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PATTERNS IN IRRIGATION PROJECTS

An Analysis of AID's Automated Data

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By:

Practical Concepts Incorporated
1730 Rhode Island Avenue, N.W.
Suite 200
Washington, D.C. 20036

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SECTION ONE

OVERVIEW

Water is a basic development resource. AID projects that are designed to increase the efficiency and effectiveness of food production efforts in the developing nations, as well as those that focus on improvements on the health and well-being of a population, often involve the development of systems that provide access to water. In this report, PCI reviews the patterns of AID activity that focus either centrally, or as part of a broader development scheme, on the availability of irrigation water.*

An examination of AID's automated data bases indicates that there are 109 projects that involve some form of irrigation -- these range from small rural earthworks projects to multi-year, multi-million dollar rural development efforts. Nineteen of the projects PCI identified are in the planning stage, 61 are active, and an additional 29 have been completed or terminated.** The data bases record a total of 72 evaluation studies for these 109 projects: 64 Project Appraisal Reports and 8 Special Evaluations.

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*/ This is the second in a series of brief analyses that are being undertaken by PCI for the Special Studies Division (AID/PPC/E/S). The first report examined patterns in potable water projects.

**/ Data for this analysis comes from four automated AID files: TEXT, BREF, PBAR and ACCT. The data bases were developed using the following criteria: all projects that were active in October 1974, and all subsequent projects are included. Thus some projects with start dates as early as 1952 are considered to be part of the portfolio as are a number of projects that have been completed since data base development.

PCI's review of the automated data on these 109 projects suggest that:

- All geographic Bureaus are undertaking irrigation projects.
- The irrigation projects are fairly evenly distributed among these Bureaus.
- Obligations for irrigation efforts are not evenly distributed.
- Yet, as a proportion of total Bureau funds, the dollars invested in irrigation are roughly equal across geographic Bureaus.
- The number of irrigation projects is increasing.
- New project development is moving fastest in Africa and Asia.

Table I-1 displays projects by Bureau and status. As the table suggests, the total number of irrigation projects is fairly evenly distributed across the geographic Bureaus, particularly if one considers only active projects. A comparison of terminated and planned projects suggests that the Africa Bureau is rapidly building its portfolio in this field.

TABLE I-1

DISTRIBUTION OF PROJECTS BY BUREAU AND STATUS

	PROJECT STATUS			
BUREAU	PLANNED	ACTIVE	COMPLETED OR TERMINATED	TOTAL
AFRICA	9	13	1	23
ASIA	5	16	13	34
LATIN AMERICA	2	13	6	21
NEAR EAST	3	15	6	24
CENTRALLY FUNDED	-	4	3	7
TOTAL	19	61	29	109

The build up in irrigation projects is not simply an Africa Bureau pattern. As Table I-2 demonstrates, all of the geographic Bureaus have been active in starting irrigation efforts in recent years. The current low number of projects planned in Latin America probably suggests a hiatus rather than a decline. In Asia and the Near East, bureaus that have been undertaking irrigation projects since the 1960s, there appears to be a sustained interest in irrigation. The Asia Bureau is second only to Africa in number of planned starts.

TABLE I-2

PROJECTS BY BUREAU AND START DATE

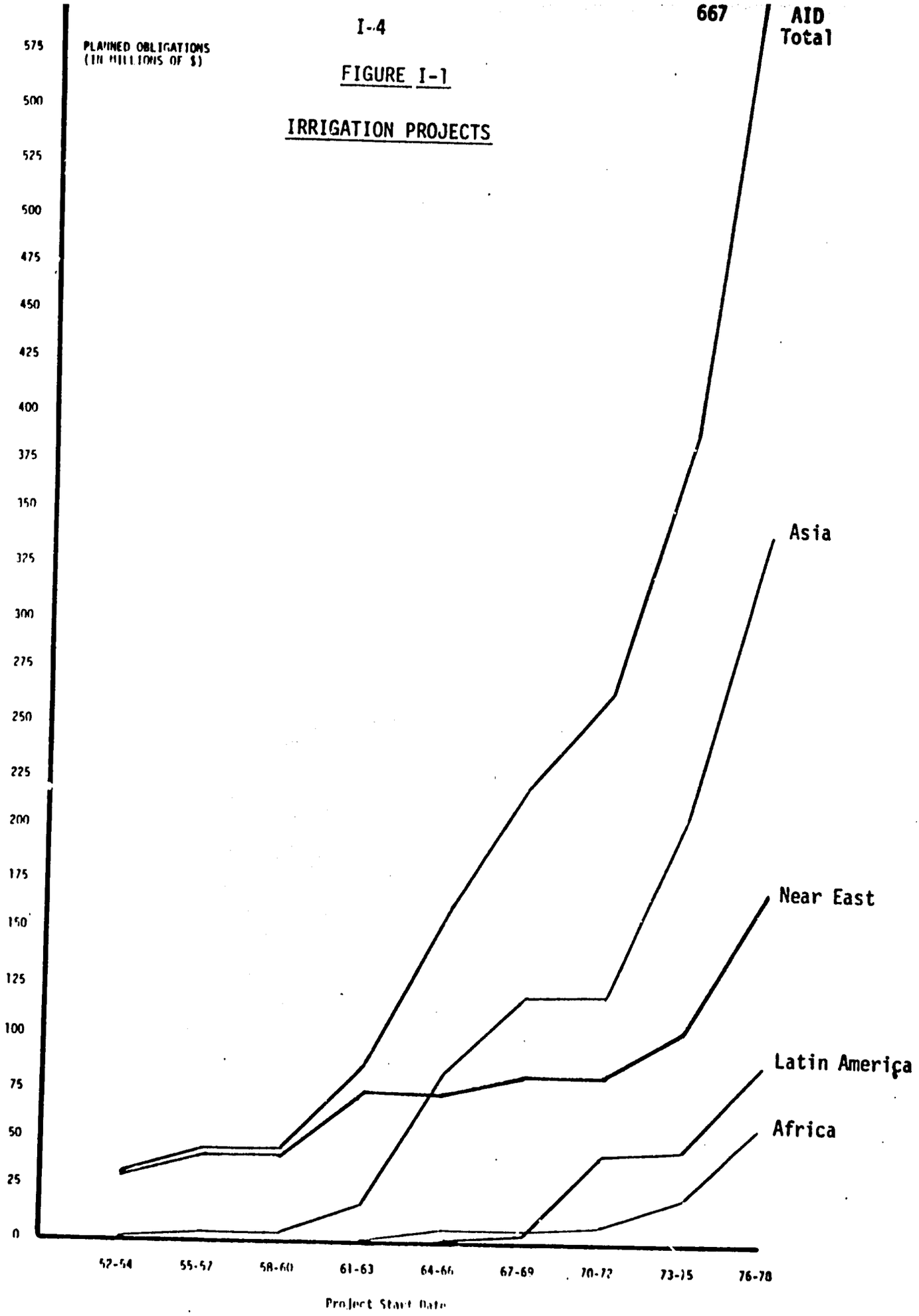
BUREAU	BEFORE 1960	1961-1963	1964-1966	1967-1969	1970-1972	1973-1975	1976-1978	PLANNED	TOTAL
AFRICA	-	-	1	-	2	3	8	9	23
ASIA	1	3	4	6	-	8	7	5	34
LATIN AMERICA	-	-	1	1	6	4	7	2	21
NEAR EAST	3	2	-	4	-	6	6	3	24
CENTRALLY FUNDED	-	-	1	3	-	1	2	-	7
TOTAL	4	5	7	14	8	22	30	19	109

The 99 irrigation projects for which data on planned obligations is available suggest that AID has an investment of almost $1 billion in this sub-sector (See Table I-3).* Figure I-1 displays a plot of cumulative planned obligations by year for these 99 projects. Worldwide, the average size of AID irrigation projects has been approximately $10 million. However, this average conceals wide variations. The Asia Bureau accounts for over $485

*/ Planned obligations were chosen as indicators of size because they are the most consistently available cost data for projects of all stages.

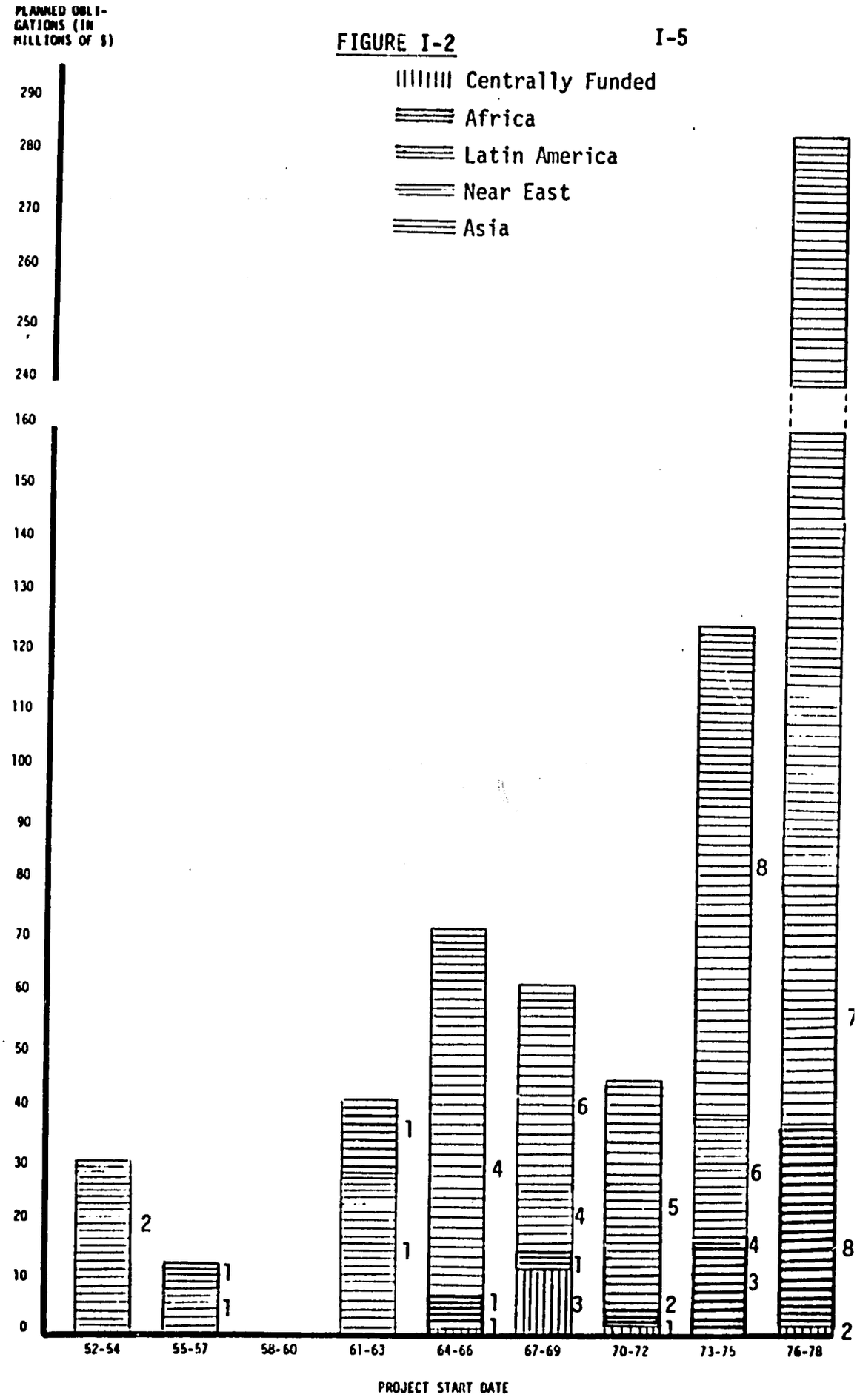
FIGURE I-1

IRRIGATION PROJECTS



CUMULATIVE PLANNED OBLIGATIONS

FIGURE I-2



PLANNED OBLIGATIONS FOR IRRIGATION PROJECTS AND NUMBER OF NEW PROJECTS* BY BUREAU BY YEAR

*/ Excludes new projects for which data on obligations were not available.

million in planned obligations, and a per project average cost of over $17 million. This project cost figure is three times larger for Asia than for the Africa and Latin America Bureaus.

TABLE I-3

DISTRIBUTION OF PROJECTS BY BUREAU AND PROJECT SIZE

BUREAU	NUMBER OF PROJECTS*	TOTAL PLANNED OBLIGATIONS (THOUSANDS)*	% OF ALL PLANNED OBLIGATIONS	AVERAGE PROJECT SIZE (THOUSANDS)
AFRICA	23	115,992	11.7	5,043
ASIA	28	485,209	49.1	17,329
LATIN AMERICA	18	94,160	9.5	5,231
NEAR EAST	23	277,850	28.1	12,080
CENTRALLY FUNDED	7	15,985	1.6	2,283
TOTAL	99	989,196	100	9,992

*Excludes projects for which financial data unavailable: Asia - 6 Projects
Latin America - 3 Projects
Near East - 1 Project

Project cost data, by bureau, reinforce the suggestion of concentration in the data on numbers of projects. Bureaus implementing a large number of projects also appear to implement large projects. However, the differences in average project cost suggest regional differences more strongly than does a simple tally of number of projects by bureau. The distribution of AID's total effort among bureaus, which appears quite equal in terms of number of projects, is clearly different when the resources supporting regional project efforts is examined.

A review of the total and average planned obligations, by bureau, indicates that Asia Bureau projects account for almost 50% of total planned obligations for irrigation projects. The Near East Bureau accounts for 28% of total planned obligations, while the Africa and Latin America Bureaus claim roughly 10% each (Figure I-3).

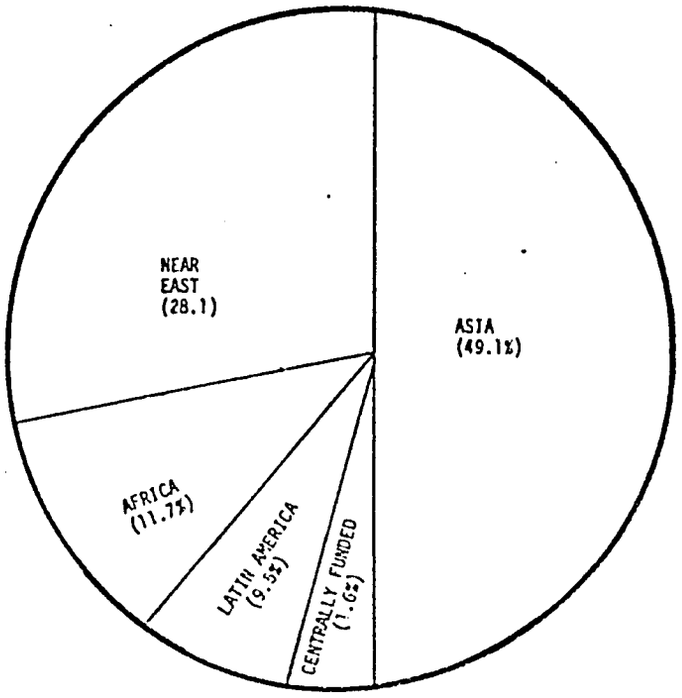


FIGURE I-3

DISTRIBUTION OF TOTAL IRRIGATION OBLIGATIONS BY BUREAU (1952-1978)

Table I-4 further documents how differences in project size affect the total resource allocation picture. The sixteen largest projects (16% of total projects) consumed 57% of total resources, while the 48 smallest projects (48% of total projects) consumed only 9% of total resources. Resource allocations for irrigation (in absolute dollar terms) differ widely among the Bureaus. However, absolute dollar allocations do not give an adequate indication of the relative priority different bureaus place on irrigation.

In order to address the issue of "relative priority" PCI calculated total AID allocations by Bureau (excluding Security Supporting Assistance) and

TABLE I-4

DISTRIBUTION OF PLANNED OBLIGATIONS BY PROJECT SIZE

PLANNED OBLIGATION	NUMBER OF PROJECTS	% OF TOTAL PROJECTS	PLANNED OBLIGATION (THOUSANDS)	% OF ALL PLANNED OBLIGATIONS
OVER $40M	3	3	211,252	21
$20M-$40M	13	13	356,400	36
$10M-$20M	17	17	208,203	21
$5M-$10M	18	18	124,319	13
$1M-$5M	32	32	81,826	8
UNDER $1M	16	16	5,196	1
TOTAL	99	99	989,196	100

compared them with irrigation expenditures in Table I-5. The proportion of planned obligations for irrigation projects is compared to total AID allocations by region. If this proportion can be used as a rough indicator of the relative effort by bureau then there is remarkable uniformity among the regions. On average, Bureaus spent 1.5% of their total budget on irrigation projects. The range is from a low of 1.2% in Latin America to a high of 1.7% in Asia. Thus it appears that differences in Bureau allocation for irrigation may be directly related to total AID flows for a region.

TABLE I-5

PROPORTION OF TOTAL AID ALLOCATIONS SPENT ON IRRIGATION PROJECTS*

BUREAU	TOTAL AID ALLOCATION 1960-1977	TOTAL PLANNED OBLIGATIONS FOR IRRIGATION PROJECTS (1960-1977)	IRRIGATION ALLOCATION AS % OF TOTAL
AFRICA	2,833.7	43.1	1.5
ASIA	15,989.4	277.0	1.7
LATIN AMERICA	7,048.3	84.6	1.2
NEAR EAST	7,311.2	102.2	1.4
TOTAL	33,182.6	506.9	1.5

* Source: U.S. Overseas Loan and Grants (data on total planned aid allocations); data excludes Sesurity Supporting Assistance.

The data on project activity discussed above should contain an important caveat: they do not discriminate between projects which are solely irrigation efforts and projects which encompass other activities. Table I-6 presents our findings on those projects which were considered "part of a larger project" in our analysis of the raw data.* It shows that 44% of all "irrigation projects" have major outputs not directly related to irrigation. Irrigation efforts are most frequently mixed with other activities in projects financed by the Asia and Latin America Bureaus. Almost 72% of the Latin America Bureau's planned obligations are directed toward these mixed-output projects. For the Agency as a whole, irrigation projects that are part of a larger project comprise 40% of total planned obligations. For the purpose of this study, we have adopted the definition of irrigation used in the automated data bases and therefore have included these projects.

TABLE I-6

IRRIGATION PROJECTS LISTED AS "PART OF A LARGER PROJECT"

BUREAU	NUMBER OF PROJECTS	% OF TOTAL PROJECTS (IN BUREAU)	PLANNED OBLIGATIONS (IN THOUSANDS)	% OF TOTAL PLANNED OBLIGATIONS (IN BUREAU)
AFRICA	8	34.8	36,029	31.1
ASIA	19	55.9	231,786*	47.8
LATIN AMERICA	12	57.1	67,544**	71.7
NEAR EAST	9	37.5	62,911	22.6
TOTAL	48	44.0	398,270	40.3

*/ Missing planned obligations data for 3 projects
**/ Missing planned obligations data for 2 projects

*/ This information is recorded on the raw data tables in Appendix B in response to the question: Is the project part of a larger project? That is, are there any major outputs not directly related to the subject area in question?

As was noted at the introduction to this report, the phrase "irrigation project" covers a wide variety of activities. In this study, PCI found information on project Purposes and Goals for 73 projects. Table I-7 displays a regional distribution of project Purpose statements; Table I-8 shows the data on project Goals.

TABLE I-7

PURPOSE STATEMENTS BY BUREAU

PURPOSE CATEGORIES	AFRICA	ASIA	LATIN AMERICA	NEAR EAST	CENTRALLY FUNDED	TOTAL
Improve research and planning	2	7	-	4	1	14
Increase amount of irrigated land	1	3	3	4	-	11
Develop irrigation infrastructure	-	3	1	3	1	8
Increase production and income	6	7	3	3	-	19
Provide demonstration and extension	1	-	3	2	-	6
Institutional development	1	8	4	4	-	17
Improve management of natural resources, including land and water	2	4	4	2	2	14
Miscellaneous	1	1	3	1	1	7

TABLE I-8

GOAL STATEMENTS BY BUREAU

GOAL CATEGORIES	AFRICA	ASIA	LATIN AMERICA	NEAR EAST	CENTRALLY FUNDED	TOTAL
Increase agricultural production	5	16	10	10	2	43
Increase agricultural income and employment	2	4	3	4	1	14
Increase socio-economic development	2	9	6	4	-	21
Increase management of natural resources, including land and water	-	5	1	4	2	12
Institutional development	-	-	1	1	-	2
Crop diversification	-	1	1	-	-	2
Miscellaneous	1	2	1	2	-	6

As the tables suggest the basic focus has been agricultural production, and the hypothesized effect of increased production on the income of those involved in irrigated farming. Institutional development and land management have been considerations in a number of projects, but these concerns appear to be secondary to the agricultural improvement thrust found in projects across bureaus. Year-by-year examination of Purpose and Goal statements suggests that institutional development as an objective has appeared more frequently in recent projects. From the automated data we cannot discern whether the inclusion of institutional development in the mix of objectives results from past experience, or from other stimuli.

The automated data bases in the Office of Development Information were queried concerning the availability of evaluative data. Searches of these automated files revealed 8 Special Evaluations and 64 Project Appraisal Reports (Table I-9). In addition, 7 End-of-Tour Reports were referenced as were a variety of other sources of supplementary data.

TABLE I-9

POTENTIAL AND ACTUAL SOURCES OF EVALUATIVE DATA

	AFRICA	ASIA	LATIN AMERICA	NEAR EAST	CENTRALLY FUNDED	TOTAL
AID Supported Study	1	-	-	-	-	1
Bibliography	-	-	-	1	1	2
End-of-Tour Report	1	3	3	-	-	7
Feasibility Study	-	1	-	-	-	1
Final Report	-	-	-	1	-	1
Incoming Airgram	-	1	-	-	-	1
Progress Report/ Interim Report	1	1	-	1	-	3
Project Appraisal Report*	5	41	3	17	1	64
Special Evaluation*	1	2	2	2	1	8
Undifferentiated Report	-	1	-	1	-	2
TOTAL	9	50	8	23	3	93

* Known actual source of evaluative data

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SECTION TWO

REGIONAL SUMMARIES

Tables A-2 through A-6 in Appendix A provide financial and chronological information at the project level. Data for specific projects may be drawn from those tables. The summary tables which appear in this section are drawn from the more detailed presentations in that Appendix.

A. AFRICA BUREAU PROJECT PATTERNS

PCI's search of the automated data on irrigation projects in the Africa Bureau identified 23 activities. As was noted in Section I, most of this Bureau's irrigation projects are fairly recent. Fifteen of the Africa Bureau's 23 irrigation projects (65.2%) began no earlier than 1/77, or are in the planning stage now. As Table II-1 indicates, the planned obligations for these new projects add up to 74.3% of the Bureau's total planned obligations for irrigation projects. Table I-3 (Section I) shows that the Africa Bureau's total planned obligations for irrigation projects account for 11.7% of the Agency's total irrigation activity. When only the most recent efforts are examined, as they are in Table II-1, the Bureau's proportion of planned obligations for irrigation projects rises to 19%.

The Africa Bureau is increasing both its total projects and percent share of irrigation funds relative to other Bureaus. As might be expected, there has been an increase in irrigation activity in the Sahel area. Chad began irrigation projects in 1976, 1977, and 1978. Mali begain one project in 1976, two in 1978, and has one in the planning stage. Niger began one project in 1977 and has one in the planning stage. The range of planned obligations for the Bureau's irrigation

TABLE II-1

REGIONAL BREAKDOWN OF PROJECTS BEGINNING AFTER 1/77 (INCLUDING PROJECTS IN PLANNING STAGE)

BUREAU	TOTAL NUMBER OF PROJECTS	TOTAL PLANNED OBLIGATIONS	# OF PROJECTS BEGINNING AFTER 1/77	AS % OF ALL PROJECTS BEGINNING AFTER 1/77	AS % OF COLUMN ONE	TOTAL PLANNED OBLIGATIONS FOR PROJECTS BEGINNING AFTER 1/77	AS % OF ALL PLANNED OBLIGATIONS FOR PROJECTS BEGINNING AFTER 1/77	AS % OF COLUMN TWO
AFRICA	23	115,992	15	40.6	65.2	86,231	19.0	74.3
ASIA	34	485,209*	8	21.6	23.5	209,800	46.3	43.2
LATIN AMERICA	21	94,160*	6	16.2	28.6	10,256	2.2	10.9
NEAR EAST	24	277,850*	6	16.2	25.0	146,504	32.2	52.7
CENTRALLY FUNDED	7	15,985	2	5.4	28.6	1,470	0.3	9.2
TOTAL	109	989,196	37	100	34	454,261	100	45.9

* Planned obligation data missing for: Asia - 6 projects
Latin America - 3 projects
Near East - 1 project

projects is wide. One of the active Chad projects lists planned obligations of $293,000. The Niger planning stage project reports planned obligations of $10,000,000. The average size of the Africa Bureau irrigation projects has not changed over time. The total bureau average is $5,043,000 per project (Tabel I-3). The average cost for the subset of recent projects is $5,748,000 (Table II-1).

Africa Bureau projects most frequently cite increased production and income as project PURPOSE (6 out of 14 PURPOSE statements). Following the pattern of irrigation projects throughout the Agency, the most common project GOAL is increase agricultural production.

PCI's automated search located 6 Bureau evaluations, 1 Special Evaluation and 5 Project Appraisal Reports.

B. ASIA BUREAU PROJECT PATTERNS

A total of 34 Asia Bureau irrigation projects were located in our search. The Asia Bureau has the largest number of active irrigation projects. The Bureau also has the highest number of completed or terminated projects, and the largest volume of total planned obligations for irrigation projects. Further, it has the highest average planned cost for irrigation projects. Table II-1 shows that recent Asia Bureau efforts account for a considerable proportion of the Bureau's total planned obligations for irrigation projects (43.2%). They also comprise a sizable precentage of Agency planned obligations for recent irrigation projects (46.3%). The average size of an Asia Bureau irrigation project is $17,329,000 (Table I-3). The average size of Bureau projects since 1/77 is $26,225,000.

There are a number of very large projects in the Asia Bureau which contribute significantly to the high total and average figures. Indonesia has 5 large irrigation projects and India has one large planned project. Data for the Asia Bureau as a whole is influenced by these 6 efforts.

The total planned obligations for Indonesia's projects is $128,000,000, or $25,600,000 on average. (If these projects are omitted from the calculations, the average planned obligations for Asia Bureau irrigation projects drops from $17,329,000 per project to $15,530,826.) Three of the 5 Indonesia projects began no earlier then 1/77. The omission of these 3 projects would drop the Asia cost average for more recent projects from $26,225,000 to $23,360,000.

An India planning stage project shows planned obligations of $75,000.000. Deleting that project, and the Indonesia effort, drops the average planned obligations for Asia Bureau projects from $17,329,000 to $12,828,000 per project. The average for more recent projects drops from $26,225,000 to $10,450,000 if the India project and the three more recent Indonesia projects are omitted from the calculations.*

Asia Bureau projects are evenly divided among three PURPOSES: improve research and planning, increase production and income, and institutional development. The first two categories contain 7 references, the third one has 8. Sixteen of the 37 Asia Bureau projects have as GOALS to increase agricultural production. This is the most prevalent GOAL statement in the Agency.

There are 43 Bureau irrigation evaluations in the data base.

C. LATIN AMERICA PROJECT PATTERNS

The Latin America Bureau data are similar to the Africa Bureau in a number of ways. The total planned obligations for irrigation projects are similar in magnitude ($93,160,000 for Latin America, $115,992,000 for Africa). The average planned obligations for the two Bureaus are

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*/ Table A-4 of Appendix A provides project-level detail for the above discussion.

also similar. Latin America's average is $5,231,000 per project, while Africa averages $5,043,000. On the other hand, the Latin America Bureau's irrigation activities relative to other bureaus has decreased recently. Table I-3 showed that the Bureau's total planned obligations for irrigation projects amounts to 9.5% of Agency total planned obligations. For the more recent projects displayed in Table II-1, Latin America's proportion of irrigation activity has dropped to 2.2% of total planned obligations for irrigation. The 6 Latin America Bureau projects which began no earlier than 1/77, or are now in the planning stage, make up only 10.9% of the Bureau's total planned obligations for irrigation projects.

In terms of number of projects, Haiti and Peru have been the most active countries over the long run (6 and 5 projects, respectively). The small dollar investment in Haiti projects is a key factor in the Bureau's relatively low average planned cost. The 6 Haiti projects have average planned obligations of $3,220,000. Four of the 6 projects average $1,445,000 in planned obligations. The Bureau as a whole exhibits a wide range of planned costs. A Haiti project which began in 1975 lists planned obligations of $45,000. A Bolivia project which began in 1971 reports planned obligations of $27,292,000.

Projects from the Latin America Bureau list a variety of PURPOSES. There is an even distribution in the Bureau among almost all PURPOSE statement categories, with the exception of <u>improve research and planning</u> (none) and <u>develop irrigation infrastructure</u> (1). Three or 4 citations were found in the other PURPOSE categories. Over half of the Bureau's project GOALS are to <u>increase agricultural production</u>. This represents the patterns of the entire Agency at the GOAL level.

Our automated search revealed 5 citations of evaluations.

D. NEAR EAST PROJECT PATTERNS

The Near East Bureau is second to the Asia Bureau in total planned obligations and in planned obligations per project. Twenty-four irrigation projects in this Bureau have total planned obligations of $277,850,000, or an average of $12,080,000 per project. When recent irrigation projects in the Bureau are examined (Table II-1), average planned obligations increase to $24,417,000. Projects which began no earlier than 1/77 account for $146,504,000 in total planned obligations, or 32.2% of planned obligations for all irrigation projects in that period. This figure is 4.1% higher than the Bureau's percentage of planned obligations for all irrigation projects. Taking the subset of projects displayed in Table II-1, the Asia and Near East Bureaus account for 75.8% of Agency planned obligations for active and planned irrigation project since January 1977.

As in the other Bureaus, the range of planned obligations per project in the Near East is high. A project in Tunisia which began in 1973 lists planned obligations of $455,000. A Jordan project in the planning stage contains planned obligations of $72,500,000. The removal of this one project from our calculations of obligations per project lowers the Near East average from $12,080,000 to $9,334,000 of planned obligations per project.*

The Near East Bureau is similar to the Latin America Bureau in that project PURPOSES are dispersed throughout the various categories. Excluding the miscellaneous cell, each PURPOSE is cited either 2,3 or 4 times. These various PURPOSES most frequently point to increase agricultural production as project GOAL.

Nineteen evaluation references were located.

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*/ Table A-6 of Appendix A provides project-level detail for Near East projects.

E. CENTRALLY FUNDED PROJECT PATTERNS

In AID's irrigation portfolio, 7 of the 109 projects are centrally funded. Their planned obligations total $15,985,000, or 1.6% of all planned obligations for irrigation projects. There are no centrally funded irrigation projects in the planning stage. Four are active and three are completed or terminated. Two of the centrally funded projects began as recently as 1977. Four began no later than 1969.

One centrally funded project exceeds $10 million in planned obligations. None of the others exceed $2 million. The average size of a centrally funded project is $2,283,000. If the one relatively large project were removed from the cost calculations, the average planned cost would drop to $987,000.

Centrally funded projects do not seem to concentrate on any one GOAL or PURPOSE. There are 5 references each to PURPOSE and GOAL statements. Improve management of resources is the only PURPOSE which receives more than one citation. The GOAL statements are divided among increase agricultural production (2), improve management of natural resources (2), and increase agricultural income and employment.

Our automated search located two evaluation documents for centrally funded projects.

APPENDIX A: SUPPLEMENTARY ANALYSIS

The tables which constitute Appendix A are more specific versions of most of the summary tables found in the body of the report. The majority of the tables in the Appendix report data at the project level.

TABLE A-1

DISTRIBUTION OF PROJECTS BY BUREAU AND SIZE OF PROJECT

BUREAU	PROJECT SIZE*						
	UNDER $1M	$1M-$5M	$5M-$10M	$10M-$20M	$20M-$40M	OVER $40M	TOTAL**
AFRICA	4	8	8	3	-	-	23
ASIA	1	9	3	5	8	2	28
LATIN AMERICA	7	5	2	3	1	-	18
NEAR EAST	2	6	5	5	4	1	23
CENTRALLY FUNDED	2	4	-	1	-	-	7
TOTAL	16	32	18	17	13	3	99

* Project size assessed in terms of planned obligations.

** Excludes projects for which financial data unavailable: Asia - 6 projects
Latin America - 3 projects
Near East - 1 project

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TABLE A-2

SUMMARY TABLE OF IRRIGATION PROJECTS
BY BUREAU, START DATE, AND PLANNED OBLIGATION

BUREAU		1952	1954	1957	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	FY77	FY78	FY79	FY80	TOTAL
AFRICA	Number									1						2		1		2	2	2	4	1	5	2	1	23
	Planned Obligation									5983						2447		11000		3260	7071	13339	16715	6559	30384	13939	5304	115992
ASIA	Number			1		1		2*	1		3	2	3	1				2	2	4	4	1	2		3	2		34
	Planned Obligation			4340		13854			63752		2016	31694	3445	1030				4498	26842	55702	68236		6000	65500		45600	92700	485209
LATIN AMERICA	Number								1*					1	1*	3	2	1		3	3	3	1	1		1		21
	Planned Obligation																					706	2300	7000		250		94160
NEAR EAST	Number	1	1	1		1		1*				3	1					2	3	1	3	1	2		1	2		24
	Planned Obligation	11566	20185	8383		27912						8385	3897					10455	11122	1451	28000	11000	25004		28000	82500		277856
CENTRALLY FUNDED	Number									1			1	2			1					1	1					7
	Planned Obligation									1028			10062	1995			1430					350	1120					15985
TOTAL PROJECTS		1	1	2		2		3*	2*	2	3	5	5	4	1*	5	3	6	5	10	12	8	10	2	9	7	1	109
TOTAL PLANNED OBLIGATIONS		11566	20185	12723		41766			63752	7011	2016	40079	17394	5489		32739	11460	27830	37964	60779	42182	31395	110639	13559	103984	189380	5304	989196

*Missing data for planned obligations

TABLE A-3

AFRICA BUREAU IRRIGATION PROJECTS BY START DATE AND PLANNED OBLIGATION

County	Project No.	1965	1966	1967	1970	1971	1972	1973	1974	1975	1976	1977	1978	FY77	FY78	FY79	FY80
Area Development Dakar	6280702																
Central & West Africa Regional	6250616														6000(P)		
Chad	[illegible]									1260(A)							
	6770069											3643(A)					
	6770023										293(A)						
Guinea-Bissau	6570004												475(A)				
Kenya	6150164														2099(P)		
Mali	6880206									2000(A)							
	6880210										6778(A)						
	6880212												11416(A)				
	6880213															3930(P)	
Mauritania	6820203												4426(A)				
Niger	6830205														3000(P)		
	6830227											4699(A)					
Nigeria	6200742	5983(c)														10000(P)	
Senegal	6850208																
Southern African Region OSARAC	6900026													6559(P)			
	6900068					363(A)											
Sudan	6500026														9600(P)		
	6500100							11000(A)					398(A)				
Swaziland	6300024					2084(A)											
Tanzania	6210151																
Upper Volta	6860224																5304(P)
Total Planned Obligation		5983				2447		11000		3260	7071	13339	16715	6559	9585(P)		
TOTAL NUMBER		1				2		1		2	2	2	4	1	30384	13930	5304
															5	2	1

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TABLE A-4

ASIA BUREAU IRRIGATION PROJECTS BY START DATE AND PLANNED OBLIGATION

Country	Project No.	1957 -	1960	1961	1962	1963	1964	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	FY77	FY78	FY79
sia-Regional	4890133			13854(C)																			
angladesh	3880012																						
	3880015																					7100(P)	
	3880017																29913(A)						
	3880019																	1536(A)					
ndia	3860233							X(C)										14000(A)					
	3860355							2016(A)															
	3860368							X(C)															
	3860379								X(C)														
	3860456																						
idonesia	4970242																						75000(P)
	4970244																	20000(A)					
	4970252																15000(A)						
	4970267																			29500(A)			
	4970285																			36000(A)			
rea	4890594					X(C)																27500(P)	
	4890706																						
os	4390065					X(C)										25700(A)							
pal	3670054	4340(A)																					
	3670207																						
kistan	3910327										1030(T)												
	3910401									27(C)													
	3910413															1142(A)							
ilippines	4920189																	32700(A)					
	4920233									3413(C)													
	4929260									X(C)													
	4920264														2498(A)								
	4920274														2000(C)								
	4920275																7289(A)						
	4920301																3500(A)						
Lanka	3830042																					11000(P)	
	3830050																		6000(A)				
iland	4930163						63752(C)																17700(P)
nam	7300314								31694(C)														
al Planned igation		4340		13854			63752	2016	31694	3445	1030				4498	26842	55702	68236	6000	65500		45600	92700
al Number		1				2	1	3	2	3	1				2	2	4	4	1	2		3	2

TABLE A-5

LATIN AMERICA IRRIGATION PROJECTS BY START DATE AND PLANNED OBLIGATION

Country	Project No.	1964	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	FY77	FY78	FY79
Bolivia	5110364						27292(A)										
Chile	5130297														7000(P)		
El Salvador	5190184													230(A)			
Guatemala	5200233											15775(A)					
Guyana					2464(A)												
Haiti	5210061							4930(A)									
	5210069								1877(A)								
	5210076										121(A)						
	5210078											12100(A)					
	5210080										45(A)						
	5210102																
Honduras	5220147																250(P)
LA Regional	5990545						X(C)						9(A)				
Nicaragua	5240067					X(C)											
	5240112										200(T)						
Panama	5250094	X(C)															
Peru	5270134						3000(C)										
	5270138							5100(C)									
	5270150												200(A)				
	5270156											11000(A)					
	5270170												497(A)				
Total Planned Obligations					2464		30292	10030	1877		366	38875	706	2300	7000		250
TOTAL NUMBER		1			1	1	3	2	1		3	3	3	1	1		1

X's indicate missing data for planned obligations.

Practical Concepts Incorporated

TABLE A-6

NEAR EAST BUREAU IRRIGATION PROJECTS BY START DATE AND PLANNED OBLIGATION

Country	Project No.	1952	1954	1957	1950	1951	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	FY77	FY78	FY79
Afghanistan	2050002	11566(7)																								
	2050[illegible]		20185(c)																							
	2050122																									
	2050131												2937(c)													
	2050144																		4352(A)							
	2050149																			1451(A)						
Egypt	2630017																						2004(A)			
	2630[illegible]																				7000(A)					
Jordan	2780139																					11000(A)				
	2780175											568(c)														
	2780178																	[illegible]								
	2780179																		2250(A)							
	2780225																		4500(A)							
	2780229																									72530(P)
Morocco	6080645				27912(A)																		5300(A)			
	6080174																									
	6080177																				8000(A)					
Near E. Regional	2980035																				13000(A)					
Syria	2750018											6628(A)														
Tunisia	6640000			839(c)																					29000(P)	
	6640178							1[illegible](c)																		
	6640177																									
	6640[illegible]																	455(A)								
Turkey	2770429																									1000(P)
Total Planned Obligation		11566	20185	8383	27912							8235	2857					10455	11122	1451	23000	11000	25004		28000	82500
Total Number		1	1	1	1			1				3	1					2	3	1	3	1	2		1	2

* is indicate missing data for planned obligations.

TABLE A-7

REGIONAL BREAKDOWN OF PROJECTS IN "PLANNING" STAGE AND THEIR PLANNED OBLIGATIONS

BUREAU	TOTAL NUMBER OF PROJECTS	TOTAL PLANNED OBLIGATIONS	# OF PROJECTS IN "PLANNING STAGE"	AS % OF ALL PLANNING STAGE PROJECTS	AS % OF COLUMN ONE	TOTAL PLANNED OBLIGATIONS FOR PLANNING STAGE PROJ.	AS % OF ALL PLANNED OBLIGATIONS FOR PLANNING STAGE PROJ.	AS % OF COLUMN TWO
AFRICA	23	115,992	9	47.4	39.1	56,177	18	48.4
ASIA	34	485,209*	5	26.3	14.7	138,300	44.3	28.5
LATIN AMERICA	21	94,160*	2	10.5	9.5	7,250	2.3	7.7
NEAR EAST	24	277,850*	3	15.8	12.5	110,500	35.4	39.8
CENTRALLY FUNDED	7	15,985	0	0	0	0	0	0
TOTAL	109	989,196	19	100	17.4	312,227	100	31.6

* Planned obligation data missing for: Asia - 6 projects
Latin America - 3 projects
Near East - 1 project

TABLE A-8

REGIONAL BREAKDOWN OF PROJECTS IN ACTIVE STAGE AND THEIR PLANNED OBLIGATIONS

BUREAU	TOTAL NUMBER OF PROJECTS	TOTAL PLANNED OBLIGATIONS	# OF PROJECTS IN ACTIVE STAGE	AS % OF ALL ACTIVE STAGE PROJECTS	AS % OF COLUMN ONE	TOTAL PLANNED OBLIGATIONS FOR "ACTIVE" STAGE PROJ.	AS % OF ALL PLANNED OBLIGATIONS FOR ACTIVE STAGE PROJ.	AS % OF COLUMN TWO
AFRICA	23	115,992	13	21.7	56.5	53,832	10.8	46.4
ASIA	34	485,209*	16	26.7	47.1	231,134	46.3	47.6
LATIN AMERICA	21	94,160*	13	21.7	61.9	78,610	15.7	83.5
NEAR EAST	24	277,850*	15	25	62.5	122,761	24.6	44.2
CENTRALLY FUNDED	7	15,985	4	6.7	57.1	12,962	2.6	81.1
TOTAL	109	989,196	60	100	55.1	499,299	100	50.5

* Planned obligation data missing for: Asia - 6 projects
Latin America - 3 projects
Near East - 1 project

APPENDIX B: RAW DATA

BUREAU: AFRICA

IRRIGATION PROJECTS

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
AREA DEVELOPMENT - DAKAR	6260702 [illegible]778						Planning			6000		No
CENTRAL & WEST AFRICA	6260615 750627 780630	25	• More dependent on imports of basic foods for survival ▲ • Agriculture production in OMVS member states affected ▲ • Sahelian drought ▲ • Senegal River Basin essentially unexploited	• Integrated development of agricultural production in Senegal River Basin.	• Balance increase in cereals and livestock production ▲ • Regularization of River ▲ • Prepare technological package to be used in agricultural development projects.	Yes	Active	Yes	• Extension Training • Livestock production • Forage • Agricultural Extension • Crop patterns • Research Training • Agricultural technology • Grain production	1260	1240 - U.S. Personnel • 65 - Commodities • 528 - Other Costs • 0 - Operating Support • 647 - Unallocated • 0	No
CHAD	6770001	48	• Exposed lake bottom (polders) is very fertile, but lacks a modern agricultural technology package	• Develop irrigated agriculture in Lake Chad Area	• Formulate an integrated agricultural strategy for Lake Chad Area	No	Active	Yes	• Mobile Maintenance brigade (roads and irrigation) • Cereal research • Research in - Soil mgmt. - Farm mgmt. policy • Health Activities • Technical and social studies	2640	1037 - U.S. Personnel • 308 - Local and TCN Personnel • 6 - Commodities • 486 - Other Costs • 237	No
	6770009 780601 791231	43					Active			2993		No

BUREAU: AFRICA

IRRIGATION PROJECTS

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	MODIFICATION-CAPACITY	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
CHAD (Cont'd)	6770023 780912 790811	12					Active			475		No
GUINEA BISSAU	6570004 FY78						Planning			2099		No
KENYA	6150164 750101 790930	46	• Soil and vegetation degradation ▲ • Production pressure on land resources ▲ • Rising farm population • Lack of mgmt. and production systems to inventory resources and improve production	• Enhance self-sufficiency in food production	• Increase stock and crop production ▲ • Develop resource mgmt. strategy	No	Active	Yes	• Resource Classifications • Soil surveys • Resource analysis training • New projects designed in various subject areas	2000	1210 - U.S. Personnel • 901 - Commodities • 82 - Other Costs • 227	No
MALI	6880206 760901 810900	60					Active			6778		No
	6880210 780929 830915	60					Active			11416		No
	6880212 FY79						Planning			3930		No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
MALI (Cont'd)	6880213 780728 820630	47					Active			4426		No
MAURITANIA	6820203 FY78						Planning			3000		No
NIGER	6830205 770829 810131	40	• 350000 small farmers in Niamey (in Sahel) have per capita income of $50 A • Area is food deficient A • Lack of rainfall • Erosion, declining fertility, crop pests, plant disease • Traditional cultivation methods • Absence of credit systems • No animal traction • Weak marketing and extension	• Increase standard of living in Niamey A • Increase rural income in Niamey A • Increase food production in Niamey	• Begin process of rural development A • Provide initial motivation and organizational requirements among rural population • Create institutional, physical and technical capacity to begin rural development	Yes	Active	Yes	• Agricultural services • Training field agents • Credit and cooperative services • Livestock service programs • Village-level land use and soil conservation • Study program (of rural problems)	4699	244 - Commodities • 212 - Other Costs • 32 - Unearmarked • 0	Yes AID supported study No date
	6830227 FY79						Planning			1000		No

BUREAU: AFRICA

IRRIGATION PROJECTS

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	GOAL OF LARGER PROVINCE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
NIGERIA	5200742 650101 770930	153	• Nigeria lacks university-trained agriculturalists	• Accelerate agricultural development in Nigeria	• Manpower trained in agriculture at University of Ife, Nigeria provided	Yes	Completed	Yes	• Research and teaching in - Plant science - Animal science - Ag. enginerring - Food science - Technology	5983	5914 - U.S. Personnel • 4255 - Local and TCN Personnel • 48 - Participants • 666 - Commodities • 276 - Other Costs • 669	Yes Progress Report/ Interim Report 6/74 End-of-Tour Rep. 11/74 Project Appraisal Report (3) 4/71, 5/66 11/66
SENEGAL	6850208 FY77						Planning			6559		No
SOUTHERN AFRICA REGION-USARAC	5900026 710801 770930	74	• Food and export situation in Malawi not improving ▲ • Lack of agricultural production and mechanization. ▲ • Lack of mid-level personnel with agricultural engineering background. ▲ • Bunda Agricultural College lacks department or degree program to train students.	• Increase the quality & quantity of middle and high-level agricultural manpower in Malawi	• Train agricultural personnel in agricultural production.	No	Active	Yes	• Education in Agricultural Engineering • Management personnel • Curriculum and degree program developed • Mid-level management	363	363 - U.S. Personnel • 260 - Participants • 103 - Other Costs • 0	Yes Project Appraisal Report (2) 3/74 5/76

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PROJECT?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
SOUTHERN AFRICA REGION-OSARAC (Cont'd)	6900068						Planning			2600		No
SUDAN	6500026 720914 810913	36					Active			398		No
	6500100 730226 770530	51	• A large number of farmers in Sudan are unable to produce beyond the subsistence level. ▲ • Nile water and arable land underutilized.	• Economic and social conditions are improved for subsistence farmers in Rahad region of Sudan.	• Increase farm income ▲ • Improve farm productivity ▲ • Increase area under irrigation	No	Active	Yes	• Agricultural processing equipment and storage facilities installed.	11000	10274 - No breakdown given	No
SWAZILAND	6900024 711101 780730	81	• Small traditional farms of Swaziland not productive	• Transform subsistence agriculture into commercial farming	• Increase agricultural production of small-scale traditional farms in Swaziland	No	Active	Yes	• Loans for procurement of seeds, fertilizer, insecticides, tools	2084	1786 - U.S. Personnel • 900 - Local and TCN Personnel • 2 - Participants • 121 - Commodities • 44 - Other Costs • 719	Yes Special Evaluation 8/74

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PIECE/SECON-STRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
TANZANIA	5210151 FY80						Planning			5304		No
UPPER VOLTA	5860224 FY78						Planning			9685		No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PROGRAM?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
ASIA REGIONAL	4880133 610701 750630	168	• Poor agricultural and economic development in Mekong River Basin ▲ • Limited use of resources	• Promote regional cooperation ▲ • Develop Mekong River as natural resource	• Provide participating countries with engineering, economic, and reconnaissance reports and documentation	No	Completed	Yes	• Studies about dam, power plant, transmission lines, flood control	13854	13854 - U.S. Personnel • 6116 - Local and TCN personnel • 23 - Participants • 29 - Commodities • 767 - Other Costs • 6919	No
BANGLADESH	3880012 FY78						Planning			7100		No
	3880015 750115 780630	41	• Food needs of population not met	• Achieve self-sufficiency in food grains ▲ • Increase agricultural production	• Alleviate severe shortfall in foodgrain production ▲ • Provide commodity support & concessional assistance for one crop year	No	Active		• Import wheatseed and fertilizer	29913	29748 - Commodities • 29748	No
	3880017 760601 801230	55	• Rural infrastructure needs repair ▲ • Monsoon, cyclone age, neglect	• Provide direct employment for rural landless and near landless people	• Complete labor intensive rural earthworks projects	No	Active	Yes	• Procedures to design and approve projects • Flood control, land reclamation, roads	1535	950 - U.S. Personnel • 521 - Commodities • 339 - Other Costs • 100	No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
BANGLADESH (Cont'd)	3880019 760929 810930	60	• Acceptance of irrigation cooperatives and credit institutions deterred ▲ • Farmers too poor to buy irrigation handpumps ▲ • Insufficient crop income	• Achieve self-sufficiency in food grain production in Bangladesh by 1980	• Provide farmers with private ownership of small-scale irrigation equipment	No	Active	No		14000		Yes Project Appraisal Report 7/77
INDIA	3860233 660601 740330	92	• Lack of irrigation water • Lack of flood control	• Increase agricultural and industrial growth in Punjab and Rajasthan	• Supply target area with electricity, irrigation and emergency water, and flood control ▲ • Set up a system of dams, canals, and hydroelectric powerplants	No	Completed	Yes	• Concrete diversion dam, 14000 acre-ft. capacity • 8 mile tunnel, 7.2 mile canal, 13000 acre-ft. balancing reservoir • 5 diversion tunnels • Hydrologic, geophysical surveys	14438	14438 - No breakdown given	Yes Feasibility Study 8/63 Undifferentiated Report 5/59

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
INDIA (Cont'd)	3860366 661201 770930	130	• Lack of proper practices to obtain maximum results from new high yield varieties	• Continue growth up agricultural production in India	• Continue identification and solution of production problems resulting from introduction of high yield varieties	Yes	Active	Yes	• Research into all problems associated with new high yield varieties	2016	2141 - U.S. Personnel • 1973 - Participants • 124 - Commodities • 44	Yes End-of-Tour Report 2/70-1/72 Project-Appraisal Report 2/73
	3860368 651101 750630	104	• Low average crop yields A • Lack of assured and dependable water supply	• Continue rapid growth of agricultural production in India	• Bring about institutional capability to utilize soil and water resources	Yes	Completed	Yes	• Soil management	464*	464 - U.S. Personnel • 4[illegible]4 - P[illegible]ticipants • [illegible]9 - Commodities • 11	Yes Project Appraisal Report (6) 2/69 12/69 10/71 4/73 10/71 9/73
	3860379 670500 730600	73	• Average rice yields in India remain constant despite several years of crop improvement research	• Continue rapid growth of agricultural production in India	• Establish an all India coordinate rice improvement project (AICRIP) with adequate organization & operational techniques	No	Completed	Yes	• Development of high yield rice varieties	578*	573 - No breakdown given	Yes Project Appraisal Report (2) 12/68 2/70
	3860466 FY79						Planning			75000		No
INDONESIA	4970242 761028 790126	27	• Growing dependence on food imports A • Insufficient tranined staff to plan, implement & manage public works programs	• Increase rice production in Sedorhana subproject areas	• Institutional capacity to plan & run irrigation & land development programs	No	Active	No		20000	2905 - No breakdown given	No

BUREAU: ASIA

IRRIGATION PROJECTS

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
INDONESIA (Cont'd)	4970244 751023 810630	68	• Inadequate rural infrastructure • Low use of modern farm technology • Lack of cooperative marketing efforts	• Improve well-being of small farmers ▲ • Increase per capita consumption and movement of surpluses to food deficient areas ▲ • Raise productivity	• Improve well-being of poor ▲ • Increase agricultural activity ▲ • Pursue institution building	No	Active	Yes	• Farm service centers • Advanced crop production technology • Trunk roads	15000	288 - No breakdown given	Yes Project Appraisal Report 9/77
	4970252 780831 830831	60					Active			29500		No
	4970267 780330 830330	60	• Food production and employment inhibited ▲ • 1 out of 140 million families have electricity	• Standard of living of rural population in 10 selected areas improved	• Increase productivity of rural poor ▲ • Provide reliable electric power to rural areas ▲ • Train Indonesians in all areas of rural electrification	No	Active	Yes	• Rural electrification • Rural sanitation with health component	36000	42 - Participants • 33 - Construction • 9	No
	4970265 FY78						Planning			27500		No

BUREAU: ASIA

IRRIGATION PROJECTS

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
KOREA	4890594 630701 741230	138	• Govt. agricultural agencies lack capability to make full use of government resources	• Increase growth in rural sector ▲ • More productive use of resources achieved	• Improved agricultural planning, programs, and use of resources	No	Completed	Yes	• Sector analysis • Fertilizer provided • Pastureland improvement • Enlarged agricultural economic research institute • Land development • Grain production	6000*	6000 - U.S. Personnel • 5062 - Participants • 794 - Commodities • 109 - Other Costs • 25	No
	4890706 740911 780331	43	• Agricultural production constrained ▲ • Inadequate irrigation and drainage facilities	• Minimize food grain imports ▲ • Increase agricultural production	• Irrigation water effectively applied in rice and barley farming (as many as 66 sub-projects)	No	Active	No		25700	25700 - No breakdown given	No
LAOS	4390065 630701 751230	150	• Flooding of farm land ▲ • Lack of govt. personnel in irrigation/water control	• Improve Laotian economy ▲ • Achieve self-sufficiency in production of basic foodstuffs • Diversify agricultural production	• Increase availability of irrigation water ▲ • Achieve more efficient use of existing facilities	No	Completed	No		18880	13980 - U.S. Personnel • 8242 - Local and TCN personnel • 1534 - Participants • 705 - Commodities • 6837 - Other Costs • 1562	Yes Project Appraisal Report-16 2/69 no date 12/69 no date 12/71 12/69 5/74 1/69 12/69 10/69 12/70 11/68 11/68 10/69 1/69 1/69

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
NEPAL	3670054 570701 780930	255	• Agricultural production too low ▲ • Existing Nepalese technology unable to overcome environmental barriers	• Nepal's food grain production increased by 3% from 1970-74.	• Improved administrative and technical competence of Nepal's Ministry of Agriculture	Yes	Active	Yes	• Education/research • Project design assistance • Extension • Grain storage/marketing • Varietal testing and seed multiplication • Credit Coops	4340	4341 - U.S. Personnel • 3529 - Participants • 497 - Commodities • 315	Yes End-of-Tour Report(2) 5/69-12/69 11/65-11/68 Project Appraisal Report(2)
	3570207 690301 770930	103	• Groundwater not used to potential ▲ • Lack of information on production, well spacing, construction, yield, and cost of water production	• Increase food production ▲ • Increase use of groundwater	• A sound basis for systematic exploitation of of groundwater provided	No	Terminated	No		1030	1029 - U.S. Personnel • 661 - Participants • 94 - Commodities • 274	Yes Project Appraisal Report 7/71
PAKISTAN	3910327 680801 770630	107	• East Pakistan lacks sufficient supplies of seed potatoes	• Institute of East Pakistan achieves self-sufficiency in potatoe production	• Increased supply of improved high yielding potatoes	Yes	Completed	Yes	• seed multiplication • seed storage • farmer training • fertilizer, pesticide provisions	27	27 - No breakdown given	No
	3910401	45	• On-farm water mgmt. practices inefficient ▲ • Traditional soil moving and land grading tools inefficient	• Accelerate productivity in irrigated areas	• Improve on-farm water use ▲ • Implement precision land-leveling	No	Active	Yes	• Land leveling • Govt. cost-sharing program with small farmers	1142	1130 - Advisory services • 1066 - Vehicles/farm equipment • 64	Yes Special Evaluation 2/76 Progress Report/Interim Report No date

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
PAKISTAN (Cont'd)	3910413 761027 791231	38	• Low farm output ▲ • Inefficient on-farm water mgmt.	• Increase small farmer income ▲ • Increase agricultural production ▲ • On-farm water mgmt. concept appreciated by govt.	• Install capability to plan and delivery on-farm water mgmt. services in public and private sector	Yes	Active	Yes	• Demonstrations of improved crop techniques • Credit for farmers	32700	155 - Land leveling • 155 - Water Course Improvement • 0 - Other Costs • 0	No
PHILIPPINES	4920189 680601 750228						Completed			3418		Yes Special Evaluation 1/76
	4920233	102	• Inefficient water development activities ▲ • Lack of central authority and planning	• Improve water supply and distribution system	• Establish planning capability in National Irrigation Administration	Yes	Completed	No		646*	646 - U.S. Personnel • 610 - Commodities • 28 - Other Costs • 2	Yes Project Appraisal Report--2 7/69 4/72
	4920260	84	• Govt. lacks institutional capacity to create and implement a sectoral integrated development program	• Develop rural sector of Philippines	• Develop institutional capability to manage integrated program for Bicol River Basin.	Yes	Active	Yes	• Socio-economic & technical surveys • Systems planning simulation model • Pilot projects in: -crops -transportation -agribusiness -livestock -fisheries -farm mechanization -ag. credit -land reform (Continued)	2498	1980 - U.S. Personnel • 1480 - Participants • 78 - Commodities • 288 - Other Costs • 131	No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMON-STRATION	STATUS	PART OF LARGER PROJECT?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
PHILIPPINES (Cont'd)									-coops -ag. education -health/nutrition			
	4920264 730630 750630	36	• Public infrastructure damaged ▲ • Disastrous floods in summer of '72	• Basic social & economic reform achieved	• Effective mgmt. of limited resources by govt.	No	Completed	Yes	• Feasibility studies of: -flood control systems -land reform -air transportation -regional development -geothermal power	2000	1313 - No breakdown given	No
	4920274 750729 800930	62	• Inadequate rice production ▲ • Small farmers too poor to be productive	• Achieve self-sufficiency in rice production by FY77 ▲ • Increase rice production	• Increase small farmer income in target areas	No	Active	Yes	• Modern rice production techniques • Post-harvest service centers • Mgmt. and marketing training	7289	5384 - U.S. Personnel • 503 - Participants • 138 - Commodities • 3 - Other Costs • 4740	Yes Incoming Airgrain 9/77
	4920275 750729 780730	36	• Bicol River Basin population lacks social services, electric power, potable water ▲ • Govt. lacks organization to initiate agricultural and social improvements	• Socio-economic uplifting of rural poor	• Install capability to carry out multi-sector programs	No	Active	Yes	• Education • Sanitation • Family planning • Health services	3500	162 - Other Costs • 162	No
	4920301 FY78						Planning			11000		No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
SRI LANKA	3830042 770831 820930	61					Active			6000		No
	3830050 FY79						Planning			17700		No
THAILAND	4930163 640101 770630	162	• Rural population in insurgent-threatened areas lacks loyalty to government	• Deter subversion A • Improve rural environment	• Strengthen local self-governments • Strengthen ties between govt. and rural population	No	Completed	Yes	• rural roads • village water • wells	53752	53621 - U.S. Personnel • 15223 - Participants • 1612 - Commodities • 45885 - Other Costs • 901	Yes Project Appraisal Report(3) no date no date 5/69
VIET NAM	7300314 670301 770331	121	• Vietnamese crop production activities A • Lack of training and research in agricultural mechanization • Rice & grain processing require drying & storing facilities • Farmers need adapted machinery to efficiently grow high-yielding crops	• Earn and save foreign exchange • Increase rural income • Improve diet of Vietnamese A • Efficient production & distribution of sufficient agricultural products	• Conduct research & training in crop & horticulture mechanization A • Develop institutional capacity for training & researching	Yes	Completed	Yes	• Agricultural Research • Agricultural Machinery • Institution Bldg • Storage facilities • Farmer training • Crop pattern • Grading	31694	31694 - U.S. Personnel • 5734 - Local & TCN Personnel • 17 - Participants • 313 - Commodities • 25601 - Other Costs • 29	Yes Project Appraisal Report(6) 9/75 1/72 9/75 9/75 5/72 6/72

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
BOLIVIA	5110364 711201 790630	91	• Rural population of Bolivia unable to develop into a viable community ▲ • Handicapped by diversity of languages, mass illiteracy, poor sanitation superstitions, outworn social & economic organizations.	• Modernization of rural sector	• Bolivian community development program carries out development projects & encourages establishment of permanent local institutions for representative self-govt.	No	Active	Yes	• potable water supplies • schools • agric. demonstrations • health facilities • roads & bridges • courses in agriculture, home improvement, health literacy	27292	22257 - U.S. Personnel • 4954 - Local & TCN Personnel • 151 - Participants • 418 - Commodities • 575 - Other Costs • 11464 - Roads & Trails • 3907 - Production Services • 258 - Social Service • 366 - Project Administration • 18 - Project Location • 146 - Contingencies • 0	Yes End-of-Tour Report(3) 7/68 8/66 3/61 Project Appraisal Report(7) 2/69 12/69 4/71 5/74 1/75 3/71 6/76
CHILE	5130297 FY77		• Agricultural & economic development of the Limari River Basin retarded ▲ • Erratic rainfall patterns • Lack of efficient irrigation systems • Lack of medium term credit	• Increase income of Limari River Basin small farm families ▲ • Increase productivity of small farm families	• Economic return for irrigation water use increased	No	Planning	Yes	• Agricultural Credit for: -land leveling -fruit planting - machinery & dairy cattle purchases	7000		No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMON-STRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
EL SALVADOR	5190184 780830 830901	60					Active			2300		No
GUATEMALA	5200233 760601 801230	65	• Crops start to suffer from lack of soil moisture shortly after heavy rains ▲ • Water retention is poor & runoff rapid in project area ▲ • Productivity of extremely scarce resource is progressively reduced ▲ • Soil erosion • Exploitation of ever steeper slopes ▲ • Increasing population pressure on land resource	• Improve water & land use in project area	• Establish within Digesa capability to effectively implement small irrigation & soil conservation projects.	Yes	Active	No		15775	572 - TA Small Farmer Improvement • 663 - Project Support Costs • 9	No
GUYANA	5040054 690816 770330	79					Active			2464		No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LANDER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE,	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
HAITI	5210061 720401 780930	78	• Effective community councils in Northwestern Haiti need support				Active		• Roads • Health clinics • Nutrition centers • Community development	4930	3864 - Contract services • 733 - Commodities • 230 - Other Costs • 2901	Yes Special Evaluation(2) 1/75 10/76
	5210069 730601 791031	77	• Development of agricultural sector will depend on providing for more financial & human resource transfers to the rural areas ▲ • Resulting low levels of income, underemployment, & decay of rural resources-irrigation systems, roads & renewable natural resources ▲ • Flow of resources from rural to urban communities	• Contribute to better nutritional levels ▲ • Increase & improve agricultural production in Haiti	• Increase production of food & industrial crops • Reverse misuse of land resources • Assist Haitian farmer intensify use or irrigable lands • Strengthen institutions responsible for community development • Change Haitian farmers attitude from traditional farming methods to intensive agricultural production techniques & soil conservation practices • Assist rural communities to organize themselves	No	Active	Yes	• Maize production demonstration • Policy analysis	1877	1680 -Contract Services • 1359 -Participants • 9 -Commodities • 116 -Other Costs • 196	Yes Project Appraisal Report 6/76

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
HAITI (Cont'd)	5210076 750601 780331	84	• 3.5% of deaths in Haiti caused by water-borne intestinal diseases ▲ • Problem has remained severe despite promulgation of curative medical services since 1967 ▲ • Almost complete lack of potable water systems in rural areas	• Improve health & agricultural productivity of rural Haitian population	• Reduce incidence of gastro-intestinal diseases in rural Haiti	No	Active	Yes	• Rural potable water systems	121	121 - Contract Services • 121	No
	521007a 760929 811231	63	• Lack of concern by urban elite & certain elements of ministries responsible for rural problems ▲ • Development hampered by lack of natural resources, lack of trained manpower, low level of education, serious dietary deficiencies & primitive state of agric. infrastructure ▲ • Agricultural productivity & per capita production has declined in recent years	• Provide increased employment & income for rural population. ▲ • Increase agricultural production	• Develop institutional capacity of Haiti's Dept. of Agriculture & Community organizations to deliver productive resources & services to small farmers.	No	Active	Yes	• water user groups organized • community staff trained • community nurseries established • soil conservation groups organized • research trials conducted • extension agents trained • community groups assisted • community groups organized • new credit agents working • rural engineering faculty trained • rural engineering students graduated • management systems revised.	12100	84 - Contract Services • 25 - Commodities • 55 - Other Costs • 4 - Unearmarked • 0	No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AID DATE
HAITI (Cont'd)	5210078 (Cont'd)		• Erosion of capital & resources in rural sector A • One-way flow of resources from rural to urban areas									
	5210080 751201 781231	37	• Mountainous terrain of La Gonave is seriously eroded by deforestation • Soil erosion has decreased fertility • Inadequate water supply due to chronic drought	• Improve health conditions & agricultural production in Haiti	• Develop water & soil resources on island of La Gonave	No	Active	Yes	• surveys of potential potable water resources • complete 22 potable water sources • 5-8 nurseries reforestation areas established	45	52 - Contract services • 52	No
	5210102 FY79						Planning			250		No
HONDURAS	5220147 770830 780930	13	• High poverty levels, low income, high infant mortality rates, widespread malnutrition & extremely low literacy rates in rural San Marcos de Ocotepque • No permanent mechanism for comprehensive non-formal training designed to (Con't)	• Integrate Campesino population in development process & stabilize frontier zone. A • Capacitation of human resources	• Provide permanent comprehensive non-formal education program for poor Campesinos in agriculture, health, nutrition, family planning, literacy, appropriate technology, cooperatives & youth development	No	Active	Yes	• establish rural leadership training center • 800 indigenous people trained in one or more of following: agriculture, health, nutrition, family planning, literacy, appropriate technology, cooperatives & youth development	9	9 - Other Costs • 9	No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
HONDURAS (Cont'd)	5220147 (Cont'd)		ease problems & integrate community into development process									
LATIN AMER. REGIONAL	5980545 710101 741230	48	• Excess demand for food A • increased population growth rates • agricultural sector's low production A • variable soil fertility, high costs of bringing new land into production, sparse population in potentially productive areas, lack of adequate technical/social knowledge of tropical lowlands, inability to use crops developed for highland agriculture in the lowlands, poor livestock health	• Increase food production in Latin America	• Develop the capacity of the International Center for Tropical Agriculture (CIAT) in food research/production activities that evidence the greatest potential for economic success & progress in human welfare.	No	Completed	Yes	• Research and training to increase animal/crop production in lowland tropic areas: various subject areas.	2276	2276 - Other Costs • 2276	No

BUREAU: LATIN AMERICA

IRRIGATION PROJECTS

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PROJECT?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
NICARAGUA	5240067 700301 740830	16	• Much of Nicaragua's agricultural area receives rainfall only part of year. • Need to collect data from controlled irrigation operations, evaluate it & make recommendations on how to train farmers to use irrigation water & on proper timing of farm activities during wet & dry seasons.	• Assist Govt. of Nicaragua in increasing & diversifying productive capacity of economy.	• Proper use of irrigation & cropping patterns used by Nicaraguan farmers in production of crops to fit into an irrigated cropping pattern.	No	Completed	No		129*	129 - U.S. Personnel • 101 - Other Costs • 28	Yes Project Appraisal Report 6/69
	5240112 750601 770930	28	• Agrarian Reform Colony, Colonia Angelica de Schick, needs to increase & improve harvest if its lower income farmers are to improve quality of life A • Colony lacks financial/technical capability to improve quality and increase number of yearly harvests	• Improve quality of life of lower income farmers	• Increase number of harvest & amount harvested by lower income farmers of Colonia Angelica de Schick.	No	Terminated	No		200	201 - U.S. Personnel • 0 - Commodities • 201	No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
PANAMA	5250094 641100 680300	40	• Production for domestic consumption barely keeping pace with population growth	• Domestic agricultural production increased	• Adoption of modern agricultural technology by Panama's small subsistence farmers	Yes	Completed	Yes	• Animal disease Control • Seed program • Adult training	2400	2400	No
PERU	5270134 711112 751231	39.5	• Loss of thousands of lives, destruction of 200,000 buildings & interruption in community services A • In 1970 Peru experienced worst earthquake in history of Western Hemisphere	• Improve economic & social conditions in Peru	• Provide housing & community services to areas affected by 1970 earthquake	No	Completed	Yes	• Housing facilities constructed • Community development projects (irrigation, water, sewage, electricity & small industry) • Community organizations strengthened	3000	3000	No
	5270138 720725 731115	16	• Crops & irrigation systems destroyed, roads & bridges washed out, soils eroded houses damaged potable water distribution & sewage disposal systems A • The floods of 1972	• Increase employment & income for farm workers & farm owners	• Normalize agricultural production in flood area A • Restore basic farm infrastructure such as irrigation systems	No	Completed	Yes	• furnish agricultural credit to farmers • other farm rehabilitation measures • emergency crop cultivation campaign	5100	5100	No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
PERU (Cont'd)	5270150 770331 800930	42	• Constraint on increased agricultural production ▲ • Limited productive land base of Peru	• Increase food production ▲ • Expansion of arable land along Peru's populated coastal desert • Reduce environmental sewage contamination along coast	• Successfully demonstrate economic & technical feasibility of producing significant quantities of needed foodstuff ▲ • Irrigate desert lands with treated sewage effluent	Yes	Active	No		200	68 - Other Cost • 68 - Unearmarked • 0	No
	5270156 760901 810900	60	• Off-farm employment opportunities are few and cannot absorb current surplus of labor ▲ • Population growth on limited productive land	• Increase food production in the Sierra	• Improve water & land use in project areas of Cajamarca & Montaro	No	Active	Yes	• implementation of afforestation program to prevent erosion, conserve water, protect irrigation structures • establishment of fund in agrarian bank for sub-lending to participating farmers • technical advisory services • training • finance watershed planning • on-farm demonstration in efficiency of water use	11000	141 - Technical Assistance • 17 - Credit Fund • 0 - Study des and sprv. • 106 - Commodities • 0 - Labor Costs • 18 - Reforestation • 0 - AID Supervision • 0 - Unearmarked • 0	No
	5270170 771229 801229	36					Active			497		No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
AFGHANISTAN	3060002 520601 770630	181	• Lack of data for design of irrigation works ▲ • Lack of river gauging capability	• Improve design and operation of irrigation, hydropower, & water supply systems	• Establish Afghan self-sufficiency in obtaining & utilizing stream flow and sediment data	No	Terminated	Yes	• Gauging stations • River sediment stations • Training of hydrographers, hydrologists, and sedimentologists	11566	11563 - U.S. Personnel • 7277 - Participants • 1768 - Commodities • 2271 - Other Costs • 247	Yes Project Appraisal Report(11) 4/69,5/70 9/71,4/69 5/70,3/71 4/69,1770 3/71,2/69 1/70
	3060090 540101 770630	62	• Insufficient agricultural production ▲ • Inadequate water control/distribution • Inefficient irrigation practices and drainage systems • Inadequate road network	• Surplus of foodgrains by mid-1970's.	• Assist farmers and Helmand Arghandab Valley Authority (HAVA) in utilization of water and soil resources		Completed	Yes	• Training in horticultural practices • Planting of wheat • double-cropping of corn • Seed-fertilizer distribution • Recruitment/training for HAVA agricultural division • Agricultural Development Bank for farmer credit	20185	20185 - U.S. Personnel • 10720 - Local and TCN Personnel • 2017 - Participants • 1037 - Commodities • 6150 - Other Costs • 261	Yes Project Appraisal Report (4) 5/70 10/71 5/72 5/73
	3060102 680501 761230	103	• Initiation of land reclamation and irrigation projects limited ▲ • Insufficient quantities of trained personnel and earthmoving machinery	• Self-sufficiency in land betterment projects	• Institutional development of Valley Authority and Valley Construction Unit	No	Completed	Yes	• Land reclamation • Training, supervisory, and technical services	3887	3887 - No breakdown given	No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMON-STRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
AFGHANISTAN (Cont'd)	3060131 740601 800930	76	• Inability of Rural Development Division (RDD) to perform rural road building, irrigation, and social service projects ▲ • Lack of capital and technical expertise	• Institutional capacity for high-impact rural development programs	• Rural works/ experimental IRD projects completed	Yes	Active	Yes	• Construction and evaluation temas trained • 25 bridges built • 100 km. farm-to-market roads • 3 model IRD programs begun	4362	1058 - U.S. Personnel • 628 - Participants • 65 - Commodities • 46 - Other Costs • 319	Yes Special Evaluation 8/76
	3060146 750501 800319	58	• Development of upper Helmand and Arghandab Valley hampered ▲ • Poor drainage system • Need for better water mgmt.	• Increase small farmer productivity ▲ • Soil salinity & water logging reduced ▲ • Construction & improvement of drains	• Accomplishment of defined construction work goals • Technical information collected ▲ • Working relationship between USAID & Valley Authority developed	No	Active	No		1451	1336 - U.S. Personnel • 752 - Commodities • 332 - Other Costs • 252	Yes Special Evaluation 7/76
	3060149 780803 811231	41	• Water-logging & salinity of farm land ▲ • Insufficiency of natural drainage ▲ • Installation of modern irrigatio • Over-irrigation by	• Agricultural income and employment of small scale farmers increased Agricultural productivity of small farmers increased	o Reduce water-logging and soil salinity		Active			20004		Yes Undifferentiated Report No date Bibliography No date

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
EGYPT	2630017 760601 811230	67	• Low agricultural production--50% below fields in experiment stations ▲ • Low water efficiency for crop production	• Improve social and economic conditions of small farmer	• Increase agricultural production ▲ • Increase institutional capacity to develop and sustain on-farm water mgmt. program ▲ • Demonstrate replicable irrigation water mgmt.	Yes	Active	No		7000	1178 - U.S. Personnel • 1178 - Participants • 0 - Commodities • 0 - Other Costs • 0 - Uncommitted • 0	No
	2630040 770927 810228	41					Active			11000		No
JORDAN	2780139 670801 770630	119	• Wheat production in Jordan meets 50% of domestic needs	• Improve wheat production in Jordan	• Develop and disseminate a system of wheat production technology	Yes	Completed	Yes	• Wheat producing demonstrations • Research plots	568	546 - U.S. Personnel • 297 - Participants • 101 - Commodities • 98 - Other Costs • 50	Yes Final Report 3/76
	2780175 730201 780831	57	• Limited agricultural production ▲ • Lack of proper irrigation systems	• Provide irrigation for an increased amount of farmland in the Jordan Valley	• Establish irrigation network in the Jordan Valley	No	Active	No		10000	9200 - Other Costs • 9200	No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
JORDAN (Cont'd)	2780176 741201 791231	61	• Jordan lacks a central authority to plan and direct agricultural sector and to train personnel	• Increased productivity per unit of utilized land	• An established faculty of agriculture at Univ. of Jordan able to plan and implement research education, and extension programs	No	Active	Yes	• Research and extension for: - technologies - crop yields - animal production - disease/pest control - fertilizers - farm machinery - agriculture • Courses for extension agents	2260	1605 - U.S. Personnel • 668 - Participants • 252 - Commodities • 683 - Other Costs • 2	No
	2780179 740701 780703	48	• Increased water requirements in Zarqa triangle ▲ • Gravity flow canals insufficient to meet increased water needs ▲ • Water sprinklers needed	• Increase fruit and vegetable production	• Increase amount of irrigated land	No	Active	No		4500	4500 - Other Costs • 4500	No
	2780225 FY79						Planning			72500		No
	2780229 780828 811231	40					Active			5000		No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
MOROCCO	6080045 600301 761030	200	• Delays in the completion of water storage & transmission facilities in lower Moulouya Irrigation Projects ▲ • Serious floods and geological problems plague this area.	• Increase production in Dry-Land And Irrigated Farming In Lower Moulouya River Basin	• Develop gravity irrigation system of lower Moulouya Basin	No	Active	No		27912	27912 - No breakdown given	No
	6080126 760601 790930	40	• Food production is not keeping pace with the growth in domestic demand. ▲ • Small farmers are hampered by the significant lag in completion of EM-to-farm and on-farm irrigation works.	• Agricultural production, income and employment are increased in the Triffa high service area by 1981	• 77% of farmers holding less than 10 HA served by irrigation system ▲ • Irrigated farming bring practiced on 6270 net hectores in Triffa high service area by 1977.	No	Active	No		8000	8000 - Other Costs • 8000	No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PROJECT?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
MOROCCO (Cont'd)	6080127 760601 810630	61	• Large food import requirement and seasonal unemployment with low per capita income and unproductive urban migration in the densely populated Doukkala area of Morocco. • Shortage of water supply due to limited and irregular rainfall and inadequate agricultural practices.	• Increase exports & import substitution of agricultural products. • Increase agricultural production • Increase rural employment	• Establish irrigated agriculture on 15410 MA in the Doukkala region by 1979.	No	Active	Yes	• Expanded agricultural management services and agriculture credit. • Construction of project and village infrastructure	13000	2930 - Pumps and Motors • 816 - Movable Sprinklers • 2114 - Hydrants • 0 - O&M Equipment • 0 - CMV Equipment • 0 - Civil Works Pumps Stations • 0 - Village Water Works • 0 - Other Local Cost • 0	No
NEAR EAST REGIONAL	2980035 670101 800930	165	• Stagnated economic development • Lack of project planning and development	• Improve standard of living in LDC's.	• Provide studies for various project development & support services in various sectors	No	Active	Yes	• Oilseed processing study in Pakistan • Education and human resource study in Pakistan • Rural health delivery studies in various countries • Studies of various public and private rural development efforts in Asian countries	6628	4922 - U.S. Personnel • 3137 - Participants • 58 - Commodities • 86 - Other Costs	No
SYRIA	2760016 FY78						Planning			28000		No

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMON-STRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
TUNISIA	6640000 570301 760930	235	• Inefficient sewage treatment and sewage reclamation for irrigation water is found in the City of Tunis.	• Develop sewage treatment in Tunis	• Assist government of Tunisia to determine which method of dewage treatment is best suited for Tunis.	No	Completed	No		8383	8333 - U.S. Personnel • 6710 - Local and TCN Personnel • 251 - Participants • 77 - Commodities • 476 - Other Costs • 869	No
	6640178 630201 730830	12					Completed			2197*		No
	6640277 730601 780930	64	• Improved crop production lacking ▲ • Tunisian farmers unaware of possible improvements in irrigation	• Increase income and level of living of agricultural production	• Increased farmer income ▲ • Proper utilization of all agricultural production factors. ▲ • Develop GOT capacity in Northern Region.	Yes	Active	Yes	• Credit Crop • Rotation • Production • Coop • Extension training • Agricultural Marketing • Grading • Agricultural Extension • Demo Farm • New land ownership patterns	455	435 - U.S. Personnel • 369 Participants • 11 Commodities • 54 Other Costs • 1	Yes Project Appraisal Report 3/77
	6640309 FY79						Planning			0000		No

BUREAU: NEAR EAST

IRRIGATION PROJECTS

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
TURKEY	2770426 670101 750930	105	• Turkish farmers & soil conservation agency are unfamiliar with modern technique	• Achieve Turkish socio-economic goals. A • More efficient management and utilization of agricultural resources	• Prepare land for maximum production under irrigation • Apply proper irrigation and drainage practices on developed lands. A • Develop competence in soil conservation agency	No	Active	No		1189	1182 - U.S. Personnel • 813 - Participants • 365 - Commodities • 4	Yes Project Appraisal Report 8/74

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMON-STRATION	STATUS	PART OF LARGER PACKAGE?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
FOOD FOR PEACE	9040310 730701 800131	78				No	Active	No		1430	1463	No
TECHNICAL ASSISTANCE	9310115 690401 771231	105	• Water loss ↓ • Lack of effective drainage ↓ • Lack of water delivery & removal systems	• Optimum utilization of water in canal system for agriculture in LDC's	• Reducing water loss & water-logging ↓ • Construction & maintenance, by groups of small farmers, of systems to transport water from the terminal end of a canal.	No	Terminated	No		1050	1050 - U.S. Personnel • 1050	No
	9310116 690401 780331	108	• Optimum utilization of water ↓ • Lack of management capabilities, technical sophistication & knowledge to reduce water waste & efficiently irrigate land.	• Conservation of irrigation water in LDC's.	• Schedule & apply proper amount of water in efficient manner on small farms in LDC's	No	Terminated	No		945	945 - U.S. Personnel • 945	Yes Project Appraisal Report 12/76

COUNTRY	PROJECT NUMBER AND DATES	PLANNED LENGTH	PROBLEM	GOAL	PURPOSE	PILOT/DEMONSTRATION	STATUS	PART OF LARGER PROJECT?	IF YES, OTHER COMPONENTS	PLANNED COSTS	EXPENDITURES TO DATE	ANY EVALUATION DOCUMENTS, TYPE, AND DATE
TECHNICAL ASSISTANCE (Cont'd)	9310443 650601 751230	127	• Animal and human power on rice farms inadequate	• Increase farm incomes ▲ • Increase crop yields	• Simple agricultural equipment locally manufactured, provided to tropical rice farmers at low price	No	Completed	Yes	• Machines for: - Land preparation - Seeding - Weeding - Fertilizing - Harvesting - Processing - Other tasks	1028	1349 - U.S. Personnel • 1097 - Other Costs • 252	Yes Bibliography 5/75
	9310489 680601 800930	149	• Serious restrictions on productivity performance of all other agricultural inputs ▲ • Limitations in water availability for crop growth	• Increase food production in arid & sub-humid lands of LDC's	• Improve & integrate water management practices with other agricultural resource management & farming practices.	No	Active	No		1062	9139 - U.S. Personnel • 9199	Yes Special Evaluation 3/76
	9311005 770930 800930	36					Active			350		No
	9311007 780930 800929	24					Active			1120		No