct Hire	PASA	Contract	Participants	6/30 1976	9/30 1976	9/30 1977	9/30 1978
							Direct Hire							
							PASA							
							Contract							
							Participants							

NARRATIVE PROGRESS STATEMENT

Special Development Activities - Belize (596-15-998-060).
This continuing project provides financing for small "im-
pact" self-help activities in Belize. It is implemented
by the American Consul General in Belize City. No funds
are requested for the Interim Quarter; \$10,000 is requested
for FY 1977.

Country/Program ROCAP FORMAT FOR FISCAL DATA
ONGOING GRANT PROJECTS FOR THE ANNUAL BUDGET SUBMISSION

Project Name Technical Support-Section 106 Initial Obligation FY 1975 Date PROP/Revision N/A
 Project Number 596-000 Final Obligation Open Date Last PAR N/A
 Appropriation 72-11X1026 Total Cost Open Date Next PAR N/A

U.S. DOLLAR COST (IN THOUSANDS)

	FY Obligations	FY Expenditures	Unliquidated		FY 1977 and FY 1978					
			as of:	Component	Direct Aid	Contract	PASA	Total		
Actual FY 1976	9	1	6/30/76 inc. prior year funds	8	77	78	77	78	77	78
Estimated Interim Qtr.	10	18	9/30/76							
Estimated FY 1977	30	30	9/30/77							
Proposed FY 1978	30	30	9/30/78							
				Total						

Contract/PASA Funding Periods

Name of Contractor	FY 1976		FY 1977		FY 1978		On Board Personnel							
	Obligations	Int. Qtr. Obligations	Obligations	Obligations	Obligations	Obligations	6/30 1976		9/30 1976		9/30 1977		9/30 1978	
To be determined	mo/yr-mo/yr	mo/yr-mo/yr	mo/yr-mo/yr	mo/yr-mo/yr	mo/yr-mo/yr	mo/yr-mo/yr								
		7/76-9/76		10/76-9/77		10/77-9/78								
		10		15		15								

Direct Hire
 PASA
 Contract Participants

Country/Program ROCAP

Proposed New Projects - FY 1978 Alternative Funding Levels

	(Alternative A)	(Alternative B)	(Alternative C)
	Full Funding Level	Forward Funding	Mission Alternative
	Months	According to	If Grant Resources
	from Date	A-368	Curtailed
	Dollars	Dollars	Months from
	of Obligations		Date of
			Obligation

Project
Food and Nutrition

1	Regional Horticultural	754	36	574	394	12
2	Crop Development					

Section 106

	Regional Seismic	560	12	560	560	12
	Instrumentation					
	Network					

1. Regional Horticulture Crop Development:

Alternative A finances technical services for LOP, thereby giving the contracting agent (CATIE) increased flexibility in hiring technical advisors who could be offered employment for three years. This could help CATIE recruit more capable personnel. All other project costs would be financed for one year.

Alternative B, in accord with A-368, would finance technical services for two years at project inception and other project costs for one year. Alternative C finances all project costs for one year. ROCAP feels Alternative A to be most desirable, with B and C next.

2. Regional Seismic Instrumentation Network:

At this stage of project development ROCAP sees no advantages in forward funding this activity beyond an initial twelve month period. The first year of project activity will require major purchases and installation of commodities followed by an evaluation. Forward funding of the remaining commodities or technical services to be provided in subsequent years would neither result in economies during purchase nor yield other apparent advantages.

LONG-RANGE PROGRAM PLAN -- NARRATIVE SUMMARY

The attached projections are based on the following assumptions:

1. The Central American Common Market will continue in existence throughout the period. The projections do not depend on the adoption by the Central American countries of the draft treaty for a Central American Economic and Social Community (CAESC). Should the CAESC materialize, the probability of the three agricultural trade and cooperation loans (see below) would be increased.

2. The SIECA/ROCAP "six-month" study will explore the feasibility and desirability of (a) a regional grains authority (possibly with additional responsibilities in trade of fruits, vegetables, and other agricultural products), and (b) a regional grains buffer stock, to be administered by the Authority. ROCAP will provide technical assistance to the Authority, and two loans (FY 78 and 81) to create and expand the buffer stock. The FY 81 loan may seek to expand storage capacity in C.A.

3. Experience with the Authority and the buffer stock program, coupled with the analytical work of the SIECA/Brookings unit, will result in steady progress toward free trade in grains in Central America. This process will be sufficiently far advanced by 1982 to warrant going ahead with an adjustment credit fund loan for small farmers adversely affected by the new economic circumstances.

4. A feasibility study in FY 77 will demonstrate that it is feasible and cost effective to undertake a campaign against the Mediterranean Fruit Fly in Central America. This will result in a loan in FY 79. Alternatively, there may be a requirement to support expanded intraregional fruit and vegetable trade (e.g., wholesale markets).

5. The FY 76 (77?) agroindustry loan will prove to be a sufficiently effective means of reaching the small farmer to justify going ahead with a second loan (FY 80).

Country/Program ROCAP

LONG RANGE PROGRAM PLAN
(\$ millions)

	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
<u>Food/Nutrition</u>					
Grants	2.0 ^{1/}	1.4 ^{2/}	1.4 ^{3/}	1.4 ^{4/}	1.4 ^{5/}
Loans	20.0 ^{1/}	25.0 ^{2/}	20.0 ^{3/}	20.0 ^{4/}	25.0 ^{5/}
<u>Education</u>					
Grants	.6	.4	.3	.3	.3
Loans					
<u>Section 106</u>					
Grants	.6	.4	.3	.3	.3
Loans					
<u>Totals</u>					
Grants	3.4	2.2	2.0	2.0	2.0
Loans	20.0	25.0	20.0	20.0	25.0

- 1/ Buffer Stock I
- 2/ Med. Fly or Wholesale Markets
- 3/ Agro Industry II
- 4/ Buffer Stock II or Grain Storage Facilities
- 5/ Agriculture Adjustment Fund

Country: ROCAP

Mission Evaluation Schedule for FY 1977 and FY 1978

(1)	(2)	(3)	(4)	(5)	(6)
Project Title & Number/Subject	Last Evaluation Submission Date	Number of Last PAR	Date of Submission FY 77 and/or FY 78 Evaluation	Period Covered Next Evaluation	Remarks
<u>Food and Nutrition</u>					
Agricultural Research and Info. Systems 596-0048	June 1976	76-6	August 1977/ August 1978	One year	
Soil Fertility 596-0063	-	-	March 1977/ March 1978	18 months	
Small Farm Cropping Systems 596-0064	April 1976	76-2	March 1977/ March 1978	One year	
Regional Nutrition 596-0065	-	-	June 1977/ June 1978	One year	
Regional Agriculture Marketing Authority 596-0071	-	-	May 1978	One year	
LAAD Agribusiness Development II 596-T-015	-	-	Nov. 1976	16 months	
Agribusiness Development 596-0068	-	-	Oct. 1977/ Oct. 1978		

Evaluation depends upon
date loan is signed

<u>Project Title & Number/Subject</u>	<u>Last Evaluation Submission Date</u>	<u>Number of Last PAR</u>	<u>Date of Submission FY 77 and/or FY 78 Evaluation</u>	<u>Period Covered Next Evaluation</u>	<u>Remarks</u>
<u>Education & Human Resources Development</u>					
SIECA Institutional Assistance 596-0040	April 1976	76-4	April 1977/ April 1978	One year	
Transfer of Technology 596-0066	-	-	Nov. 1977	18 months	End of Phase I
Rural Sector Management Improvement 596-0067	-	-	Sept. 1977/ Sept. 1978	15 months	
Central American School of Business Administration 596-L-012	March, 1975	-	June, 1976		Final Evaluation
<u>Section 106 Development Activities</u>					
Housing Technical Assistance 596-0058	May 1976	76-5	June 1977	13 months	Final Evaluation
Special Development Activities - Belize 596-0060	-	-	Oct. 1977	13 months	FY 76 funds obligated in May. Project will be inactive during 1Q. If funds are not made available early in FY 77, evaluation may be postponed.

<u>Project Title & Number/Subject</u>	<u>Last Evaluation Submission Date</u>	<u>Number of Last PAR</u>	<u>Date of Submission FY 77 and/or FY 78 Evaluation</u>	<u>Period Covered Next Evaluation</u>	<u>Remarks</u>
CABEL - Economic Inte- gration Fund 596-L-008	Oct. 1975	-	August 1976	One year	Final Evaluation
CABEI - Tourism Infrastructure 596-L-013	August 1975	-	October 1976/ October 1977	One year	
CABEL - Highway Infrastructure 596-L-014	February 1975	-	Sept. 1976/ Sept. 1977	18 months	
Export Industries and Tourism 596-L-010	Sept. 1975	-	January 1977	15 months	Final Evaluation

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IDENTIFICATION DOCUMENT FACESHEET
 TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE

A A = ADD
 C C = CHANGE
 D D = DELETE

PID

2. DOCUMENT CODE

3. COUNTRY/ENTITY
 ROCAP

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 DIGITS)
 596-0074

6. BUREAU/OFFICE
 A. SYMBOL LA B. CODE 05

7. PROJECT TITLE (MAXIMUM 40 CHARACTERS)
 REGIONAL BASIC GRAINS BUFFER STOCK

8. PROPOSED NEXT DOCUMENT

A. 2 = PRP 3 = PP B. DATE 10/7/6

10. ESTIMATED COSTS

(\$000 OR EQUIVALENT, \$1 = 1 C.A. UNIT)

FUNDING SOURCE	BASE
A. AID APPROPRIATED	20,000
B. OTHER U.S.	17,250
C. MOST COUNTRIES	
D. OTHER DONOR(S)	
TOTAL	37,250

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION

a. INITIAL FY 7/8 b. FINAL FY 7/8

11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY 78		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) FN	1395		056		20,000		20,000
(2)							
(3)							
(4)							
		TOTAL		20,000		20,000	

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)

013

13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)

BF

14. SECONDARY PURPOSE CODE

15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)

To establish socio-economic conditions which will provide the poorest majority of urban/rural population with increased opportunity for and sustained participation in the expanding benefits emanating from development.

16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)

To finance a regional grain stockpile that would (1) in the short-run aid Central American governments to manage their grain surpluses and deficits and (2) in the longer-run to stimulate free trade and specialization in basic food grains so that the Central American countries can share in the benefits of more efficient low-cost production based on the agricultural comparative advantage of each.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)

One grain stock policy specialist (1/2 mo.) \$3,000
 One grain stock management specialist (1/2 mo.) \$3,000
 One grain storage specialist (1/2 mo.) \$3,000
 One grain standards specialist (1/2 mo.) \$3,000

18. ORIGINATING OFFICE CLEARANCE

Signature

[Handwritten Signature]

Title

Acting Director

Date Signed

10/17/66

19. DATE DOCUMENT RECEIVED AID/W, OR FOR AID/W COLLECTIONS, DATE OF DISTRIBUTION

MM DD YY

REGIONAL BASIC GRAINS BUFFER STOCK PROGRAM

I. The Problem and Its Proposed Solution

A. The Problem and Its Background

AID, along with other international development agencies, has provided financial resources and technical services to the Central American countries to enable them to expand their capacities to meet domestic food needs and diversify their agricultural commodity exports. Production credits, irrigation works, rural roads, research and extension programs, and grain storage facilities are all programs that have been designed and implemented with the goal of domestic food self-sufficiency in mind. The Central American region is rapidly acquiring the technical and financial capacity to meet the goal of self-sufficiency in basic food supplies as set by the Central American Ministers of Agriculture in October 1974 and subsequently subscribed to in recent regional meetings of the Central American Chiefs of State. (It already has the natural resource endowments though they vary among countries.)

However, recent adverse crop years, caused by natural phenomena and aggravated by unstable world markets for fuel and fertilizers, have demonstrated that while Central America has the long-run capacity to meet its food needs, it does not have a viable mechanism to cushion itself from inevitable short-run disturbances in supply and demand conditions. In the 1973/74 and 1974/75 crop years, for example, several Central American countries were hit by droughts and hurricanes which affected their grain production. They had to turn to world markets for imports at the very time international grain stocks were low and prices high. When some Central American countries returned to surplus conditions in the 1975/76 crop year, world market prices had dropped to below Central American levels leaving the region with unexportable stocks. Buffeted about by the natural disasters and world market fluctuations in recent years, Central American grain producers and consumers alike suffered real losses in income and well-being. Government marketing agencies also suffered major financial losses that threatened them with decapitalization and led to accusations of mismanagement.

In well-intentioned but ineffectual attempts to protect themselves against excessive swings in the supply of basic food grains, Central American governments in recent years have closed their borders to trade and stimulated production of grains in areas more suitable to other crops -- which themselves could be more important sources of income, employment and foreign exchange -- or on land

that should be left idle and not subject to annual cropping that threatens erosion and environmental deterioration. The goal has been to meet grain supply requirements through policies of national self-sufficiency.

ROCAP believes that Central American governments can achieve necessary "supply protection" at a lower cost and with greater effectiveness by means that in the long-run are more viable than trade controls and irrational production stimulants. Specifically, the Mission proposes to finance a regional contingency fund or buffer stock program which would assure Central American governments access to needed grain supplies in lean years and needed extra storage capacity in abundant times. This would enable the Central American governments to open up trade and enjoy the benefits of specialization without being placed at the mercy of uncontrollable conditions in world -- or neighboring Central American Common Market (CACM) country -- markets.

Of course, operation of a regional grains contingency fund has costs in management and financing of inventories and these would need to be clarified during project development. Nevertheless, preliminary studies conducted by SIECA and financed by ROCAP suggest these costs are insignificant compared to either the costs of closed borders or the gains from production specialization and trade.

B. The Proposed Solution To The Problem

Each Central American government is now in the process of formulating and implementing a national grain price stabilization program. Discussions have been held on a regional grain stockpile program that could help the region through abundant or lean production years. Just as no Central American country can guarantee itself a given level of production each year, it is also unable to promise its neighbors the markets they need. However, acting collectively, the Central American countries can "create" a stable market by pooling their resources to maintain a regional grain stockpile to which each can turn to buy and sell.

ROCAP wishes to assist in the establishment of such a buffer stock program, assuming its financial viability and that the Central American countries both want it and are willing to cooperate in its management. The buffer stock program, as ROCAP presently views it, would be distinct from -- though complementary to -- the proposed Regional Grain Price Stabilization Fund. Indeed, the price

stabilization fund, which implies harmonization of grain prices among the five countries, need not exist for the buffer stock program to become effective, as it would serve principally to maintain grain prices throughout the year within reasonable levels of variation. In short, the Price Stabilization Fund would provide price protection to consumers and producers. The buffer stock program on the other hand would assure Central American countries of the conditions necessary to allow free trade and specialization, by providing supply protection to producers and consumers.

1. Project Description. The buffer stock program would consist of a regionally managed financial mechanism which would underwrite grain stocks stored in Central American country facilities. The Central American governments would be paid for the grains "sold" to the program which would then be available to any country in the region at any time at established prices. Countries with regional grain stocks in their facilities would be paid storage fees. The level of stocks would be monitored continuously so that at times of extreme regional deficits or surpluses, extraregional grain transactions would be possible to supplement the regional stockpile program. Other lenders -- including bilateral AID Missions -- would assist in financing the construction of storage facilities and training of operators.

2. Project Output. The major output of the project would be a basic grains buffer stock inventory equal to between 2% and 20% of the region's grains consumption based on historical trends in the size of shortfalls covered by imports since the formation of the CACM in 1960 and varying among grains (corn 20%, beans 6%, sorghum 8%, rice 10%).

3. Project Inputs. To finance the buffer stock program about \$19,250,000 in grain imports (at March 1976 prices) will be required. An additional \$750,000 in loan financed technical assistance will be required as follows:

Grading and inspection	\$200,000
Facilities operation training	\$225,000
Crop forecasting	\$175,000
Trade and price policy	\$150,000

(Additional grant-funded technical assistance is anticipated under a separate FY 1977 ROCAP Regional Agricultural Marketing Authority Project for these activities prior to loan disbursement).

4. Major Assumptions. ROCAP believes this project will be functional if the Central American governments become aware of the substantial savings in costs and gains in benefits that participation by all CACM members in a buffer stock program would permit. It is assumed that an appropriate regional institution will promote the project among Central American governments which in turn will collaborate together to undertake a regional buffer stock program designed to fit within the present structure of the Central American integration movement.

5. Project Beneficiaries. The AID target group in Central America is the rural poor. Studies into the make-up of the target group -- conducted by USAID Mission assessments, national tripartite teams and ROCAP staff -- demonstrate that the bulk of the rural poor in Central America is made up of small grains producers and consumers. These individuals stand to benefit directly in improved real incomes made possible by more stable grains prices which the project will foster. Furthermore, by stimulating cultivation of grains in areas most suitable on a regional basis for their production, the project should generate lower cost grain supplies for the region. The project is being designed to give priority attention to servicing those small farmers falling within the poorest majority of Central America, whenever the purchase or sale of grain from the buffer stock is planned.

II. Financial Requirements and Plans

A. The estimated project cost of \$37,250,000 would be disbursed over a 3-year period.

B. ROCAP's share of the cost is estimated at \$20.0 million, of which \$19,250,000 would finance grain buffer stocks and \$750,000 would cover needed technical assistance.

C. The Central American country contributions of \$17,250,000 would finance national price stabilization programs, operating costs and technical assistance.

D. Budget:

	AID		Host Country		Total
	Total	%	Total	%	
(1) Buffer Stocks	\$19,250	(100)	--		\$19,250
(2) Operating overhead			\$ 1,500	(100)	\$ 1,500
(3) Price Stabilization	--		\$15,000	(100)	\$15,000
(4) Technical Assistance	750	(50)	750	(50)	\$ 1,500
Total	\$20,000	(54)	\$17,250	(46)	\$37,250

III. Project Development

A. Project Preparation

During 1973-75 ROCAP financed a study undertaken by SIECA into the economic, financial and technical feasibility of a regional fund for basic grains price stabilization. From that study ROCAP concluded that AID should focus its financial resources on the problem of "supply protection" to be addressed by a buffer stock program to handle long-run market adjustments between crop years while the Central American countries would provide counterpart funds to deal with the "price protection" or stabilization of prices occurring in the short-run between production seasons. While the buffer stock program offers obvious advantages to the region, several issues surrounding its operation must be resolved. ROCAP has identified the following questions which it wishes to examine with the Central American governments during the last half of CY 1976. If satisfactory resolution of these questions is possible, and it appears feasible to establish regional buffer stocks, ROCAP will begin formal discussions with the Central American governments late in 1976 regarding final design of the project and the necessary financial resources to initiate the program.

1. Regional Management. A regional supervisory authority will be necessary to monitor grain stock levels, establish buying and selling prices, pay storage fees, repay the AID loan, as well as inspect and certify grain stocks amount and quality. Will all Central American countries support such an authority and give it the necessary powers to act? Should this authority be part of a

regional agency such as SIECA or independent (e.g., like the Central American Monetary Stabilization Fund)? Should it have its own control over financing or should a separate agency such as CABEI be its financial manager? Who should represent the Central American governments in the authority - Ministers of Agriculture? Economy? Chiefs of national marketing agencies?

2. Pricing. Inasmuch as there is currently wide variation in basic grain prices from one country to another, can a formula be found which will establish buying and selling prices that are satisfactory to the countries and which assure financial solvency of the buffer stock program? Is a crop forecasting system essential? A price reporting network?

3. Storage Capacity. Are the current national storage facilities adequate for this program? If not, will Central American governments be able to participate in construction of regional facilities in addition to those they now have? Should the storage facilities holding regional grain buffer stocks be nationally or regionally owned and/or operated?

4. Grain Standards. Since storage of individual grain commodities will be in bulk storage, what standards should be used? Are the present grain (CAP) standards adequate or should they be revised? How should disputes over quality be mediated?

5. Regional Autonomy of the Buffer Stock Program. To be feasible, the proposed buffer stock program must have a degree of regional autonomy. Are the Central American governments willing to grant the following to the Program:

a. Access to a predetermined amount of national storage capacity to hold buffer stocks?

b. Periodic inspection by a regional authority of the quality and volume of regional buffer grain stocks held in national facilities?

c. Free movement of grain buffer stocks to any other country in the region?

6. The Nature of External Financing. The U.S. Government recognizes the need for external resources to initiate the buffer stock program. What should be the nature and source of these resources? A U.S. dollar loan? PL 480? Other sources? Would the

Central American governments guarantee an external loan to the buffer stock authority and make up any losses due to pricing or grain spoilage?

B. Documentation Schedule

ROCAP anticipates the following schedule for submission of required documentation:

Submit PRP October 1976

Submit PP October 1977

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IDENTIFICATION DOCUMENT FACESHEET
 TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE
 A A = ADD
 C C = CHANGE
 D D = DELETE

PID
 2. DOCUMENT CODE
 1

3. COUNTRY/ENTITY
 ROCAP

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 DIGITS)
 596-0073

6. BUREAU/OFFICE
 A. SYMBOL LA B. CODE 05

7. PROJECT TITLE (MAXIMUM 40 CHARACTERS)
 Regional Horticultural Crop Development

8. PROPOSED NEXT DOCUMENT
 A. 2 = PRP B. DATE MM YY 10 7 16
 3 = PP

10. ESTIMATED COSTS (\$000 OR EQUIVALENT, \$1 = 1 CA Peso)

FUNDING SOURCE		BASE
A. AID APPROPRIATED		1,182
B. OTHER U.S.	1, 2,	
C. HOST COUNTRY		418
D. OTHER DONOR(S)		
TOTAL		1,600

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
 a. INITIAL FY 718 b. FINAL FY 810

11. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY 78		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) FN	141 B	967		394		1,182	
(2)							
(3)							
(4)							
TOTAL				394		1,182	

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)
 075 | 080 | 023

13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)
 BRW | BWB | R/AG | TNG

14. SECONDARY PURPOSE CODE
 121

15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)
 To establish socio-economic conditions which will provide the poorest majority of the urban/rural population with increased opportunity for and sustained participation in the expanding benefits emanating from development.

16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)
 To help develop a continuing integrated horticultural research capacity within Central America which will identify new crop production opportunities, determine bottlenecks requiring research, train national counterparts and prepare technological packages for identified cropping systems having socio-economic benefits to small farms.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)
 Up to two months TDY services of tropical horticulturalists may be needed to develop the PRP and PP at \$5,200/mo under USDA PASA.

18. ORIGINATING OFFICE CLEARANCE
 Signature: *Harry Adman*
 Title: Acting Director
 Date Signed: MM DD YY 06 17 76

19. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
 MM DD YY

REGIONAL HORTICULTURAL CROP DEVELOPMENT PROGRAMI. The Problem and Proposed Response to the Problem

This project will finance a regional horticultural research team at the Tropical Agricultural Research and Training Center (CATIE), Turrialba, Costa Rica which will help support national programs designed to expand small farm production and marketing of non-traditional horticultural crops.

1. The Problem

Central America's rural sector is at a crossroads in its evolution. While agriculture produces more than 60% of employment and 25% of national GDP, governments continue to provide less than adequate social and financial support to the majority of their rural poor.

Estimated under-employment rates for Central America range from 15% in Costa Rica, up to 58% in El Salvador a/. This problem is compounded by the fact that the rate of increase of the rural labor force in the five countries is rising from the 3.2% rate which existed in 1974. It may rise to approximately 3.4 to 3.9% annually in the next 15 years.

To open new rural employment opportunities to meet the needs of Central America's increasing rural labor force, the region will have to develop more vigorous rural sector policies and find new production and marketing opportunities. Special emphasis in expanding the Central American region's agricultural potential and finding new work opportunities for the 60% of the region's population now living in the rural sector appears justifiable for three principal reasons:

1) While labor is abundant, capital will continue to be a limiting factor in creating new job opportunities, both

a/ See Benefits & Costs of Economic Integration in C.A., William R. Cline, Brookings Institution (Draft) Nov. 1975

in rural and urban sectors. The cost, however, of creating a man year of work in the urban sector is usually 3 to 7 times that of creating an equivalent employment unit in agriculture.

2) Central America has an outstanding opportunity to benefit from new horticultural crop production because of its variety of climatic situations.

3) Due to its proximity, the region has a modest comparative advantage on transport costs to the U.S. market.

Currently, Central American governments stress the production of basic food crops: corn, beans and rice with a view toward national self-sufficiency. The five major traditional export crops: coffee, cotton, sugar, beef cattle and bananas continue to receive support. Unfortunately, insufficient emphasis is being placed on potential high value, labor and land intensive horticultural crops, for which the region may enjoy comparative advantages.

The Central American governments are conducting experiments on horticultural crops. Central American horticultural research has generally been poorly organized and lacks qualified national expertise, which results in poorly designed and inadequately executed experiments. This, in part, has been due to the extremely modest support provided for horticultural research and the inadequate training of sufficient numbers of well qualified pomologists, olericulturists and micro-economists. Probably less than 15 Central American technicians with advanced degrees in horticultural sciences are presently employed by public sector research and university institutions in Central America.

2. The Proposed Response

ROCAP proposes the development of a Central American regional integrated horticultural research capacity to develop information for use by the region's public and private sectors in the expansion of production and marketing of non-traditional horticultural crops, with special emphasis on their use on small farms. The program will

take advantage of the region's human and physical resources and geographic location. It will be linked to and take advantage of existing ROCAP agricultural projects in multiple cropping, soil fertility and agricultural and research information in addition to USAID projects in the five Central American countries.

Technical and financial assistance will be provided for this initiative in the following areas:

1) To Develop a Regional Central American Horticultural Research Team

An inter-disciplinary research team consisting of one economist, a marketing specialist and three fruit and vegetable research horticulturists will be organized at the Tropical Agricultural Research and Training Center (CATIE) in Turrialba, Costa Rica, to provide continuing support to the national programs. CATIE has been chosen as the most appropriate location for the regional support because of its research facilities, extensive collection of plant materials and excellent library on agricultural and horticultural sciences.

This team will provide economic and technical research guidance to national planning councils and research institutions of the Central American republics. It will work with national counterparts in the identification of new crop production opportunities, determination of primary bottlenecks requiring research, train national counterparts in horticultural research and in the preparation of technological packages for identified commodities having major socio-economic benefits for use on small farms. As new crop marketing opportunities are identified by national planning and research groups, USAIDs and the CATIE team, an analysis will be made of existing limitations in national production methods, varieties, pest control and harvesting methods to serve as a basis for the design of national research efforts. The CATIE team will provide continuing advice, collaborative field work, technical assistance and on-the-job training to national researchers throughout the region.

2) Training of Central American Technicians:

CATIE will provide the administrative and technical support for graduate and short term training of Central American technicians. It will assist national government institutions and USAIDs in the selection of training candidates and the preparation of training curricula. It is proposed that the following types of training be provided under this program:

a) Graduate Training: A minimum of one Central American technician will be selected annually per country for training in pomology, olericulture, horticulture or plant physiology at the Masters degree level in the U.S. and Puerto Rico.

b) Ingeniero Agronomo Short Course Training: The CATIE team, supported by U.S. and third country technicians will provide short courses and workshops of from 1 week to 1 month to groups of Ingenieros Agronomos and other key individuals.

c) Undergraduate Horticultural Training: CATIE, assisted where appropriate by instructors from the Escuela Agrícola Panamericana at Zamorano, Honduras, will provide short course training for up to twenty Bachilleres and vocational agricultural school graduates in horticulture so that they may better support senior international research technicians.

II. Financial Requirements and Plans

1. The project is estimated to cost \$1,600,000 during the three year period beginning in FY 1978.

2. ROCAP's share of the cost is estimated to be \$1,182,000 which would be grant funded at the rate of \$394,000 per year in accordance with Annex A.

3. The contributions of CATIE and the national research institutions would be largely in kind. They will be expected to provide research facilities, professional and

support personnel and to pay other expenses not covered by the AID grant. Specific contributions of these institutions will be identified during the development of the PRP and PP. The role of the Inter American Institute of Agricultural Sciences (IICA) in this project will be determined as the project is developed.

III. Development of the Project

Since CATIE is well known to ROCAP and is now implementing the Central American Regional Small Farm Cropping Systems and Soil Fertility projects, it will be possible to develop the project quickly and efficiently. However, ROCAP's financial support is scheduled to terminate by the end of FY-78 for both ongoing projects. The future of these projects after FY 78 remains to be determined. Therefore, project planning and implementation of the Regional Horticultural Development project must be sensitive to and closely coordinated with CATIE's new situation and capacity. CATIE's experiences in carrying out the two ongoing projects should provide the background needed for rapid and successful implementation of the proposed project. These matters will be addressed in the PRP and PP. Up to two months of TDY services from a tropical horticulturalist may be needed to assist with the preparation of the PRP and PP.

With ROCAP's financial assistance in 1973-1974 SIECA conducted an initial study to identify new crop opportunities for Central America. In consultation with the five governments, SIECA established ten criteria for the selection of new crop production alternatives. Among these criteria were employment generation, better distribution of income and the possibility of adapting significant numbers of small agricultural production units to new production and marketing.

ICAITI is completing a guideline study of nine horticultural crops which appear to have potential for expanded Central American production. This project will draw on the results of this study and close coordination and cooperation will be sought with ICAITI staff.

CATIE in cooperation with the national research institutions has conducted baseline studies in selected ecological areas in the cooperating countries. Interdisciplinary multiple cropping production research and field trials are being carried out in these areas. Although the focus of this research has not been on horticultural crops, increased emphasis will be placed on integrating a greater variety of horticultural crops (both vegetables and fruits) into the cropping systems of small farmers. During the course of the Small Farm Cropping Systems Project, close working relationships have been established between CATIE and the Central American national research institutions. This record of cooperation should provide a solid foundation for orderly execution of the Regional Horticultural Development Program. The establishment by FAO in 1976 of a regional center at CATIE for the collection and storage of native Latin American tropical germ plasm will provide valuable plant material for use in the horticultural research program.

ROCAP is in continuing contact with CATIE and CATIE and the AID Missions are in continuing contact with the national research institutions. These close working relationships will facilitate project planning and the preparation of the PRP and PP. Preparation of the PRP will proceed following approval of the PID and the document will be completed before November 1, 1976. Preparation of the PP will proceed following the approval of the PRP. The PP is expected to draw on the results of the March 1977 evaluation of the Small Farm Cropping Systems Project. The PP should be completed not later than June 1, 1977 in anticipation of FY 1978 implementation.

IV. Assumptions

No major policy issues are anticipated. It is assumed that CATIE will continue to reorient its research programs toward small farmer cropping systems development.

REGIONAL HORTICULTURAL CROP DEVELOPMENT PROGRAMProposed Three Year Budget for ROCAP

	<u>Annual Cost</u>	<u>Total 3-yr Cost</u>
I. <u>CATIE TEAM</u>		
A. <u>Full Term Staff (U.S. & L.A.)</u>		
1 Economist (Prod)	\$ 36,000	\$ 108,000
1 Economist (Mkt)	36,000	108,000
2 Olericulturists	72,000	216,000
1 Horticulturist	<u>36,000</u>	<u>108,000</u>
	180,000	540,000
 <u>Short Term</u>		
4 M/M Short term technical advisors (U.S. & L.A.)	20,000	60,000
 <u>Support Staff</u>		
1 Secretary	5,000	
1 Data Clerk	4,000	
Field Labor	<u>11,000</u>	
	20,000	
Total personnel costs		<u>60,000</u>
		\$ 660,000
 B. <u>Other Costs</u>		
Travel and Transport	20,000	
Publication & Photocopy	5,000	
Communication	5,000	
Matterials, supplies & research equipment	30,000	
Conferences and workshops	<u>10,000</u>	
Sub total other Costs	<u>70,000</u>	<u>210,000</u>
Total CATIE costs	\$ 290,000	\$ 870,000

II. TRAINING C. A. RESEARCHERS

A. Graduate (M.Sc Degree in USA) 5 candidates 1.5 yrs. ea. at \$8,000/year	60,000	180,000
B. Eng. Agr. & Perito short courses (CATIE and EAP) 20 individuals, 3 mos ea. at \$1,200/ea	24,000	72,000
C. Miscellaneous short courses and workshops for Eng. Agronomos and others	<u>20,000</u>	<u>60,000</u>
TOTAL COSTS	\$ 394,000 =====	\$ 1,182,000 =====

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IDENTIFICATION DOCUMENT FACESHEET
 TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE
 A = ADD
 C = CHANGE
 D = DELETE

PID
 2. DOCUMENT CODE
 1

3. COUNTRY/ENTITY
 RCCAP/Guatemala

4. DOCUMENT REVISION NUMBER

5. PROJECT NUMBER (7 DIGITS)
 596 - 0072

6. BUREAU/OFFICE
 A. SYMBOL
 B. CODE

7. PROJECT TITLE (MAXIMUM 40 CHARACTERS)
 Regional Seismic Instrumentation Network

8. PROPOSED NEXT DOCUMENT
 A. 2 = PRP
 3 = PP
 B. DATE MM YY
 1 8

10. ESTIMATED COSTS (\$000 OR EQUIVALENT, \$1 = C.A. peso)

FUNDING SOURCE	6455088
A. AID APPROPRIATED	755
B. OTHER U.S./2.	
C. HOST COUNTRIES	2,200
D. OTHER DONOR(S)	
TOTAL	2,955

9. ESTIMATED FY OF AUTHORIZATION/DELIGATION
 A. INITIAL FY 7 8
 B. FINAL FY 8 0

11. PROPOSED BUDGET AND APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. FIRST FY 78		LIFE OF PROJECT	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN
(1) SD	754 B	874		560		755	
(2)							
(3)							
(4)							
TOTAL				560		755	

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)
 873 860

13. SPECIAL CONCERNS CODES (MAXIMUM SIX CODES OF FOUR POSITIONS EACH)
 BRW BUN

14. SECONDARY PURPOSE CODE

15. PROJECT GOAL (MAXIMUM 240 CHARACTERS)
 To reduce chances for loss of life and property, urban and rural, caused by seismic activity.

16. PROJECT PURPOSE (MAXIMUM 480 CHARACTERS)
 To develop within ICAITE the regional capacity to process seismic data, and to provide advice and assistance to strengthen and expand scope and capabilities of national seismic institutes.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)
 Two man months USGS advisor, funded either by AID/W or RCCAP to help develop the PRP. Estimated cost \$13,000. A similar amount of assistance may be needed to prepare the PP.

18. ORIGINATING OFFICE CLEARANCE
 Signature: *Robert S. Adman*
 Title: Acting Director
 Date Signed: 06 08 78

19. DATE ORDER RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
 MM DD YY

Regional Seismic Instrumentation Network

I. Problem Summary and Proposed Response

Central America has a long history of devastating earthquakes which has been reemphasized by the events in recent years. Although earthquakes cannot be prevented, appropriate construction codes and land use plans can be developed given accurate information and a national desire to implement them. Achievement of these objectives is impeded in Central America due to the present lack of: A) adequate knowledge of tectonically active and inactive areas, thereby preventing the establishment of suitable land use plans, and B) good records of strong ground motions for input in the evaluation of engineering designs and for use in construction codes.

The recent earthquakes in Guatemala and Managua have served to illustrate these omissions and add impetus to the May, 1975 decision of the Central American Economic Cooperation Committee to establish seismic networks within and between these nations. Many lives have been lost and homes ruined due to the disregard of possibly active secondary faults and construction in geologically questionable areas. Utilization and maintenance of existing strong ground motion instrumentation has proven inadequate; only one accelerograph record and four useful seismoscope records were obtained in Managua during the December, 1972 earthquake and two seismoscope records in Guatemala for the February 4, 1976 earthquake.

To help deal with this problem, ROCAP proposes to help establish a permanent regional seismic instrumentation network and a regional seismic center. ICAITI, the Central American Institute for Industrial Investigation and Technology, will be responsible for the organization of the regional seismic network and the operation of the regional seismic center. It will process seismic data and provide advice and assistance to strengthen and expand the scope and capabilities of the national seismic institutes in Central America. Technical assistance will be provided to ICAITI by the U.S. Geological Survey.

The five AID Missions in Central America have been contacted; they all endorse and concur in the importance of this activity.

II. Background

A network of seismic instrumentation has two facets: A) strong motion instrumentation (accelerographs and seismoscopes) to obtain records of movements during major earthquakes, and B) a network of seismographs to record small earth movements thereby facilitating the location of faults.

Table I gives a summary of the seismic instrumentation currently available in Central America.

TABLE I

Seismic Instrumentation Existing in Central America
(1976)

A. Strong Motions Instruments

<u>Country</u>	<u>No. of Accelerographs</u>	<u>No. of Seismoscopes</u>	<u>Location</u>
Guatemala	2	3	Guatemala City
El Salvador	4	20	San Salvador
Nicaragua	21	26	Cities throughout Nicaragua
Costa Rica	1		San José

B. Seismograph Networks

<u>Country</u>	<u>No. of Seismographs</u>	<u>Location</u>
Guatemala	6	Around Guatemala City, Lake Amatitlán and Fuego Volcano
El Salvador	1	Near Tejutla
Honduras	1	Tegucigalpa
Nicaragua	14	Throughout seismically active western region of Nicaragua
Costa Rica	9	Six in a network around Volcán Arenal, remaining three in northern half of Costa Rica

Regarding strong motion instruments, the available quantity, except in Nicaragua, is miniscule, especially when past experience has shown

that, due to poor maintenance, only about 30% of the instruments in place function when needed. As a direct result of the December, 1972 Managua earthquake, Nicaragua has 47 strong motion instruments and an active maintenance program.

Several of the Central American countries have seismograph networks of limited scope, but only Nicaragua has a truly national network. The networks in Guatemala and Costa Rica, for example, have a very local character and are primarily for monitoring volcanic activity. Some of these stations could be incorporated into a regional network. Several international organizations have made efforts to establish a regional seismic network. Among these is the Economic Commission for Latin America (ECLA) which, together with UNESCO, submitted a request for financing in 1975 to the United Nations Development Program; this was turned down due to financial limitations. More recently, the Organization of American States approved a proposal made by El Salvador to undertake a feasibility study for a regional seismic network in Central America. Financing for this study appears uncertain.

III. Project Plan

ICAITI will be responsible for coordinating the project and establishing the regional seismic center. Since each Central American country has a department or agency which has been made responsible for seismic instrumentation, the regional seismic center will coordinate their activities within a regional framework.

The regional seismic center will not "own" any seismograph or accelerograph stations; the responsibility for ownership and maintenance of these will remain at the national level. The project will seek to elevate the standards of the four national seismic agencies in Central America (excluding Nicaragua) to that of the seismic center in Nicaragua, while simultaneously promoting regional cooperation. The national centers will be responsible for the installation, maintenance and operation of their national networks with assistance provided from the regional center. Each national center will process its own data.

The regional center will supply technical assistance to the national centers in order A) to help them design and install the national networks, B) to train personnel to operate the networks, and C) after the networks are established, to help solve maintenance and operation problems. The regional center will have a minicomputer or obtain access to local computer facilities and will analyze seismograph data from larger earthquakes (greater than Richter magnitude

2.5). This raw data will be received from the national stations on a periodic basis.

This function of the regional center is very important since much of the tectonic and volcanic activity in Central America originates from the stresses caused by the interaction of the "Pacific Plate" sliding under the "Cocos Plate", which occurs largely outside of the Central American land mass. Location of earthquake epicenters is done by triangulation. When the epicenter occurs within a national network, it can be very accurately located, but outside, the accuracy decreases rapidly. A regional network which draws upon data from stations in all of Central America can provide much more accurate locations, and consequently a far more reliable and comprehensive overall picture of what is happening in Central America.

Data on earthquakes greater than Richter magnitude 4.0 will be sent by the regional center to the National Earthquake Information Service in the United States in order to help develop a worldwide framework.

Subject to further design refinement a minimum of 35 seismograph stations will be added to the existing instruments. This will give a grid with centers approximately 50 miles apart covering the areas considered to be tectonically active in Central America. (The 50 mile spacing was suggested by Dr. Robert Page of the USGS.) ROCAP estimates the approximate number of new stations for each country to be:

Guatemala	20
El Salvador	5
Honduras	6
Costa Rica	4

Each station will be equipped with a seismograph which records continuously. The stations will be linked telemetrically to a central national recording station in order to correlate the readings.

In addition to data collection, the project will also emphasize the need for associated geological field studies to collaborate the seismograph data. This is necessary in order to prepare maps of faults since a systematic error in the data processing could cause the locations of the epicenters to be offset by a constant distance. Each national center will have a geologist whose sole task will be to locate the faults and produce maps indicating the faults and their relative activity.

The strong motion instruments (accelerographs and seismoscopes) generally will be located in urban areas since their results are used to correlate earthquake damages with the intensity and frequency of ground motions. These observations provide a sound basis for construction codes. Approximately 40 accelerographs will be installed throughout Central America at locations chosen by the regional center with USGS assistance and by national technicians. Periodic maintenance will be necessary and will be the responsibility of the national seismic centers. Since these instruments record only during large earthquakes (greater than Richter magnitude 5), and since after a major earthquake many earthquake research institutes will volunteer to analyze the records, the data processing requirements for strong motion instruments are negligible.

IV. Outputs

The output of the regional network will be data which would: A) assist the Central American governments in improving their land use plans, e.g. maps indicating seismic risk, B) allow more accurate determination of the parameters needed as input for construction codes in tectonically active areas, C) permit a better comprehension of the tectonic activity which is influencing the entire Central American region and provide a regional framework within which national geology can be better understood, and D) help develop the long term data banks which are required for earthquake prediction so that as techniques are further developed, they could then be applied in Central America.

In addition the project will create a regional center which will be a unique source of seismic information and technical expertise in Central America.

V. Regional Justification

a) The regional center, as explained in Section III, will provide a well developed regional framework within which national data can be better understood.

b) A regional seismic center would encourage the interchange of ideas, data and techniques among the seismic centers in the five countries. Since the national seismic centers will probably have very small staffs, they could stagnate and a close regional structure would offer a constant stimulus to national personnel.

c) A regional center will considerably ease communications from Central America to the rest of the world during critical periods. The regional center would have seismograph data available within hours to describe the magnitude and location of a major earthquake within Central America or to send to the worldwide center for their use in determining the location of the epicenter of a major event outside of Central America.

d) The creation of a regional seismic network would help assure maintenance of the instrumentation and uniform data processing.

e) A regional center can more efficiently use and apportion expert technical services within Central America than can five separate activities.

VI. Life of Project

ROCAP's participation in the project would be limited to three years. The first year would be used for helping ICAITI develop the regional center, determine sites, install instruments and train regional and national personnel. During the second and third years the network would be placed in operation; further personnel training and resolution of operational difficulties would be undertaken.

VII. Major Assumptions

A) That interest in seismic instrumentation will continue to be as great as it currently is, and that the Central American governments will fund their networks and the regional network. National support for this activity, both during the life of the project and afterwards, is very important. This issue will be explored in depth in the PRP and the PP.

B) That given the availability of seismic risk maps, the governments and the private sector will utilize the information. (Similar information was made available in San Francisco by the USGS, who subsequently noted considerable use being made of the maps by both the government and the public.)

C) That sufficient personnel can be trained to manage this project.

VIII. Direct and Indirect Beneficiaries

The people of Central America would benefit from a program which would provide a more accurate and informative picture of the

potential risks from natural disasters which have occurred so frequently in the area. The short-term benefits would be:

- i) Development of information for better design and construction codes and zoning laws.
- ii) More accurate geologic mapping of Central America. This is critical for the increasing numbers of large construction projects such as hydroelectric plants which are planned in Central America. There is evidence that the recent earthquakes in Central America have caused some investors considerable concern, but a technical assessment of the actual danger and the identification of optimal areas for future development should serve to allay their fears.

Of a more long range nature a network of seismic instrumentation and data are prerequisites for a system of earthquake prediction. Considering that over 22,000 persons (the rural poor making up the great majority) died in the February 4, 1976 earthquake in Guatemala, a project which offers any progress towards the prediction of similar disasters in the future is well justified.

IX. Financial Plan

A) ROCAP proposes a grant in the amount of US\$755,000 to ICAITI to finance:

- i) the purchase and installation of the seismic instruments,
- ii) the training of Central American personnel to manage the program,
- iii) the salaries of USGS personnel required for technical assistance.

The Central American governments will be responsible for:

- i) provision of vehicles and offices for national seismic centers,
- ii) salaries of all personnel in national seismic centers,
- iii) costs for operations, maintenance and data processing at national level,
- iv) payment of ICAITI's costs for running regional seismic center.

	KOCAP (\$000)		
	<u>FY 78</u>	<u>FY 79</u>	<u>FY 80</u>
1) USGS PASA Technicians (FY 78-24 mm, FY 79 and 80 12 mm)	157	67	76
2) Participant Training	15	10	-
3) Commodities*	<u>394</u>	<u>23</u>	<u>19</u>
	566	100	95
Total (3 years)	785		

The nature of the services is:

- a) PASA Technicians - Seismologist (36 MM), instrument technician (8 MM), geologist (4MM)
- b) Participants - Training of regional and national personnel in Central America, at both regional center and national centers
- c) Commodities - Central recording stations, 35 remote seismograph stations, test equipment, 40 accelerographs, supplies, minicomputer for regional center, communications to regional center.

* The prices for commodities are based on current USGS prices:

\$5,500 per installed seismograph station,
\$3,000 per accelerograph, and
\$40,000 for a minicomputer

B) National Contribution

The costs for each country to operate its national seismograph network will vary considerably due to the variation of the number of stations required. At least the following staff will be necessary:

	<u>Yearly Salary (US\$)</u>	
1 seismologist	15,000	- 20,000
1 geologist	15,000	- 20,000
1 electronic technician	7,000	- 10,000
1 technician	4,000	- 6,000
1 secretary	3,000	- 4,000
1 chauffer	2,000	- 3,000
	<u>46,000</u>	<u>- 63,000</u>

The additional costs for maintenance, operation and data processing will be about \$8,000 to \$7,000 per seismograph station per year. (Nicaragua budgeted approximately US\$150,000 for its seismic center for FY 1976).

The total annual investment in US\$ by each country for their national seismic instrumentation network will approximate:

Guatemala	190,000
El Salvador	90,000
Honduras	70,000
Nicaragua	150,000
Costa Rica	180,000

C) Regional Seismic Center

The regional seismic center, to be maintained by ICAITI, will require the following staff:

	<u>Yearly Salary (US\$)</u>	
1 Seismologist	15,000	- 20,000
1 Computer technician	3,000	- 3,000
1 Secretary	3,000	- 4,000
	<u>21,000</u>	<u>- 32,000</u>

ROCAP estimates that the annual operating costs for the regional center will be on the order of an additional US\$20,000.

The total annual budget for the regional seismic center will be approximately \$50,000. This cost should be divided equally among the five Central American countries.

X. Development of Project

The organizational aspects of the project can be undertaken by the ROCAP staff but substantial assistance will be required for technical refinement. This assistance should consist of a PASA with USGS since the USGS has worked on similar projects throughout Central America.

Schedule:

Submission PRP: October, 1976
Submission PP: October, 1977

It is difficult to define the exact quantity of assistance necessary but it should be on the order of two-man months to develop the PRP.