

PD-AAS-673

43453

WATER MANAGEMENT SYNTHESIS II

CID/AID-DAN-4127-C-00-2086-00

1ST QUARTERLY REPORT FY86

October 1, 1985 to December 31, 1985

Submitted by:
The Consortium for
International Development

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 1st Quarterly Report FY86-FY87
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WATER MANAGEMENT SYNTHESIS II PROJECT

QUARTERLY REPORT COVERING PERIOD
OCTOBER 1, 1985
TO
DECEMBER 31, 1985

I. INTRODUCTION

A. General

This report summarizes the activities of the Water Management Synthesis II Project for the first quarter of FY86, covering the period October 1, 1985 to December 31, 1985. This report includes information relative to current activities, finished activities as well as university highlights.

The central purpose of WMS-II is to develop and disseminate (in AID-assisted countries) more efficient water management technologies and practices to increase agricultural production and rural equity. The WMS-II Program is a joint project of S&T/AGR, S&T/RD, the Africa Bureau and the Asia and Near East Bureau of AID. These offices contribute funds and participate in the development, approval, and execution of Project activities. The Consortium for International Development (CID) is the Prime Contractor for WMS-II. Cornell University, Utah State University and Colorado State University, through the Consortium for International Development, share the lead university responsibilities for the Water Management Synthesis II Project.

B. A Summary of Significant Project Accomplishments

By the end of the reporting period (31 December, 1985) we had completed the draft of the "second edition" of the FY86-FY87 Workplan, developed what was thought to be a mutually acceptable Workplan for the work to be funded by the Africa Bureau and also continued a busy schedule involving the regular on-going work of WMS-II which is reported on in the main body of this report.

1. Workplan Development: The CPMT and Worth Fitzgerald met in July, 1985 and considered proposed university initiated activities for FY86-FY87. Activities involving about one third of the initial budget request for Core funds were dropped by the CPMT to bring the requests into line with the estimated Core funds which would be available for FY86-FY87. By the time of the JPMT Meeting in late August, the estimate of the Core funds available for FY86-FY87 was reduced and the estimated budget ceiling available for Buy-in activities was increased. University initiated requests for Core funds were again cut by one third. Some of the main points with regard to the agreement reached on the FY85-FY86 Workplan are discussed below.

a. It was agreed that the Workplan would be for the last two fiscal years of the Project. It was agreed that a two year Workplan would lead to both more responsible financial planning and a more integrated plan of work. It was also agreed that a series of "editions" of the Workplan would be developed and only those activities would be included in the Approved Workplan which had developed to a stage where a mutually agreed upon scope of work and the resulting budget could be generated. After the "second edition" of the Workplan has been approved, any additions to the Approved Workplan would only involve (1) development of a mutually agreed upon scope of work for the activity which was to be either added or modified, (2) development of an acceptable budget corresponding to that scope of work and (3) updated financial summary tables generated by the WMS-II computer based Tracking System.

b. A set of working totals for budget categories are presented in Schedule C which is updated from the version presented in the "second edition" of the FY86-FY87 Workplan. The five budget categories are (1) University Initiated Core Funded Activities, (2) Buy-ins, (3) AID Initiated Core Funded Activities, (4) Administration/Support, and (5) Africa Bureau Funded Activities.

The "second edition" of the FY86-FY87 Workplan was submitted in mid-November, 1985. Included in the "second edition" was what was anticipated to be an agreed upon scope of work for the work funded by the Africa Bureau. However, some modifications will have to be made, and these should be completed during January, 1986. As soon as the "second edition" of the FY86-FY87 Workplan is approved, the process of updating the Workplan will have to begin.

2. Financial Status of WMS-II. The budget ceiling for the project was set at \$19,645,933. The total expenditures thru December 31, 1985 are \$11,913,713 (see table below).

WMS-II EXPENDITURES thru December 31, 1985

	Budgets	Expenditures	Balance
FY86-FY87 Activities	\$ 9,176,092	\$ 6,061,775	\$ 3,114,317
Prior Yr. Activities	4,535,558	4,019,064	516,494
Closed Out Activities	<u>1,832,874</u>	<u>1,832,874</u>	<u>0.0</u>
Total	\$15,544,524	\$11,913,713	\$ 3,630,811

The approved budgets for Workplans prior to FY86-FY87 includes activities which will not be initiated, in part because the scope of work for some of the activities were never developed to a stage where the activity could be implemented. The approved budget

totals are therefore not a useful figure in estimating financial commitments. It is hoped that the procedures used in developing the FY86-FY87 Workplan will permit the use of approved budget totals as a basis for financial planning.

The expenditures for FY86-I are \$1,045,577, for FY85-IV \$1,308,591, for FY85-III - \$1,292,728, for FY85-II - \$1,085,997, for FY85-I - \$961,366, and the average quarterly expenditures for the first thirteen quarters of the Project are \$916,439. The unexpended portion of the budget ceiling is \$7,732,220. This would allow an average quarterly expenditure for the remainder of the Project of \$1,104,603, if all expenditures were recorded by the end of the Project - 30 September, 1987.

This simplistic analysis of the financial status of WMS-II can be used to highlight three issues which must be dealt with, if the financial aspects of the Project are to be handled in a responsible way, so that the contract ceiling will not be exceeded and plans can be made so that the remaining Project financial resources can be used as productively as possible. (1) Funds to permit expenditures to equal the budget ceiling will not be available unless buy-ins equal the figure presented above and AID funding levels permit allocation of Core funds at the levels implied above. a/ (2) The quarter during which commitments are made for some expenditures lags the quarter during which expenditures are reported. Therefore, if the Project is to simultaneously make full use of the financial resources which can be made available and not exceed the contract ceiling on expenditures, it will be necessary to develop an accrual accounting system which permits reasonable estimates of expenditure commitments which are not yet recorded. Work will begin on the development of such a system during FY86. (3) Allowing for the fact that project expenditures will tend to decrease as the Project winds down, the general level of expenditures can be sustained. With a modicum of financial planning, the Project personnel should be able to complete the Project work in a responsible and effective manner.

a/ During January, 1986, it became apparent that as the result of general decreases in US/AID FY86 funding, some cuts in WMS-II FY86 funding will occur. At the present time, it appears as if the total funding for WMS-II will not be cut, but payments from US/AID to CID will take place over a longer period of time. As this situation becomes better understood, a program for dealing with this situation will have to be developed.

SCHEDULE B

AID INITIATED ACTIVITIES
W/F86-FY87 CORE FUNDS

PART I

Activity	University	Budget Status	AID Initiated Core Funds	Funding Total w/Mission Contr.
Sri-Lanka ARTI-Continuing Support 1-02-045-86	CU	Approved	\$ 72,440	\$ 72,440
Sri-Lanka FY86 Central Support 1-02-048-86	CSU	Approved	66,782	66,782
Thailand Thailand SS Overseas 86 3-04-057-86	CSU		25,000	50,027
Egypt Irrigation Sector Assessment 1-02-052-86	USU	Approved	128,383	128,383
Kenya Small Scale 1-02-042-86	CU	Approved	12,267	101,426
India Socio-Tech. 1-04-059-86	CSU	Approved	3,183	3,183
Total for Activities in WMS Tracking System as of 25 January, 1986			Total	\$ 422,241
			\$ 308,055	\$ 422,241

SCHEDULE B

AID INITIATED ACTIVITIES
W/FB6-FY87 CORE FUNDS

PART II

Activity	University	Budget Status	AID Initiated Core Funds	Funding Total w/Mission Contr.
Zimbabwe Small Scale 1-02-050-86	CSU	Approved	\$ 58,000	\$ 58,000
Peru Plan Meris Completion 1-02-061-86	USU	Approved	30,000	60,000
Worldwide Washington Office FY86 0-01-995-86	EPD	Approved	60,000	60,000
Worldwide FY87 0-01-995-87	EPD	Approved	55,000	55,000
Rwanda Water Management & Drng 1-02-062-86	USU	Approved	9,051	14,901
Ecuador Completion of 2-03-54-84	USU	Approved	6,500	
Total as of 25 January, 1986			\$ 218,551	\$ 247,901

SCHEDULE C

SUMMARY OF ALLOCATION
AND APPROVAL OF FY86-FY87 FUNDS
FOR BUDGETS AS OF 25 JANUARY, 1986

	Proj. Total	CSU	CU	USU	EPD
Allocated for Univ/Initiated "New" Core Funded Activities	\$ 1,755,000	\$ 585,000	\$ 585,000	\$ 585,000	
Apprv. Budget FY86		1,065,876	1,117,910	725,181	
Apprv. Budget FY87		125,623	79,565	246,269	
Total Approved Budget a)	\$ 3,959,406	\$ 1,191,499	\$ 1,197,475	\$ 971,450	\$ 598,982
Less					
Admin/Support b)	(879,572)	(246,600)	(208,073)	(233,089)	(191,810)
Buy-In	(145,884)	(56,725)	(89,159)	0	0
AID Init. Core (Sched. B Part I)	(308,055)	(94,965)	(84,707)	(128,383)	
Carry-Over Sched. A	(316,203)	(108,998)	(131,541)	(75,664)	
Africa Bureau	(800,000)	(120,654)	(149,474)	(124,700)	
Res. TRIAD Phase II	80,000	0 c)	40,000	40,000	
Approved for University Initiated "New" Core Funded Activities	1,589,692	563,557	574,521	449,614	407,172
Allocated But Not Approved-University Initiated "New" Core Funded Activities	165,308	21,443	10,479	135,386	
Allocated/Buy-Ins	1,822,660				
Approved/Buy-Ins	(145,884)				
Balance	1,676,776				

SCHEDULE C

SUMMARY OF ALLOCATION
AND APPROVAL OF FY86-FY87 FUNDS
FOR BUDGETS AS OF 25 JANUARY, 1986

	Proj. Total	CSU	CU	USU	EPD

Allocated for AID					
Init/Core Funded	800,000				
Approved Sched. B	(308,055)				
Balance d)	491,945				

Allocated for					
Admin/Support					
No include DC office	1,800,000				
Approved	(879,572)				
Balance	920,428				

Allocated for Africa					
Bureau Activities	800,000				
Approved	(800,000)				
Balance	0				

- a) Includes \$598,982 in EPD-all but Admin/Support related to Africa Bureau funded activities.
- b) Includes EPD Admin/Support-\$191,810.
- c) \$40,002 Carry-Over from India Handbook FY85.
- d) Six activities were known as of 25 January, 1986 which would use \$224,175 of AID Initiated Core Funded work (see second part of Schedule B). This would leave a balance of unused Core Funds allocated for AID Initiated work of \$267,770.

II. SPECIAL FOCUS

In this section of the report, each university presents an in-depth report of current work undertaken by that university.

- A. Colorado State University
- B. Cornell University
- C. Utah State University

COLORADO STATE UNIVERSITY SPECIAL FOCUS

TRAINING STRATEGY REVIEW

Training has been a major activity of Colorado State University for both WMS I and WMS II projects. Many faculty and departments of CSU are also deeply involved in the training of third world nationals which can have direct application to improving irrigated agriculture.

The strategies for training delivery have taken many forms. These have included formal academic degree training in specialized disciplines, on campus short courses for specific topic coverage, interdisciplinary academic and short courses directly related to agricultural development, specialized multi-disciplinary courses designed for the needs of a particular country, training programs packaged by academic course selection to meet the non-degree specialization requirements of individuals, and educational fieldtrips to provide on the site observation of different irrigation systems in operation.

The "flagship training program" utilized by CSU in WMS II training activities has been the basic Diagnostic Analysis Workshop. The basic concept of this training is to integrate at least four disciplines (engineering, agronomy, economics and sociology) into both classroom and in the field instruction. Workshop participants learn techniques of their own discipline by actually doing a diagnostic analysis of a system and performing the tasks required of the discipline during this process. Each participant also gains better understanding of other disciplines. The basic training design of the DA has been maintained while allowing the delivery to meet the requests of host country and USAID/Mission personnel. For example, the length of training has been decreased from 5 to 6 weeks to less than one week for senior officials; it has lasted up to 8 weeks in several countries. The training has also been used as technical assistance by requiring reports of findings and recommendations of participants and trainers on irrigation systems studied (for example several of the India sites). Training teams have been expanded to as many as 6 discipline trainers and a WID component or decreased to only 1 person for a limited training objective. The number of participants have also varied from as many as 7 of each discipline to only one of a discipline. For example, in Nepal each trainer worked with one national to collect and analyze data in an interdisciplinary DA with a technical assistance type output. The results were then presented to senior officials in a short workshop.

The DA workshops have provided information for identifying future needs in both training and technical assistance. Some of the training activities identified for greater emphasis are workshops for senior officials, data management procedures for monitoring and evaluation of irrigation systems, and search for solutions research methods.

A deficiency in the whole training process was identified in the recent training strategies workshop. We have not followed-up on training as much as is needed. This could involve evaluating lessons learned in training and more systematically communicate them to WMS II project personnel. This can facilitate training improvement. The communication should also be extended world wide. There is also the follow-up on individuals who have received training and on institutions and organizations to which the trainees have returned. We are probably sacrificing a considerable potential multiplier effect of training when follow-up is not planned for nor funded. This might be

made a part of the synthesizing activities considered for WMS II. A first step can be to determine how other projects or agencies are now following up on training.

CORNELL UNIVERSITY SPECIAL FOCUS

KENYA: SMALL-SCALE IRRIGATION ANALYSIS

Small-scale irrigation systems in Kenya range from centuries old indigenous hydraulic works in the Kerio Valley and the Taita Hills, to "furrows" constructed by the British colonial government, to current public and private sector projects. Nearly half of Kenya's 50,000 hectares of irrigated land are incorporated into large plantations devoted to high value crops such as coffee and pineapples. Resettlement schemes account for another 20 percent.

The small-scale sector remains very small, despite the fact that water availability is a constraint on production throughout the country. Increasing population and the closing of the frontier mean that Kenya must rely on agricultural intensification to meet domestic food needs. Interest in irrigation on the part of the government of Kenya is high, but prior experiences with large-scale projects have been negative. Thus, interest in small-scale development to increase food production and employment opportunities is growing.

In this context, the Kenya mission asked WMS to send a team to analyze existing small-scale irrigation systems and to offer recommendations for program development. The team was headed by E. Walter Coward, Jr., rural sociologist, Cornell University. Other members were Richard N. McConnen, WMS Executive Project Director and agricultural economist, Ramchand Oad, agricultural engineer, Colorado State University, and Francis Gichuki, a graduate student in agricultural engineering at Utah State University and a native of Kenya. In Nairobi, the team was augmented by two consultants, Joseph Ssenyonga, an anthropologist, and agricultural economist Leo Arao.

The team found a high degree of variation of existing small-scale systems—variability due in part to ecological diversity, in part to historical factors, in part because of the dissimilar production goals of water users between and within schemes, and in part due to the broader production systems in which irrigation agriculture is embedded. Within this context, the analysis concentrates on four major themes:

1. Food security/food sufficiency and small-scale irrigation
2. Water user organizations
3. Engineering aspects of small-scale systems
4. Technical manpower and training needs

Several government approaches to small-scale irrigation development were examined. Particular attention was given to the activities of the Irrigation Drainage Branch (IDB) of the Kenyan Ministry of Agriculture. The IDB, which has received considerable foreign assistance, implements its activities through newly established Provincial Irrigation Units (PIUs). The overall goals of its present program are to increase food production and to create opportunities for rural employment.

The IDB/PIU program is in many ways a significant departure from previous Kenyan irrigation strategies. Projects are initiated in response to requests from private user groups already involved in irrigation in some manner. Emphasis is on the construction of low-cost technological facilities; attention is given to keeping recurrent costs low as well. Provincial/district-based technical teams are used to implement project planning, design, and construction. Responsibility for irrigation facility management is devolved to private user groups, while farm management decisions are left with landowners and farm operators. No attempt is made to recoup project development costs.

While the IDB/PIU strategy differs significantly from more costly and highly centralized projects undertaken in the past, it is not without its problems. The team identified five major constraints that are limiting these efforts:

1. The strategy now being implemented nets a very small annual increase in irrigated hectareage;
2. The Government of Kenya is providing very limited funding for project implementation, and thus also limits the pace of small-scale irrigation development;
3. Private user groups responsible for scheme operation and maintenance are fragile social organizations;
4. Inadequate attention is being paid to the range of technical alternatives possible for creating small-scale irrigation facilities; and
5. The present IDB/PIU development strategy is not complemented by needed research programs.

There are possibilities for donor assistance to the small-scale irrigation sector in Kenya that would enable the existing IDB/PIU program to grow modestly in size, to improve program staff and quality, and to develop the capacity to more effectively utilize various nongovernment partners who can potentially contribute to small-scale irrigation development. The team also suggested that donor aid should directly assist nongovernmental entities.

In conclusion, the Kenya report makes five specific recommendations for future actions:

1. The IDB/PIU should be assisted with development of policies, strategies and operational procedures that would allow them to mobilize the engineering talent now found or potentially to be located in architectural, engineering and consulting firms.
2. The government of Kenya should be provided with additional funds for small-scale irrigation project implementation.
3. The IDB/PIU, NGOs and other appropriate groups should be assisted in strengthening their capacity to effectively support the creation and enhancement of viable private user groups.

4. The IDB/PIU, in conjunction with appropriate private firms and NGOs should be assisted in designing and testing a comprehensive approach for accelerating the installation and use of irrigation pumps in selected areas with available ground or surface water supplies.

5. The government of Kenya and appropriate private sector entities should receive assistance in the planning and implementation of research and training activities as well as policy discussions in support of small-scale irrigation development.

A draft report containing these recommendations has been delivered to the Kenya mission. The revised manuscript will appear in the WMS report series.

UTAH STATE UNIVERSITY

Egypt Sector Analysis

During November an 11-member joint Egypt-U.S. Team completed field work for an irrigation sector study for Egypt. The U.S. Team, led by Dr. Dean F. Peterson, also included Dr. David W. James, Professor of Soils and Biometeorology, USU; Dr. Glen E. Stringham, Professor of Irrigation and Drainage Engineering, USU; Dr. Keith Roberts, Emeritus Professor of Agricultural and Irrigation Engineering, USU; and Dr. Gerald Wheelock, Professor of Rural Sociology, Alabama A&M University.

The Egyptian Team consisted of Eng. Sarwat Fahmy, Undersecretary and Director of the Water Planning Group, Ministry of Irrigation (MOI), Co-Leader; Eng. Mohamed Maher, Director of the Technical Office, Office of the Ministry (MOI); Eng. Jean Kamel abd El Sayed, Consultant, Manpower Training and Development Unit (MOI); Eng. Wadie Rafla, Undersecretary for Irrigation, Alexandria Governate; Eng. Raza Rezek El Mansawy, Director of Works, Egyptian Drainage Authority; and Dr. Mohamed El Zanaty, Chief, Agricultural Division, Water Master Plan, Water Planning Group (MOI).

Egypt's goals and interests were expressed to the Team shortly after the U.S. members arrived in Cairo by Eng. Ismail Badawy, Vice Minister for Irrigation, who maintained a continuing personal interest in the work as it progressed, and by Mr. Edwin D. Stains, Director, Office of Irrigation and Land Development, USAID, Cairo. The draft outline was also reviewed by the Program Officer, USAID, Cairo, and by the Associate Director for Agriculture, Mr. William H. Janssen. As a result of these reviews, the report will cover a mid-term (six-year) and a longer-term (15-year) planning horizon and will include a discussion of priorities for international donor support without reference to any specific donor.

Peterson edited and collected the draft materials at Logan during December. Eng. Sarwat will come to Logan in early January. He and Peterson will finalize the draft. Sarwat will carry the draft back to Cairo for review by Egypt and USAID when he returns to Egypt after mid-January.

Overall, the boundaries of Egypt's irrigated agriculture are somewhat unique. The traditional rich land resources of the Nile Valley and Delta are rigidly defined by geographic boundaries. With multi-year storage provided by High Aswan Dam, a full water supply, and slightly more, is available for irrigating these lands, but problems of efficient and equitable distribution still remain. Egypt's population growth rate has outrun agricultural productivity during recent decades. From an export situation, Egypt now finds itself importing about 50 percent of its basic food supply needs. Its strategy is to expand its land base by reclaiming unproductive lands at the Delta margins and in the desert. Water supply would be provided from the Nile source by increasing efficiency of current uses and productivity on the traditional areas. The major need is to improve irrigation water management and irrigated agricultural practices on farms. Pilot studies for improved on-farm water

management were initiated in 1977 under a USAID-supported project with Colorado State as contractor. These studies laid the groundwork which Egypt would like to extend to its 6 million acres of irrigated land. It proposes to do this on larger pilot areas totaling 800,000 acres by 1991-92 in each of the 15 governates as a next step. In doing this, Egypt faces the usual array of institutional difficulties encountered by India's Command Area Development Authorities, Pakistan's Water Systems initiative, and elsewhere.

III. STATUS OF PROGRAMMED ACTIVITIES

The activities of the WMS II originate from three sources: (1) Mission initiated technical assistance and training; (2) University initiated special studies and training programs; and (3) AID/Washington initiated activities. The following listed activities were requests received by the WMS II Project Management from the beginning of the project up to and including December 31, 1985. Activities are categorized according to lead university as well as country.

The terms listed below are used to indicate activity status:

- Preliminary - denotes a request that requires further clarification (scope of work and/or dates are incomplete or are missing) before it can become a formal request.
- Formal - denotes a request for which all major details have been clarified and formal addition to the Workplan has been requested through the Overall Administration Office.
- Approved - denotes an activity that has been approved by the CPMT and AID/Washington and added to the Workplan through a request of the Overall Administration Office as of September 30, 1985.
- Initiated - denotes an approved activity that has been initiated and is currently ongoing.
- Finished - denotes an activity for which all technical responsibilities, including report writing, have been fulfilled.
- Completed - denotes an activity for which all technical and fiscal responsibilities have been fulfilled as of September 30, 1985.
- Pending - denotes a non-approved request for which addition to the Workplan has not been sought and/or approved even though clarification of major details has been obtained.
- Postponed - denotes an approved activity to be carried out in the following fiscal year. Reasons for postponement may be lack of host country approval, inability to identify personnel, scheduling conflicts, etc. The budget of such an activity shall be removed from the current fiscal year Workplan and included in an appendix to the one in which the work is to be done and expenditures made. The monies shall not be reallocated and reapproval will not be necessary for one fiscal year.

- Dropped - denotes a non-approved request dropped from further consideration.
- Cancelled - denotes an approved, yet uninitiated activity deleted from the Workplan and dropped from further consideration in the near future.
- Terminated - denotes an activity that has been initiated (expenditures charged against it), but then for some reason the decision is made to stop and further work. A new budget covering incurred expenses shall be submitted through the Overall Administration Office to AID/Washington and the status considered the same as completed.

The source of each activity is indicated by the following designations:

- UNIV - University initiated
- USAID - Mission initiated
- AID/WASH - AID Washington initiated

Colorado State University Activities FY 83 (12-31-85)

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Bangladesh	TA-Curricula Dev. (BAU)	1-03-030-82	Completed	USAID
	TA-Consultant, Legal	1-03-029-82	Completed	USAID
	TA-Scope of Work	1-02-006-82	Completed	USAID
	T-DA Workshop	2-02-007-82	Completed	USAID
India	TT-Watercourse Hdbks.	2-13-025-82	Completed	USAID
	TA-Water Mgmt & Trng.	1-02-020-82a	Completed	USAID
	T-Meas. for Sys. Mgmt.	2-07-026-82	Completed	USAID
	TA-Evans Proj. Prep.	1-02-033-83	Completed	USAID
	TA-Clyma's TDY	1-02-035-83	Completed	USAID
	DA Workshop Planning	1-02-044-83	Completed	
	Development of Solutions	1-02-024-82	Completed	
Indonesia	TA-Oad's TDY	1-02-030-83	Completed	USAID
Pakistan	TA-WM (CWM) Meeting	1-02-029-83b	Completed	USAID
	TA-Clyma's TDY	1-02-031-83	Completed	USAID
Sri Lanka	T-DA Workshop	2-02-028-83	Completed	USAID
	WID-DA Workshop	2-02-034-83	Completed	
Worldwide	TT-Brochures; Newsletters, Pub.	2-12-018-83	Completed	Univ
	TT-Survey & Str. for Trng.	2-09-019-83	Completed	Univ
	TT-Videotape Modules	2-03-021-83	Completed	Univ
	TT-Computer Applications	2-10-022-83	Completed	Univ
	T-Wkshop (Tech. & Soc.)	2-04-023-83	Completed	Univ
	SS-Comm. for Tech. Tran.	3-04-024-83	Completed	Univ
	SS-Irig. Systems Mgmt.	3-04-025-83	Completed	Univ
	TA-Water Resource Econ.	1-02-042-83	Completed	AID/Wash
CSU Administration	0-02-998-83	Completed		

Colorado State University Activities FY 84 (12-31-85)

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Africa	TR--Africa Workshop	2-14-113-84	Completed	Univ.
Dominican Rep.	TA--Reconnaissance Team	1-02-110-84	Completed	
India	TA-Rajasthan MIP-Cad.	1-02-026-84	Cancelled	USAID
	TR-DA Workshop M.P.	2-02-031-84	Completed	USAID
	Curriculum Development	1-02-094-84	Completed	
Indonesia	TA-Long Term WM Spec.	1-01-008-84	Cancelled	USAID
	TR-DA Workshop	2-04-010-84	Terminated	USAID
Nepal	TR-DA Workshop Planning	2-02-003-84	Completed	USAID
Pakistan	TR-Sr. Off. Workshop	2-04-019-84	Initiated	USAID
	TA-Command Water Mgmt	1-02-114-84	Initiated	USAID
Sri Lanka	TR-DA Workshop	2-02-006-84	Cancelled	USAID
	TA-WM Central Support	1-02-022-84	Finished	USAID
	TA-Design Team	1-02-102-84	Finished	USAID
	TA-Long-Term WM Spec.	1-01-109-84	Initiated	USAID
Worldwide	TR-Professional Visitors & Networking	2-11-039-84	Initiated	Univ.
	TR-DA Trainers Workshop	2-08-040-84	Finished	Univ.
	TT-Instructor's Guide DA	2-13-042-84	Initiated	Univ.
	TT-Brochures, Newsletter, Pubs.	2-12-044-84	Initiated	Univ.
	TT-ICID Senior Off. Wkshop	2-04-048-84	Completed	USAID
	TT-Survey & Strategy	2-09-049-84	Finished	Univ.
	TR-Workshop; Soc & Tech.	2-04-050-84	Completed	Univ.
	TT-Microcomputers	2-10-051-84	Finished	Univ.
CSU Administration	0-02-998-84	Completed	Univ.	

Overall Activities FY 84 (12-31-85)

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Worldwide	Administration	0-01-999-84	Completed	Univ.

Colorado State University Activities FY 85 (12-31-85)

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Egypt	TA-Eval. of IMS	1-02-072-85	Finished	USAID
El Salvador	TA-PID Preparation	1-02-059-85	Finished	USAID
India	TT-Dev. of Handbooks	2-13-027-85	Terminated	USAID
	TT-Technology Transfer	2-06-022-85	Cancelled	USAID
	TT-Training Materials	2-13-020-85	Cancelled	USAID
	TR-Training of Trainers	2-14-019-85	Cancelled	USAID
	TA-Priority Research	1-02-014-85	Cancelled	USAID
Indonesia	TA-Cost Recovery Study	1-02-074-85	Finished	USAID
Nepal	TR-DA Workshop	2-02-031-85	Finished	USAID
	Rapid Appraisal	1-02-087-85	Initiated	USAID
Pakistan	TR-Mgmt Off. Trng.-Planning	2-01-065-85	Initiated	USAID
	TA-Cur. Development	1-02-071-85	Finished	USAID
	Baseline Survey	2-04-083-85	Finished	USAID
	Key Officials	2-04-080-85	Finished	USAID
Sri Lanka	SS-Landsat 85	3-04-038-85	Finished	Univ.
	SS-Interfacing OFWM	3-04-036B85	Finished	Univ.
	TA-Central Support-85	1-02-003-85	Finished	USAID
Swaziland	TA-Irrig. Priorities	1-02-069-85	Finished	USAID
Worldwide	TR-Seminar on System Rehab. Phase I	2-05-033-85	Finished	Univ.
	TR-Microcomputer Workshop	2-14-032-85	Initiated	Univ.
	SS-Interfacing OFWM Backstopping	3-04-036A85	Finished	Univ.
	CSU Administration	0-02-998-85	Finished	

Colorado State University Activities FY 86 (12-31-85)

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Sri Lanka	Extension of Long Term	1-02-047-86	Initiated	Univ.
	Central Support	1-02-048-86	Initiated	Univ.
	Interfacing OFWM	3-04-009-86	Initiated	Univ.
	Landsat '86	3-04-011-86	Initiated	Univ.
Worldwide	Triad Synthesis #1	2-14-035-86	Initiated	Univ.
	Revision of Tr. Manuals	2-13-003-86	Initiated	Univ.
	Rev. & Dev. Videotapes	2-03-004-86	Initiated	Univ.
	Seminar on Irrig. Rehab #2	2-05-006-86	Initiated	Univ.
	Interfacing/Backstopping	3-04-010-86	Initiated	Univ.
	CSU Administration	0-02-998-86	Initiated	

CORNELL UNIVERSITY ACTIVITIES FY-84

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
India	SS-Community Kuhls in Himachal Pradesh	3-04-099-84	Cancelled	UNIV
Indonesia	TA-Small-Scale Irrigation and Management Project	1-02-011-84	Completed	USAID
Niger	SS-Small-Scale Irrigation in Niger, Preliminary	3-04-098-84	Completed	UNIV
	SS-Traditional and Developed Small-Scale Irrigation Study	3-04-111-84	Initiated	UNIV
Sri Lanka	TA-Farmer Organization Program	1-02-007-84	Completed	USAID
	SS-Impact of Physical and Operational Rehabilitation	3-04-097-84	Initiated	UNIV
Worldwide	TR-Main System Irrig.Task Force	2-06-077-84	Completed	AID/W
	TR-FAO/AID Expert: Indonesia	2-14-067-84	Completed	AID/W
	TT-Small-Scale Irrig.Task Force	2-14-065-84	Completed	AID/W
	TT-Professional Visitors	2-11-068-84	Initiated	UNIV
	TT-Current Research Seminar "Planning"	2-14-075-84	Completed	UNIV
	SS-Small-Scale Completion	3-04-069-84	Initiated	UNIV
	SS-Analysis of Participation Completion (FY-83)	3-04-070-84	Initiated	UNIV
	SS-Management Intensities	3-04-096-84	Initiated	UNIV

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CORNELL UNIVERSITY ACTIVITIES FY-85

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Haiti	Cayes Plain	1-02-084-85	Initiated	USAID
India	TR-Farmer Organization Workshop	2-14-017-85	Cancelled	UNIV
Indonesia	TA-SSI Workshop	1-02-009-85	Initiated	USAID
Mauritania	TA-Peace Corps Assistance	1-02-061-85	Cancelled	USAID
Niger	SS-Traditional and Developed SSI	3-04-052-85	Initiated	UNIV
Pakistan	TR-Extension Training Recon.	2-06-063-85	Cancelled	USAID
Sri Lanka	TA-Socioeconomic Studies	1-02-004-85	Initiated	USAID
Worldwide	TA-Recurrent Costs	1-02-062-85	Finished	AID/W
	TR-Rehabilitation Game	2-13-048-85	Initiated	UNIV
	TR-Lessons Learned Workshop	2-14-049-85	Cancelled	UNIV
	TR-Current Research Seminar	2-14-050-85	Finished	UNIV
	SS-Indirect Investment Phase I	3-04-053-85	Finished	UNIV
	SS-Indirect Investment Phase II	3-04-054-85	Initiated	UNIV
	SS-Rural Employment	3-04-055-85	Initiated	UNIV
	SS-Management Intensities	3-04-056-85	Initiated	UNIV

CORNELL UNIVERSITY ACTIVITIES FY-86

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Africa	TR-JFS-Rehabilitation-Country	3-04-502-86	Pending	AID/W
Kenya	TA-Small-Scale Irrigation Analysis	1-02-042-86	Initiated	USAID
Niger	SS-Small-Scale Irrigation	3-04-023-86	Initiated	UNIV.
Sri Lanka	TR-ARTI--Continuing Support	1-02-045-86	Formal	USAID
Worldwide	TR-Rehab Game Revision	2-13-018-86	Initiated	UNIV.
	TR-Conference--Lessons Learned	2-07-019-86	Initiated	UNIV.
	TR-Professional Visitors	2-11-016-86	Initiated	UNIV.
	TR-Triad Synthesis Phase I	2-14-037-86	Initiated	UNIV.
	TR-Synthesis--Local Resource	2-14-053-86	Formal	UNIV.
	TR-Workshop--Irrig.Bureaucracies	2-14-054-86	Formal	UNIV.
	SS-Indirect Investment '86	3-04-055-86	Initiated	UNIV.

Utah State University Activities

FY 83

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Africa	SS-Dev. of Social Parameters	3-04-057-83	Completed	UNIV
Dominican Republic	TA-Project PID	1-02-010-82	Completed	USAID
	TA-Project Paper (OFWM)	1-02-009-83	Completed	USAID
Ecuador	TT-Ecuavir Video	2-03-054-83	Initiated	UNIV/USAID
Haiti	TA-Irrigation Project Eval.	1-02-039-83	Completed	USAID
India	TA-Water Mgmt. and Training, and Water Management CWM	1-02-020-82B) 1-02-029-83)	Completed	USAID
	TA-Olsen's TDY	1-02-037-83	Completed	USAID
	TA-Institutional Analysis	1-02-053-83	Cancelled	AID/WASH
	TT-Senior Officers Workshop	2-04-007-83	Completed	UNIV
Jordan	TA-Review of Curriculum	1-02-041-82	Completed	USAID
Mali	TA-OFWM Specialist	1-02-006-82	Completed	USAID
Pakistan	TA-Mayfield's TDY	1-02-040-83	Completed	USAID
Peru	TA-Special Study	1-04-027-82A	Completed	USAID
West Africa	SS-Small-Scale Irrigation	3-04-036-83	Completed	UNIV
Worldwide	TT-Start-Up Workshop	2-14-055-83	Completed	UNIV
	TT-Short-Term Nondegree	2-08-056-83	Completed	UNIV
	SS-On-Farm Irr. System Sel.	3-04-058-83	Completed	UNIV
	SS-Main Sys. Mgmt. & Rehab., and Action Research	3-04-059-83) 3-04-060-83)	Completed	UNIV
	SS-Development of Handbook	3- - -83	Completed	UNIV

Utah State University Activities

FY 84

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Africa	TA-African Irrigation Overview	1-02-108-84	Initiated	AID/WASH
Chile	TT-Conference	2-14-058-84	Completed	AID/WASH
Dominican Republic	TA-Weed Control Specialist	1-02-091-84	Completed	USAID
Ecuador	TT-Finishing Original Modules	2-03-054-84	Initiated	USAID
	TT-Instructional Manual	2-03-055-84	Cancelled	UNIV
Haiti	TA-Irrigation Sector Survey	1-04-017-84	Completed	USAID
India	TA-Short Course	1-02-100-84	Completed	USAID
	TA-Maharashtra MIP	1-02-018-84	Finished	USAID
	SS-Irrig. Project Monitoring	3-04-020-84	Cancelled	UNIV
	TA-Maharashtra IT&M	1-01-021-84	Finished	USAID
	TA-Soc/Tech Feas. Study	1-02-023-84	Cancelled	USAID
	TA-Madhya Pradesh MIP	1-01-025-84	Cancelled	USAID
	TT-Senior Officer's Workshop	2-04-053-84	Initiated	UNIV/USAID
	TA-Irr. Eval. & Strategy Review	1-02-103-84	Finished	USAID
Jordan	TA-Irrigation Sector Survey	1-04-013-84	Completed	USAID
	TA-WM Specialist (TDY)	1-02-014-84	Completed	USAID
	TT-On-Farm Water Management	2-01-015-84	Cancelled	USAID
Pakistan	TA-Irrigation Policies	1-02-101-84	Completed	USAID
	TA-Command Water Management	1-02-106-84	Completed	USAID
Peru	TA-Small & Med. Irri. Systems	1-02-035-84	Completed	USAID
	TA-Plan MERIS	1-01-112-84	Initiated	USAID
Senegal	TA-Bakel Irr. Per. Assist.	1-02-033-84	Deleted	USAID
Swaziland	TA-Irri. System Monitoring	1-02-063-84	Deleted	USAID
Tanzania	TA-Irrigation Study	1-02-082-84	Completed	USAID
Worldwide	TT-French Language Training	2-11-059-84	Completed	UNIV
	TT-Irr. Sys. Mgmt. Task Force	2-14-060-84	Initiated	UNIV
	SS-Main Sys. Des. Mgmt., Rehab.	3-04-061-84	Completed	UNIV
	SS-Selection of Irrig. Tech.	3-04-062-84	Completed	UNIV

Utah State University Activities
FY 85

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Bolivia	TT-Small-Scale Course	2-14-010-85	Completed	USAID
	TT-On-Farm Water Mgmt. Course	2-14-011-85	Cancelled	USAID
Dominican Republic	TT-On-Farm Water Mgmt. Course	2-14-030-85	Cancelled	USAID
Chad	TA-Irrigated Agric. Assessment	1-02-073-85	Initiated	USAID
Egypt	TA-Water Use Project Evaluation	1-02-066-85	Completed	USAID
El Salvador	TA-Project Paper	1-02-077-85	Finished	USAID
Honduras	TA-Irrigation Development	1-02-060-85	Completed	USAID
India	TA-Water Balance	1-02-023-85	Deleted	USAID
	TA-Hydraulic Conductivity	1-02-024-85	Deleted	USAID
	TA-Reservoir Operation	1-02-025-85	Deleted	USAID
	TA-University Curricula	1-02-013-85	Completed	USAID
	TT-Rapid Appraisal	2-14-016-85	Deleted	USAID
	TT-Innovative Teaching	2-03-012-85	Deleted	USAID
	TT-Main Systems Training	2-14-015-85	Deleted	USAID
	TT-Computer Assisted ISM	2-14-040-85	Deleted	USAID
	TT-Video Modules	2-14-075-85	Finished	USAID
Jamaica	TA-Planning Activities	1-02-007-85	Approved	USAID
	TA-System Study	1-02-008-85	Approved	USAID
Jordan	TA-Advisory Service	1-02-028-85	Approved	USAID
Mauritania	TA-Plan of Action	1-02-076-85	Finished	USAID
Morocco	TA-PID Development	1-02-002-85	Finished	USAID
Nepal	TA-Small & Medium-Scale Irrig.	1-02-067-85	Completed	USAID
Sri Lanka	TA-Model Calibration	1-02-005-85	Initiated	USAID
Swaziland	TA-Irrigation Assistance	1-02-029-85	Cancelled	USAID
Thailand	TT-Maintenance Workshop	2-14-088-85	Finished	USAID
Worldwide	TT-Lessons Learned	2-14-039-85	Initiated	UNIV
	TT-French Language Training	2-11-041-85	Initiated	UNIV
	SS-Main Systems-Remote Sensing	3-04-042-85	Initiated	UNIV
	SS-ISM Development	3-04-043A85	Initiated	UNIV
	SS-Thailand Case Study	3-04-043B85	Initiated	UNIV
	SS-Morocco Case Study	3-04-043C85	Initiated	UNIV
	SS-India Case Study	3-04-043D85	Deleted	UNIV
	SS-Interdisciplinary Workshop	3-04-043E85	Initiated	UNIV

Utah State University Activities

FY 86

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Egypt	TA-Irrig. Sector Assessment	1-02-052-86	Initiated	USAID
India	TT-Demonstration Workshop	2-02-051-86	Formal	USAID
Pakistan	TA-Irrigation Consultant	1-02-060-86	Formal	USAID
Worldwide	TT-Triad Synthesis Phase I	2-14-036-86	Initiated	USAID
	TT-International Irr. Systems	2-04-027-86	Initiated	UNIV
	SS-Irrig. Project Analysis	3-04-005-86	Initiated	UNIV

IV. ACTIVITIES

This section is a summary of the status of each activity under the WMSII Project. The review includes a synopsis of the purpose and status of each activity, the participants, and the time spent by each individual.

In order to clarify the project activities, this section has been divided into three sections, FY84, FY85 and FY86; FY84, FY85 and FY86 are divided into the following categories: Technical Assistance, Training and Technology, Special Studies and Administration.

A. FY84

A.1 Technical Assistance Activities

1. AFRICA - African Irrigation Overview

Code Number: 1-02-108-84

Status: Initiated

Lead University: Utah State University

Summary of Work: In PMT meetings held in Washington, D.C. on October 7-8, a revised plan of work for the African Irrigation Overview was agreed upon. This envisioned: (a) division of the main report still not complete into two sections, the first an overview of study findings aimed at field users and the second containing detailed technical materials; (b) it was agreed the overview volume should be based on chapters 1 and 7 already circulated in draft form and completed by the first week in November in time for presentation at the African ADO conference in mid-November; (c) the second volume would be more oriented towards an academic audience and would serve as a guide to the extensive bibliography already published. It would have 4-5 chapters and a completed draft should be ready as soon as possible after the end of funding (31 December); and (d) three months of project support would be added for Moris to complete the two remaining volumes, as well as a one-week visit to FAO to obtain FAO documentation on specific African schemes.

The overview report was published, becoming available on November 8, 1985. It is, however, a more substantial review than had been envisioned, with three chapters and 94 pages, as well as summaries of the key working papers (by Stern, Tiffen, Vincent and Humpal). This means that it can serve as a relatively self-sufficient policy document, as well as having background data required by field officers. Copies were hand-carried by AID staff to the Africa ADO meeting.

Moris traveled to Washington, D.C. (under separate funding) to participate in an IFPRI/AID/IBRD conference on seasonal dimensions of hunger December 10-13. The paper presented there is being revised to serve as the main review of the socio-economic section in the final report. December 15-20 was spent in Rome at FAO where through cooperation of the Land and Water Division, Moris was given complete access to the bibliographic materials on African irrigation (entries for Senegal, Cameroun, Nigeria, Sudan, Kenya and Zimbabwe were reviewed), and case studies on 30 or more individual irrigation schemes. Complete notes were taken, and this visit provided a wealth of recent information on major African schemes.

As of early January 1986, the drafting of volume two is about half complete and proceeding. It is anticipated that sections will be entered in the word processor from mid-month and that it will take approximately 10-14 days for entry and corrections of each chapter.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Jon R. Moris	3.00 ppm	3.00 ppm	USU	Sociology
Linda Fields	0.10 spm	0.10 spm	USU	Typing

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2. PAKISTAN - Command Water Management Planning

Code Number: 1-02-114-84

Status: Initiated

Lead University: Colorado State University

Summary of Work: The On-Site Training was initiated in September as planned, but the Subproject Management Offices (SMOs) in Punjab and Sind were not ready to start until November 1. A number of logistical problems needed resolution including provisions of staff, equipment and transportation. The Punjab effort involved personnel from the SMO, the Irrigation Department, Agricultural Extension including personnel trained in the DA Workshop and additional personnel, the On-Farm Water Management Directorate, the Punjab Economic Research Institute, the Alluvial Channel Observation Program (ACOP), and the WMS II training team. The Sind personnel came from the SMO, the personnel deputed for On-Farm Water Management implementation, some assistance from the Irrigation Department both from the canal and SCARP (Salinity Control and Reclamation Project) wings, consultations with WAPDA (Water and Power Development Authority), and the WMS II training team.

The Northwest Frontier Province (NWFP) started later because of lack of personnel assigned from the Agriculture Department. They also were longer in completing the study because of the lack of availability of the assigned personnel. They were to complete the DA study after the WMS II team left Pakistan.

Baluchistan was unable to initiate their field study because of lack of personnel to be assigned from the Agriculture Department. Effort by the Federal Coordinator, USAID, the WMS II team, and the Subproject Manager was made to complete the personnel assignment, but the arrangements could not be completed. The alternative was to provide assistance from WMS II in 1986 when personnel were finally assigned. Additional funding would be provided for this effort.

Because of the need for additional assistance, one WMS II team was assigned to work with the Sind and Baluchistan, and one WMS II team was assigned to work with the Punjab and NWFP. Because of the delay in getting started, the Federal Coordinator and the USAID Project Officer agreed with the Subproject Managers and Dr. Clyma that the Management Plan would not be completed during the fall program but would be completed as a separate activity during 1986.

The On-Site Training provided a field study of the subproject areas in Sind and Punjab with a draft report completed of the results. The NWFP draft report is under preparation. Considerable interaction between the SMO and the line departments occurred in the Punjab including several initiatives as a result of the DA study. In the Sind interactions occurred with the Irrigation Department, but because extension and on-farm water management were represented on the SMO staff, less interaction occurred.

The management plan training will be combined with the management training based on the recommendations of the management assessment team which completed its work in December. The joint training effort is scheduled for March, April and May with Baluchistan scheduled for later in the summer.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Mohammed Haider	3.00 ppm	12.00 ppm	CSU	Economics
Wayne Clyma	2.50 ppm	9.05 ppm	CSU	Agricultural Engr.
S. Sritharan	3.33 ppm	13.36 ppm	CSU	Civil Engr.
Ed Shinn	3.00 ppm	15.20 ppm	CSU	Sociology
M. Shafique	3.00 ppm	15.70 ppm	CSU	Agricultural Engr.
S. Karaki	0.00 ppm	0.80 ppm	CSU	Civil Engr.
Ralph Luebs	2.50 ppm	6.75 ppm	Consultant	Agronomy
J. Warner	1.95 ppm	4.84 ppm	CSU	Civil Engr.
Tom Sheng	1.00 ppm	2.75 ppm	CSU	Civil Engr.
Oguz Nayman	2.50 ppm	3.17 ppm	CSU	Tech. Journalism
Max Donkor	0.00 gpm	5.67 gpm	CSU	Agricultural Engr.
Paul Wattenberger	3.00 ppm	5.00 ppm	CSU	Agricultural Engr.
Support Staff	1.25 ppm	2.65 ppm	CSU	Support Staff
Richard Tinsley	3.00 ppm	3.00 ppm	CSU	Agronomy
A.R. Robinson	1.85 ppm	1.85 ppm	CSU	Irrig. Engr.
Eugene Quenomen	1.50 ppm	1.50 ppm	Consultant	Economics
Ramchand Oad	1.00 ppm	1.00 ppm	CSU	Agricultural Engr.

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3. PERU - Plan MERIS

Code Number: 1-01-112-84

Status: Initiated

Lead University: Utah State University

Summary of Work: The Plan MERIS Pilot Plan activity terminated December 31, 1985 along with the Peru AID Mission project for improved water use in the Peruvian Sierra. As indicated in the last quarterly report, various delays in the implementation of the Pilot Plan meant that all of the field data could not be collected, analyzed and included in a final report prepared prior to the termination date.

Kern Stutler traveled to Peru in November to review project status and progress and arrange for a continuation of activities to finish the Plan MERIS Pilot Plan during the first quarter of 1986 with other funding.

Harvest of the experimental and demonstration plots has been completed and all field data has been collected. The Peru AID Mission has contracted the long-term Peruvian team for January through March 1986 and it appears that WMS II and Latin American Bureau funding will be made available to cover the return of the five-man short-term team from USU and Cornell to work with the long-term team to prepare the final report. The typing, translation and printing of the final report will be done by the Peru AID Mission.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
R. Kern Stutler	0.95 ppm	0.95 ppm	USU	Irrig. Engineering
Dale Allred	3.00 ppm	3.00 ppm	Consultant	Engineering
Luis Barrios	3.00 ppm	3.00 ppm	Consultant	Extension
Julio Guerra	1.00 ppm	1.00 ppm	Consultant	Administration
Jose Luis Villaran	3.00 ppm	3.00 ppm	Consultant	Sociology
Carlos Villanueva	3.00 ppm	3.00 ppm	Consultant	Ag. Economics
Carlos Nonone	3.00 ppm	3.00 ppm	Consultant	Agronomy

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4. SRI LANKA - Long-Term WM Specialist

Code Number: 1-01-109-84

Status: Initiated Lead University: Colorado State University

Summary of Work: Larry Nelson continued work on reports from the diagnostic analyses that were done on two tank sites in Polonnaruwa during Yala season. All of the counterpart discipline leaders are assigned on a part-time basis, but they have been able to provide considerable help this quarter.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Larry Nelson	3.00 ppm	21.00 ppm	CSU	Agronomy

A. FY84

A.2 Training and Technology Transfer Activities

1. PAKISTAN - CWM Officials Workshop

Code: 2-04-019-84

Status: Initiated Lead University: Colorado State University

Summary of Work: This activity has been rescheduled for mid-June. The tour has been combined with the Extension tour with the itinerary to be India and Sri Lanka. CU and CSU will assist in the tour.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Ramchand Oad	0.00 ppm	2.25 ppm	CSU	Agricultural Engr.
Mohammed Haider	0.00 ppm	0.50 ppm	CSU	Economics
Wayne Clyma	0.00 ppm	1.14 ppm	CSU	Agricultural Engr.
Robby Laitos	0.00 ppm	0.25 ppm	CSU	Sociology

2. WORLDWIDE - Professional Visitors & Networking

Code Number: 2-11-039-84

Status: Initiated Lead University: Colorado State University

Summary of Work: One visitor came to CSU during this quarter. Dr. Jayanatha Perera, Associate Director of the Agrarian Research and Training Institute in Colombo, Sri Lanka. Dr. Perera continued his visit by departing from CSU to visit Utah State University then returned to Cornell University.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Oguz Nayman	0.00 ppm	0.67 ppm	CSU	Technical Journalism

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3. WORLDWIDE - Brochures, Newsletters, Publications

Code Number: 2-12-044-84

Status: Initiated Lead University: Colorado State University

Summary of Work: The first project newsletter, the 16-page Water Management Review was distributed.

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Darlene Fowler	.50 ppm	9.93 ppm	CSU	Tech. Journalism

4. WORLDWIDE - Instructor's Guide for DA

Code Number: 2-13-042-84

Status: Initiated Lead University: Colorado State University

Summary of Work: A draft copy of the guide was completed and is being revised before printing.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Larry Nelson	0.00 ppm	2.25 ppm	CSU	Agronomy
Robby Laitos	0.00 ppm	1.00 ppm	CSU	Sociologist
Ramchand Oad	0.00 ppm	0.88 ppm	CSU	Agricultural Engr.
Mohammed Haider	0.00 ppm	1.00 ppm	CSU	Economics

A. FY84

A. 3 Special Studies

1. SRI LANKA Impact of Physical and Operational Rehabilitation on Equity of Water Distribution and Performance of Farmer Organizations

Code Number: 3-04-097-84

Status: Initiated Lead University: Cornell University

Summary of Work: This study assesses experience in the Left Bank/Gal Oya, Sri Lanka in shifting and sharing responsibilities for main system management, with a focus on activities such as measuring and monitoring water deliveries with farmer participation. Zolezzi's draft report was edited for publication as a working paper.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Hammond Murray-Rust	0.0 ppm	1.0 ppm	Cornell	Irri. Engineering
Oscar Zolezzi	0.0 gsm	4.5 gsm	Cornell	Irri. Engineering

2. WORLDWIDE Comparative Analysis of Farmer Participation

Code Number: 3-04-070-84

Status: Initiated Lead University: Cornell University

Summary of Work: The draft state-of-the art paper by Uphoff, Meinzen-Dick and St. Julien was condensed and will appear shortly as a WMS Professional Paper. The longer version is being revised for publication as a working paper.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Norman Uphoff	0.5 ppm	3.5 ppm	Cornell	Political Science
Nancy St. Julien	0.0 ppm	10.0 gsm	Cornell	City & Regional Planning
Bryan Bruns	0.0 gsm	3.0 gsm	Cornell	Rural Sociology
Ruth Meinzen-Dick	0.5 gsm	5.5 gsm	Cornell	Rural Sociology
Gerard Finnan	2.25 gsm	2.25 gsm	Cornell	City & Regional Planning

3. WORLDWIDE Small-Scale Irrigation Systems Study Completion

Code Number: 3-04-069-84

Status: Initiated Lead University: Cornell University

Summary of Work: E. Walter Coward, Jr.'s paper, "Improving Policies and Programs for the Development of Small-Scale Irrigation Systems," was published in September 1984 as Water Management Synthesis Report Number 27. "Community Participation and Local Organization for Small-Scale Irrigation" (Barbara D. Lynch) has been published as Water Management Synthesis Report Number 34. "Small-Scale Irrigation: An Examination of Critical Design Issues" (Wensley and Walter) has been published as WMS Report Number 39. James Nickum has redrafted his paper on Investment Strategies for SSI. It will be distributed as a working paper.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
E. Walter Coward, Jr.	0.0 ppm	3.1 ppm	Cornell	Rural Sociology
Michael Walter	0.0 ppm	3.1 ppm	Cornell	Agri. Engineering
James Nickum	0.0 ppm	6.0 ppm	Cornell	Economics
Barbara D. Lynch	0.0 ppm	7.5 ppm	Cornell	Rural Sociology
Beth Rose	0.0 ppm	2.4 ppm	Cornell	Editing
Ray Norman	0.0 gsm	12.0 gsm	Cornell	Agri. Engineering
Susan Turnquist	0.0 gsm	12.0 gsm	Cornell	Rural Sociology
Luin Goldring	0.0 gsm	0.1 gsm	Cornell	Rural Sociology

A. FY84

A.4 Administration

A. FY84

A.5 Overall Administration

A. FY84

A.6 Summary FY84

B. FY85

B.1 Technical Assistance

1. CHAD - Irrigated Agriculture Assessment

Code Number: 1-02-073-85

Status: Initiated

Lead University: Utah State University

Summary of Work: The review draft for the Chad Irrigated Agriculture Assessment was completed and forwarded to the Mission for their critique and comments. Mission comments range between complimentary and somewhat critical statements. On the one hand, they found the recommendations quite useful and are incorporating them into their planning activities. On the other hand, they were somewhat critical of our relatively slow time schedule and the fact that we were unable to obtain all the data that they had hoped would be available. The slowness was caused by Keller's injury, as he was unable to lead the Team, and Weaver had to take over as Team Leader. Had he not done this, the study would have been aborted in mid-stream, as Keller was injured en route to Chad. As Weaver did not expect to be Team Leader until he was en route to Chad, he had not scheduled the follow-up time necessary for completing the report, which necessitated him working it into his busy Fall schedule when he had time available. Furthermore, by not having Keller on the trip it was more difficult than usual to gather together all the information for the engineering portions of the report.

The lack of background material was simply the result of the fact that the Team was unable to find the hoped-for materials either in the document centers in Paris or in Chad. The final report should be completed early during next Quarter and will only be printed in English and used mainly as an AID planning document rather than being translated to French for broader dissemination to Chad Governmental agencies.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Jack Keller	0.00 ppm	0.00 ppm	USU	Irrig. Engineering

2. HAITI Cayes Plain—Distribution of Benefits from Irrigation Development

Code Number: 1-02-084-85

Status: Initiated Lead University: Cornell University

Summary of Work: Laura Reynolds, Rural Sociology graduate student, travelled to Haiti. She spent approximately one month learning Creole, then relocated in the Cayes Plain area and began a study focusing on the impacts of irrigation development on land values, land sales, and land consolidation in the project area. Reynolds returned from Haiti in late November to work on data analysis and report preparation.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Laura Reynolds	2.0 gsm	4.5 gsm	Cornell	Rural Sociology

3. INDONESIA Small-Scale Irrigation Workshop and Other Technical Assistance

Code Number: 1-02-009-85

Status: Initiated Lead University: Cornell University

Summary of Work: This activity consists of a series of efforts in support of irrigation development in Indonesia including technical assistance in analysis of irrigation regulation and water disputes, engineering assistance to various small-scale irrigation projects, and a workshop for selected Indonesian government officials from West Java, NTB and NTT. Jeff Brewer has been compiled the final report for this activity, which is being prepared for publication.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Loren Parks	0.0 ppm	1.0 ppm	University of California (Davis)	Economics
Ramchand Oad	0.0 ppm	1.0 ppm	CSU	Engineering
Andrew Keller	0.0 ppm	1.0 ppm	USU	Irri. Engineering
Jeff Brewer	0.0 ppm	1.25 ppm	CSU	Anthropology
Pierre LaRamee	.25 ppm	.25 ppm	Cornell	Editor

4. NEPAL - Rapid Appraisal

Code Number: 1-02-087-85

Status: Initiated Lead University: Colorado State University

Summary of Work: A series of Rapid Appraisals of irrigation systems were conducted in Nepal to provide relevant information to GON and USAID/Nepal personnel concerning the best sites for implementing USAID/Nepal's new Irrigation Management Project.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Robby Laftos	2.25 ppm	2.75 ppm	CSU	Sociology
Al Early	2.25 ppm	2.65 ppm	CSU	Agricultural Engr.

5. SRI LANKA Socioeconomics Studies for Rehabilitation

Code Number: 1-02-004-85

Status: Initiated Lead University: Cornell University

Summary of Work: Norman Uphoff returned to Sri Lanka to review the Institutional Organizer/Farmer Organizer program in Ampare. He traveled to Galgamuwa (GITI) and returned to Ampare to participate in the training program for a new batch of Sinhala speaking IOs. In addition he consulted with mission and ARTI personnel in Colombo.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Norman Uphoff	0 ppm	2.25 ppm	Cornell	Political Science

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B. FY85

B.2 Training and Technology Transfer

1. PAKISTAN - TR-Mgmt. Officials Training Planning

Code Number: 2-01-065-85

Status: Initiated

Lead University: Colorado State University

Summary of Work: An assessment of management training needs in Command Water Management (CWM) was conducted by A. Jones of the International Development Management Center, University of Maryland; Ed Kirdar of the Salt River Project and Wayne Clyma. A training program of Action Training was recommended that combines management training with the management planning and is scheduled for each of the four provinces. The action training will attempt to establish a working organization for implementation of CWM in the four provinces while providing training in management.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Wayne Clyma	0.75 ppm	0.75 ppm	CSU	Agricultural Engr.
Ed Kirdar	1.00 ppm	1.00 ppm	Salt River	Civil Engineer

2. WORLDWIDE - Lessons Learned: Irrigation Systems Management

Code Number: 2-14-039-85

Status: Initiated

Lead University: Utah State University

Summary of Work: During the quarter a two-person team went to Washington D.C. to gather materials of donor agencies for the activity and to talk with their representatives about those they consider the most experienced irrigation experts who have worked for or with them. Written materials were obtained from the World Bank, the Inter-American Development Bank, and AID. Also, lists of experienced irrigation experts were generated through discussions with representatives of the donor institutions.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Allen LeBaron	0.00 ppm	0.00 ppm	USU	Ag. Economics
Bryant Smith	1.00 ppm	0.00 ppm	USU	Law/Institutions
R. Kern Stutler	0.35 ppm	0.35 ppm	USU	Irrig. Engineering
J. Perera	0.13 ppm	0.13 ppm	Sri Lanka (Honorarium)	Sociology

3. WORLDWIDE - French Language Training

Code Number: 2-11-041-85

Status: Initiated

Lead University: Utah State University

Summary of Work: Two Ag. and Irrigation Engineering staff members were taught French on a tutorial basis on non-department time. The cost of the activity was for only the tutor.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Jean Paul Favre	0.45 gpm	0.45 gpm	USU	Engineering

4. WORLDWIDE - IDM (Irrigation Data Management) Workshop

Code Number: 2-14-032-85

Status: Initiated

Lead University: Colorado State University

Summary of Work: Pakistan/IDM Workshop. USAID/Pakistan and GOP will host two IDM Workshops in 1986. Based on Sheng's meeting with the mission and GOP in November, a two-phase training approach was selected. Phase one of the workshop is scheduled for March. Two identical IDM workshops will be conducted: one workshop in Karachi for the CWM staff from Sind and Baluchistan, and one in Islamabad for the staff from NWFP and Punjab. Phase two will be conducted in September using the same format as phase one. Phase one of the workshop will cover the fundamentals of IBM/PC and ways to use commercially available software for IDM applications. Then, phase two training will follow up with more advanced programming techniques in IDM.

India/IDM Workshop. USAID/India agreed to host an IDM Workshop in 1986. The mission will provide fullfunding for the workshop, once the details and modalities are finalized. Sheng will visit the mission to finalize the workshop prior to his trip to Pakistan in March or even earlier if his schedule permits and funding for overseas travel is available.

Sri Lanka/IDM Workshop. Sheng met with Mr. Herb Blank (USAID/Sri Lanka) and the Irrigation Department staff in December to discuss the possibility of WMS II providing the IDM Workshop. Feedback from the meeting indicated the department is interested in having an IDM Workshop, but they need time to discuss this further with the mission. As of December 31, 1985, the mission has not requested for an IDM Workshop.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
John Webb	1.00 ppm	2.25 ppm	Consultant	Tech. Journalism
Tom Sheng	1.00 ppm	4.25 ppm	CSU	Civil Engr.
Darlene Fowler	0.50 ppm	0.50 ppm	CSU	Tech. Journalism

B. FY85

B.3 Special Studies

1. MOROCCO - Case Study

Code Number: 3-04-043C85

Status: Initiated

Lead University: Utah State University

Summary of Work: Utah State University personnel visited Morocco during the third and fourth quarter of FY 85 to set up a case study. The Government, ORMUAs and University groups were very excited and willing to collaborate.

USAID/Morocco was not helpful nor inclined to encourage participation in the irrigated sector. The USAID/Morocco country strategy and its personnel are directed toward rainfed agriculture. During the second visit to Morocco, a USU PID team prepared a PID document that included elements of a project dealing with the irrigated sector. Apparently, this was not well received. Consequently, USU does not intend pursuing a Moroccan case study with any vigor and will request a shift in funds to more case studies in Thailand or Sri Lanka. There will be some individual collaboration with Moroccans such as Dr. Rachid Abdellaoui who was an early member of the USU Main System team. Similarly, a continuing linkage will be maintained with Mr. Filali Abdelwahab who is working on the main system allocation model. It is hoped that these individual contacts can be maintained well enough to test main system software in Morocco.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Wynn R. Walker	0.00 ppm	0.00 ppm	USU	Irrig. Engineering

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2. THAILAND - Case Study

Code Number: 3-04-043B85

Status: Initiated

Lead University: Utah State University

Summary of Work: The first quarter of FY 86 saw the completion of the one-year training exercise for Mr. Charoon Pojsoontorn, a Royal Irrigation Department Operations Engineer, working on the Lam Nam Oon Project in the northeast. It is believed that his time was well spent at USU, having participated in several International Irrigation Center short courses and utilizing the UCA and Main System Hydraulic Model to evaluate conditions at Lam Nam Oon. He will begin a data collection program upon return to more fully utilize the UCA Model. His colleague, Mr. Kanching Kawsard, will continue the application of the models to both Lam Nam Oon and the Hiai Aeng Project.

The USAID Mission to Thailand and the Thai Government initiated a PIO/C with USU for the purchase of a duplicate computer system to the one being used by the main system team. The computer has been ordered and will be taken to Thailand in June 1986 and installed at Region Headquarters in the northeast. All WMS main systems software will also be installed. Special code training was given to Mr. Pojsoontorn and will be repeated for Mr. Kawsard.

The remaining work under this activity will be for Mr. Kawsard's preparation of his M.S. thesis report under the direction of Professor G.V. Skogerboe.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION ing
	Quart.	Cum.		
Kanching Kawsard	1.50 gpm	1.50 gpm	USU	Irrig. Engineering
C. Pajsoontorn	1.50 gpm	1.50 gpm	USU	Irrig. Engineering

3. WORLDWIDE - Irrigation Systems Modeling Development

Code Number: 3-04-043A85

Status: Initiated

Lead University: Utah State University

Summary of Work: Two software packages have been completed. The first is the "Unit Command Area Model" and the second is the "Main System Hydraulic Model." The UCA Model was used extensively by two visiting engineers from the Central Water Commission of India for advanced planning of two projects in India. They transported a copy to New Delhi for local implementation. The UCA Model will be documented with a Ph.D dissertation in the second quarter of FY 86 and another in the fourth quarter.

The Main System Hydraulic Model is being finalized with respect to graphic display by two USU engineers. It has been utilized by the two Royal Thai Irrigation Department Engineers undergoing training at USU. Documentation will be developed in the second and third quarters of FY 86.

The reservoir model has been undergoing parallel development through a collaboration agreement with the Utah Water Research Laboratory. It is not funded by WMS but has utilized limited WMS resources to insure linkage with the UCA and Main System Allocation Model. Little, if any, work was underway on this model during the first quarter.

The Watershed and Framework Models were initiated in FY 85 and are still in the early stage of development. Specific progress to date has been limited.

The Main System Allocation Model received a critical internal evaluation during the ISM Workshop, and the student working on it has returned home. At this point, it appears that the segment of the software will have to be completely reformulated.

Overall, the main system team is working well together and proceeding toward project completion.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Wynn R. Walker	0.92 ppm	0.92 ppm	USU	Irrig. Engineering
Willem Vlotman	1.00 ppm	1.00 ppm	USU	Irrig. Engineering

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4. WORLDWIDE - Rapid Irrigation Project Appraisal Using Remote Sensing Systems

Code Number: 3-04-042-85

Status: Initiated

Lead University: Utah State University

Summary of Work: Work is completed with the exception of the final report from IRIS International. Following receipt of the IRIS report in January, the USU WMS II personnel will review and submit a final activity report by the end of the second quarter of FY 86. Intermediate results have been examined at USU and field data has been coupled to the satellite images. It seems obvious that many of the issues raised regarding the use of remote sensing can be dealt with if the data can be accessed. The most limiting factor on the widespread use of remote sensing is not the technology or its sensitivity, but the inordinate delays in obtaining the digital data from the down link stations. Much of Asia, for example, down loads to the Indian center. This data is effectively useless because it is not available in anything like a reasonable period of time. Fortunately for this activity, some satellite data covering Sri Lanka is also available from Thailand.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
IRIS International	0.25 ppm	0.25 ppm	Subcontractor	LANDSAT Data

5. WORLDWIDE - Irrigation Systems Modeling Workshop

Code Number: 3-04-043E85

Status: Initiated

Lead University: Utah State University

Summary of Work: This activity was held in the fourth quarter of FY 85 and has been summarized previously. At the recommendation of Drs. Keller and Smith of the USU management and Dr. McConnen of CID management, the main system team has been using residual funds to improve presentation materials describing the USU project in order to give a similar workshop to WMS/Washington management.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Francis Gichuki	1.00 gpm	1.00 gpm	USU	Irrig. Engineering
Hubert Eisele	1.50 gpm	1.50 gpm	USU	Irrig. Engineering
Andrew Keller	1.50 gpm	1.50 gpm	USU	Irrig. Engineering

6. WORLDWIDE Phase II: Comparative Analysis of Indirect Investment Strategies for Development of Small-Scale Irrigation Works

Code Number: 3-04-054-85

Status: Initiated

Lead University: Cornell University

Summary of Work: Graduate assistants Wensley and Goldring revised a draft paper prepared on indirect investments in US Irrigation by the Soil Conservation Service, the Bureau of Reclamation, the Army Corps of Engineers, and the states. This paper includes an extensive literature review, analysis of indirect investment strategies in the US, and their application to Third World situations. Plans were made to select sites for field studies in Indonesia.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
E. Walter Coward, Jr.	0.0 ppm	0.25 ppm	Cornell	Rural Sociology
Chris Wensley	3.0 gsm	8.0 gsm	Cornell	Agri. Engineering
Luin Goldring	1.0 gsm	4.0 gsm	Cornell	Rural Sociology

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7. WORLDWIDE Irrigation Systems Performance as Affected by Management Intensities

Code Number: 3-04-056-85 (formerly 3-04-096-84)

Status: Initiated Lead University: Cornell University

Summary of Work: Bob Yoder and Ed Martin have completed dissertations on the performance of farmer-managed irrigation in two small-scale systems with different supply constraints. Carol Ferguson is analyzing data from her research in the Philippines under the supervision of Randy Barker. The group also began work on a final report for AID distilling the research results.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Randolph Barker	0.25 ppm	3.25 ppm	Cornell	Agri. Economics
Edward Martin	3.0 gsm	16.5 gsm	Cornell	Agri. Economics
Robert Yoder	2.0 gsm	19.5 gsm	Cornell	Agri. Engineering
Fred Valera	0.0 gsm	9.0 gsm	Cornell	Agri. Engineering
Carol Ferguson	0.0 gsm	2.5 gsm	Cornell	Agri. Economics
Tammo Steenhuis	0.5 ppm	2.5 ppm	Cornell	Agri. Engineering

8. WORLDWIDE Rural Employment and Irrigation System Performance

Code Number: 3-04-055-85

Status: Initiated Lead University: Cornell University

Summary of Work: Graduate assistant Ruth Meinzen-Dick is completing a literature search and review of materials dealing with the relationships between employment and irrigation development. In December she visited ILO offices in Geneva to collect relevant documents. A draft paper has been circulated for comment.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Ruth Meinzen-Dick	1.0 gsm	10.0 gsm	Cornell	Rural Sociology
E. Walter Coward, Jr.	0.25 ppm	0.25 ppm	Cornell	Rural Sociology

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B. FY85

B.4 Administration

Administration

1. CSU Administration FY 85 0-02-998-85
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Armentrout, Janelle
Clyma, Wayne
Fowler, Darlene
Freeman, Dave
Kelly, Don
Lattimore, Dan
Lindburg, Mary
Madsen, Al
Meyer, Beverly
Podmore, Terry
Schmehl, W.
Sheng, Tom
Wunch, Sandra
Sunada, Dan

B. FY85

B.5 Overall Administration

B. FY85

B.6 Summary FY85

C. FY86

C.1 Technical Assistance Activities

1. EGYPT - Irrigation Sector Assessment

Code Number: 1-02-052-86

Status: Initiated

Lead University: Utah State University

Summary of Work: A five-person team went to Egypt during November to carry out an irrigation sector survey for the AID Mission and the Government of Egypt. The combined team took a number of field trips to various project sites and reviewed a large number of documents from government and USAID contractor sources as part of the evaluation.

A team of Egyptian counterparts collaborated closely with the USU team and a draft report was submitted to the Mission and GOE by the combined USU/Egyptian team before the USU team left Egypt. After the team's return to the U.S., Dean Peterson edited the draft materials in Utah. In January of 1986 an Egyptian irrigation expert, Eng. Sarwat, will go to Logan to finalize the report with Peterson.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Glen Stringham	1.45 ppm	1.45 ppm	USU	Irrig. Engineering
David W. James	1.35 ppm	1.35 ppm	USU	Soil Science
Dean F. Peterson	1.45 ppm	1.45 ppm	Consultant	Irrig. Engineering
Gerald Wheelock	1.20 ppm	1.20 ppm	Consultant	Anthropology
Keith Roberts	1.40 ppm	1.40 ppm	Consultant	Ag. Economics
Linda Fields	0.20 spm	0.20 spm	USU	Typing

2. INDIA - Social Technical Feasibility Study

Code Number: 1-04-059-86

Status: Initiated

Lead University: Colorado State University

Summary of Work: The Madhya Pradesh Irrigation Department wants to begin farmer involvement activities in conjunction with AID's Minor Irrigation Scheme Project. Rather than beginning such activities on their own, the Irrigation Department has requested help from the Bhopal WALMI. The WALMI officials, in turn, asked Mr. R.S. Pachori of their staff to coordinate this work.

Dr. Pachor was assisted in designing the methods and content of a study of the Ratapani Irrigation Project (1,500 ha) prior to beginning farmer involvement activities. Additionally, a meeting with a number of concerned Irrigation Department officials and with a group of Ratapani farmers.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
William Laitos	0.25 ppm	0.25 ppm	CSU	Sociology

3. KENYA Small-Scale Irrigation Analysis

Code Number: 1-02-042-86

Status: Initiated Lead University: Cornell University

Summary of Work: A four-man team headed by E. Walter Coward, Jr. Rural Sociology, and including, Richard McConnen, economist, CID, Ramchand Oad, Agricultural Engineering, Colorado State University, and Francis Gichuki, an engineering graduate student from Utah State University, spent a month in Kenya assessing past experiences with the design, operation and management of small-scale irrigation in Kenya. This was augmented by two local consultants selected by the mission: anthropologist Joseph Ssenyonga and Leo Arao, an agricultural economist. While in Kenya, the team drafted substantial portions of their report **Small-Scale Irrigation Development in Kenya: Current Public and Private Sector Activities**. Coward spent the remaining weeks in December compiling and editing the report.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
E.W. Coward, Jr.	1.5 ppm	1.5 ppm	Cornell	Rural Sociology
Richard McConnen	1.5 ppm	1.5 ppm	CID	Ag. Economics
Ramchand Oad	1.0 ppm	1.0 ppm	CSU	Ag. Engineering
Joseph Ssenyonga	1.0 ppm	1.0 ppm	Consultant	Anthropologist
Leo Arao	1.0 ppm	1.0 ppm	Consultant	Ag. Economics
Francis Gichuki	1.0 gsm	1.0 gsm	CSU	Ag. Engineering

4. SRI LANKA - Extension of Long Term

Code Number: 1-02-047-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

No activity this quarter.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
No Staffing				

5. SRI LANKA - Central Support

Code Number: 1-02-048-86

Status: Initiated

Lead University: Colorado State University

Summary of Work: From November 28 to December 13, Dr. Tom Sheng helped the long-term diagnostic analysis team in Sri Lanka to process and analyze the irrigation data collected from the Parakrama Samudra Scheme during the 1985 Yala season. Mr. Weerakon (Senior irrigation engineer for the DA studies) and Tom devised a way to automate the irrigation data processing, analysis, storage, and retrieval process, using the microcomputer with the Lotus 1-2-3 electronic worksheet package. Within 16 days, several system strengths and constraints regarding water distribution of PSS were identified based on the results (tables and graphs) of the computer assisted engineering analysis. These preliminary DA findings and related computer outputs are included in Sheng's trip report as an example for those who are interested in the computer assisted IDM (Irrigation Data Management).

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Tom Sheng	1.00 ppm	1.00 ppm	CSU	Civil Engineer

C. FY86

C.2 Training and Technology Transfer Activities

1. WORLDWIDE - Revision of Training Manuals

Code Number: 2-13-003-86

Status: Initiated

Lead University: Colorado State University

Summary of Work: A number of editorial revisions have been made by Darlene Fowler in the reprints. An interdisciplinary team will make the appropriate revisions in the Volume I and Volume II of the DA training manual in May and June of 1986.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Darlene Fowler	1.50 ppm	1.50 ppm	CSU	Tech. Journalism

2. WORLDWIDE - Rev. & Dev. Videotapes

Code Number: 2-03-004-86

Status: Initiated

Lead University: Colorado State University

Summary of Work: A slide show about the project was produced and is available on videotape. A program on Technology In Irrigation Data Management was produced. Revisions of graphics for a program on the role of economics in diagnostic analysis were completed. Videotapes produced by the project were reproduced and distributed worldwide.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
John Webb	3.00 ppm	3.00 ppm	CSU	Tech. Journalism

3. WORLDWIDE - Seminar on Irrigation Rehabilitation #2

Code Number: 2-05-006-86

Status: Initiated Lead University: Colorado State University

Summary of Work: A draft program for the conference has been prepared and the process of identifying participating donor organizations, and participants has started. A number of case studies and papers to be presented have been identified. The conference is tentatively scheduled for October 1986.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		

No Staffing

4. WORLDWIDE Rehabilitation Game Revision

Code Number: 2-13-018-86

Status: Initiated Lead University: Cornell University

Summary of Work: Following a trial of the revised and improved Rehabilitation Game at the CSU Pingry Park Workshop, Rob Oaks under the supervision of Ed Vander Velde and Tammo Steenhuis, has begun work on the development of a computer software and manual package for reproduction. A hard card has been designed to adapt personal computers for the Rehab Game software.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Robert Oaks	3.0 gsm	3.0 gsm	Cornell	Ag. Engineering
Ed Vander Velde	0.25 ppm	0.25 ppm	Aquinas Coll.	Geography
Tammo Steenhuis	0.50 ppm	0.50 ppm	Cornell	Ag. Engineering

5. WORLDWIDE Conference on Lessons Learned

Code Number: 2-07-019-86

Status: Initiated Lead University: Cornell University

Summary of Work: Michael Walter, Agricultural Engineering, and Randy Barker, Agricultural Economics, at Cornell began work on workshop design in consultation with Jack Keller at USU. In late December, the conference coordinators, in collaboration with the Cornell WMS core faculty chose three broad themes for emphasis: Analysis of Irrigation System Management, Irrigation in Africa, and the AID Irrigation Project Design Experience.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Michael Walter	0.25 ppm	0.25 ppm	Cornell	Ag. Engineering
Randy Barker	0.25 ppm	0.25 ppm	Cornell	Ag. Economics

6. WORLDWIDE Triad Synthesis I

Code Number: 2-14-037-86

Status: Initiated Lead University: Cornell University

Summary of Work: E. Walter Coward, Jr. Rural Sociology, and Norman Uphoff, Political Science, attended a meeting of UPDs and other WMS staff to design a series of "synthesis" activities which will pull together and refine understandings growing out of WMS experiences with TA, training, and special studies.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
E.W. Coward, Jr.	0.25 ppm	0.25 ppm	Cornell	Rural Sociology
Norman Uphoff	0.25 ppm	0.25 ppm	Cornell	Political Science

7. WORLDWIDE - Triad Synthesis #1

Code Number: 2-14-035-86

Status: Initiated

Lead University: Colorado State University

Summary of Work: Preplanning to develop the priorities, scope and objectives of the synthesis effort have occurred. A plan for accomplishing the objectives is under preparation.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
No Staffing				

C. FY86

C.3 Special Studies

1. NIGER Traditional and Developed Small-Scale Irrigation Study

Code Number: 3-04-023-86

Status: Initiated Lead University: Cornell University

Summary of Work: W. Ray Norman has established research sites at Moullela and Guidan-Magagi, two ONAHA perimeters in the Maggia Valley and at Koumassa, a traditional onion gardening site. Data collected include plot measurements and mapping, plant density counts, timing of furrow and basin wetting, infiltration rates, soil moisture monitoring. Norman has been interviewing farmers to gather data outside of the research sites with Nigerien assistants. In addition, at the request of AID/Niamey, Norman has consulted with other groups in Niger who have an interest in small-scale irrigation. Roelef Sikkens, a graduate student in Agricultural Engineering visited Niger to help Norman with data collection in the field. Norman's data collection activities were set back by flooding in several perimeters under study.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Ray Norman	3.0 gsm	15.5 gsm	Cornell	Agri. Engineering
Mike Walter	0.0 ppm	0.75 ppm	Cornell,	"
John Wells	0.0 gsm	3.5 gsm	Cornell	"
Tammo Steenhuis	0.5 ppm	0.5 ppm	Cornell	"
Roelef Sikkens	1.5 gsm	1.5 gsm	Cornell	"

2. SRI LANKA - Landsat '86

Code Number: 3-04-011-86

Status: Initiated Lead University: Colorado State University

Summary of Work: Continue project from 1985. Completed 1:24,000 scale map of irrigation systems, in Polonnaruwa area, from aerial photos and ground data. Researched computer classification of Landsat digital data. Researched and ordered image processing and geographic information computer system. Received 1985 Landsat data from Thailand receiving station.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Tim Martin	1.50 gpm	1.50 gpm	CSU	Agronomy

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3. THAILAND - Special Studies

Code Number: 3-04-008-86

Status: Initiated

Lead University: Colorado State University

Summary of Work: The Thailand Special Studies activity was initiated in the last quarter of FY 1985 with the hiring of a Thai Social Scientist as a Research Associate of CSU. The first quarter of FY 1986 was the beginning of field activities while Dr. Laitos and Dr. Early were on TDY in Thailand (October 19 - November 4) including:

- a) Project initiation workshop (Sr. Officials);
- b) Rapid Appraisal of the Lam Chamuak Selected Site (by project personnel);
- c) Solution Search Workshop (Sr. Officials).

In the latter workshop a workplan was prepared including:

- a) preparation for field research of technical and institutional process documentation
- b) preparation for institutional organization including
 - i) recruitment of irrigation community organizers (ICO's)
 - ii) training of ICO's
 - iii) placement of ICO's in Lam Chamuak Tank Irrigation System
- c) hiring of an organizational consultant, to assist with training of ICO's and to assist the RID/CSU staff in preparation of the annual workplan

The ICO's were fielded in mid-December. Process documentation on the institution and technical aspects of the project were initiated at the same time.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Al Early	0.75 ppm	0.75 ppm	CSU	Agricultural Engr.
William Laitos	0.50 ppm	0.50 ppm	CSU	Sociology

4. SRI LANKA - Interfacing OFWM

Code Number: 3-04-009-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

John and Patricia Wilkens-Wells were successful in assembling a Sri Lankan team including a sociologist, economist, engineer and agronomist. Data collection during the wet season was used as preparation and training for systematic data gathering during the coming dry season. Preliminary data gathered identified four distinct types of farmer organizations at the research sites.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
John Wilkens-Wells	2.25 mo.	2.25 mo.	CSU	Sociology
Pat Wilkens-Wells	2.25 mo.	2.25 mo.	CSU	Sociology

5. WORLDWIDE - Interfacing/Backstopping

Code Number: 3-04-010-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

-Campus group is processing data from Pakistan and will be doing the same with data from Thailand as it comes in.

-Campus group has been a support in the training of a team in Thailand.

-Synthesizing of experiences from several project activities is underway. Campus group will share results at the Triad-Synthesis meeting in March, 1986.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Oad	.5 mo.	.5 mo.	CSU	Ag. & Chem. Eng.
Wendell	1.5 mo.	1.5 mo.	CSU	Sociology

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C. FY86

C.4 Administration

WORLDWIDE - Administration

Code Number: 0-02-997-86

Status: Initiated

Lead University: Utah State University

Summary of Work: During the quarter budgets and approval requests were prepared for the following activities: Finishing Plan MERIS, Egypt Irrigation Sector Survey, India Demonstration Workshop, and Expert Consultation for Pakistan. Consulting agreements were prepared for Dean F. Peterson, Gerald Wheelock, Keith Roberts, and Mr. Vantessan. Continuing technical coordination was required on the Plan MERIS activity, the India Demonstration Workshop, the Africa Irrigation Overview, and the Chad TA activity. Administrative work was involved with USAID/India and in the preparation of four MacIntosh computers, printers, software, and accessories for shipment to India.

Revised proposals were examined and prepared and budgets estimated for three activities including the Guatemala Model, Rome Conference on Water Charges, and the Irrigation Experience Transfer activity.

Travel preparations including tickets, per diem advances and travel authorization requests to AID, as well as the liquidation of trip expenses were carried out for the following people: Kern Stutler, Dean Peterson, Keith Roberts, David James, Glen Stringham, Gerald Wheelock, Charoon Pojsoontorn, Jack Keller, Jon Moris, Mr. Perera (visitor to USU Lessons Learned activity), Francis Gichuki, Allen LeBaron, and Bryant Smith.

In addition to a number of trip reports and general correspondence, the following major reports were typed on the administrative budget: three volumes of the India Irrigation Sector Evaluation and Strategy Review, Egypt Irrigation Sector Survey draft, African Irrigation Overview Summary, Haiti Irrigation Sector Survey, and the Discharge Ratings for Control Structures and Channel Losses for Computer Operation of Gal Oya Irrigation Project.

Finally, accounting for expenditures under the project were tracked and kept up to date as well as a quarterly financial report prepared. A report was prepared for CID which included a summary of all USU/WMS II activities for the six preceding months.

Staffing:

PERSON	ACTIVITY TIME Quart.	Cum.	AFFILIATION	SPECIALIZATION
<u>Professional:</u>				
Jack Keller	2.11 ppm	2.11 ppm	USU	Irrig. Engineering Institutional
Bryant D. Smith	2.25 ppm	2.25 ppm	USU	
<u>Support Staff:</u>				
Angie Ballam	0.75 spm	0.75 spm	USU	Secretarial/Typing Secretarial/Acctg. Secretarial/Typing Secretarial/Typing
JoAnn Biery	3.00 spm	3.00 spm	USU	
Linda Fields	3.00 spm	3.00 spm	USU	
Donna Gossner	0.75 spm	0.75 spm	USU	
<u>Students:</u>				
Camille Loveland	0.68 gpm	0.68 gpm	USU	Secretarial/Typing

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Administration

1. CSU Administration FY 86 0-02-998-86

NAME	QUARTERLY 9/1/85-12/31/85	CUMULATIVE 12/31/85
Freeman, Dave	1.00 ppm	1.00 ppm
Lattimore, Dan	1.50 ppm	1.50 ppm
Lindburg, Mary	2.25 ppm	2.25 ppm
Madsen, Al	1.00 ppm	1.00 ppm
McPhaul, Vonni	2.50 ppm	2.50 ppm
Meyer, Beverly	3.00 ppm	3.00 ppm
Schmehl, W.	0.46 ppm	0.46 ppm

C. FY86

C.5 Overall Administration

CSU PPM on Other Institution's Activities

Cornell University-Kenya 1-02-042-86

Ramchand Oad 1.50 ppm 1.50 ppm

C. FY86

C.6 Summary FY86

V. FINISHED ACTIVITIES

The information contained in this section refers solely to finished activities. When activities appear in this section, the specific work has been finalized and reports have been distributed. After an activity has appeared in this section of the quarterly report, it will not be included again until a final tabulation of funding has been completed. At that time, it will appear as a completed activity in the financial section.

FINISHED ACTIVITIES

A. Technical Assistance Activities

Country: Egypt

Title of Activity: TA-Eval. of IMS

Code Number of Activity: 1-02-072-85 Finished Date: October 28, 1985

Lead University: Colorado State University

Description of Activity:

This evaluation is to assist the overall financial, physical, technical and organizational aspects of the Irrigation System Management Project in Egypt as well as improve its effectiveness in reaching the defined purposes. The finding of this evaluation will assist in the determination of whether to proceed with additional work and/or further commitments.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Dr. W. W. Shaner	Colorado State University	Engr. Economist
Dr. C. D. Busch	Consultant	Irrigation Engr.
Dr. F. A. Santopolo	Colorado State University	Sociologist
Eng. Mohammed Ali	Government of Egypt	Civil Engineer
Eng. Ahmed Fahmy	Government of Egypt	Civil Engineer

Significant Findings and Results:

The Irrigation System Management Project consists of ten components of which nine were evaluated. The nine components evaluated were the Project Preparation Unit, North Zifta Feasibility Study, Gharbia O&M, Training and Manpower, Commodities, Consulting Services, Regional Irrigation Improvement Project, Water Research Center, and Telemetry. The activities of the IMS project are in line with the government of Egypt's concern for making more efficient use of the Niles' waters. The set of IMS activities have an internal consistency that makes their implementation under a single USAID umbrella a reasonable approach. The project outputs are in the form of improved institutional capabilities in each of the nine components. The project has fallen behind in a number of its physical and expenditure targets. For this reason, the Ministry of Irrigation will require more time to complete the projects objectives than allotted in the grant agreement.

The Ministry of Irrigation (MOI) operates under a serious manpower constraint because of the general demand for engineers outside of MOI and the governments low rate of remuneration.

Recommendation: The IMS Coordinating Committee should contact higher level GOE authorities to explore ways of solving the MOI's manpower shortage. USAID should explore ways with GOE for enhancing and expediting incentive payments to MOI staff.

The relationships between the MOI and Ministry of Agriculture (MOA) are reportedly good at the national and directorate levels; in contrast, we found little evidence of effective integration of their activities at the grass roots level.

Recommendation: USAID should contact MOI, MOA and other donors to discuss ways to bring about more effective cooperation and coordination among the activities of these two ministries.

The Project Preparation Unit (PPU) has serious constraints in its use to conduct prefeasibility studies on potential projects, a conflict between its function of training and project preparation, and a lack of experienced staff in planning.

Recommendation: The coordinating committee should assist the PPU to select projects and prepare feasibility studies, establish priorities for training and project preparation, and assist the project director in recruiting more experienced Egyptian staff. The PPU should begin immediately planning for an extension of the technical assistance contract.

The North Zifta Project reached negative conclusions concerning its feasibility study. However, a number of significant findings concerning open channel buried pipeline design should be considered for field testing and development in the project area. The Gharbia O & M project needs administrative changes to allow the water distribution unit to accept responsibility for implementation of the O&M activities and the project needs further technical assistance.

Recommendation: Further technical assistance should be provided and the administrative change to allow the water distribution unit responsible for implementing O&M.

The Training and Manpower unit needs improvement in the evaluation process and needs an expanded effort because of the increased need for additional staff in the Ministry of Irrigation and Ministry of Agriculture. The regional irrigation improvement program will also need an expanded interdisciplinary staff.

Recommendation: Expatriate assistance in increasing the training capability should be provided immediately. USAID should provide an assessment team to study the feasibility of a national training institute. The on-farm water management course should be retained in its original format.

The Regional Irrigation Improvement Program (RIIP) has begun the process of preparing designs for canal improvements but has not started on Mesqa or other on-farm improvements. The target of improving 40,000 to 50,000 feddans by July 1987 will not be attained. Several reasons explain the slow start.

Recommendation: The MOI and Consortium for International Development (CID) expatriate team should take up the question of the type of pilot program to undertake, a revised timetable for accomplishments should be prepared and the Ministry of Agriculture should be formally brought into the RIIP program.

The Water Research Center (WRC) carries responsibilities to continue the work begun by the Egypt Water Use and Management Project to assist in the implementation of RIIP. The Water Management Research Institute (WMRI) will continue the on-farm work previously conducted by EWUP.

Recommendation: Because of WRC's influence over RIIP the WRC director should explore with USAID ways in which the MOA extension agents may become members of interdisciplinary teams responsible for improving irrigation at the Mesqa level.

The Telemetry Project provides an example of a well conceived approach for technology transfer which developed over the past eight years. The director faces serious problems in the lack of Egyptian staff.

Recommendation: The project director should pay particular attention to future staffing requirements, including the acquiring of back-up staff. Significant incentive increases for key employees should also be considered.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Egyptian Evaluation Report	October 28, 1985	JPMT USAID/Egypt

Country: Pakistan

Title of Activity: Baseline Survey

Code Number of Activity: 1-04-083-85 Finished Date: December 31, 1985

Lead University: Colorado State University

Description of Activity: Provide guidance to the provincial policy committee and the subproject managers in the development of plans for implementation of a baseline survey in each of the seven subproject areas. Assistance will be directed through USAID and the federal coordinator to assist in the development and review of plans for implementation of the baseline surveys.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Norm Evans	CSU	Ag. Engineer
Norm Landgren	CSU	Ag. Economist

Significant Findings and Results:

The Baseline Survey team consisted of Drs. Norman Evans and Norman Landgren, an engineer and economist, respectively. Their purpose was to review the status and plans for a Baseline Survey in each province, evaluate the plans for achievement of their purpose, advise the provincial officials on a desirable plan, and identify staffing and staff training needs and recommend how these needs might be met. The plan was implemented through visits to each of the provinces with discussions with the subproject managers, other provincial personnel and personnel of prospective organizations who might assist in the Baseline Survey.

The team provided a report on their visit to each province with an identification of particular needs in each province. They developed a framework to guide the Baseline Survey effort, interviewed personnel of organizations for their ability to provide needed assistance and made recommendations on appropriate organizations, and suggested a strategy for each province to use in implementing the Baseline Survey. Their recommendations were as follows:

Recommendations:

1. Given the critical importance of comprehensive baseline data before project implementation, the BLS design and implementation should be given high priority by all subproject managers.
2. Each subproject management office should recruit a qualified and experienced staff member to handle BLS responsibilities. The preferred discipline for this person would be economics.
3. Outside professional assistance should be employed for design of BLS and formulation of necessary questionnaire instruments. Services may include the total implementation of BLS, including engineering and physical measurement, or only that part which cannot better be done by personnel of line

agencies under SPM coordination. Qualified organizations have been identified that are conveniently located for each subproject as follows:

NWFP - Institute for Development Studies, Peshawar Agricultural College, Dr. Noorul Islam Mian, Director, (The Center for Applied Economic Studies, University of Peshawar, Prof. Nazir Ahmed, should be investigated as an alternative).

Punjab - Punjab Economic Research Institute Lahore, Dr. Jameel Khan, Director

Baluchistan - Sind Regional Planning Office, Agriculture Center, Karachi, Mr. Pirzada, Additional Director

Sind - S.R.P.O. (above), or Agricultural Economics Department, Sind Agricultural University, Tando Jam, Prof. Siddique

4. A model for format and content of a "scope of work" should be prepared for guidance to SPM's in negotiations for technical assistance. In this regard, some thoughts of the team are attached as Appendix C. Each SPM would need to modify as appropriate.

5. To the extent possible, the BLS in the seven subproject areas should use common survey designs, methodology, survey instruments and reporting formats to enable subsequent inter-project comparisons.

6. Close collaboration and coordination between SPMO staffs responsible for the BLS and agencies/institutions providing external assistance will be essential for achieving consistency among subprojects. This will be particularly important during the design phase, but should continue throughout the BLS activity. Workshops involving BLS principals from each province are recommended to achieve the desired consistency.

7. Based upon review of previous monitoring and evaluation of water related projects in Pakistan, the team believes that intensive study of purposively selected sample of watercourses and farms enabling water and farm budget documentation offers the best potential for assessing the direct effects and impacts of CWMP components and recommends that this approach receive consideration in designing the BLS.

8. The team is advised that plans for M & E of the OFWM II project will be finalized by October 31, 1985. As OFWM is an important component of the CWMP, the BLS design for CWMP should be developed with consideration of the finalized OFWM II plans to take advantage of any complementarities and avoid duplication of time and expense where possible.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Baseline Survey Training	October 2, 1985	USAID/Pakistan JPMT

Country: Sri Lanka

Title of Activity: Central Support

Code Number of Activity: 1-02-003-85 Finished Date: June 30, 1985

Lead University: Colorado State University

Description of Activity:

Technical assistance in the areas of economics, off-farm and on-farm engineering were requested by GSL to assist in long-term diagnostic analysis studies in Polonnaruwa being carried out by Water Management Cell of Irrigation Management Division.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Mohan Reddy Junna	CSU	Ag. Engineer
Mohammed Haider	CSU	Economics
Tom Sheng	CSU	Civil Engineer

Significant Findings and Results:

Based on the request from GSL for four person months short term advisory services to work with Water Management Cell (WMC) under USAID's Water Management Project 383-0057, a three-person team from WMSP-CSU, Dr. T. Sheng (off-farm engineering), Dr. M. Reddy (on-farm engineering), and Dr. M. Haider (economics), went to Sri Lanka in May. The major objective of their visit was to assist the WMC to plan and initiate the Yala season diagnostic analysis of Parakrama Samudra and Girital irrigation schemes. The significant results from the TDY visit are divided into three areas and presented in the following sections.

Off-Farm Engineering

The major objective of Sheng's trip was to work with Dr. C. Kariyawasam, the counterpart for off-farm engineering, to establish a water monitoring program for evaluating the Parakrama Samudra Scheme (PSS) performance in terms of water control (water supply, reliability and equity, condition of structures, and drainage capacity) and system management (operation and maintenance).

Based on our two reconnaissances of the PSS, the entire off-farm team met and decided that we would concentrate our water monitoring efforts on the D1 main and north canals, and not look at the entire system for the Yala season. The team will include the rest of system (D1 east branch canal) for the Maha season 1986 diagnostic analysis, once the D1 north constraints and strengths are identified. A water monitoring and evaluation program was designed and commenced. Due to absence of measuring structures in the PSS, a total of 34 water monitoring stations (staff gauges) were established in D1 main and north canals, and all distributary channels along both canals. Fifteen data collec-

tion activities were initiated and assigned to the technical assistance (TAs) from the Irrigation Department. To make the data collection easier, seven data forms were designed to facilitate the monitoring and evaluation process.

A one-day review session was conducted to train the TAs in the techniques of calibrating monitoring stations (staff gauges) and in developing rating curves for the stations. Using the techniques, the TAs will establish rating curves for the selected stations along the D1 main and north canals.

Data collected from the water monitoring program were designed to be tabulated and analyzed weekly by the off-farm team members under the close supervision of Mr. Kariyawasam. At the end of Yala season, Dr. Sheng will return to assist the team in processing and analyzing the collected data and in preparing the 1985 Yala Season DA report.

Due to the time limitation, computer training in irrigation data analysis for the core team members and the development of computer programs to calculate and print flows for each of the monitoring stations were not provided.

On-Farm Engineering

The purpose of Reddy's visit was to work with Mr. H. Gamage, the counter part for on-farm engineering, to set up the field monitoring sites to study the water balances on farms in the Parakrama Samudra and Girital irrigation schemes.

Reddy reviewed the layout and operation of the PSS system and the reconnaissance report provided by the DA core team. It was clear to him that the Irrigation Department, which operates the system, knew neither the supply nor the demand. There is not a single measurement structure in the PSS system, which supplies about 25,000 acres. Based upon the available information, the on-farm team decided to study the aspects related to water control on the selected field channels and the farmers' fields. In addition, the team wanted to look at design, operation and maintenance of the on-farm engineering structures. To do all the above studies, field sites were selected and farm-level and field-channel data collection activities were designed and implemented. Flumes were installed in selected allotments and field channels. Flow rate measurements were taken four times per day. Agricultural diploma holders were hired to read the flumes. In addition, they are expected to collect data once per day from rain gauges, evaporation pans, auger holes, and deep percolation barrels.

The surveying work was assigned to the technical assistants (TAs) from the Irrigation Department. They will survey the area under each selected field channel, including the area of each allotment and the area under each OFC (other field crops).

Collected data were designed to be analyzed weekly by the on-farm team. Weekly analysis helps the team identify the additional data requirements, if any, so that at the end of the season, they will have the required information.

For the Girital irrigation scheme, the on-farm group limited their studies to measuring flow rates to selected field channels and to selected allotments under given field channels. Because of the size of the scheme, only two D-channels -- 4 and 23 -- were selected for field studies. In D-channel 4, the head, middle and tail field channels were selected. In D-channel 23, some

allotments on RBI at the head, and the last 8 allotments at the tail end were selected.

Economics

The objective of Haider's visit was to work with Mr. Nanayakara, the counterpart economist, to design a set of economic questionnaires for studying farm budgets, credit, agricultural inputs, marketing facilities and farmer perceptions of agricultural constraints.

To gain an in-depth understanding of the farm level production and economic activities and constraints that have contributed to under-utilization of essential inputs and low productivity and income, a three phase farm management study was designed. Phase one of the survey was to focus on background information: farm size, sub-division of farm, and tenureship pattern, cropping pattern, credit, crop insurance, cultivation practices, yield, marketing, and irrigation O & M fees for Maha 84/85 and Yala 85.

The second phase will be conducted about 2-3 weeks prior to the Yala season harvest. In this survey, all the cultivation practices, input used and associated costs starting from the time of the first survey until the harvest will be included.

The last phase was designed to obtain information on harvest and post-harvest operations and costs, yield, and marketing practices. Difficulties that farmers experienced in Yala 85 due to water shortages, availability of credit, and costs and availability of other inputs will be identified. The study of the irrigation system O & M fees will be followed up in greater detail during this phase. The study of the institutions providing credit, agricultural inputs, and the marketing sh be carried out along with the third phase survey in September - October .

The number of farms within each six selected field channels for study are less than ten. All of the farmers' fields used for detailed on-farm engineering measurements, plus a number of other farmers on that field channel and the neighboring field channel, up to a maximum of ten at each of six locations, will be surveyed. Phase one of the farm management survey was designed to be completed by June 7.

Mr. Nanayakara is expected to coordinate the data collection and analysis for the phase one survey. The second and third phase data can be analyzed during the months of September and October 1985 with assistance from Dr. Haider.

As of June 6, 1985, a detailed questionnaire was designed for the phase one farm management survey. The economic study of diagnostic analysis of the PSS was commenced.

Reports/Documents

Completion Date

Distribution

Sheng, TDY Report	June 30, 1985	JPMT
Reddy, TDY Report	June 30, 1985	JPMT
Haider, TDY Report	June 30, 1985	JPMT

Country: Worldwide

Title of Activity: Meeting Recurrent Costs of Irrigation Systems—A Systematic Assembly and Synthesis of What is Known

Code Number of Activity: 1-02-062-85

Finished Date: 12/85

Lead University: Cornell University

Description of Activity: Professor K. William Easter directed a research effort to review issues related to financing recurrent costs for irrigation in Asia. This program consisted of (a) a literature review undertaken by Robert A. Westgate, a graduate student at the University of Minnesota; (b) case studies of current policies and practices regarding water pricing and collection of irrigation fees in Nepal, Sri Lanka, India, and the Philippines prepared by T.B. Shrestha et al., A.T.M. Silva et al., J.R. Pawar, and L.S. Cabanilla; and (c) an analysis and synthesis of the findings by Easter. In addition, Cornell professors E. Walter Coward, Jr. Rural Sociology, and Norman Uphoff, Political Science, prepared a paper on O&M Costs in Irrigation Reappraising Government and Farmer Responsibilities and Rights. The paper was delivered at the ARDO Workshop held in Los Banos, the Philippines in April 1985.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
K. William Easter	U. of Minnesota	Ag Economics
E. Walter Coward, Jr.	Cornell	Rural Sociology
Norman Uphoff	Cornell	Political Science
Robert Westgate	U. of Minnesota	

Significant Findings and Results:

The problem of recurrent costs for irrigation agencies for operation and maintenance activities has become increasingly important for project planners for several reasons. In many countries, neglect of O&M has resulted in the rapid depreciation of investments in irrigation infrastructure and a concomitant reduction in command area served. Given rising costs of project development and the lack of fiscal resources available to international donors as well as governments in the developing world, the costs of system maintenance are an important policy concern.

On the basis of the four case studies, Easter has concluded that a basic constraint to adequate O&M in Asia is a lack of resources, which in turn is at least in part attributable to the failure of agencies to take a system approach to irrigation and to plan for O&M until after construction is completed. For this reason water pricing policy and fee collection capacity are by and large inadequate to meet recurrent costs. Other factors contributing to this problem are national budget constraints, new project emphasis, lack of interest in O&M on the part of donor agencies, and the low status of O&M in irrigation departments.

Strategies proposed for increasing resources available for O&M often entail

increased fee collection from farmers. Easter lists six conditions to be met if collections are to be significantly increased: (1) an up-to-date information system on those who receive water; (2) a reasonably dependable delivery system; (3) an agency willing and able (with adequate staffing and funding) to collect fees; (4) use of fees to improve or maintain system; (5) the imposition of a fee collection system when a system is new or just rehabilitated; and (6) penalties for non-payment. If any of the first four conditions do not hold, it would be unrealistic to expect to collect fees, and that it would be preferable to rely on a general land or product tax. Governments are not likely to be able to collect the same level of fees from all projects and that fees should not be expected to cover O&M costs in all projects.

Alternatives to fee collection include devolution of responsibility for O&M to water user organizations. Increased government or donor agency investments in rehabilitation and maintenance are prerequisites for enhanced fee collection and donor agencies should address O&M capacity before turning over irrigation projects to government agencies.

The ARDO Conference paper prepared by Coward and Uphoff grew out of a series of discussion sessions with the Irrigation Studies Group. It suggests that policies that encourage farmers to mobilize their own resources for irrigation O&M are feasible and are likely to reduce agency recurrent costs. Such policies would allow for considerable farmer involvement in system operation and responsibility for maintenance. To achieve fuller participation more attention must be directed to design and construction of appropriate physical facilities, to increased farmer involvement in management and decisionmaking and management, to strengthening local irrigation organizations, and to creating new financial arrangements for O&M expenditures and fee collection. Such a shift in irrigation development strategies will require fundamental changes in both agency behavior and in the design and construction of irrigation facilities.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Coward and Uphoff O&M Costs in Irrigation	April, 1985	Presented at ARDO Conf.
W.K. Easter Recurrent Costs of Irrigation in Asia	September 1985	WMS Working Paper
R. Westgate Review of Literature (draft)	April 1985	AID/W

FINISHED ACTIVITIES

B. Training and Technology

Country: INDIA

Title of Activity: Video Modules

Code Number of Activity: 2-03-075-85

Completion Date: 11/85

Lead University: Utah State University

Description of Activity: To produce a series of six professional broadcast-quality TV video modules, each of approximately 10-minutes in length, for use by AID Missions to demonstrate the technology available, illustrate its use in computer assisted management of irrigation system management and provide an introduction to the use of the WMS II software.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Tom Cronkite	USU	Instructional Technology
Elaine Campanella	USU	Computer Graphics
Bonnie Reid	USU	Computer Graphics

Significant Findings and Results: The graphic presentation of the use of computers and the demonstration of the principals of the unit command area modeling and main system modeling has been very effective. It significantly accelerates the understanding of engineers not trained in these areas and gives non-engineers an ability to perceive and conceptualize the elements of these models. The completion of these six modules represents a significant advance in the ability of WMS II to communicate with AID Missions and host governments with regard to the basic elements of these models, the basic objectives of operating these models in host countries, and increasing our ability to teach operational techniques and training.

During this quarter, Program 1 was revised, re-edited and approved by the Main Systems group. The last of the computer graphics for Programs 2 through 6 were finished, along with completion of the live video recording. Programs 2 through 6 were edited and critiqued and then revised and re-edited with final approval from the Main Systems group. Project completion date was Friday, November 15, 1985.

Reports/Documents

Completion Date

Distribution

Six Video Modules

11/85

India AID Mission,
CSU, CU, AID/W

Country: Nepal

Title of Activity: DA Workshop

Code Number of Activity: 2-02-031-85 Finished Date: February 19, 1985

Lead University: Colorado State University

Description of Activity:

An actual Diagnostic Analysis of an operating irrigation system was conducted in Nepal, using GON officials, but with training as a secondary objective. Results of the DA were then presented to higher-level GON irrigation and agriculture officials, who participated in a 3-day problem-solving seminar.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
William Laitos	CSU	Sociology
Oguz Nayman	CSU	Tech. Journalism
Tom Sheng	CSU	Civil Engineer
Al Early	CSU	Agricultural Engr.
Duane Johnson	CSU	Agronomy

Significant Findings and Results:

The Nepal DA workshop was not a full-scale training effort. Rather, it was a DA study of an irrigation system with training as a secondary objective. Using interdisciplinary teams from WMS II and GON, we used a case study approach to begin to understand how a Nepalese irrigation system operates (Sirsia irrigation system) and to identify priority constraints (Phase I). We then presented our findings to higher-level irrigation and agriculture officials in a three-day seminar held at the site. We asked these officials to develop potential solutions to identified problems (Phase II). Finally, many of the Phase II officials discussed the workshop's conclusions with very high-level irrigation and agriculture officials at a shorter two-hour seminar in Kathmandu (Phase III).

The purpose of this phased approach was to learn more about the problems of irrigated agriculture in Nepal, while at the same time demonstrating that irrigation management is an interdisciplinary endeavor. We also want without much concern in a specific sense for how the improved management would be achieved.

The major finding of the DA workshop in Nepal was that the Sirsia irrigation system was a "government-owned, but farmer-controlled" system. Though ostensibly a government irrigation system, in reality the farmers had taken control of much of the system. The farmers, however, were far from being organized, resulting in a situation best described as water anarchy. Though the farmers were somewhat in control of water distribution, for instance, their lack of

organization (and low water supplies) forced them to continually undercut one another in their efforts to gain some water control. The physical and organizational constraints prevented both the farmers and the government from properly managing the system.

In addition to these specific results based on our field data collection, the Phase II participants also discussed more widespread constraints and potential solutions. The Phase II participants first criticized the Irrigation Department for its bias towards construction, widely ignoring the very real needs of properly managing existing irrigation systems. These participants also noted that there is a gap between government officials and the farmers, as well as a gap within GON, primarily between the Irrigation and Agriculture Departments.

Two potential solutions were particularly noteworthy. First, some participants urged that at irrigation sites throughout Nepal, a tripartite decision-making body should be established, composed of irrigation officials, agriculture officials, and farmers. This decision-making board would be responsible for setting timing and scheduling of water releases, and then seeing to it that these decisions were implemented. These participants also urged that the farmers' wishes should have the greatest weight in decision-making.

Second, officials urged that government systems 2,000 ha or smaller should be turned over to the farmers after appropriate training has been provided to the farmers. The rationale behind this action was that farmers are closest to the system and should know best how to run the system.

In general, the Nepal DA workshop proved that personnel from the Irrigation and Agriculture Departments can work together to properly identify priority constraints to better irrigation system performance. The activity also proved that GON officials can effectively work with farmers if the right framework and encouragement are given to these officials.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Diagnostic Analysis of Sirsi Irrigation System, Nepal; Water Management Synthesis Project, WMS Report 38	November 1985	WMII and GON Officials

Country: Pakistan

Title of Activity: Key Officials

Code Number of Activity: 2-04-080-85 Finished Date: December 31, 1985

Lead University: Colorado State University

Description of Activity:

The activity consisted of visits to the four provinces to review the status of the Command Water Management (CWM) Project, obtain comments and suggestions from the Provincial Policy Committees (PPC) of their perceptions of needs in CWM, review the plans for training and the involvement of the PPC in these activities. The visiting team consisted of Mr. John Foster, USAID Project Officer, and Drs. Clyma and Shafique of WMS II.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Wayne Clyma	CSU	Ag. Engineer

Significant Findings and Results:

The original plan was to provide a short Seminar on CWM with the policy level personnel of the four provinces. Because of problems in scheduling of personnel through the Government of Pakistan (GOP) and a strong perception by the GOP that attendance at such a seminar would be low because of the level of the personnel involved, a team visited the PPC members and other key policy level personnel in each province. In some provinces even appointments of short duration could not be obtained with the results that the next level of personnel were visited.

CWM was viewed as an experimental project by most personnel. The Secretary of each Department was both concerned about the impact of CWM on the role of the Department while at the same time wishing to communicate a willingness to cooperate. The result was suggestions of how the program of their department could be advanced while suggesting that CWM must make a major impact on irrigated agriculture in Pakistan.

The training programs outlined were usually of considerable interest. Diagnostic Analysis was usually discussed in terms of what it meant to Pakistan and CWM. Interest in having additional personnel trained was usually expressed. The management training was also of considerable interest with some individuals expressing the opinion that this was a major area of need. The strongest perception in most cases was that Irrigation and On-Farm Water Management were looking for CWM to provide major funds for construction without much concern in a specific sense for how the improved management would be achieved.

Numerous suggestions were received. The concept that training would be important to CWM was emphasized by several different PPC members. The role of extension was perceived as important, but the mechanism for extension involvement was not clear to a number of individuals. How the Subproject Manager would achieve coordination between the various departments was also a major

concern. The desire to make CWM a successful program was emphasized by most. The success was sometimes defined in terms of departmental objectives but was often described as making a major impact on irrigated agriculture. The USAID representative perceived the value of the activity as primarily related to providing key personnel with information on CWM and as a mechanism to collect information on their concerns and suggestions.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Summary Report	November 1, 1985	USAID/Pakistan GOP, and JPMT

Country: Thailand

Title of Activity: Maintenance Workshop

Code Number of Activity: 2-14-088-85

Completion Date: 10/85

Lead University: Utah State University

Description of Activity: A maintenance workshop was carried out in Thailand with primary emphasis on maintenance training. The workshop was conducted primarily with personnel from the Royal Irrigation Department, and it was held in several locations in the country.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Gaylord V. Skogerboe	USU	Irrig. Engineering

Significant Findings and Results: On September 25, a two-hour presentation on the "Design of Irrigation Channels in the Northeast" was made by Prof. Gaylord Skogerboe, at the Royal Irrigation Department (RID) Irrigation Engineering Center in Bangkok, which is a recently constructed modern facility funded by the Government of Japan. There were 41 attendees. The presentation focused upon the necessary design criteria for minimizing maintenance problems in an environment having sandy soils and monsoon rains.

On July 1 and 2, while in Bangkok, the framework for two one-week training courses on "Maintenance of Irrigation Systems" had been planned. Prof. Skogerboe had recommended that 20 participants be allowed in each course, with the number not to exceed 30. There were exactly 30 participants in both courses. A RID engineer responsible for a province in the Northeast said later that he was unable to get any of his people into the first course because it was full, but he was able to get two of them into the second course.

The first course was held October 1-5 at the Lam Pao Irrigation Project near Kalasin, while the second course was held October 7-11 at the Lam Nam Oon Irrigation Project near Sakhon Nakorn. Some training materials in English and 21 transparencies had been prepared in Logan during August 1985. These materials were translated into Thai during September. The courses were presented in Thai, with Skogerboe's presentations being translated. During the second course, there was much less translation as the trainees took more of the responsibility. There is a need to expand the training materials, written and visual aids. The organization at both courses was impressive. The Thai did a first-class job of having everything arranged and meeting time schedules. The participants were conscientious and had to also work during most evenings.

In discussions with RID personnel, it is planned that the next training course in "Maintenance of Irrigation Systems" will be held at a large-scale irrigation project for a longer time period. Trainees will be selected from the

training course site, as well as a few selected irrigation projects. The trainees will prepare a complete maintenance plan. Then, the priority maintenance needs on one lateral will be implemented by the trainees. During the implementation period a half-day orientation for RID administrators will be held, followed by a two-day workshop for Project Managers and Project Engineers. Following this training course, funds will be provided annually to complete the priority maintenance needs. The trainees from other selected irrigation projects will begin the preparation of a maintenance plan upon their return.

A proposal for submission to the Department of Technical and Economic Cooperation (DTEC), Royal Thai Government had been completed in September by RID for an "Operation and Maintenance Training and Applied Studies Program." Based on meetings with the Project Manager for the Northeast Small-Scale Irrigation Project (NESSI) and USAID/Thailand, grant funds from NESSI will be permitted for use in this program. Also, other modifications have been proposed for this program. The revisions were completed on October 12 and the revised proposal was completed on October 17 and then submitted to DTEC and USAID/Thailand. Then, additional revisions were made in November and December. Now, both DTEC and USAID/Thailand have approved the funding. During January and February of 1985 Khun Nukool Thongtawee, Director, O&M Division, RID and Professor Skogerboe will address the concerns of AID/Washington so that WMS II support can also be obtained for this effort.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Trip Report	10/85	USAID/Thailand, CSU, CU, AID/Washington

Country: Worldwide

Title of Activity: DA Trainers Workshop

Code Number of Activity: 2-08-040-84 Finished Date: August 21, 1985

Lead University: Colorado State University

Description of Activity:

The workshop emphasized how to improve the content and methods used in international irrigation training programs. The workshop was structured to take advantage of participants' experiences and insights.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Ramchand Oad	CSU	Agricultural Engr.
Robby Laitos	CSU	Sociology
Oguz Nayman	CSU	Tech. Journalism
Vicki Duneman	CSU	Tech. Journalism
D. Fowler	CSU	Tech. Journalism

Significant Findings and Results:

One of WMS II's goals is to improve the training capabilities of institutions and individuals involved in irrigation management. The objectives of the Training of Trainers workshop were to discuss and develop ways to improve the structure and processes of irrigation training workshops and improve the training skills of the workshop participants.

The workshop developed a three-phased approach to training (pre-training, training, post-training) with specific activities emphasized in each of the phases.

1. Pre-Training

- establishing and clarifying training goals.
- defining training requirements and settings.
- developing relationships with work organizations.
- organizing training inputs.
- selecting a training strategy.

2. Training

- establishing common goals.
- developing norms of behavior.
- building realistic relationships
- setting a climate for training.

- delivering good quality training.
- doing formative evaluation.

3. Post-Training

- providing support after training.
- supporting the application of training to work.

The workshop participants also identified the training issues that they felt affect the success of an international training program. All of the issues fell into five major categories.

1. Organizational Framework - the activities and organizations of concern when planning the training program.

2. Physical/Logistical Concerns - the activities involved in selecting the physical environment of the training.

3. Trainer Characteristics - the aspects that the workshop participants would look for when selecting trainers, and the process used for selection.

4. Trainee Characteristics - those aspects the workshop participants saw might affect trainee performance.

5. Presentation - the quality of the materials and the trainers, and how smoothly the program functions as a whole.

The participants then outlined some of the most important goals and guidelines for the pre-training, and post-training phases. By the end of the workshop, a general consensus had developed concerning the usefulness of the formative evaluations used every day.

Reports/Documents

Completion Date

Distribution

Training Trainers: A
Workshop Report; Water
Management Synthesis Project

November 1985

All workshop
participants;
other copies
available on
request

Country: Worldwide

Title of Activity: Survey and Strategy

Code Number of Activity: 2-09-049-84 Finished Date: October 4, 1985

Lead University: Colorado State University

Description of Activity:

A training strategies workshop was held October 3-4, 1985, at CSU with 19 participants. The workshop dealt with key training issues including intercultural communication and management. Dr. James King from the University of Nebraska and Eugene Martin from the University of Maryland management consulting group were the funded consultants. Albert Madsen planned and directed the workshop.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Lynn Gibson	CSU	Ag. Economics
Albert Madsen	CSU	Ag. Economics

Significant Findings and Results:

Training has been an important activity in the WMSI and WMSII projects. The three universities involved in WMSII also have long been involved in training third world specialists in programs not directly funded by WMS II. A two day Training Strategies Workshop was held at CSU October 3rd and 4th, 1985. There were nineteen participants in the workshop and they represented the disciplines of civil engineering, agricultural engineering, sociology, agricultural economics, agronomy, and technical journalism. The main objective of the workshop was to draw upon the training experience of the participants to identify the critical issues in training and lessons learned about these issues. Dr. James King attended the workshop as a consultant to instruct about "Training to Bring About Change" by means of improving intercultural communications. Dr. Eugene Martin attended as a consultant to instruct about the "Team Planning Meeting" (TPM) procedures developed by OICD, USDA. The purpose of the TPM is to improve technical assistance teams and training teams sent to foreign countries. The perceived ultimate outcome of the training strategies workshop is to increase food production by bringing about more rapid improvement in irrigated agriculture. Irrigation systems can be enhanced by applying lessons learned in past training experience to improve future training.

Seventeen critical training issues were identified by workshop participants in a general brainstorming session. The lessons learned about seven of these issues were considered in small group sessions and discussed in general sessions where time permitted. The results from these working sessions are summarized below.

Critical Issue: The training audience - selection of participants.

Lesson Learned: Trainers can influence who is selected for training by writing a job description for those attending, however, final choices are those of the host country and funding agencies. Caution must be exercised in placing foreign students in U.S. academic courses - prerequisites must be noted and observed. Throughout the world there needs to be more emphasis on providing the academic concepts and principles required by middle management personnel in the 45-55 age bracket.

Critical Issue: Expectations of trainees vs. objectives of trainers.

Lesson Learned: To bring about change in a system there will be conflict between the training program and training participants. Conflict in training is not necessarily bad. An interactive "experiential" approach to training enables participants to adopt to new concepts and learn basic skills as they gain experience. This brings about a positive feedback between trainers and participants and learning by both parties is accelerated.

Critical Issue: On-campus Adult Training (non-degree)

Lesson Learned: Older and senior people are not keen on courses with much technical detail. Often participants do not want to take the time to learn specific material for a course. Multi-disciplinary academic courses designed for a specific clientele may satisfy those of one discipline while proving to be too difficult for another discipline. Participants must be carefully selected for this type course.

Critical Issue: Identification of training Needs in Irrigation

Lesson Learned: Interdisciplinary diagnostic analysis of irrigation systems facilitates the understanding of a system's operation and the identification of constraints under which systems must function. Findings from DA workshops can only be used as guidelines for future research or other training efforts. The detailed answers to questions required for long term planning are not available from these 4 to 8 week workshops. There are needs for training workshops for senior officials and for such workshop topics as data management, and procedures for monitoring and evaluation of irrigation systems. Seminars with project and USAID Mission/Washington personnel would help clarify different points of view relating to training activities.

Critical Issue: Follow-up After Training

Lesson Learned: Follow-up to determine the effectiveness of training and maintain communication with trainees will not just happen. It must be planned for and budgeted as an integral part of training programs to achieve greater results from training. Particular areas for follow-up must be communicated to host country agencies. What other training programs are doing in follow-up should be explored.

Critical Issue: Evaluation

Lesson Learned: Three phases of training must be evaluated. These phases are the planning period, the training period and the post training period. Planning period evaluation will include program contents, proposed training methods, trainers' performance, and training team leadership. During training the following evaluations can prove beneficial -- trainers evaluate trainees, trainees evaluate trainers, workshop contents, administration and logistics, schedule and agenda of training, and trainee progress during training. Post training evaluation should be made of the training impact upon: (a) individuals; (b) changes in organization (institutions) upon the return of trainees; (c) how skills or information has been applied on the job; (d) the contribution of the planning phase to the success or training; and (e) networking success. Several methods of evaluation were identified for each evaluation phase.

Critical Issue: Training Team Composition

Lesson Learned: There is often the tendency to fund fewer people for a training activity than is needed. There is a critical point where training should not be conducted if the necessary people cannot be included on the team. Women will be included on interdisciplinary teams to function as a discipline specialist but not just to address WID topics. These topics will be handled by social science team members. The nationality of team members is not important after workshops have been presented and the discipline competence is recognized. Trainers must be facilitators to the learning process of participants by asking direct questions and providing hands on experience. Multi media must be used in training but video materials must be locally relevant and well done.

Dr. James King instructed participants on such topics as the training process, criteria for effective training, communication, learning theory and cultural concerns in training. This valuable information is elaborated in a handout included as an appendix of the workshop detailed report.

Dr. Eugene Martin instructed workshop participants about the Team Planning Meeting procedure and content. This formalized procedure to prepare training and technical assistance teams to better carry out their assignments has many valuable aspects that can or are already being applied to WMS II activities. Details about the TPM are available from OICD/USDA.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Training Strategies for Third World Participants Workshop Reports	December 31, 1985	19 Participants AID, Utah State, Cornell Univ.

FINISHED ACTIVITIES

C. Special Studies

Country: Sri Lanka

Title of Activity: SS-Interfacing On-Farm Water Management

Code Number of Activity: 3-04-036B-85 Finished Date: Sept. 30, 1985

Lead University: Colorado State University

Description of Activity:

Provides in-country action-research for Sri Lanka. It includes interdisciplinary activities integrating agricultural economics, agronomy, engineering, and sociology components for a study of existing tanks to identify constraints to improvement and evaluate alternative improvements.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Pat Wilkins-Wells	CSU	Sociology
John Wilkins-Wells	CSU	Sociology
Mohammed Haider	CSU	Economics
Tom Sheng	CSU	Civil Engineer
Ramchand Oad	CSU	Ag. Engineer

Significant Findings and Results:

This activity is ongoing into FY-86. Although work is continuing, significant results include the strengthening of relationships with the Agrarian Research and Training Institute in Colombo.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Ramchand Oad, TDY	Sept., 1985	JPMT, N. Uphoff, D.M. Freeman

VI. COMMITTEES

Project management has identified various issues to be addressed via the committee system. The following information refers to the _____ , chaired by _____ and the _____ chaired by _____.

NONE SUBMITTED THIS QUARTER

VII. ROSTER UPDATE

One contract required WMS II activity is the establishment of a human resource file or a professional roster of persons interested in water management work. The activity is part of the overall management unit of the WMS II Project.

In order to initiate the activity, a standard roster form was developed which would acquire relevant information in the areas of professional competence, education, work experience, availability for overseas assignments, language competence, geographic preferences, and other information. Approximately 400 forms were then sent through AID and the CID systems, as well as Colorado State University, Cornell University and Utah State University. In addition, approximately 100 forms were subsequently sent to persons who made inquiries about the project.

The acquired data were stored on the microcomputer data base system for general usage by the project. Thus, the data were recorded, filed, retrievable, and can be summarized. The computerized roster of water management specialists facilitates the identification and selection of professionals in agronomy, economics, engineering, sociology, Women in Development (WID), and other disciplines for WMS II assignments.

The roster has been used by DA coordinators for Bangladesh (1983), Sri Lanka (1982 and 1983), and India (1984) DA Workshops. In addition, the roster has been used to identify suitable professionals for short-term technical assistance activities overseas.

As of December 31, 1985 approximately 221 persons were listed on the roster. A total entry of 39 in agronomy, 38 in economics, 83 in engineering, and 61 in sociology and other disciplines.

VIII. FINANCIAL REPORT

VIII.

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

EXHIBIT A

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

QUARTERLY REPORT
FOR THE PERIOD ENDING DECEMBER 31, 1985

FISCAL YEAR 1986 WORK PLAN ACTIVITIES

ACTIVITY	CODE	UNIV.	STATUS	APPROVED BUDGET	/ - - E X P E N D I T U R E S - - \			BUDGET BALANCE
					THROUGH SEP. 30, 85	CURRENT QUARTER	THROUGH DEC. 31, 85	
ADMINISTRATION:								
WORLDWIDE								
EPD ADMINISTRATION	0-01-999-85	CID	FINI	191,810	219,590	20,550	240,140	(48,330)
EPD ADMINISTRATION	0-01-999-86	CID	FORM	191,810	0	32,568	32,568	159,242
CU ADMINISTRATION	0-02-996-85	CU	FINI	206,932	106,727	44,136	150,863	56,069
USU ADMINISTRATION	0-02-997-85	USU	FINI	233,126	211,176	7,162	218,338	14,788
USU ADMINISTRATION	0-02-997-86	USU	FORM	233,089	0	55,907	55,907	177,182
CSU ADMINISTRATION	0-02-998-85	CSU	FINI	231,641	228,592	1,425	230,017	1,624
CSU ADMINISTRATION	0-02-998-86	CSU	FORM	246,600	0	62,960	62,960	183,640
CLOSED OUT CU ADMIN	0-99-996-84	CU	TERM	0	-14,326	0	-14,326	14,326
CLOSED OUT USU ADMIN	0-99-997-84	USU	TERM	0	-3,804	0	-3,804	3,804
CLOSED OUT CSU ADMIN	0-99-998-84	CSU	TERM	0	-1,328	0	-1,328	1,328
TOTAL ADMINISTRATION \$				1,535,008	746,627	224,708	971,335	563,673
TECHNICAL ASSISTANCE:								
AFRICA:								
African Irrigation Overvi	1-02-108-84	USU	INIT	166,965	159,967	23,152	183,119	(16,154)
CHAD:								
Irrigated Agric. Assessme	1-02-073-85	USU	INIT	116,022	60,967	23,286	84,253	31,769
EGYPT:								
Irrigation Sector Assessm	1-02-052-86	USU	FORM	128,383	0	52,432	52,432	75,951
Egypt Water Use & Mngmt	1-02-066-85	USU	COMP	41,268	25,269	0	25,269	15,999
IMS Evaluation Team	1-02-072-85	CSU	FINI	0	25,435	21,175	46,610	(46,610)
EL SALVADOR:								
PID Preparation	1-02-059-85	CSU	FINI	22,500	22,604	383	22,987	(487)
PP Development	1-02-077-85	USU	FINI	164,814	124,839	39,017	163,856	958
HAITI:								
Cayes Plain-Distrib. Bene	1-02-084-85	CU	INIT	8,249	844	125	969	7,280
Irrigation Sector Survey	1-04-017-84	USU	COMP	50,658	50,332	0	50,332	326
MONOURAS:								
Irrigation Development Pr	1-02-060-85	USU	COMP	12,309	7,924	0	7,924	4,385
INDIA:								
TA/Fid Stu/TR-Maha Irr T&	1-01-021-84	USU	FINI	415,000	411,900	841	412,741	2,259

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FISCAL YEAR 1986 WORK PLAN ACTIVITIES

ACTIVITY	CODE	UNIV.	STATUS	APPROVED BUDGET	- - E X P E N D I T U R E S - -			BUDGET BALANCE
					THROUGH SEP. 30, 85	CURRENT QUARTER	THROUGH DEC. 31, 85	
TA/Field Stu/TR-Madhya Pr	1-01-025-84	USU	TERM	9,000	3,975	0	3,975	5,025
University Curricula	1-02-013-85	USU	COMP	26,472	19,848	0	19,848	6,624
Priority Research	1-02-014-85	CSU	TERM	113,877	0	0	0	113,877
Mdya Pr Mnr Irr:Socio-Tch	1-02-023-84	USU	TERM	174,989	18	0	18	174,971
Irr Sector Eval & Strtgy	1-02-103-84	USU	FINI	227,461	210,602	-1,615	208,987	18,474
INDONESIA:								
Small-scale irr. workshop	1-02-009-85	CU	INIT	200,658	56,524	410	56,934	143,724
Cost Recovery	1-02-074-85	CSU	FINI	12,611	11,945	7	11,952	659
JAMAICA:								
Planning Activities	1-02-007-85	USU	APPR	11,970	0	0	0	11,970
Systems Study	1-02-008-85	USU	APPR	24,822	0	0	0	24,822
JORDAN:								
Jordan Advisory Services	1-02-028-85	USU	APPR	10,338	0	0	0	10,338
KENYA:								
Small Scale Irrig. Analy.	1-02-042-86	CU	FORM	101,426	0	34,634	34,634	66,792
MALI:								
Closed Out OFUM Specialis	1-99-006-83	USU	TERM	0	8	0	8 (	8)
MAURITANIA:								
River Valley - Plan of Ac	1-02-076-85	USU	FINI	45,915	20,123	0	20,123	25,792
MOROCCO:								
PID Development	1-02-002-85	USU	FINI	47,629	20,872	27,791	48,663 (	1,034)
NEPAL:								
Sm/Med Scale Irrigation	1-02-067-85	USU	COMP	89,481	62,898	23	62,921	26,560
Nepal Rapid Appraisal	1-02-087-85	CSU	INIT	77,390	10,046	38,275	48,321	29,069
PAKISTAN:								
Curriculum Development	1-02-071-85	CSU	FINI	74,443	58,668	-4	58,664	15,779
Baseline Survey	1-02-083-85	CSU	FINI	39,749	5,484	0	5,484	34,265
Command Water Management	1-02-114-84	CSU	INIT	739,011	409,274	179,875	589,149	149,862
PERU:								
Plan MERIS	1-01-112-84	USU	INIT	579,000	440,316	73,349	513,665	65,335
SRI LANKA:								
Long Term Wtr Mgmt Speci	1-01-109-84	CSU	INIT	216,137	376,290	21,588	397,878 (	181,741)
Central Support	1-02-003-85	CSU	FINI	73,695	59,379	-11,590	47,789	25,906
Socioeconomic studies - r	1-02-004-85	CU	INIT	82,673	25,954	0	25,954	56,719
Model Calibration	1-02-005-85	USU	INIT	37,600	31,814	12,566	44,380 (	6,780)
Irr Sys Mgmt Proj Design	1-02-102-84	CSU	FINI	172,000	123,821	44	123,865	48,135
SWAZILAND:								
Irrigation Priorities	1-02-069-85	CSU	FINI	25,843	23,122	22	23,144	2,699
WORLDWIDE:								
Meeting recurrent costs o	1-02-062-85	CU	INIT	51,345	40,156	785	40,941	10,404
Shortcourse Staff Assista	1-02-070-85	CID	COMP	14,590	10,990	0	10,990	3,600
Peace Corps Support	1-02-078-85	CID	COMP	15,331	15,331	0	15,331	0
Thunder & Assoc.	1-03-066-86	CID	APPR	0	0	5,462	5,462 (	5,462)
TOTAL TECHNICAL ASSIST. \$				4,421,624	2,927,539	542,033	3,469,572	952,052

FISCAL YEAR 1986 WORK PLAN ACTIVITIES

ACTIVITY	CODE	UNIV.	STATUS	APPROVED BUDGET	/ - - E X P E N D I T U R E S - - \			BUDGET BALANCE
					THROUGH SEP. 30, 85	CURRENT QUARTER	THROUGH DEC. 31, 85	
TRAINING AND TECHNOLOGY TRANSFER:								
BOLIVIA:								
Course - Small-Scale Irr	2-14-010-85	USU	COMP	41,333	16,555	0	16,555	24,778
ECUADOR:								
Finish Original Training	2-03-054-84	USU	INIT	167,676	159,086	9	159,095	8,581
INDIA:								
Demo. Workshop	2-02-051-86	USU	APPR	90,147	0	70	70	90,077
Video Modules	2-03-075-85	USU	INIT	74,001	33,279	31,940	65,219	8,782
Senior Officer's Workshop	2-04-053-84	USU	INIT	74,337	33,726	1,845	35,571	38,766
Development of Handbooks	2-13-027-85	CSU	TERM	79,956	29,729	0	29,729	50,227
Sr. Off. Workshop	2-14-053-84	USU	APPR	74,337	0	28	28	74,309
NEPAL:								
Diagnostic Anal. of Irr	2-02-031-85	CSU	FINI	126,479	122,036	3,784	125,820	659
PAKISTAN:								
Mngmnt Officials Trng -	2-01-065-85	CSU	INIT	99,881	0	0	0	99,881
Sr Officer's Workshop/Sem	2-04-019-84	CSU	INIT	90,892	33,218	-150	33,068	57,824
Management Tr. Key Offici	2-04-080-85	CSU	FINI	17,512	16,647	13,026	29,673	(12,161)
SRI LANKA:								
Seminar on Irrig System R	2-05-033-85	CSU	FINI	53,030	45,242	3,209	48,451	4,579
THAILAND:								
Maintenance Workshop	2-14-088-85	USU	FORM	17,129	0	10,835	10,835	6,294
WORLDWIDE:								
Rev&Development of Videot	2-03-004-86	CSU	FORM	50,215	0	15,246	15,246	34,969
Seminar Irrig. System Reh	2-05-006-86	CSU	FORM	105,818	0	255	255	105,563
DA Trainers Workshop	2-08-040-84	CSU	FINI	29,736	25,265	5,558	30,823	(1,087)
Strategy for Training	2-09-049-84	CSU	FINI	27,378	20,738	1,107	21,845	5,533
Micro Applications for DA	2-10-051-84	CSU	FINI	62,615	62,298	154	62,452	163
Professional Visitors & N	2-11-039-84	CSU	INIT	10,284	8,042	574	8,616	1,668
French Language Training	2-11-041-85	USU	INIT	10,650	979	681	1,660	8,990
Professional Visitors	2-11-068-84	CU	INIT	9,673	3,018	1,347	4,365	5,308
Unidentified (Broch. & Ne	2-12-000-86	CU	FORM	0	0	15	15	(15)
Brochures, Newsletters, P	2-12-044-84	CSU	INIT	39,976	40,368	141	40,509	(533)
Revision of Training Manu	2-13-003-86	CSU	FORM	44,775	0	4,596	4,596	40,179
Rehabilitation Game Revis	2-13-018-86	CU	FORM	66,840	0	5,741	5,741	61,099
Instructors Guide for DA	2-13-042-84	CSU	INIT	24,881	24,785	-7	24,778	103
"Rehab.", A Game Simulati	2-13-048-85	CU	FINI	33,445	12,619	4,279	16,898	16,547
Micro Computer Workshop	2-14-032-85	CSU	INIT	59,972	26,201	15,542	41,743	18,229
Lessons Learned: Irr Sys	2-14-039-85	USU	INIT	103,209	9,259	6,864	16,123	87,086
Lessons Learned Wkshop: A	2-14-049-85	CU	APPR	41,790	0	0	0	41,790
Jt Seminar on Current Res	2-14-050-85	CU	FINI	94,372	60,106	21	60,127	34,245
Irr Sys Mgmt Task Force	2-14-060-84	USU	INIT	44,284	9,504	0	9,504	34,780
Tsk Frc Sal-Scl Comm-Mgd	2-14-065-84	CU	COMP	20,741	8,906	0	8,906	11,835

FISCAL YEAR 1986 WORK PLAN ACTIVITIES

ACTIVITY	CODE	UNIV.	STATUS	APPROVED BUDGET	/ - - E X P E N D I T U R E S - - \			BUDGET BALANCE
					THROUGH SEP. 30, 85	CURRENT QUARTER	THROUGH DEC. 31, 85	
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$				1,887,364	801,606	126,710	928,316	959,048
SPECIAL STUDIES:								
AFRICA:								
MOROCCO:	Africa Plann Act	3-04-505-86	CU FORM	0	0	13	13 (	13)
	Moroccan Case Studies	3-04-043C85	USU APPR	29,433	20,197	-3,682	16,515	12,918
NIGER:	Small Scale Irrigation St	3-04-023-86	CU FORM	109,577	0	6,406	6,406	103,171
	Trad & Devel Small-Scale	3-04-052-85	CU INIT	42,484	33,338	2,248	35,586	6,898
	Sml-Scl Irr & Wtr Mgmt, P	3-04-098-84	CU COMP	5,508	5,986	0	5,986 (	478)
SRI LANKA:	Interfacing OF Water Mana	3-04-009-86	CSU FORM	165,361	0	12,718	12,718	152,643
	Landsat 86 - Remote Sensi	3-04-011-86	CSU FORM	42,177	0	8,512	8,512	33,665
	Interfacing On-Farm Wtr M	3-04-036A85	CSU FINI	86,390	64,535	1,113	65,648	20,742
	Sri Lanka Interfacing On-	3-04-036B85	CSU FINI	130,907	51,224	14,507	65,731	65,176
	Landsat85-Remote Sensing	3-04-038-85	CSU FINI	34,442	30,436	8,012	38,448 (	4,006)
	Phys & Oper Rehab Impact	3-04-097-84	CU INIT	26,492	18,796	448	19,244	7,248
THAILAND:	Interfacing	3-04-008-86	CIO APPR	0	0	2,374	2,374 (	2,374)
	Thailand Case Study	3-04-043B85	USU INIT	44,067	28,576	9,678	38,254	5,813
	Thailand SS Overseas 86	3-04-057-86	CSU FORM	50,027	0	10,166	10,166	39,861
WORLDWIDE:	Interfacing O.F. Water Mg	3-04-010-86	CSU FORM	103,561	0	7,604	7,604	95,957
	Rapid Irr. Project Apprai	3-04-042-85	USU INIT	73,710	28,489	35,773	64,262	9,448
	Irrigation System Model D	3-04-043A85	USU INIT	87,623	71,200	17,764	88,964 (	1,341)
	Interdisciplinary Mn Sys	3-04-043E85	USU INIT	27,848	6,804	10,420	17,224	10,624
	Comp Anal of Frmr Partcpt	3-04-046-83	CU INIT	17,535	23,061	0	23,061 (	5,526)
	Comp Anal of Ind Invst St	3-04-053-85	CU FINI	15,031	32,385	0	32,385 (	17,354)
	Comp Anal of Ind Invst St	3-04-054-85	CU INIT	97,099	0	3,693	3,693	93,406
	Rural Employment & Sys Pe	3-04-055-85	CU INIT	16,150	14,086	2,648	16,734 (	584)
	Irr Sys Pfrnce-Mgmt In	3-04-056-85	CU INIT	69,615	58,387	713	59,100	10,515
	Sml-Scl Irr Sys Spcl Stdy	3-04-069-84	CU INIT	57,059	53,482	442	53,924	3,135
TOTAL SPECIAL STUDIES \$				1,332,096	540,982	151,570	692,552	639,544
TOTAL FY 86 ACTIVITIES \$				9,176,092	5,016,754	1,045,021	6,061,775	3,114,317

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-60-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

CID / EPD OFFICE
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
EPD ADMINISTRATION 0-01-999-85	85,909	26,358	42,289	518	19,347	174,421	15,163	189,584	191,810
EPD ADMINISTRATION 0-01-999-86	12,323	1,320	7,174	5,653	3,389	29,859	2,709	32,568	191,810
TOTAL UNIVERSITY SUPPORT \$	98,232	27,678	49,463	6,171	22,736	204,280	17,872	222,152	383,620
TECHNICAL ASSISTANCE:									
INDIA:									
TA/Fid Stu/TR-Maha Irr T&M Prj 1-01-021-84	0	1,488	0	0	0	1,488	147	1,635	USU
University Curricula 1-02-013-85	0	459	0	0	0	459	45	504	USU
KENYA:									
Small Scale Irrig. Analy. 1-02-042-86	6,575	2,986	0	0	1,801	11,538	1,140	12,502	CU
NEPAL:									
Nepal Rapid Appraisal 1-02-087-85	0	0	327	0	0	327	32	359	CSU
PAKISTAN:									
Curriculum Development 1-02-071-85	0	4,857	31	0	0	4,888	484	5,372	CSU
Command Water Management Prog 1-02-114-84	0	0	106	0	0	106	11	117	CSU
SRI LANKA:									
Irr Sys Mgmt Proj Design Team 1-02-102-84	8,142	5,566	0	0	3,770	17,478	1,534	19,012	CSU
JORLOWIDE:									
Meeting recurrent costs of irr 1-02-062-85	21,462	171	959	0	5,129	27,722	2,237	29,959	CU

CID / EPD OFFICE
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND OBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET

Shortcourse Staff Assistance									
1-02-070-85	10,000	0	0	0	0	10,000	990	10,990	14,590
Peace Corps Support									
1-02-078-85	0	0	13,950	0	0	13,950	1,381	15,331	15,331
Thunder & Assoc.									
1-03-066-86	0	0	4,970	0	0	4,970	492	5,462	0

TOTAL TECHNICAL ASSIST. \$	46,179	15,527	20,343	0	10,700	92,750	26,365	101,243	29,921

TRAINING AND TECHNOLOGY TRANSFER:									

INDIA:									
Senior Officer's Workshop									
2-04-053-84	0	9,811	6,851	0	0	16,662	1,649	18,312	USU
WORLDWIDE:									
DA Trainers Workshop									
2-08-040-84	0	0	2,520	0	0	2,520	249	2,769	CSU

TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	0	9,811	9,371	0	0	19,182	28,263	21,081	0

SPECIAL STUDIES:									

SRI LANKA:									
Interfacing On-Farm Wtr Mngmnt									
3-04-036A85	0	0	1,297	0	0	1,297	128	1,425	CSU
THAILAND:									
Interfacing									
3-04-008-86	0	0	2,160	0	0	2,160	214	2,374	0
Thailand Case Study									
3-04-043B85	0	416	0	0	0	416	41	457	USU

TOTAL SPECIAL STUDIES \$	0	416	3,457	0	0	3,873	28,646	4,256	0

TOTAL FY 86 ACTIVITIES \$	144,411	53,432	82,634	6,171	33,436	320,085	28,646	348,732	413,541

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CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

COLORADO STATE UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
EPD ADMINISTRATION									
0-01-999-85	31,912	181	2,558	0	12,475	47,126	3,430	50,556	CID
COLORADO STATE UNIV.									
0-02-998-85	118,625	7,654	35,792	0	51,901	214,090	16,045	230,017	231,641
COLORADO STATE UNIV.									
0-02-998-86	33,865	2,140	6,025	0	16,769	58,799	4,161	62,960	246,600
CLOSED OUT CSU ADMIN									
0-99-998-84	-577	0	-333	0	-328	-1,238	-90	-1,328	0
TOTAL UNIVERSITY SUPPORT \$	183,825	9,975	44,042	0	80,817	318,245	23,546	342,205	478,241
TECHNICAL ASSISTANCE:									
AFRICA:									
African Irrigation Overview									
1-02-108-84	9,297	868	3,363	0	4,870	18,398	1,339	19,737	USU
EGYPT:									
IMS Evaluation Team									
1-02-072-85	24,066	7,225	304	0	11,374	43,436	3,641	46,610	0
EL SALVADOR:									
PID Preparation									
1-02-059-85	5,990	3,970	5,773	0	5,657	21,462	1,597	22,987	22,500
INDIA:									
Priority Research									
1-02-014-85	0	0	0	0	0	0	0	0	113,877
INDONESIA:									
Small-scale irr. workshop, etc									
1-02-009-85	13,536	9,676	104	0	5,130	28,447	2,616	31,062	CU
Cost Recovery									
1-02-074-85	4,620	3,470	45	0	2,930	11,140	887	11,952	12,611
KENYA:									
Small Scale Irrig. Analy.									
1-02-042-86	5,597	2,070	68	0	3,086	10,949	907	11,728	CU

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COLORADO STATE UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
NEPAL:									
Sm/Med Scale Irrigation									
1-02-067-85	11,592	6,889	25	0	4,071	22,805	2,083	24,660	USU
Nepal Rapid Appraisal									
1-02-087-85	21,151	9,388	4,679	0	8,680	44,243	4,064	47,962	77,390
PAKISTAN:									
Curriculum Development									
1-02-071-85	18,313	8,289	524	0	9,765	37,158	3,036	39,927	74,443
Baseline Survey									
1-02-083-85	0	3,395	364	0	1,353	5,112	372	5,484	39,749
Command Water Management Prog									
1-02-114-84	329,503	46,986	45,309	2,998	118,495	546,942	45,741	589,032	739,011
SRI LANKA:									
Long Term Wtr Mgmt Specialist									
1-01-109-84	164,727	8,098	36,961	12,313	152,006	376,955	23,773	397,878	216,137
Central Support									
1-02-003-85	28,743	6,091	69	0	9,022	44,297	3,864	47,789	73,695
Irr Sys Mgmt Proj Design Team									
1-02-102-84	27,519	12,283	4,531	0	11,409	56,183	4,874	60,616	172,000
SWAZILAND:									
Irrigation Priorities									
1-02-069-85	10,153	5,310	249	0	5,656	21,567	1,776	23,144	25,843
TOTAL TECHNICAL ASSIST. \$	674,807	134,008	102,368	15,311	353,504	1,279,755	124,116	1,380,568	1,567,256
RAINING AND TECHNOLOGY TRANSFER:									
INDIA:									
Development of Handbooks									
2-13-027-85	18,030	2,468	96	0	7,096	27,690	2,039	29,729	79,956
NEPAL:									
Diagnostic Anal. of Irr. Sys.									
2-02-031-85	55,747	21,389	15,542	0	23,134	116,570	10,008	125,820	126,479
PAKISTAN:									
Mngmt Officials Trnng - Plnng									
2-01-065-85	0	0	0	0	0	0	0	0	99,881
Sr Officer's Workshop/Seminar									
2-04-019-84	16,934	4,247	1,435	0	8,141	30,757	2,311	33,068	90,892
Management Tr. Key Officials									
2-04-080-85	18,549	1,565	89	0	7,273	27,663	2,197	29,673	17,512
SRI LANKA:									
Seminar on Irrig System Rehab									
2-05-033-85	29,204	1,098	2,582	0	11,812	44,696	3,256	47,952	53,030

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COLORADO STATE UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
WORLDWIDE:									
Rev&Develpment of Videotapes									
2-03-004-86	4,500	0	5,677	0	4,061	14,238	1,008	15,246	50,215
Seminar Irrig. System Rehab 2									
2-05-006-86	0	170	0	0	68	238	17	255	105,818
DA Trainers Workshop									
2-08-040-84	16,090	1,469	1,670	0	6,922	26,151	1,903	28,054	29,736
Strategy for Training									
2-09-049-84	13,751	492	873	0	5,233	20,349	1,496	21,845	27,378
Micro Applications for DA Trng									
2-10-051-84	31,056	129	10,747	2,312	14,057	58,301	4,151	62,452	62,615
Professional Visitors & Netwkg									
2-11-039-84	2,670	2,640	621	0	2,098	8,029	587	8,616	10,284
Brochures, Newsletters, Publ.									
2-12-044-84	19,565	478	7,711	0	9,992	37,746	2,748	40,494	39,976
Revision of Training Manual									
2-13-003-86	3,053	0	15	0	1,224	4,292	304	4,596	44,775
Instructors Guide for DA Wkshp									
2-13-042-84	16,013	0	950	0	6,107	23,106	1,708	24,778	24,881
Micro Computer Workshop									
2-14-032-85	22,013	0	6,597	0	10,300	38,910	2,833	41,743	59,972
Jt Seminar on Current Research									
2-14-050-85	1,220	1,552	0	0	610	3,405	299	3,681	CU
Tsk Frc Sml-Scl Comm-Mgd System									
2-14-065-84	0	992	0	0	854	1,846	98	1,944	CU
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$									
	268,395	38,689	54,605	2,312	118,982	482,983	161,079	519,946	923,400
SPECIAL STUDIES:									
SRI LANKA:									
Interfacing OF Water Managmnt.									
3-04-009-86	6,165	211	2,086	0	3,251	11,865	1,005	12,718	165,361
Landsat 86 - Remote Sensing									
3-04-011-86	1,950	282	3,996	0	1,667	7,895	617	8,512	42,177
Interfacing On-Farm Wtr Mngmnt									
3-04-036A85	39,492	0	5,656	0	14,606	59,754	4,469	64,223	86,390
Sri Lanka Interfacing On-Farm									
3-04-036B85	23,785	17,105	7,764	0	11,959	60,887	5,118	65,731	130,907
Landsat85-Remote Sensing Recon									
3-04-038-85	16,125	6,553	4,860	0	8,164	35,702	2,746	38,448	34,442
THAILAND:									
Thailand SS Overseas 86									
3-04-057-86	4,991	1,200	511	0	2,674	9,491	790	10,166	50,027

COLORADO STATE UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
WORLDWIDE:									
Interfacing O.F. Water Mgmt. 3-D4-D10-86	3,948	0	1,538	0	1,575	7,061	543	7,604	103,561
TOTAL SPECIAL STUDIES \$	96,456	25,351	26,411	0	43,896	192,114	176,367	207,402	612,865
TOTAL FY 86 ACTIVITIES \$	1,223,483	208,023	227,426	17,623	597,199	2,273,097	176,367	2,450,121	3,581,762

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CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

CORNELL UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
CORNELL UNIVERSITY									
0-02-996-85	72,051	6,233	11,770	0	51,894	141,948	8,915	150,863	206,932
CLOSED OUT CU ADMIN									
0-99-996-84	-7,553	-830	-190	0	-4,904	-13,477	-849	-14,326	0
TOTAL UNIVERSITY SUPPORT \$	64,498	5,403	11,580	0	46,990	128,471	8,066	136,537	206,932
TECHNICAL ASSISTANCE:									
CHAD:									
Irrigated Agric. Assessment									
1-02-073-85	7,102	125	4,556	0	7,202	18,985	1,166	20,151	USU
HAITI:									
Cayes Plain-Distrib. Benefits									
1-02-084-85	0	0	712	0	186	898	71	969	8,249
INDIA:									
Irr Sector Eval & Strtgy Revw									
1-02-103-84	6,161	4,524	10	0	6,491	17,186	1,059	18,245	USU
INDONESIA:									
Small-scale irr. workshop, etc									
1-02-009-85	1,317	0	10,080	0	2,730	14,126	1,129	15,255	200,658
KENYA:									
Small Scale Irrig. Analy.									
1-02-042-86	0	3,026	30	0	2,124	5,180	303	5,483	101,426
PAKISTAN:									
Curriculum Development									
1-02-071-85	4,937	0	3,842	0	3,717	12,496	869	13,365	CSU
PERU:									
Plan MERIS									
1-01-112-84	10,094	4,346	831	0	9,093	24,364	1,512	25,876	USU
SRI LANKA:									
Socioeconomic studies - rehab.									
1-02-004-85	4,646	9,732	327	0	9,793	24,498	1,456	25,954	82,673

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CORNELL UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
WORLDWIDE:									
Meeting recurrent costs of irr 1-02-062-85	3,156	2,773	454	0	3,967	10,350	632	10,982	51,345
TOTAL TECHNICAL ASSIST. \$	37,413	24,526	20,842	0	45,303	128,083	16,263	136,280	444,351
TRAINING AND TECHNOLOGY TRANSFER:									
SRI LANKA:									
Seminar on Irrig System Rehab 2-05-033-85	0	278	0	0	193	471	28	499	CSU
WORLDWIDE:									
Professional Visitors 2-11-068-84	0	72	2,421	0	1,625	4,118	247	4,365	9,673
Unidentified (Broch. & News) 2-12-000-86	0	0	8	0	6	14	1	15	0
Brochures, Newsletters, Publ. 2-12-044-84	0	0	8	0	6	14	1	15	CSU
Rehabilitation Game Revision 2-13-018-86	3,060	0	657	0	1,656	5,373	368	5,741	66,840
"Rehab.", A Game Simulation 2-13-048-85	5,084	0	5,793	0	4,944	15,821	1,077	16,898	33,445
Lessons Learned Wkshop: Activ. 2-14-049-85	0	0	0	0	0	0	0	0	41,790
Jt Seminar on Current Research 2-14-050-85	4,400	4,806	18,980	0	9,844	38,030	2,790	40,820	94,372
Tsk Frc Sm1-Sci Comm-Mgd System 2-14-065-84	2,240	591	820	0	1,761	5,412	361	5,773	20,741
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	14,784	5,747	28,687	0	20,035	69,253	21,136	74,126	266,861
SPECIAL STUDIES:									
AFRICA:									
Africa Plann Act 3-04-505-86	0	0	7	0	5	12	1	13	0
NIGER:									
Small Scale Irrigation Study 3-04-023-86	2,502	1,631	87	0	1,768	5,988	418	6,406	109,577
Trad & Devel Small-Scale Irr 3-04-052-85	11,496	6,666	7,297	1,178	6,428	33,065	2,521	35,586	42,484

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CORNELL UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
Sml-Sci Irr & Wtr Mgmt, Prelim 3-04-098-84	4,237	0	2	0	1,327	5,566	420	5,986	5,508
SRI LANKA: Phys & Oper Rehab Impact 3-04-097-84	10,186	0	2,894	0	4,869	17,949	1,295	19,244	26,492
WORLDWIDE: Comp Anal of Frmr Partcptn Exp 3-04-046-83	12,216	0	3,043	0	6,291	21,550	1,511	23,061	17,535
Comp Anal of Ind Invst Stratgy 3-04-053-85	16,894	0	3,170	0	10,336	30,400	1,986	32,385	15,031
Comp Anal of Ind Invst Stratgy 3-04-054-85	2,063	0	73	0	1,346	3,482	211	3,693	97,099
Rural Employment & Sys Perform 3-04-055-85	7,908	0	2,833	0	4,930	15,671	1,063	16,734	16,150
Irr Sys Prfrnce-Mgmt Intnsts 3-04-056-85	34,365	90	1,375	0	19,724	55,554	3,547	59,100	69,615
Sml-Sci Irr Sys Spcl Stdy Comp 3-04-069-84	32,163	0	3,788	0	14,414	50,365	3,559	53,924	57,059
TOTAL SPECIAL STUDIES \$	134,030	8,387	24,569	1,178	71,438	239,602	37,668	256,132	456,550
TOTAL FY 86 ACTIVITIES \$	250,725	44,063	85,678	1,178	183,766	565,409	37,668	603,075	1,374,694

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CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

UTAH STATE UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
UTAH STATE UNIV. 0-02-997-85	117,808	9,033	23,739	3,354	49,497	203,431	14,907	218,338	233,126
UTAH STATE UNIV. 0-02-997-86	36,245	456	1,882	0	13,504	52,087	3,820	55,907	233,089
CLOSED OUT USU ADMIN 0-99-997-84	-2,682	0	1	0	-858	-3,539	-265	-3,804	0
TOTAL UNIVERSITY SUPPORT \$	151,371	9,489	25,622	3,354	62,143	251,979	18,462	270,441	466,215
TECHNICAL ASSISTANCE:									
AFRICA:									
African Irrigation Overview 1-02-108-84	66,170	20,753	27,785	0	37,186	152,026	11,488	163,382	166,965
CHAD:									
Irrigated Agric. Assessment 1-02-073-85	0	8,737	35,656	0	14,964	59,559	4,745	64,102	116,022
EGYPT:									
Irrigation Sector Assessment 1-02-052-86	0	8,079	27,629	0	12,498	48,689	4,226	52,432	128,383
Egypt Water Use & Mngmnt Eval 1-02-066-85	0	4,458	13,145	0	5,633	23,526	2,033	25,269	41,268
EL SALVADOR:									
PP Development 1-02-077-85	8,700	3,273	124,176	0	13,146	149,449	14,561	163,856	164,814
HAITI:									
Irrigation Sector Survey 1-04-017-84	26,062	8,242	892	0	11,296	46,492	3,840	50,332	50,658
HONDURAS:									
Irrigation Development Project 1-02-060-85	3,280	2,211	52	0	1,774	7,375	607	7,924	12,309

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UTAH STATE UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
INDIA:									
TA/Field Stu/TR-Maha Irr T&M Prj 1-01-021-84	186,365	33,190	70,564	8,707	82,257	382,568	30,023	411,106	415,000
TA/Field Stu/TR-Madhya Pr Minr 1-01-025-84	0	3,617	0	0	0	3,617	358	3,975	9,000
University Curricula 1-02-013-85	10,484	2,938	80	0	4,320	18,007	1,522	19,344	26,472
Mdya Pr Mnr Irr: Socio-Tch Feas 1-02-023-84	0	0	13	0	4	17	1	18	174,989
Irr Sector Eval & Strtgy Revw 1-02-103-84	48,380	9,915	84,415	0	32,526	175,237	15,506	190,742	227,461
INDONESIA:									
Small-scale irr. workshop, etc 1-02-009-85	1,640	5,756	60	0	2,386	9,879	775	10,617	CU
JAMAICA:									
Planning Activities 1-02-007-85	0	0	0	0	0	0	0	0	11,970
Systems Study 1-02-008-85	0	0	0	0	0	0	0	0	24,822
JORDAN:									
Jordan Advisory Services 1-02-028-85	0	0	0	0	0	0	0	0	10,338
KENYA:									
Small Scale Irrig. Analy. 1-02-042-86	500	2,643	244	0	1,186	4,586	348	4,921	CU
MALI:									
Closed Out OFUM Specialist 1-99-006-83	0	6	0	0	2	8	0	8	0
MAURITANIA:									
River Valley - Plan of Action 1-02-076-85	9,175	4,583	19	0	4,820	18,759	1,526	20,123	45,915
MOROCCO:									
PID Development 1-02-002-85	18,910	13,718	797	0	11,533	45,354	3,705	48,663	47,629
NEPAL:									
Sm/Med Scale Irrigation 1-02-067-85	10,730	6,297	9,717	0	8,558	35,613	2,959	38,261	89,481
PERU:									
Plan MERIS 1-01-112-84	47,297	53,632	223,600	21,927	106,414	454,624	34,919	487,789	579,000
SRI LANKA:									
Model Calibration 1-02-005-85	16,656	13,587	333	0	10,472	41,307	3,332	44,380	37,600
Irr Sys Mgmt Proj Design Team 1-02-102-84	21,128	8,529	1,262	0	9,894	41,176	3,424	44,237	CSU

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UTAH STATE UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
TOTAL TECHNICAL ASSIST. \$	475,477	214,164	620,439	30,634	370,869	1,708,770	158,360	1,851,481	2,380,096
TRAINING AND TECHNOLOGY TRANSFER:									
BOLIVIA:									
Course - Small-Scale Irr Design 2-14-010-85	5,988	348	5,180	0	3,685	15,415	1,354	16,555	41,333
ECUADOR:									
Finish Original Training Mduls 2-03-054-84	105,567	1,665	4,883	0	35,880	147,995	11,100	159,095	167,676
INDIA:									
Demo. Workshop 2-02-051-86	0	0	48	0	17	65	5	70	90,147
Video Modules 2-03-075-85	26,622	0	17,424	1,397	15,416	60,859	4,360	65,219	74,001
Senior Officer's Workshop 2-04-053-84	0	2,186	9,864	0	3,856	15,906	1,353	17,259	74,337
Sr. Off. Workshop 2-14-053-84	0	0	19	0	7	26	2	28	74,337
THAILAND:									
Maintenance Workshop 2-14-088-85	5,369	1,976	0	0	2,651	10,108	839	10,835	17,129
WORLDWIDE:									
French Language Training 2-11-041-85	1,116	0	44	0	385	1,545	115	1,660	10,650
Lessons Learned: Irr Sys Mngmt 2-14-039-85	5,919	3,440	1,800	0	3,859	15,018	1,105	16,123	103,209
Jt Seminar on Current Research 2-14-050-85	4,783	6,051	119	0	3,505	14,542	1,168	15,626	CU
Irr Sys Mngmt Task Force 2-14-060-84	5,188	1,492	18	0	2,143	8,841	663	9,504	44,284
Tsk Frc Sal-Scl Comm-Mgd System 2-14-065-84	0	820	18	0	268	1,106	83	1,189	CU
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	160,552	17,978	39,417	1,397	71,672	291,016	180,507	313,163	697,103
SPECIAL STUDIES:									
MOROCCO:									
Moroccan Case Studies 3-04-043C85	1,459	10,073	14	0	3,800	15,372	1,169	16,515	29,433

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UTAH STATE UNIVERSITY
FISCAL YEAR 1986 WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
THAILAND:									
Thailand Case Study									
3-04-043885	6,742	2,277	18,269	0	7,789	35,095	2,720	37,797	44,067
WORLDWIDE:									
Rapid Irr. Project Appraisal									
3-04-042-85	0	533	46,314	0	12,777	59,624	4,638	64,262	73,710
Irrigation System Model Devel.									
3-04-043A85	55,809	2,937	3,025	0	21,077	82,848	6,116	88,964	87,623
Interdisciplinary Mn Sys Wkshp									
3-04-043E85	6,711	0	5,176	0	4,160	16,047	1,177	17,224	27,848
TOTAL SPECIAL STUDIES \$	70,721	15,820	72,798	0	49,603	208,942	196,327	224,762	262,681
TOTAL FY 86 ACTIVITIES \$	858,121	257,451	758,276	35,385	554,287	2,460,707	196,327	2,659,847	3,806,095

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYNTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)QUARTERLY REPORT
FOR THE PERIOD ENDING DECEMBER 31, 1985

PRIOR YEARS WORK PLAN ACTIVITIES NOT CLOSED OUT

ACTIVITY	CODE	UNIV.	STATUS	APPROVED BUDGET	/ - - E X P E N D I T U R E S - - \			BUDGET BALANCE
					THROUGH SEP. 30, 85	CURRENT QUARTER	THROUGH DEC. 31, 85	
ADMINISTRATION:								
WORLDWIDE								
EPD ADMINISTRATION	0-01-999-83	CID	COMP	145,937	145,778	-6	145,772	165
CSU ADMINISTRATION	0-02-998-83	CSU	COMP	281,382	281,323	-6	281,317	65
TOTAL ADMINISTRATION \$				427,319	427,101	-6	427,089	230
TECHNICAL ASSISTANCE:								
BANGLADESH:								
Water Management Systems	1-02-015-82	CU	CLOS	154,287	106,864	-6	106,858	47,429
Water Mgmt Sys Proj Paper	1-02-072-84	CU	COMP	20,719	30,349	-6	30,343	(9,624)
BAU Collaboration Team	1-03-030-82	CSU	CLOS	84,243	66,956	30	66,986	17,257
BURMA:								
Wakema Pump Scheme Study	1-02-036-84	CU	CLOS	4,759	4,329	30	4,359	400
DOMINICAN REPUBLIC:								
Weed Control Specialist	1-02-091-84	USU	COMP	3,354	3,088	30	3,118	236
Water Management Spec.	1-02-110-84	CSU	CLOS	26,813	19,091	11	19,102	7,711
EL SALVADOR:								
Evaluation Team	1-02-107A84	CID	COMP	107,449	121,829	11	121,840	(14,391)
INDIA:								
Hill Area Land & Water De	1-02-013-83	CU	CLOS	140,949	42,993	11	43,004	97,945
Maharashtra Minor Irrig	1-02-018-84	USU	FINI	171,970	161,077	11	161,088	10,882
Water Management & Traini	1-02-020882	USU	CLOS	22,802	24,015	11	24,026	(1,224)
Development of Solutions	1-02-024-82	CSU	CLOS	63,936	61,219	-29	61,190	2,746
DA Workshop Planning	1-02-044-83	CSU	CLOS	28,149	31,718	18	31,736	(3,507)
Institutional Analysis	1-02-047-83	CID	COMP	32,647	21,480	18	21,498	11,149
Hill Irrig Proj Prep II	1-02-074-84	CU	COMP	61,218	111,755	18	111,773	(50,555)
Curriculum Development	1-02-094-84	CSU	COMP	10,682	10,992	16	11,008	(326)
Short Course	1-02-100-84	USU	COMP	84,388	76,111	16	76,127	8,261
INDONESIA:								
Small Scale Irrig & Mgmt	1-02-011-84	CU	COMP	54,468	151,745	25	151,770	(97,302)
OAD'S TDY	1-02-030-83	CSU	CLOS	14,408	16,204	-4	16,200	(1,792)
JORDAN:								
SR. On Farm WM Advisor	1-02-014-84	USU	COMP	4,767	5,848	-4	5,844	(1,077)

PRIOR YEARS WORK PLAN ACTIVITIES NOT CLOSED OUT

ACTIVITY	CODE	UNIV.	STATUS	APPROVED BUDGET	/ - - E X P E N D I T U R E S - - \			BUDGET BALANCE
					THROUGH SEP. 30, 85	CURRENT QUARTER	THROUGH DEC. 31, 85	
Irrigation Sector Study	1-04-013-84	USU	COMP	31,429	19,179	-4	19,175	12,254
PAKISTAN:								
WM (CWM) Meeting	1-02-029883	CSU	CLOS	9,931	3,168	-4	3,164	6,767
Mayfield's TOY	1-02-040-83	USU	CLOS	15,666	15,509	-4	15,505	161
Long-Term Strategies	1-02-101-84	USU	COMP	9,369	1,860	-4	1,856	7,513
Command Area Management	1-02-106-84	USU	COMP	16,068	14,057	-4	14,053	2,015
PERU:								
Expansion of Irrig. Syste	1-C 35-84	USU	COMP	53,681	99,968	-4	99,964	(46,283)
Special Study	1-04-027-82	USU	COMP	93,755	71,411	-4	71,407	22,348
SRI LANKA:								
Water Mgmt Central Suppor	1-01-022-84	CSU	FINI	58,984	66,524	41	66,565	(7,581)
Farmer Organization Progr	1-02-007-84	CU	COMP	64,466	63,606	41	63,647	819
TANZANIA:								
Tanzania Irrig Study	1-02-082-84	USU	COMP	12,567	11,706	41	11,747	820
WORLDWIDE:								
Water Resource Econ	1-02-042-83	CSU	CLOS	19,703	19,556	41	19,597	106
TOTAL TECHNICAL ASSIST. \$				1,477,627	1,454,207	104	1,454,550	23,077
TRAINING AND TECHNOLOGY TRANSFER:								
AFRICA:								
Africa Workshop	2-14-113-84	CSU	COMP	14,333	14,613	-357	14,256	77
BANGLADESH:								
DA Workshop	2-02-007-82	CSU	CLOS	219,174	234,248	-138	234,110	(14,936)
BOLIVIA:								
Tarija Short Course	2-01-095-84	CU	COMP	64,995	5,364	-138	5,226	59,769
ECUADOR:								
Equivar Video	2-03-054-83	USU	INIT	204,837	204,833	-138	204,695	142
INDIA:								
DA Workshop Madhya Prades	2-02-031-84	CSU	COMP	135,470	140,404	191	140,595	(5,125)
DA Workshop - WIO	2-02-090-84	CIO	FINI	21,980	5,340	191	5,531	16,449
Senior Officials	2-04-007-83	USU	COMP	1,054	864	191	1,055	(1)
Watercourse Handbooks	2-13-025-82	CSU	CLOS	15,188	20,217	37	20,254	(5,066)
INDONESIA:								
DA Workshop	2-02-010-84	CSU	CLOS	8,736	8,220	37	8,257	479
NEPAL:								
DA Workshop Planning	2-02-003-84	CSU	COMP	21,842	21,445	3	21,448	394
SRI LANKA:								
DA Workshop	2-02-028-83	CSU	CLOS	121,475	120,441	78	120,519	956
THAILAND:								
Improving Allocations	2-14-062-83	CIO	CLOS	44,250	44,143	78	44,221	29
WORLDWIDE:								
DA Review	2-02-080-84	CIO	CLOS	0	13,370	78	13,448	(13,448)

PRIOR YEARS WORK PLAN ACTIVITIES NOT CLOSED OUT

ACTIVITY	CODE	UNIV.	STATUS	APPROVED BUDGET	/ - - E X P E N D I T U R E S - - \			BUDGET BALANCE
					THROUGH SEP. 30, 85	CURRENT QUARTER	THROUGH DEC. 31, 85	
Videotape Modules	2-03-021-83	CSU	COMP	90,755	90,747	344	91,091 (	336)
ICID Conference	2-04-048-84	CSU	COMP	20,678	19,895	344	20,239	439
Main System Mgmt Task For	2-06-077-84	CU	COMP	7,557	743	344	1,087	6,470
Short Term Non-Degree	2-08-056-83	USU	CLOS	37,909	27,451	344	27,795	10,114
Survey & Strategy for Tra	2-09-019-83	CSU	COMP	34,267	33,097	344	33,441	826
Computer Applications	2-10-022-83	CSU	COMP	70,020	69,390	344	69,734	286
Increasing WM Capabilitie	2-11-020-83	CID	INIT	57,569	50,200	10	50,210	7,359
French Language Training	2-11-059-84	USU	COMP	10,650	5,994	10	6,004	4,646
Increasing WM Capabilitie	2-11-081-84	CID	INIT	20,847	16,234	10	16,244	4,603
Small Scale Irrigation Wo	2-14-064-84	CU	FINI	47,163	32,746	10	32,756	14,407
Farmer Participation Wksp	2-14-066-84	CU	COMP	36,193	24,573	10	24,583	11,610
AID/FAO Expert Consul WM	2-14-067-84	CU	COMP	9,288	12,769	10	12,779 (	3,491)
Planning for Seminar	2-14-075-84	CU	COMP	9,889	6,727	10	6,737	3,152
FAO Workshop Participants	2-14-078-84	CID	INIT	26,000	11,990	10	12,000	14,000
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$				1,352,119	1,236,058	168	1,238,315	113,804
SPECIAL STUDIES:								
AFRICA:								
Dev. Of Social Parameters	3-04-057-83	USU	COMP	67,039	59,281	10	59,291	7,748
NIGER:								
Traditional & Dev. SSI	3-04-111-84	CU	INIT	14,825	17,834	10	17,844 (	3,019)
WORLDWIDE:								
Development of Handbook	3-00-000-83	USU	CLOS	4,615	4,606	10	4,616 (	1)
Communication of Tech Tra	3-04-024-83	CSU	COMP	52,783	52,751	10	52,761	22
Irrigation Systems Manage	3-04-025-83	CSU	COMP	156,507	156,449	14	156,463	44
Small Scale Irrigation	3-04-045-83	CU	INIT	160,697	104,165	14	104,179	56,518
Interfacing Farm & Manage	3-04-045-84	CSU	INIT	223,239	106,965	225	107,190	116,049
Small scale irrigation	3-04-045883	CU	INIT	3,416	3,191	225	3,416	0
On-Farm Irrigation System	3-04-058-83	USU	COMP	47,146	18,136	225	18,361	28,785
Main System Management	3-04-059-83	USU	COMP	146,905	108,593	225	108,818	38,087
Main System Management	3-04-059883	CSU	COMP	14,716	0	42	42	14,674
Monitoring Projects	3-04-061-83	USU	POST	18,350	-42	42	0	18,350
Main Sys Design, Mgmt Reh	3-04-061-84	USU	COMP	221,424	167,835	9	167,844	53,580
Interdisp. Irrig. Sys. Se	3-04-062-84	USU	COMF	62,430	34,552	9	34,561	27,869
OA Evaluation	3-04-063-83	CID	COMP	7,163	-9	9	0	7,163
Management Intensity	3-04-076-84	CU	INIT	77,238	63,715	9	63,724	13,514
TOTAL SPECIAL STUDIES \$				1,278,493	898,022	290	899,110	379,383
TOTAL PRIOR YEARS ACTIVITIES \$				4,535,558	4,015,388	556	4,019,064	516,494

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)EXPENDITURE REPORT
AS OF DECEMBER 31, 1985CID / EPD OFFICE
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
TECHNICAL ASSISTANCE:									
BANGLADESH:									
Water Mgmt Central Support 1-02-015-82	0	0	9,641	0	0	9,641	954	10,595	CSU
Water Mgmt Sys Proj Paper 1-02-072-84	0	0	9,011	0	0	9,011	892	9,903	CU
EL SALVADOR:									
Evaluation Team 1-02-107A84	0	0	89,888	0	0	90,816	9,827	99,715	107,449
INDIA:									
Hill Area Land & Water Dev 1-02-013-83	0	0	1,574	0	0	1,574	156	1,730	CU
Maharashtra Minor Irrig 1-02-018-84	0	21,467	23,330	0	3,309	48,106	4,735	52,841	USU
Development of Solutions 1-02-024-82	0	0	3,826	0	0	3,826	379	4,205	CSU
Institutional Analysis 1-02-047-83	0	3,354	12,608	0	3,706	19,668	1,830	21,498	32,647
Hill Irrig Proj Prep II 1-02-074-84	0	6,943	0	0	0	6,943	687	7,630	CU
Short Course 1-02-100-84	0	7,161	0	0	0	7,161	709	7,870	USU
JORDAN:									
Irrigation Sector Study 1-04-013-84	0	0	7,500	0	0	7,500	742	8,242	USU
PAKISTAN:									
Long-Term Strategies 1-02-101-84	0	749	0	0	0	749	74	823	USU
Command Area Management 1-02-106-84	0	2,609	0	0	0	2,609	258	2,867	USU
PERU:									
Expansion of Irrig. Systems 1-02-035-84	0	0	8,148	0	0	8,148	807	8,955	USU
Special Study 1-04-027-82	0	0	7,500	0	0	7,500	742	8,242	USU

CID / EPD OFFICE
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
SRI LANKA:									
Water Mgmt Central Support 1-01-022-84	0	3,540	0	0	0	3,540	350	3,890	CSU
TOTAL TECHNICAL ASSIST. \$	0	45,823	173,026	0	7,015	225,314	23,142	249,006	140,096
TRAINING AND TECHNOLOGY TRANSFER:									
BANGLADESH:									
DA Workshop 2-02-007-82	0	0	29,436	0	0	29,436	2,914	32,350	CSU
INDIA:									
DA Workshop Madhya Pradesh 2-02-031-84	0	12,090	0	0	0	12,090	1,207	13,297	CSU
DA Workshop - WID 2-02-090-84	0	2,006	0	0	0	2,006	199	2,205	21,980
Watercourse Handbooks 2-13-025-82	0	2,530	0	0	0	2,530	250	2,780	CSU
THAILAND:									
Improving Allocations 2-14-062-83	0	34,909	553	0	5,248	40,710	3,511	44,221	44,250
WORLDWIDE:									
Increasing WM Capabilities 2-11-081-84	0	2,011	0	0	0	2,011	199	2,210	20,847
FAO Workshop Participants 2-14-078-84	0	10,919	0	0	0	10,919	1,081	12,000	26,000
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	0	64,465	29,989	0	5,248	99,692	32,503	109,063	113,077
SPECIAL STUDIES:									
NIGER:									
Traditional & Dev. SSI 3-04-111-84	0	0	0	5,797	0	5,797	0	5,797	CU
WORLDWIDE:									
Main Sys Design, Mgmt Rehab 3-04-061-84	0	0	1,043	0	0	1,043	103	1,146	USU
DA Evaluation 3-04-063-83	0	0	0	0	0	0	0	0	7,163
TOTAL SPECIAL STUDIES \$	0	0	1,043	5,797	0	6,840	32,606	6,943	7,163
TOTAL PRIOR YEARS ACTIV. \$	0	110,288	204,058	5,797	12,263	331,846	32,606	365,012	260,336

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CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

SCHEDULE B-2

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

COLORADO STATE UNIVERSITY
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
EPD ADMINISTRATION 0-01-999-83	78,404	6,173	13,267	2,964	35,224	136,091	9,740	145,772	CID
COLORADO STATE UNIV. 0-02-998-83	124,503	2,895	52,710	19,204	64,174	263,486	17,831	281,317	281,382
TOTAL UNIVERSITY SUPPORT \$	202,907	9,068	65,977	22,168	99,398	399,518	27,571	427,089	281,382
TECHNICAL ASSISTANCE:									
BANGLADESH:									
BAU Collaboration Team 1-03-030-82	20,928	10,208	9,208	0	12,600	53,138	4,218	57,162	84,243
DOMINICAN REPUBLIC:									
Water Management Spec. 1-02-110-84	7,530	2,142	3,339	0	4,684	17,911	1,407	19,102	26,813
EL SALVADOR:									
Evaluation Team 1-02-107A84	13,674	561	930	0	5,460	20,625	1,500	22,125	CID
INDIA:									
Development of Solutions 1-02-024-82	27,582	12,226	1,835	0	10,625	52,891	4,717	56,985	63,936
DA Workshop Planning 1-02-044-83	17,523	4,002	158	0	7,806	29,571	2,247	31,736	28,149
Curriculum Development 1-02-093-84	7,114	0	312	0	2,673	10,257	909	11,008	10,682
INDONESIA:									
Small Scale Irrig & Mgmt 1-02-011-84	13,698	15,737	482	0	10,036	40,207	3,241	43,194	CU
OAD'S TOY 1-02-030-83	4,527	7,360	84	0	2,951	15,019	1,278	16,200	14,408
PAKISTAN:									
WM (CWM) Meeting 1-02-029B83	2,143	0	0	0	772	2,956	249	3,164	9,931

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COLORADO STATE UNIVERSITY
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
SRI LANKA:									
Water Mgmt Central Support 1-01-022-84	23,690	21,203	1,751	148	10,810	58,016	5,073	62,675	58,984
WORLDWIDE:									
Water Resource Econ 1-02-042-83	12,490	700	252	0	4,824	18,266	1,331	19,597	19,703
TOTAL TECHNICAL ASSIST. \$	150,899	74,139	18,351	148	73,241	316,886	53,741	342,948	316,849
TRAINING AND TECHNOLOGY TRANSFER:									
AFRICA:									
Africa Workshop 2-14-113-84	4,929	4,683	89	0	3,493	13,291	1,062	14,256	14,333
BANGLADESH:									
DA Workshop 2-02-007-82	91,121	38,551	13,343	790	43,310	187,740	14,645	201,760	219,174
INDIA:									
DA Workshop Madhya Pradesh 2-02-031-84	61,871	23,774	7,280	0	24,356	118,024	10,017	127,298	135,470
DA Workshop - WID 2-02-090-84	0	783	1,572	0	738	3,093	233	3,326	CID
Watercourse Handbooks 2-13-025-82	9,254	2,525	57	0	4,261	16,265	1,377	17,474	15,188
INDONESIA:									
DA Workshop 2-02-010-84	2,849	890	1,955	0	1,999	7,693	564	8,257	8,736
NEPAL:									
DA Workshop Planning 2-02-003-84	7,041	6,355	1,566	0	4,970	19,964	1,516	21,448	21,842
SRI LANKA:									
DA Workshop 2-02-028-83	41,877	32,539	11,453	0	25,739	111,953	8,911	120,519	121,475
WORLDWIDE:									
Videotape Modules 2-03-021-83	33,483	17,850	13,725	0	19,302	84,598	6,731	91,091	90,755
ICID Conference 2-04-048-84	13,416	0	456	0	4,994	18,866	1,373	20,239	20,678
Survey & Strategy for Training 2-09-019-83	21,377	749	1,031	0	7,991	31,148	2,293	33,441	34,267
Computer Applications 2-10-022-83	33,736	455	7,589	9,475	14,343	65,598	4,136	69,734	70,020
Increasing WM Capabilities 2-11-020-83	4,211	8,102	2,867	0	4,878	20,102	1,557	21,615	CID

COLORADO STATE UNIVERSITY
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND OBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
Increasing WM Capabilities									
2-11-081-84	1,301	0	0	0	468	1,769	129	1,898	CID
Farmer Participation Wksp									
2-14-066-84	0	1,944	0	0	700	2,644	192	2,836	CU
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	326,466	139,200	62,983	10,265	161,542	700,456	108,477	755,192	751,938
SPECIAL STUDIES:									
Communication of Tech Trans									
3-04-024-83	34,813	595	755	0	13,018	49,181	3,580	52,761	52,783
Irrigation Systems Management									
3-04-025-83	99,136	7,208	1,019	0	38,393	145,820	10,707	156,463	156,507
Small Scale Irrigation									
3-04-045-83	0	2,341	0	0	843	3,184	232	3,416	CU
Interfacing Farm & Management									
3-04-045-84	60,556	10,090	3,167	0	25,846	99,659	7,531	107,190	223,239
Small scale irrigation									
3-04-045883	0	2,341	0	0	843	3,184	232	3,416	CU
Main System Management									
3-04-059-83	10,006	0	0	0	3,602	13,798	1,181	14,789	USU
Main System Management									
3-04-059883	0	0	0	0	0	0	42	42	14,716
Main Sys Design, Mgmt Rehab									
3-04-061-84	18,524	0	82	0	6,698	25,396	1,943	27,247	USU
TAL SPECIAL STUDIES \$	223,035	22,575	5,023	0	89,243	339,876	133,925	365,324	447,245
TAL PRIOR YEARS ACTIV. \$	903,307	244,982	152,334	32,581	423,424	1,756,736	133,925	1,890,553	1,797,414

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

CORNELL UNIVERSITY
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
TECHNICAL ASSISTANCE:									
BANGLADESH:									
Farmer Organization Program									
1-02-015-82	27,521	22,515	12,156	1,695	26,219	90,106	6,157	96,263	154,287
Water Mgmt Sys Proj Paper									
1-02-072-84	11,966	0	1,364	545	5,245	19,120	1,320	20,440	20,719
BAU Collaboration Team									
1-03-030-82	2,779	3,561	0	0	2,856	9,196	628	9,824	CSU
BURMA:									
Wakema Pump Scheme Study									
1-02-036-84	2,914	0	1	0	1,155	4,070	289	4,359	4,759
INDIA:									
Hill Area Land & Water Dev									
1-02-013-83	7,991	3,004	7,896	0	8,099	26,990	1,870	28,860	140,949
Hill Irrig Proj Prep II									
1-02-074-84	12,347	7,649	287	0	8,809	29,092	2,008	31,100	61,218
INDONESIA:									
Small Scale Irrig & Mgmt									
1-02-011-84	17,223	22,019	4,944	0	25,898	70,084	4,374	74,458	54,468
PERU:									
Expansion of Irrig. Systems									
1-02-035-84	1,260	1,239	1,583	0	1,904	5,986	404	6,390	USU
SRI LANKA:									
Farmer Organization Program									
1-02-007-84	18,260	20,014	884	0	20,612	59,770	3,877	63,647	64,466
TOTAL TECHNICAL ASSIST. \$	102,261	80,001	29,115	2,240	100,797	314,414	20,927	335,341	500,866
TRAINING AND TECHNOLOGY TRANSFER:									
TOLIVIA:									
Tarija Short Course									
2-01-095-84	0	0	66	0	45	111	7	117	64,995

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CORNELL UNIVERSITY
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
WORLDWIDE:									
Main System Mgmt Task Force 2-06-077-84	0	609	0	0	418	1,027	60	1,087	7,557
Increasing WM Capabilities 2-11-020-83	3,744	4,258	0	0	1,600	9,602	792	10,394	C10
Increasing WM Capabilities 2-11-081-84	3,072	0	0	0	733	3,805	304	4,109	C10
Small Scale Irrigation Works 2-14-064-84	9,497	716	10,905	0	9,547	30,665	2,091	32,756	47,163
Farmer Participation Wksp 2-14-066-84	4,030	40	7,772	0	6,933	18,775	1,172	19,947	36,193
AID/FAO Expert Consul WM 2-14-067-84	1,811	6,169	27	0	3,979	11,986	793	12,779	9,288
Planning for Seminar 2-14-075-84	4,080	0	3	0	2,250	6,333	404	6,737	9,889
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	26,234	11,792	18,773	0	25,505	82,304	26,550	87,926	175,085
SPECIAL STUDIES:									
NIGER:									
Traditional & Dev. SSI 3-04-111-84	3,548	3,134	2,528	0	1,925	11,135	912	12,047	14,825
WORLDWIDE:									
Small Scale Irrigation 3-04-045-83	45,919	15,662	4,347	0	28,308	94,236	6,527	100,763	160,697
Management Intensity 3-04-096-84	38,517	415	752	0	20,111	59,795	3,929	63,724	77,238
TOTAL SPECIAL STUDIES \$	87,984	19,211	7,627	0	50,344	165,166	37,918	176,534	252,760
TOTAL PRIOR YEARS ACTIV. \$	216,479	111,004	55,515	2,240	176,646	561,884	37,918	599,801	928,711

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

SCHEDULE B-4

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-QQ-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

UTAH STATE UNIVERSITY
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
TECHNICAL ASSISTANCE:									
DOMINICAN REPUBLIC:									
Small Scale Irrig & Mgmt 1-02-091-84	674	1,511	1	0	700	2,902	232	3,118	CU
INDIA:									
Hill Area Land & Water Dev 1-02-013-83	0	841	7,726	0	2,999	11,566	848	12,414	CU
Maharashtra Minor Irrig 1-02-018-84	16,846	25,222	33,793	0	24,275	100,737	8,111	108,247	171,970
Water Management & Training 1-02-020882	0	4,121	12,460	0	5,803	22,384	1,642	24,026	22,802
Hill Irrig Proj Prep II 1-02-074-84	5,315	14,751	30,945	0	16,324	67,993	5,708	73,043	CU
Short Course 1-02-100-84	14,303	10,060	23,414	0	15,289	63,527	5,191	68,257	84,388
INDONESIA:									
Small Scale Irrig & Mgmt 1-02-011-84	7,487	15,635	828	0	7,664	31,747	2,504	34,118	CU
JORDAN:									
SR. On Farm WM Advisor 1-02-014-84	1,440	360	2,318	0	1,318	5,436	408	5,844	4,767
Irrigation Sector Study 1-04-013-84	6,345	982	300	0	2,440	10,178	866	10,933	31,429
PAKISTAN:									
Mayfield's TOY 1-02-040-83	0	4,987	5,606	0	3,708	14,456	1,204	15,505	15,666
Long-Term Strategies 1-02-101-84	0	0	728	0	233	961	72	1,033	9,369
Command Area Management 1-02-106-84	0	1,724	6,063	0	2,492	10,279	907	11,186	16,068
PERU:									
Expansion of Irrig. Systems 1-02-035-84	0	15,750	28,018	0	35,889	79,657	4,962	84,619	53,681
Special Study 1-04-027-82	31,541	6,291	6,273	0	14,084	58,799	4,976	63,165	93,755

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UTAH STATE UNIVERSITY
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
TANZANIA:									
Tanzania Irrig Study 1-02-082-84	2,880	280	5,083	0	2,637	10,931	867	11,747	12,567
TOTAL TECHNICAL ASSIST. \$	86,831	102,515	163,556	0	135,855	488,757	38,498	527,255	516,462
TRAINING AND TECHNOLOGY TRANSFER:									
BOLIVIA:									
Tarija Short Course 2-01-095-84	1,488	2,047	47	0	1,146	4,754	381	5,109	CU
ECUADOR:									
Equivar Video 2-03-054-83	97,023	9,519	34,432	0	49,341	190,739	14,380	204,695	204,837
INDIA:									
Senior Officials 2-04-007-83	0	0	728	0	255	983	72	1,055	1,054
WORLDWIDE:									
DA Review 2-02-080-84	4,961	4,420	34	0	3,013	12,516	1,020	13,448	CID
Short Term Non-Degree 2-08-056-83	11,522	1,533	6,533	0	6,268	25,856	1,939	27,795	37,909
Increasing WM Capabilities 2-11-020-83	6,683	5,706	86	0	4,366	16,966	1,360	18,201	CID
French Language Training 2-11-059-84	3,211	0	1,020	0	1,354	5,585	419	6,004	10,650
Increasing WM Capabilities 2-11-081-84	0	5,573	84	0	1,810	7,467	560	8,027	CID
Farmer Participation Wksp 2-14-066-84	0	1,268	0	0	406	1,674	126	1,800	CU
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	124,888	30,066	42,964	0	67,959	265,877	58,755	286,134	254,450
SPECIAL STUDIES:									
AFRICA:									
Dev. Of Social Parameters 3-04-057-83	24,650	13,578	2,736	0	14,337	55,236	3,990	59,291	67,039
WORLDWIDE:									
Development of Handbook 3-00-000-83	3,201	0	52	0	1,041	4,294	322	4,616	4,615

UTAH STATE UNIVERSITY
PRIOR YEARS WORK PLAN ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
On-Farm Irrigation Systems Sel									
3-04-058-83	12,476	373	91	0	4,140	17,080	1,281	18,361	47,146
Main System Management									
3-04-059-83	34,237	22,354	8,186	0	22,672	87,616	6,580	94,029	146,905
Monitoring Projects									
3-04-061-83	0	0	0	0	0	0	0	0	18,350
Main Sys Design, Mgmt Rehab									
3-04-061-84	70,871	5,001	22,291	131	31,439	129,733	9,718	139,451	221,424
Interdisp. Irrig. Sys. Sel.									
3-04-062-84	22,739	873	744	0	7,794	32,150	2,411	34,561	62,430
TOTAL SPECIAL STUDIES \$	168,174	42,179	34,100	131	81,423	326,007	83,057	350,309	567,909
TOTAL PRIOR YEARS ACTIV. \$	379,893	174,760	240,620	131	285,237	1,080,641	83,057	1,163,698	1,338,821

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

QUARTERLY REPORT
FOR THE PERIOD ENDING DECEMBER 31, 1985

CLOSED OUT ACTIVITIES

	CODE	UNIV.	DATE CLOSED	APPROVED AMOUNT
ADMINISTRATION:				
EPD OFFICE	0-01-999-84	CiD	Mar. 31, 1985	151,815
CORNELL UNIVERSITY	0-02-996-83	CU	Mar. 31, 1985	191,967
CORNELL UNIVERSITY	0-02-996-84	CU	Mar. 31, 1985	201,970
UTAH STATE UNIVERSITY	0-02-997-83	USU	Mar. 31, 1985	212,734
UTAH STATE UNIVERSITY	0-02-997-84	USU	Mar. 31, 1985	228,956
COLORADO STATE UNIVERSITY	0-02-998-84	CSU	Mar. 31, 1985	238,395
TOTAL ADMINISTRATION				\$ 1,225,837
TECHNICAL ASSISTANCE:				
BANGLADESH:				
Scope of Work	1-02-006-82	CSU	Mar. 31, 1985	16,221
Consultant, Legal	1-03-029-82	CSU	Mar. 31, 1985	14,671
CHINA:				
Bell's Study Tour	1-02-038-83	CID	Mar. 31, 1985	2,617
DOMINICAN REPUBLIC:				
Project Paper (OFWM)	1-02-009-83	USU	Mar. 31, 1985	92,538
Project PID	1-02-010-82	USU	Mar. 31, 1985	20,564
HAITI:				
Irrigation Project Evalua	1-02-039-83	USU	Mar. 31, 1985	25,083
INDIA:				
WM & Training	1-02-014-83	CID	Mar. 31, 1985	23,710
Water Management & Traini	1-02-020A82	CSU	Mar. 31, 1985	16,901
Evans Project Preparation	1-02-033-83	CSU	Mar. 31, 1985	12,581
Clyma's TDY	1-02-035-83	CSU	Mar. 31, 1985	2,888
Olsen's TDY	1-02-037-83	USU	Mar. 31, 1985	12,448
JORDAN:				
Review of Curriculum	1-02-041-82	USU	Mar. 31, 1985	9,911
MALI:				
OFWM Specialist	1-02-006-83	USU	Mar. 31, 1985	16,421
PAKISTAN:				
CLYMA'S TDY	1-02-031-83	CSU	Mar. 31, 1985	8,165
SRI LANKA:				
Various TOY's	1-02-008-82	CU	Mar. 31, 1985	67,471

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CLOSED OUT ACTIVITIES

DESCRIPTION	CODE	UNIV.	DATE CLOSED	APPROVED AMOUNT
THAILAND:				
Equipment Engineer	1-02-005-82	CID	Mar. 31, 1985	32,012
TOTAL TECHNICAL ASSISTANCE				----- \$ 374,202
TRAINING AND TECHNOLOGY TRANSFER:				
INDIA:				
Measurement for System Mg	2-07-026-82	CSU	Mar. 31, 1985	17,324
NEPAL:				
Small Scale Systems	2-14-050-83	CU	Mar. 31, 1985	41,554
SRI LANKA:				
DA Workshop - WID	2-02-034-83	CSU	Mar. 31, 1985	16,386
WORLDWIDE:				
Workshop (Tech. & Soc. AS	2-04-023-83	CSU	Mar. 31, 1985	63,241
Workshop (Tech & Soc ASP)	2-04-050-84	CSU	Mar. 31, 1985	44,999
Increasing WM Cap. Intern	2-11-037-84	CID	Mar. 31, 1985	6,367
Brochures; Newsletters; P	2-12-018-83	CSU	Mar. 31, 1985	8,421
Start-Up Workshop	2-14-051-83	CU	Mar. 31, 1985	11,832
Start-Up Workshop	2-14-055-83	USU	Mar. 31, 1985	15,161
Conference	2-14-058-84	USU	Mar. 31, 1985	5,409
FAO/AID Workshop Planning	2-14-064-83	CU	Mar. 31, 1985	2,141
TOTAL TRAINING AND TECHNOLOGY TRANSFER				----- \$ 232,835
TOTAL CLOSED OUT ACTIVITIES				----- \$ 1,832,874

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

CID / EPD OFFICE
CLOSED OUT ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
EPD ADMINISTRATION 0-01-999-84	0	703	29	0	0	732	72	804	0
TOTAL UNIVERSITY SUPPORT \$	0	703	29	0	0	732	72	804	0
TECHNICAL ASSISTANCE:									
CHINA:									
Bell's Study Tour 1-02-038-83	0	0	2,381	0	0	2,381	236	2,617	0
INDIA:									
WM & Training 1-02-014-83	0	0	21,574	0	0	21,574	2,136	23,710	24,398
Olsen's TOY 1-02-037-83	0	0	98	0	0	98	10	108	0
THAILAND:									
Equipment Engineer 1-02-005-82	0	0	29,128	0	0	29,128	2,884	32,012	0
TOTAL TECHNICAL ASSIST. \$	0	0	53,181	0	0	53,181	5,338	58,447	24,398
TRAINING AND TECHNOLOGY TRANSFER:									
INDIA:									
Measurement for System Mgmt 2-07-026-82	0	0	3,987	0	0	3,987	395	4,382	0
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	0	0	3,987	0	0	3,987	5,733	4,382	0
TOTAL CLOSED OUT ACTIV. \$	0	703	57,197	0	0	57,900	5,733	63,633	24,398

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CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

EXPENDITURE REPORT
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COLORADO STATE UNIVERSITY
CLOSED OUT ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
EPD ADMINISTRATION									
0-01-999-84	88,237	1,904	13,362	0	37,261	140,764	10,247	151,011	0
COLORADO STATE UNIV.									
0-02-998-84	126,946	5,889	30,638	0	58,738	222,211	16,184	238,395	0
TOTAL UNIVERSITY SUPPORT \$	215,183	7,793	44,000	0	95,999	362,975	26,431	389,406	0
TECHNICAL ASSISTANCE:									
BANGLADESH:									
Scope of Work									
1-02-006-82	5,212	5,750	75	0	3,974	15,128	1,210	16,221	0
Consultant, Legal									
1-03-029-82	5,868	4,135	0	0	3,601	13,681	1,067	14,671	0
INDIA:									
Water Management & Training									
1-02-020A82	5,415	6,073	0	0	4,136	15,764	1,277	16,901	27,991
Evans Project Preparations									
1-02-033-83	4,034	4,545	0	0	3,089	11,732	913	12,581	0
Clyma's TOY									
1-02-035-83	1,224	739	0	0	707	2,694	218	2,888	0
PAKISTAN:									
CLYMA'S TOY									
1-02-031-83	2,449	3,116	0	0	2,003	7,614	597	8,165	0
TOTAL TECHNICAL ASSIST. \$	24,202	24,358	75	0	17,510	66,145	31,713	71,427	27,991
TRAINING AND TECHNOLOGY TRANSFER:									
INDIA:									
Measurement for System Mgmt									
2-07-026-82	4,856	4,805	39	0	2,134	11,982	1,108	12,942	0

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COLORADO STATE UNIVERSITY
CLOSED OUT ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
SRI LANKA:									
DA Workshop - WID									
2-02-034-83	6,290	5,692	20	0	3,133	15,198	1,251	16,386	0
WORLDWIDE:									
Workshop (Tech. & Soc. ASP)									
2-04-023-83	27,852	403	16,748	0	13,783	58,786	4,455	63,241	0
Workshop (Tech & Soc ASP)									
2-04-050-84	26,914	3,149	994	0	10,867	41,924	3,075	44,999	0
Increasing WM Cap. Intern 1									
2-11-037-84	4,827	0	0	0	1,062	5,889	478	6,367	6,367
Brochures; Newsletters; Pub.									
2-12-018-83	4,921	0	851	0	2,078	7,850	571	8,421	0
<hr/>									
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	75,660	14,049	18,652	0	33,057	141,418	42,651	152,356	6,367
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TOTAL CLOSED OUT ACTIV. \$	315,045	46,200	62,727	0	146,566	570,538	42,651	613,189	34,358

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CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

CORNELL UNIVERSITY
CLOSED OUT ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
CORNELL UNIVERSITY 0-02-996-83	92,116	6,625	26,376	0	54,463	179,580	12,387	191,967	0
CORNELL UNIVERSITY 0-02-996-84	97,801	7,197	20,035	3,359	61,200	189,592	12,378	201,970	0
TOTAL UNIVERSITY SUPPORT \$	189,917	13,822	46,411	3,359	115,663	369,172	24,765	393,937	0
TECHNICAL ASSISTANCE:									
SRI LANKA:									
Various TDY's 1-02-008-82	18,858	16,876	6,866	0	20,654	63,254	4,217	67,471	0
TOTAL TECHNICAL ASSIST. \$	18,858	16,876	6,866	0	20,654	63,254	28,982	67,471	0
TRAINING AND TECHNOLOGY TRANSFER:									
NEPAL:									
Small Scale Systems 2-14-050-83	19,760	7,058	133	0	11,935	38,886	2,668	41,554	0
WORLDWIDE:									
Start-Up Workshop 2-14-051-83	3,598	3,604	403	0	3,474	11,079	753	11,832	11,833
FAO/AID Workshop Planning 2-14-064-83	771	615	6	0	611	2,003	138	2,141	0
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	24,129	11,277	542	0	16,020	51,968	32,541	55,527	11,833
TOTAL CLOSED OUT ACTIV. \$	232,904	41,975	53,819	3,359	152,337	484,394	32,541	516,935	11,833

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CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)

EXPENDITURE REPORT
AS OF DECEMBER 31, 1985

UTAH STATE UNIVERSITY
CLOSED OUT ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
UTAH STATE UNIV. 0-02-997-83	100,395	11,305	11,018	34,916	42,951	200,585	12,149	212,734	0
UTAH STATE UNIV. 0-02-997-84	121,252	7,294	32,805	0	51,632	212,983	15,973	228,956	0
TOTAL UNIVERSITY SUPPORT \$	221,647	18,599	43,823	34,916	94,583	413,568	28,122	441,690	0
TECHNICAL ASSISTANCE:									
DOMINICAN REPUBLIC:									
Project Paper (OFWM) 1-02-009-83	7,287	23,221	33,236	0	22,310	86,227	6,484	92,538	0
Project PID 1-02-010-82	4,496	4,514	5,108	0	4,941	19,059	1,505	20,564	0
HAITI:									
Irrigation Project Evaluation 1-02-039-83	5,512	5,077	6,631	0	6,027	23,378	1,836	25,083	0
INDIA:									
Olsen's TDY 1-02-037-83	7,964	247	174	0	2,935	11,510	1,020	12,340	0
JORDAN:									
Review of Curriculum 1-02-041-82	2,390	4,334	77	0	2,380	9,238	730	9,911	0
MALI:									
OFWM Specialist 1-02-006-83	6,086	4,846	323	0	3,939	15,194	1,227	16,421	0
TOTAL TECHNICAL ASSIST. \$	33,735	42,239	45,549	0	42,532	163,835	40,924	176,857	0

MINING AND TECHNOLOGY TRANSFER:

UTAH STATE UNIVERSITY
CLOSED OUT ACTIVITIES

DESCRIPTION	SALARIES & BENEFITS	TRAVEL & PER DIEM	OTHER DIRECT COSTS	EQUIPMENT	INDIRECT COSTS	TOTAL UNIVERSITY COSTS	CID G & A AND DBA	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET

WORLDWIDE:									
Start-Up Workshop 2-14-055-83	5,971	4,491	1	0	3,662	14,125	1,036	15,161	0
Conference 2-14-058-84	1,955	1,824	2	0	1,210	5,035	418	5,409	0

TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	7,926	6,315	3	0	4,872	19,116	42,378	20,570	0

TOTAL CLOSED OUT ACTIV. \$	263,308	67,153	89,375	34,916	141,987	596,519	42,378	639,117	0

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