

PD-AAU-006

46420

WATER MANAGEMENT SYNTHESIS II
CID/AID-DAN-4127-C-00-2086-00

3RD QUARTERLY REPORT FY86

April 1, 1986 - June 30, 1986

Submitted by:
The Consortium for
International Development

TABLE OF CONTENTS

Water Management Synthesis II Project
 1st Quarterly Report FY86-FY87
 Quarterly Report Covering Period October 1, 1985 - December 31, 1985

	Page
I. INTRODUCTION	I.
II. SPECIAL FOCUS	II.
A. Colorado State University	II.1
B. Cornell University.	II.5
C. Utah State University	II.
III. STATUS OF PROGRAMMED ACTIVITIES	III.
IV. ACTIVITIES	IV.
A. FY84	IV.1
A.1 Technical Assistance Activities	IV.1
A.2 Training and Technology Transfer	IV.6
A.3 Special Studies	IV.11
A.6 Summary	IV.16
B. FY85	IV.17
B.1 Technical Assistance Activities	IV.17
B.2 Training and Technology	IV.20
B.3 Special Studies	IV.24
B.6 Summary	IV.29
C. FY86	IV.31
C.1 Technical Assistance Activities	IV.32
C.2 Training and Technology	IV.36
C.3 Special Studies	IV.44
C.4 Administrative Staff	IV.52
C.6 Summary	IV.57
V. FINISHED ACTIVITIES	V.
A. Technical Assistance Activities	V.1
B. Training and Technology	V.8
C. Special Studies	V.14
VI. COMMITTEES	VI.
VII. ROSTER UPDATE	VII.
VIII. FINANCIAL REPORT	VIII.

I. INTRODUCTION

I.

WATER MANAGEMENT SYNTHESIS II PROJECT
QUARTERLY REPORT COVERING PERIOD
1 APRIL, 1986
TO
30 JUNE, 1986

A. GENERAL

This report summarizes the activities of the Water Management Synthesis II Project for the third quarter of FY86, covering the period 1 April, 1986 to 30 June, 1986. This report includes information relative to current activities, finished activities as well as university highlights.

The central purpose of WMSII is to develop and disseminate (in AID assisted countries) more efficient water management technologies and practices to increase agricultural production and rural equity. The WMSII 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 WMSII. 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. ESTIMATES OF THE FUNDS AVAILABLE FOR THE FY87 WORKPLAN

The process of estimating the funds available for the FY87 Workplan continued and firm estimates have been established using two methods of estimation: (1) the Project WP Method and (2) the CID Obligation Method. The results of the Project WP Method are reported in Tables II and III below while the results of the CID Obligation Methods are reported in the "Notes on Financial Status of Project."

Table II Un-allocated Funds and Estimated Savings
 For the FY87 WP as Of End Of FY86-II
 2 July, 1986
Revised 11 August, 1986

Row	Item	Value
1.	Budget Ceiling	\$19,645,933
2.	Approved Budgets	\$18,252,440
3.	Un-allocated Funds (1.- 2.)	\$1,393,493
4.	Savings - Close-outs Special Report - Ramos	\$338,131
5.	Savings - Prior WP's Proposed to Close-out	\$463,309
6.	Est. Savings - Prior WP's Not Proposed for Close-out CSU \$284,780 CU \$219,048 USU \$80,915	\$584,743
7.	Est. Savings - Prior Yrs. 3rd ed. FY86-87 WP CSU 0.0 CU \$186,498 USU \$42,000	\$228,498
8.	Est. Savings 86 Act. 3rd ed. FY86-87 WP CSU 0.0 CU \$27,700 USU \$37,000	\$64,700
9.	Total Estimated Savings (Rows 4 through 8)	\$1,679,381
10.	Total Savings plus Un-allocated Funds (Row 9 + 3)	\$3,072,874

5

Table III: Estimated Funds Available for FY87 WP
 By Allocation Category
 as of FY86-II
 2 July, 1986
Revised 11 August, 1986

Row	Item	Value
1.	Est. Funds Available (from Table II)	\$3,072,874
2.	Less Buy-in not Alloc. b/	-\$1,096,376
3.	Core Funds Avail after June, '86 (Row1 - Row2)	\$1,976,498
4.	Less FY87 Activities WP a/	-\$653,383
5.	Less FY87 Reserve Admin/Sup a/	-\$920,377
6.	Less Aid Core not Alloc. a/	-\$258,906
7.	Less Un Core not Apprv. a/	-\$44,528
8.	Plus Funds Double Counted c/ in FY86 WP	+\$105,368
<hr/>		
9.	Est. Core Funds Not Alloc. and Available for FY87	+\$204,672

a/ From Schedule c, 3rd ed., FY86-87 WP

b/ This differs from the \$1,477,383 presented in Schedule C 3rd ed. of the FY86-87 WP and uses estimate presented in memo from McConnen to Fitzgerald, 3 July, 1986.

c/ For USU, "Lessons Learned", 2-14-039-85, \$85,176 was retained for accounting purposes, but also included in the approved amount for "Irrigation Expro. Transfer" 2-07-026-86. For CSU, "JFS Workshop in Zim." 3-04-500a86 was approved for development work (\$21,192), but this amount was not deducted from "CSU Rehab. Country A" 3-04-500-86.

Subject: Notes on Financial Status of Project

3 July, 1986

Revised 11 Aug., 1986

Summary of Discussion at 17-18 June, 1986 JPMT - Denver

a. Obligation and Expenditure of Funds	
1. Obligation of Funds to CID through Amend. #14	\$16,349,557
2. Expenditures as of 31 March, 1986	-\$12,800,943
3. Estimated Future Expenditures-Appr. Activities	<u>-\$3,772,116</u>
a. Bud. Bal Apprv. Act. \$5,451,497	
b. Est. Svng.	-\$1,679,381
c. Est. Fut. Expend.	\$3,772,116
4. Balance if No New Funds Obligated	-\$223,592
b. Additional Core Funds to be Obligated to CID by AID	
1. To be Obligated in FY86 (after June, 1986)	\$1,575,000
2. To be Obligated in FY87	\$625,000
3. Total Core Funds to be Obligated After June, '86	\$2,200,000
c. Remaining Buy-in Ceiling after Amend. # 14	
1. Contract Ceiling	\$19,645,933
2. Less Obligation through Amend. # 14	-\$16,349,557
3. Remainder of Contract Ceiling	\$3,296,376
4. Less Core Funds to be Obligated After June, '86	-\$2,200,000
5. Remaining Buy-in Ceiling	\$1,096,376

d. Total Mission Buy-ins		
1. Mission Buy-ins through Amend. # 14		\$4,787,364
2. Remaining Buy-in Ceiling		\$1,096,376
3. Total Buy-in Ceiling		\$5,883,740
e. Total Core Funding		
1. Core to CID through Amend #14		\$11,562,193
2. Remaining Core to be Allocated to CID		\$2,200,000
3. Total Core Ceiling		\$13,762,193
f. Calculations for Un-allocated Core		
1. Core Funds to be Obligated After June, '86		\$2,200,000
2. Less Balance from A. - 4. above		-\$223,502
3. Core Funds Avail. after June, 1986		\$1,976,498
(Row 1 - Row 2)		
4. Commitment of Core Funds 3rd ed. FY86-87 WP		-\$1,877,194
a. FY87 Act.	\$653,383	
b. FY87 Admin. Reserve	\$920,377	
c. AID Core	\$258,906	
d. Un. Core	\$44,528	
5. Adjustment for double counting of funds		+\$105,368
(see footnote c/, Table III)		

6. Est. Core Funds Not Alloc. & Avail. for FY87		+\$204,672

Note: Assumes that \$223,502 is all to be taken from Core. If we assume we spend Mission Buy-ins first, this is okay.

C. It is not possible to report the third quarter expenditures for Cornell University. As soon as those expenditures are reported, an updated version of the financial portion of this Quarterly report will be published.

A significant number of activities were formally closed during August of 1986, but these close-outs will not be reported until the next quarterly report.

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

USE OF RAPID APPRAISAL TECHNIQUE IN NEPAL

To understand the status of different irrigation systems in Nepal, a series of rapid appraisals of irrigation systems was conducted from September 1985 to February 1986. These studies were done in cooperation with the Irrigation Management Project (IMP), a joint project of His Majesty's Government of Nepal (HMG) and USAID/Nepal. IMP will institute improved irrigation management procedures in selected government irrigation systems in the hills and Terai in an effort to improve the performance of these systems. Simultaneously, IMP personnel will conduct long-term studies of farmer-managed irrigation systems in Nepal, to try to determine what lessons could be learned from these systems that could be applied to government-managed systems.

The objective of the rapid appraisals was to provide USAID/Nepal and HMG officials with relevant information on potential project sites. Based on this information, USAID/Nepal and HMG officials could make informed decisions about where IMP should be implemented.

Rapid appraisal as a technique was developed in reaction to the biases of totally unstructured "windshield surveys," and very long, time-consuming detailed studies. Rapid appraisals attempt to find a middle ground between these two extremes. The studies explicitly consider that there are always limits to budgets, time, and personnel. Rapid appraisals are simply a technique to systematically gather and analyze relevant information quickly and in a cost-effective manner.

Researchers using rapid appraisals must define the level of optimal ignorance or appropriate imprecision that they are willing to tolerate. Sacrifices in precision and detail are openly made to meet the demands of decision-makers. Results of rapid appraisal reports, therefore, should not be taken as absolute truth. Researchers facing the constraints of time, money, and personnel must admit that not everything needs to be known about a particular irrigation system. In the case of these IMP rapid appraisals, the information gathered was focused and related to the objectives of IMP.

The team did look at both problems and opportunities in all the systems studied, so that we could develop a list of strengths and weaknesses for each system. It is important, however, to realize that rapid appraisals are best seen as the starting point of future studies. Rapid appraisals should not be viewed as ends in themselves. They are complements, not substitutes, for more detailed, long-range studies.

The rapid appraisal team did not draw conclusions, nor recommend specific sites. The team simply conducted the studies and presented the findings. Site selection will be done by AID/Nepal and HMG.

It is important to realize that rapid appraisals are more of an

art, than a science. Nevertheless, there were some general principles which the rapid appraisal team did use. First, they worked as an interdisciplinary team, and constant interaction among team members was stressed. Second, the duration of each rapid appraisal varied according to the size and complexity of the irrigation system. The shortest appraisal (on a 40 ha irrigation system) took from one-half to one day, and the longest appraisal (on a 4,000 ha system) took slightly more than a week. Third, the team consciously tried to avoid the biases of looking only at main canals, head reaches, and villages near motorable roads. After a site was selected for study, the team made every effort to study the entire system from head to tail, and talk to as many different people as possible.

In addition to these general principles, the team also used past experiences, readings from rapid appraisal literature, and inductive learning to study the systems. The team developed a five-step method for conducting the rapid appraisals.

1. Entry: The team members gathered as much information as possible from written material, reports, and studies. They identified important government and farmer informants who are particularly knowledgeable about the system. They found out what other people have concluded about the site. (Unfortunately, there were usually no written reports on farmer-managed systems.)

2. Initial Walk-Through: The entire team usually walked together through the system from head to tail, exchanging observations and insights. Key informants also accompanied the team.

3. Individual Studies: Team members collected their disciplinary data through direct observations, field measurements, and informal interviews. Most of these studies were qualitative in nature. Where quantitative data were necessary (yields, landholding size), variations were stressed as much as mean figures. Particularly useful was purposively sampling all relevant socio-economic strata of the irrigation system: rich and poor, men and women, landlords and tenants, head and tail. Interviews were then conducted with both individual respondents and key informants. Proxy indicators were also used to study the system, i.e., housing standards serving as indicators for income levels.

4. Compare Findings: At the conclusion of individual data collection, the team members assembled to compare findings, correlate data, and draw tentative conclusions. This was done in both formal and informal meetings.

5. Strengths and Weaknesses: Finally, each member reported his impressions of the system's strengths and weaknesses. To keep the data fresh in team members' minds, the first drafts of the reports were written in the field.

To locate appropriate sites for the rapid appraisals, a reconnaissance of irrigation systems was first carried out in late September 1985 going from far east to the far west of Nepal. The

reconnaissance covered both DIHM and farmer-managed irrigation systems in the hills and the Terai.

After the reconnaissance, the rapid appraisal sites were selected using the following criteria:

1. Accessibility: As IMP is to generate "visible success stories," we felt it was important that potential sites be accessible to outsiders. Because of Nepal's rugged country and the resulting logistical problems, we decided that potential sites must not be more than a half-day's walk from a motorable road.

2. Size: The IMP project paper gave general guidelines for system sizes.

DIHM Terai Systems	1,500 ha (one site) 2,000 ha (one site)
DIHM Hill Systems	500 ha (total)
Farmer-Managed Terai Systems	500 ha (total)
Farmer-Managed Hill Systems	500 ha (total)

3. Control of water source, including reliability: As most irrigation in Nepal is run-of-the-river, we felt that it was important that farmers at potential sites have control of the water source and that the source be reliable.

4. Minimum external conflict: This criterion relates to number three, as external conflict over water could seriously hamper the reliability of water supplies.

5. Potential for expanding command area and cropping intensity: We wanted to study sites that had irrigated area and cropping intensity which could be expanded using improved management procedures.

6. Potential for increased crop production: This could result from improved management procedures, as well as using more improved agricultural technologies.

7. Replicability: Finally, we wanted to study sites that were representative of Nepalese irrigation, so that lessons learned could be replicated in other Nepalese irrigation systems.

After setting these criteria, the team realized that they were most applicable to DIHM-managed systems. They did not develop a separate set of criteria for farmer-managed systems, but did adapt the above criteria when necessary. They were most concerned that the farmer-managed systems in Nepal should teach us lessons about irrigation management.

During initial planning meetings, the team also began formulating a report format. For each rapid appraisal completed, they wanted a

separate report which would give officials the information needed to make site selection decisions. Each report includes a description of the system and discusses the characteristics and performance of the physical, social/institutional, operational, and agricultural aspects of the system. At the end of each report the strengths and weaknesses of the system are summarized.

By the end of the rapid appraisals, the team had examined 17 irrigation systems: 10 farmer-managed sites, 6 DIHM sites, and 1 hybrid system (Pithuwa) which combined both DIHM and farmer-managed attributes. There are 9 sites from the Terai (we considered the Chitwan Valley as part of the Terai) and 8 sites from the hills.

For detailed information on the appraisals, see Water Management Synthesis Report #43, "Rapid Appraisals of Nepal Irrigation Systems."

Cornell University Special Focus

FORUM ON IRRIGATION SYSTEMS RESEARCH AND APPLICATIONS

The Forum on Irrigation Systems Research and Applications was an interdisciplinary gathering designed to promote discussion of key irrigation management issues and to identify their implications programs and policies. It was attended by researchers in engineering, agricultural and social sciences as well as by policy makers and irrigation practitioners in the private and public sectors.

The Forum was an outgrowth of the Lessons Learned Conference planned at Cornell the previous year. The original intent of this conference was to review and evaluate the AID project design experience and to formulate guidelines for its improvement. While this focus remained a primary organizing force for the conference, Cornell and the CPMT decided that it would be useful to add several dimensions to what would have been a narrowly confined workshop. This expansion would permit interchange of ideas among irrigation researchers and practitioners inside and outside of WMS-II and AID and provide an opportunity to explore other research themes.

The Forum was organized about three major topics, each substantially different from the other two, but each highly relevant to AID's interests in irrigation:

I. Analysis of Irrigation Systems Management. This session was dedicated to presentations of empirical data on the mix of hardware and software in irrigation management. Relationships between engineering structures, institutions, and social arrangements were explored in one session. A second session focused on irrigation systems models and their applications. The following papers were presented in these sessions:

- a. "Quantitative Indicators of the Performance of Irrigation" David Seckler, R.J. Sampath and S. Raheja, Colorado State University.
- b. "A Comparative Sociology of Irrigation Systems: Concepts and Variables." David Freeman, Colorado State University.
- c. "Measuring Main Canal Performance: Productivity or Futility." Priti Ramamurthy, Syracuse University.
- d. "Intensification of Philippine Gravity Irrigation Infrastructure: Cost and Facilities in Government Systems, and Modeling NTA Water Allocation and Distribution." Carol Ferguson, Cornell University.
- e. "Software for Irrigation Systems Management." Wyn Walker, Utah State University.
- f. "Irrigation Water Management Modeling in Sri Lanka." Glen Dearth, Dames and Moore.

Discussants for these papers were Alan Early, Colorado State University, Tom Weaver, University of Rhode Island, Mark Svendsen, AID/Washington and IFPRI, and Yves Parlange, Cornell University.

II. **Research on Irrigation in Africa.** The session began with an overview of WMS-II's interest and involvement in irrigation in Africa by Executive Project Director, Richard McConen. The following papers were presented:

- a. "Comparative Analysis of Rice Production Costs in Large and Small-Scale Irrigated Perimeters, Upstream Zone of the Fleuve, Mauritania." Tocka Koita, Michigan State University.
- b. "Management of Irrigation Water in the Middle Valley of the Senegal River: The Warda/Wageningen Project." Lucas Horst, Wageningen University, the Netherlands.
- c. "Kenya's Transition from the Wittfogelian Legacy to Community-Managed Irrigation." Joseph Ssenyonga, University of Nairobi.
- d. "The Evolution of Irrigation Policy in Zimbabwe--1900 to 1986." Mandivamba Rukuni, University of Zimbabwe.

The four papers were followed by stimulating discussions led by Pat Fleuret, AID/Washington, Derrick Thom, Utah State University, Donald Humpal, Development Alternatives, Inc., and Eric Arnould, Institute of Development Anthropology.

III. **Workshop on Irrigation Project Design.** This session began with presentations on design team experiences with AID on three continents. The presentations included

- a. "Project Paper Design in Nepal and Sri Lanka," by Gaylord Skogerboe, Utah State University,
- b. "Project Paper Development: Case Studies from the Dominican Republic and Peru." Buce Anderson, AID and Utah State University.
- c. "Irrigation Development in Uncertain Environments: The Case of Chad," Tom Weaver, University of Rhode Island.

Discussion of the three presentations was led by Jim Wolf, Development Alternatives Inc., and IIMI, Gary Bittner, AID/Washington, and Dean Peterson, Utah State University. Following the general discussion, forum participants broke up into smaller groups, each of which drew up a list of guidelines and cautionary statements for future irrigation project design efforts. These were presented and discussed at a plenary discussion of the group and will be summarized and distributed in written form.

The forum brought together about fifty professionals with a broad range of irrigation experiences. The small size of the forum made possible discussion by the group as a whole. While all the presentations were thoughtful and often provocative, several should be singled out for their outstanding contributions. Ramamurthy's political economy of water measurement brought to the audience's attention the fact that water measurement in India is not an objective, value-free process, but a means toward achieving particular political ends.

Rukuni summarized the history of irrigation policy in Zimbabwe (and in the former British colony of Rhodesia), relating it to the development of a communal lands policy and to changing patterns of land ownership and exploitation in the region. Ssenyonga focused on the shift in Kenyan irrigation policy from support of large-scale, high-tech, centrally managed public irrigation to support for small-scale, community-managed systems. Like Rukuni, Ssenyonga related changes in irrigation policy to the social and political changes that have followed independence, but he also turned to indigenous systems as a model for irrigation development in Kenya. The two papers in combination yielded important insights on the impact of the British legacy on irrigation and on recent efforts at redirecting irrigation development in more promising directions.

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 (6-30-86)

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Bangladesh	Curricula Dev. (BAU)	1-03-030-82	Closed	USAID
	Consultant, Legal	1-03-029-82	Closed	USAID
	Scope of Work	1-02-006-82	Closed	USAID
	DA Workshop	2-02-007-82	Closed	USAID
India	Watercourse Hdbks.	2-13-025-82	Closed	USAID
	Water Mgmt & Trng.	1-02-020-82a	Completed	USAID
	Meas. for Sys. Mgmt.	2-07-026-82	Closed	USAID
	Evans Proj. Prep.	1-02-033-83	Closed	USAID
	Clyma's TDY	1-02-035-83	Closed	USAID
	DA Workshop Planning	1-02-044-83	Closed	
	Development of Solutions	1-02-024-82	Closed	
Indonesia	Oad's TDY	1-02-030-83	Closed	USAID
Pakistan	WM (CWM) Meeting	1-02-029-83b	Closed	USAID
	Clyma's TDY	1-02-031-83	Closed	USAID
Sri Lanka	DA Workshop	2-02-028-83	Closed	USAID
	WID-DA Workshop	2-02-034-83	Closed	
Worldwide	Water Resource Econ.	1-02-042-83	Closed	AID/Wash
	Brochures; Newsletters, Pub.	2-12-018-83	Closed	Univ
	Survey & Str. for Trng.	2-09-019-83	Completed	Univ
	Videotape Modules	2-03-031-83	Req. Clo.	Univ
	Computer Applications	2-10-022-83	Req. Clo.	Univ
	Wkshop (Tech. & Soc.)	2-04-023-83	Closed	Univ
	Comm. for Tech. Tran.	3-04-024-83	Req. Clo.	Univ
	CSU Administration	0-02-998-83	Req. Clo.	Univ
	Irrigation Sys. Mgmt.	3-04-025-83	Req. Clo.	Univ

Colorado State University Activities FY 84 (6-30-86)

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Africa	Africa Workshop	2-14-113-84	Req. Clo.	Univ.
Dominican Rep.	Reconnaissance Team	1-02-110-84	Closed	USAID
India	Rajasthan MIP	1-02-026-84	Cancelled	USAID
	DA Workshop M. P.	2-02-031-84	Req. Clo.	USAID
	Curriculum Development	1-02-094-84	Req. Clo.	
Indonesia	Long Term WM Spec.	1-01-008-84	Cancelled	USAID
	DA Workshop	2-04-010-84	Closed	USAID
Nepal	DA Workshop Planning	2-02-003-84	Req. Clo.	USAID
Pakistan	Sr. Off. Workshop	2-04-019-84	Initiated	USAID
	Command Water Mgmt	2-14-114-84	Initiated	USAID
Sri Lanka	DA Workshop	2-02-006-84	Cancelled	USAID
	WM Central Support	1-02-022-84	Completed	USAID
	Design Team	1-02-102-84	Completed	USAID
	Long-Term WM Spec.	1-01-109-84	Initiated	USAID
Worldwide	Professional Visitors & Networking	2-11-039-84	Initiated	Univ.
	DA Trainers Workshop	2-08-040-84	Completed	Univ.
	Instructor's Guide DA	2-13-042-84	Initiated	Univ.
	Brochures, Newsletter, Pubs.	2-12-044-84	Finished	Univ.
	ICID Senior Off. Wkshop	2-04-048-84	Req. Clo.	USAID
	Survey & Strategy	2-09-049-84	Completed	Univ.
	Workshop; Soc. & Tech	2-04-050-84	Closed	Univ.
	Microcomputers	2-10-051-84	Completed	Univ.
	CSU Administration	0-02-998-84	Closed	Univ.
	Interfacing Farm & Mgmt	3-04-045-84	Completed	Univ.

Overall Activities FY 84 (6-30-86)

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

Colorado State University Activities FY 85 (6-30-86)

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Egypt	Eval. of IMS	1-02-072-85	Completed	USAID
El Salvador	PID Preparation	1-02-059-85	Completed	USAID
India	Dev. of Handbooks	2-15-027-85	Req. Clo.	USAID
	Technology Transfer	2-06-022-85	Cancelled	USAID
	Training Materials	2-13-020-85	Cancelled	USAID
	Training of Trainers	2-14-019-85	Cancelled	USAID
	Priority Research	1-02-014-85	Cancelled	USAID
Indonesia	Cost Recovery Study	1-02-074-85	Completed	USAID
Nepal	DA Workshop	2-02-031-85	Completed	USAID
	Rapid Appraisal	1-02-087-85	Finished	USAID
Pakistan	Mgmt Off. Trng. Planning	2-01-065-85	Initiated	USAID
	Cur. Development	1-02-071-85	Completed	USAID
	Baseline Survey	2-04-083-85	Completed	USAID
	Key Officials	2-04-080-85	Completed	USAID
Sri Lanka	Central Support - 85	1-02-003-85	Completed	USAID
	Landsat - 85	3-04-038-85	Completed	Univ.
	Interfacing OFWM	3-04-036B85	Completed	Univ.
	Long Term WM Spec.	1-01-109-84	Initiated	USAID
Swaziland	Irrig. Priorities	1-02-069-85	Completed	USAID
Worldwide	Seminar on System Rehab. Phase I	2-05-033-85	Finished	Univ.
	Microcomputer Workshop	2-14-032-85	Initiated	Univ.
	Interfacing OFWM	3-04-036A85	Completed	Univ.
	CSU Administration	0-02-998-85	Completed	

Colorado State University Activities FY 86 (6-30-86)

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Egypt	Redesign	1-02-071-86	Initiated	USAID
India	Social Tech. Feasibility	1-04-059-86	Finished	USAID
Pakistan	Baluchistan DA	2-02-065-86	Initiated	USAID
Sri Lanka	Extension of Long Term	1-02-047-86	Terminated	Univ.
	Central Support	1-02-048-86	Initiated	Univ.
	Landsat - 86	3-04-011-86	Initiated	Univ.
	Interfacing OFWM	3-04-009-86	Initiated	Univ.
Thailand	Special Studies '86	3-04-008-86	Initiated	Univ.
Worldwide	Traid 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 Phase 2	2-05-006-86	Initiated	Univ.
	Interfacing/Backstopping CSU Administration	3-04-010-86 0-02-998-86	Initiated Initiated	Univ. Univ.
Zimbabwe	Small Scale Irrigation	1-02-050-86	Initiated	USAID
	JFW - Planning	3-04-500A86	Initiated	USAID
	Joint Field Study	3-04-500-86	Approved	USAID

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

CORNELL UNIVERSITY ACTIVITIES FY-85

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Haiti	Cayes Plain	1-02-084-85	Finished	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	Finished	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	Closed Out	USAID
	TA-Project Paper (OFWM)	1-02-009-83	Closed Out	USAID
Ecuador	TT-Ecuavir Video	2-03-054-83	Completed	UNIV/USAID
Haiti	TA-Irrigation Project Eval.	1-02-039-83	Closed Out	USAID
India	TA-Water Mgmt. and Training, and Water Management CWM	1-02-020-82B)	Completed	USAID
		1-02-029-83)		USAID
	TA-Olsen's TDY	1-02-037-83	Closed Out	USAID
	TA-Institutional Analysis	1-02-053-83	Cancelled	AID/WASH
	TT-Senior Officers Workshop	2-04-007-83	Cancelled	UNIV
Jordan	TA-Review of Curriculum	1-02-041-82	Closed Out	USAID
Mali	TA-OFWM Specialist	1-02-006-82	Closed Out	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	Closed Out	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)	Completed	UNIV
		3-04-060-83)		UNIV
	SS-Development of Handbook	3- - -83	Deleted	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	Closed Out	AID/WASH
Dominican Republic	TA-Weed Control Specialist	1-02-091-84	Completed	USAID
Ecuador	TT-Finishing Original Modules	2-03-054-84	Completed	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	Completed	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	Completed	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	Completed	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

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	Finished	USAID
Egypt	TA-Water Use Project Evaluation	1-02-066-85	Completed	USAID
El Salvador	TA-Project Paper	1-02-077-85	Completed	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	Completed	USAID
Nepal	TA-Small & Medium-Scale Irrig.	1-02-067-85	Completed	USAID
Sri Lanka	TA-Model Calibration	1-02-005-85	Completed	USAID
Swaziland	TA-Irrigation Assistance	1-02-029-85	Cancelled	USAID
Thailand	TT-Maintenance Workshop	2-14-088-85	Completed	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	Finished	UNIV
	SS-ISM Development	3-04-043A85	Finished	UNIV
	SS-Thailand Case Study	3-04-043B85	Finished	UNIV
	SS-Morocco Case Study	3-04-043C85	Finished	UNIV
	SS-India Case Study	3-04-043D85	Deleted	UNIV
	SS-Interdisciplinary Workshop	3-04-043E85	Finished	UNIV

Utah State University Activities

FY 86

COUNTRY	ACTIVITY	CODE	STATUS	SOURCE
Africa	SS-Joint Field Study	3-04-501-86	Approved	AID/UNIV
Egypt	TA-Irrig. Sector Assessment	1-02-052-86	Initiated	USAID
Guatemala	TT-Evaluation of Model	2-02-064-86	Initiated	USAID
India	TT-Demonstration Workshop	2-02-051-86	Pending	USAID
Italy	TT-Rome Consultation	2-01-063-86	Initiated	UNIV
Morocco	TT-Internat'l Irrigation Center	2-04-027-86	Initiated	UNIV
Niger	TA-Project Paper	1-02-070-86	Initiated	USAID
Pakistan	TA-Irrigation Consultation	1-02-060-86	Initiated	USAID
Paraguay	TA-Technical Assessment	1-02-067-86	Finished	USAID
Peru	TA-Finishing Plan MERIS	1-02-061-86	Finished	USAID
	TA-Project Paper Assistance	1-02-073-86	Formal	USAID
Rwanda	TA-Water Mgmt. & Drainage	1-02-062-86	Finished	USAID
Somalia	TA-Project Paper Assistance	1-02-074-86	Formal	USAID
Thailand	TT-O&M Training	2-02-069-86	Initiated	MISSION
Worldwide	TT-Triad Synthesis Phase I	2-14-036-86	Initiated	USAID
	TT-Irrig. Experience Transfer	2-07-026-86	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 - Irrigation Overview

Code Number: 1-02-108-84

Status: Initiated

Lead University: Utah State University

Summary of Work: Derrick Thom spent considerable time and Jon Moris spent two weeks at USU working on the Overview document. The status of the report at this moment is as follows: Chapters II, IV, V, VII and X are complete and proofed. Chapters I, III, and VIII are half complete. A draft is being completed for Chapter IX and Chapter VI is almost completed.

Jon Moris will be back on campus for a couple of weeks in August and is currently working on the report during his free time at ODI. We are ever hopeful of having a complete report on hand in August so that typing and finally, publication, can commence within a reasonable time thereafter.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Jon R. Moris	0.25 ppm	3.25 ppm	USU	Sociology
Derrick Thom	0.50 ppm	0.50 ppm	USU	Geography
Linda Fields	0.00 spm	0.10 spm	USU	Typing

2. PAKISTAN - Command Water Management

Code Number: 1-02-114-84

Status: Initiated

Lead University: Colorado State University

Summary of Work:

During the previous quarter Management Training and Planning Programs were completed in three provinces in Pakistan. Initially, the MTP Program was conducted in the Punjab. Subsequently, the team was divided, two members were added and programs were conducted in the Northwest Frontier and Sind Provinces.

Management plans were developed in each of the three provinces. These plans consisted of problem statements, goals reflecting the resolution of each contributing factor associated with the problem, objectives for reaching each goal and activities to accomplish each objective. These plans were developed in a collaborative problem-solving and planning process in which action training for management was provided while preparing the draft management plan.

The process involved multi-level and multi-organizational planning with the organizations involved in the Command Water Management Program in each province. A major accomplishment was the draft plans for achieving the objectives of CWM while resolving the problems of the subproject area. Another impact was the initiation of a process of coordination and planning with the involved CWM organizations.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Mohammed Haider	2.00 ppm	16.50 ppm	CSU	Economics
Wayne Clyma	2.75 ppm	13.80 ppm	CSU	Agricultural Engr.
S. Sritharan	ppm	13.36 ppm	CSU	Civil Engr.
Ed Shinn	ppm	17.20 ppm	CSU	Sociology
M. Shafique	ppm	17.20 ppm	CSU	Agricultural Engr.
S. Karaki	ppm	.80 ppm	CSU	Civil Engr.
Ralph Luebs	ppm	8.00 ppm	Consultant	Agronomy
J. Warner	ppm	5.84 ppm	CSU	Civil Engr.
Tom Sheng	ppm	4.50 ppm	CSU	Civil Engr.
Oguz Nayman	ppm	3.84 ppm	CSU	Tech. Journalism
Max Donkor	gpm	5.67 gpm	CSU	Agricultural Engr.
Paul Wattenberger	3.00 ppm	10.00 ppm	CSU	Agricultural Engr.

Support Staff		ppm	3.65	ppm	CSU	Support Staff
Richard Tinsley	2.50	ppm	7.50	ppm	CSU	Agronomy
A. R. Robinson		ppm	1.85	ppm	CSU	Irrig. Engr.
Eugene Quenomen	2.00	ppm	6.50	ppm	Consultant	Economics
Ramchand Oad	1.00	ppm	2.70	ppm	CSU	Agricultural Engr.
Vicki Duneman	.50	ppm	.50	ppm	CSU	Tech. Journalism
Alan Early	.25	ppm	.25	ppm	CSU	Agricultural Engr.
Robert Mohammed		ppm	3.75	ppm	CSU	Agricultural Engr.

3. SRI LANKA - Long-Term WM Specialist

Code Number: 1-01-109-84

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Nelson completed Yala season reports, continued work on the Maha season DA reports and set-up the studies for the 1986 Yala season. Tom Sheng assisted him with a Microcomputer Workshop for counterpart host country personnel who are working on the DA studies.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Larry Nelson	3.00 ppm	27.00 ppm	CSU	Agronomy

A. FY84

A.2 Training and Technology Transfer Activities

1. PAKISTAN - CWM Officials Workshop

Code Number: 2-04-019-84

Status: Initiated

Lead University: Colorado State University

Summary of Work:

After many delays, India was dropped from the scheduled tour and 24 Pakistani officials are scheduled to tour Sri Lanka in early August. Local arrangements have been made by the Agrarian Research and Training Institute (ARTI). The assistance of a key person from ARTI will be obtained in conducting the tour. An engineer from CSU will lead the tour group. ARTI will provide the insight and emphasis on farmer participation planned for a person from Cornell, who was not available.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Ramchand Oad	ppm 2.25	ppm	CSU	Agricultural Engr.
Mohammed Haider	ppm .50	ppm	CSU	Economics
Wayne Clyma	ppm 1.14	ppm	CSU	Agricultural Engr.
Robby Laitos	ppm .25	ppm	CSU	Sociology

2. WORLDWIDE - Irrigation Systems Management Task Force

Code Number: 2-14-060-84

Status: Initiated

Lead University: Utah State University

Summary of Work: The first draft of Chapters I and III, which contain the overview and specific material on Computerized Management were completed and sent to the various Task Force members for their comments. In addition, the group that met at the AAAS Meeting (mentioned under Irrigation Experience Transfer) reviewed the first draft and gave their comments concerning it. Keller is in the process of incorporating the comments received to date into a re-draft of the first chapter; this should be done early in July.

The response to the material submitted to date has been very positive, and it seems that this is going to be a very worthwhile effort. We note that the figures and analyses contained in Chapter I are already being picked up by various authors and quoted elsewhere. It seems that articulating a statement on management of large irrigation systems so that people are not speaking past each other and have a common beginning position and vocabulary has been much needed.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Jack Keller	1.00 ppm	1.82 ppm	USU	Irrig. Engineering

3. WORLDWIDE - Professional Visitors & Networking

Code Number: 2-11-039-84

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Mandi Rukuni, Dean of the Agricultural Faculty at the University of Zimbabwe, visited the CSU campus for discussions on the pending Joint Field Workshop in Zimbabwe.

Staffing:

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

4. WORLDWIDE - Instructor's Guide for DA

Code Number: 2-13-042-84

Status: Initiated

Lead University: Colorado State University

Summary of Work:

No work this quarter.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Larry Nelson	0	ppm 2.25 ppm	CSU	Agronomy
Robby Laitos	0	ppm 1.00 ppm	CSU	Sociologist
Ramchand Oad	0	ppm 0.88 ppm	CSU	Agricultural Engr.
Mohammed Haider	0	ppm 1.00 ppm	CSU	Economics

A. FY84

A.3 Special Studies

1. 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's paper on Investment Strategies for SSI is being prepared for publication as a WMS Report.

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

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 1. The longer version "Getting the Process Right" by Uphoff has been published as a working paper and has been accepted for publication by Westview Press.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Norman Uphoff	0.0 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	0.0 gsm	5.5 gsm	Cornell	Rural Sociology
Gerard Finnan	0.0 gsm	2.25 gsm	Cornell	City & Regional Planning

A. FY84

A.4 Administration

A. FY84

A.6 Summary FY84

A.6 Summary FY84

A review of the activity categories of technical assistance, training and technology, and special studies shows the following profile relative to institutional status and specialization areas of persons employed in each activity. This summary does not include administrative activities.

TABLE I. Amount of Employment Time Relative to Organizational Affiliations

<u>AFFILIATIONS:</u>	<u>QUARTERLY EMPLOYMENT TIME:</u>
Colorado State University	17.00
Colorado State Graduate Students	.00
Cornell University	.00
Cornell University Graduate Students	.00
Utah State University	1.75
Utah State Graduate Students	.00

One important objective and activity of the WMSII project is that of increasing the quality and expanding the pool of expertise in water management. The universities are fulfilling this objective by involving professionals from other institutions in activities, employing persons who are not affiliated with any institutions, and by incorporating graduate students whenever appropriate.

The employment profile for the project activities of Utah State University, Colorado State University, and Cornell University, is shown on Tables II, III, and IV. These figures do not include administrative activities.

<u>SOURCE OF PERSONNEL:</u>	<u>QUARTERLY EMPLOYMENT TIME:</u>
-----------------------------	-----------------------------------

TABLE II. Colorado State University Employment Profile

Colorado State University	17.00
Colorado State Graduate Students	.00

TABLE III. Cornell University Employment Profile

Cornell University	.00
Cornell Graduate Students	.00

TABLE IV. Utah State University Employment Profile

Utah State University	1.75
Utah State Graduate Students	.00

B. FY85

B.1 Technical Assistance

1. 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 in the final stages of editing

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
Beth Rose	0.25 ppm	0.25 ppm	Cornell	Editor
Pierre LaRamee	.25 ppm	.25 ppm	Cornell	Editor
Barbara Lynch				Rur. Soc.(Editing)

2. NEPAL - Rapid Appraisal

Code Number: 1-02-087-85

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Robby Laitos completed the field work and finished technical Report #43 on the Nepal Rapid Appraisals. Darlene Fowler edited the report.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
William Laitos	3.00 ppm	11.00 ppm	CSU	Sociology
Darlene Fowler	2.25 ppm	5.25 ppm	CSU	Tech. Journalism
John Baxter	ppm	1.00 ppm	Consultant	Agronomy
Alan Early	ppm	2.25 ppm	CSU	Agricultural Engr.

B. FY85

B.2 Training and Technology Transfer

1. PAKISTAN - Mgmt. Officials Training Planning

Code Number: 2-01-065-85

Status: Initiated

Lead University: Colorado State University

Summary of Work:

No activity this quarter.

Staffing:

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

2. WORLDWIDE - IDM (Irrigation Data Management) Workshop

Code Number: 2-14-032-85

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Tom Sheng conducted workshops in Pakistan and Sri Lanka. Workshops of 10-14 days taught participants how to use selected software for better irrigation management.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
John Webb	ppm	2.25 ppm	Consultant	Tech. Journalism
Tom Sheng	ppm	4.75 ppm	CSU	Civil Engr.
Darlene Fowler	ppm	.50 ppm	CSU	Tech. Journalism

3. WORLDWIDE - IDM (Irrigation Data Management) Workshop

Code Number: 2-14-032-85

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Tom Sheng conducted workshops in Pakistan and Sri Lanka. Workshops of 10-14 days taught participants how to use selected software for better irrigation management.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
John Webb	ppm	2.25 ppm	Consultant	Tech. Journalism
Tom Sheng	ppm	4.75 ppm	CSU	Civil Engr.
Darlene Fowler	ppm	.50 ppm	CSU	Tech. Journalism

4. WORLDWIDE - Lessons Learned: Irrigation Systems Management

Code Number: 2-14-039-85

Status: Initiated

Lead University: Utah State University

Summary of Work: The original concept paper has been completed and sent to various team members for review. The paper has been appended to account for the comments received to date. In conjunction with a special half-day session on International Irrigation Management at the recent May 25-30 AAAS Convention in Philadelphia, there was a one-and-one-half-day seminar with the speakers present. The speakers were Robert Chambers, Walter Coward, Roberto Lenton and Jack Keller. Dean Peterson and Roger Revelle were also at the one-and-one-half-day confab. We reviewed the concept paper and had discussions which were relevant to Irrigation Experience Transfer. We will also be able to use the papers presented at the AAAS special session in our Transfer activities.

Mark Lusk has finished his report for the Transfer document and Dave James, Kern Stutler, Bryant Smith and Allen LeBaron have their sections under way. A one-day planning session is scheduled for July 8 to finalize the Irrigation Experience Transfer manual outline and schedule the final inputs for it.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Jack Keller	0.00 ppm	0.82 ppm	USU	Irrig. Engineering
Allen LeBaron	1.70 ppm	2.70 ppm	USU	Ag. Economics
Bryant Smith	0.00 ppm	0.50 ppm	USU	Law/Institutions
R. Kern Stutler	0.00 ppm	0.85 ppm	USU	Irrig. Engineering
Mark Lusk	1.25 ppm	1.25 ppm	USU	Sociology
J. Perera	0.00 ppm	0.13 ppm	Sri Lanka (Honorarium)	Sociology
M. Mulik	0.50 gpm	1.50 gpm	USU	Irrig. Engineering
B. Sawant	0.50 gpm	1.50 gpm	USU	Irrig. Engineering

B. FY85

B.3 Special Studies

1. THAILAND - Case Study

Code Number: 3-04-043B85

Status: Initiated

Lead University: Utah State University

Summary of Work: Work on this activity is now near completion. A report written by the Thai engineers who attended USU for long-term training is under review. The engineers, including the one trained in Thailand, are now back on station and are working with the USU team implementing the main systems software in the Northeast.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Wynn R. Walker	0.00 ppm	0.25 ppm	USU	Irrig. Engineering
Kanching Kawsard	0.30 gpm	3.30 gpm	USU	Irrig. Engineering
C. Pajsoontorn	0.00 gpm	1.50 gpm	USU	Irrig. Engineering

56

2. 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

3. 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: Walt Coward visited Indonesia in January to plan activities to be carried out beginning in July 1986. Based on these discussions with AID/Jakarta and site visits, plans Coward and Walter planned a trip to Indonesia in July to start the study.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
E. Walter Coward, Jr.	0.25 ppm	0.50 ppm	Cornell	Rural Sociology
Chris Wensley	0.0 gsm	3.0 gsm	Cornell	Ag. Engineering
R. Barker	0.25 ppm	0.25 ppm	Cornell	Ag. Economics

51

4. 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	0.0 ppm	3.25 ppm	Cornell	Agri. Economics
Edward Martin	0.0 gsm	16.5 gsm	Cornell	Agri. Economics
Robert Yoder	0.0 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	0.0 ppm	2.5 ppm	Cornell	Agri. Engineering

5. WORLDWIDE - French Language Training

Code Number: 2-11-041-85

Status: Initiated Lead University: Utah State University

Summary of Work: Activity continued with one participant (Dr. Walker). While progress seems slow, it is nevertheless continuing during a one-hour tutorial each day. Sessions have been discontinued until September.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Jean Paul Favre	0.25 gpm	0.90 gpm	USU	Engineering

B. FY85

B.4 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: The draft report prepared during January was reviewed by the Ministry of Irrigation and by USAID and the final version of this report has been issued in Egypt by GOE/MOI and USAID. These copies were received by USU in early June. WMS II plans to issue this material as WMS Report No. 42.

Edwin D. Stains, Director of the Office of Irrigation and Land Development, USAID writes that the "draft report was used to develop a new program and have the green light from the Mission to proceed with an amendment to the Irrigation Management Systems project." Work on this has already begun with two U.S. consultants, Fletcher Riggs and Willis Shaner, arriving in July.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Glen Stringham	0.00 ppm	1.45 ppm	USU	Irrig. Engineering
David W. James	0.00 ppm	1.35 ppm	USU	Soil Science
Dean F. Peterson	0.00 ppm	1.45 ppm	Consultant	Irrig. Engineering
Gerald Wheelock	0.00 ppm	1.20 ppm	Consultant	Anthropology
Keith Roberts	0.00 ppm	1.40 ppm	Consultant	Ag. Economics
Linda Fields	0.00 spm	0.20 spm	USU	Typing/Editing
Cindy Nielsen	0.00 spm	0.15 spm	USU	Typing

2. EGYPT - Redesign

Code Number: 1-02-071-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Bill Shaner began a feasibility study for a redesign of the Egyptian Irrigation Systems Management Project. Fletcher Riggs, a consultant, will work through August in Egypt to assist the AID mission in preparation of the feasibility study. Dr. Shaner will complete his section in July.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
William Shaner	1.00 ppm	1.00 ppm	CSU	Mechanical Engr.
Fletcher Riggs	1.00 ppm	1.00 ppm	CID	Agri. Economist

3. SRI LANKA - Central Support

Code Number: 1-02-048-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Leslie Stillwater assisted Dr. Nelson in preparing Yala and Maha season DA reports. Dr. Tom Sheng also assisted in data analysis of Maha season data while in Sri Lanka to teach the Microcomputer Workshop.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Tom Sheng	2.50	ppm 3.75 ppm	CSU	Civil Engineer
Leslie Stillwater	2.00	ppm 4.00 ppm	CSU	Agricultural Engr.

4. SRI LANKA ARTI--Continuing Support

Code Number: 1-02-045-86

Status: Initiated

Lead University: Cornell University

Summary of Work: In April and May, Norman Uphoff made a second visit to Sri Lanka to work with ARTI on finalizing its end-of-project impact appraisal and on planning two special studies to improve farmer organization performance. Uphoff met with Gal Oya administrators and Irrigation Department officials, attended a district Agricultural Committee Meeting, and met with Gal Oya IOs.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Norman Uphoff	0.25	0.75	Cornell	Political Science

5. ZIMBABWE - Small-Scale Irrigation

Code Number: 1-02-050-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

A revised draft of the Zimbabwe report was completed by Dr. Richard McConnen and Dr. Terry Podmore. It was sent to Zimbabwe for final approval in early July.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Terry Podmore	0.50 ppm	2.00 ppm	CSU	Ag. & Chem. Engr.
Richard McConnen		1.00 ppm		Economist

C. FY86

C.2 Training and Technology Transfer Activities

1. GUATEMALA - Evaluation of Model

Code Number: 2-02-064-86

Status: Initiated

Lead University: Utah State University

Summary of Work: Tom Tenney, the graduate student, continued carrying out surveys of older mini-riego systems and marketing information. Allen LeBaron participated with Tenney in Guatemala in completing survey forms, gathering background data, and conducting the engineering survey with the extension service engineers. LeBaron and Tenney returned to Logan the first week of May and began analyzing the results of the surveys. Preliminary cost benefit analyses were made of each of 27 older projects.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Bryant Smith	0.00 ppm	0.25 ppm	USU	Institutional
Bertis Embry	0.00 ppm	0.25 ppm	Consultant	Irr. Engineering
Tom Tenney	2.25 gpm	4.25 gpm	USU	Ag. Economics

65

2. PAKISTAN - Baluchistan DA

Code Number: 2-04-065-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

A diagnostic analysis study of the Las Bellas Project in Baluchistan was conducted. Assistance from three personnel from the Sind DA was obtained since all the personnel from the Agriculture Department had not yet been assigned.

A draft DA report was prepared and presented at a farmers field day at the end of the study. This draft report is under revision and plans for a Management Training and Planning Program is awaiting the assignment of Command Water Management personnel from the Agriculture Department.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Wayne Clyma		ppm 0.50 ppm	CSU	Agricultural Engr.
Vicki Duneman		ppm 0.50 ppm	CSU	Tech. Journ.
Tom Flack	0.50	ppm 2.75 ppm	Consultant	Agronomist
Kerry Gee	0.50	ppm 2.75 ppm	Consultant	
Oguz Nayman	1.67	ppm 4.00 ppm	CSU	Tech. Journ.
Ramchand Oad		ppm 0.50 ppm	CSU	Ag. & Chem. Engr.
Alan Early	0.50	ppm 0.50 ppm	CSU	Ag & Chem. Engr.
Robert Mohammed	0.25	ppm 2.50 ppm	CSU	Ag & Chem. Engr.
Paul Wattenburger		ppm 1.00 ppm	CSU	Ag. & Chem. Engr.

3. WORLDWIDE - Triad Synthesis #1

Code Number: 2-14-035-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Ramchand Oad developed a proposal for this activity to examine project methodologies and findings from various irrigation system evaluations. The proposal was discussed at meetings of the CPMT and the JPMT in Washington and Denver.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Ramchand Oad	1.00 ppm	1.00 ppm	CSU	Agricultural Engr.

4. WORLDWIDE - Revision and Development of Videotapes

Code Number: 2-03-004-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

No work this quarter except in preparation for videotapes to be done in Pakistan and Nepal for the Rehabilitation Conference.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
John Webb	0.0 ppm	5.71 ppm	CSU	Tech. Journalism

70

5. WORLDWIDE - Revision of Training Manuals

Code Number: 2-13-003-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Richard Tinsley rewrote the agronomy section for Volume II. Darlene Fowler is editing that section. Dr. Robby Laitos began revisions on the sociology section.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Darlene Fowler	0.75 ppm	4.50 ppm	CSU	Tech. Journalism
Richard Tinsley	1.00 ppm	1.00 ppm	CSU	Agronomy

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 - Seminar on Irrigation Rehabilitation Phase #2

Code Number: 2-05-006-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

In late March and early April, the case studies on Nong Wai by Asian Development Bank and the Tank Irrigation Modernization Project by International Irrigation Management Institute were confirmed and plans for three other case studies to be commissioned by WMSII were made. The case studies on Gal Oya Project in Sri Lanka, Periyar-Vaigai Project in India, and the Bagting-Siclong Project in the Philippines were confirmed in June.

The slides for preparing a simulated field trip for Nepal were organized and reviewed along with the DA report in June. The possibility of preparing a videotape on the Sirsia irrigation system to replace the slides is under consideration. The DA report on the Niazbeg irrigation system was evaluated as basis for preparing a script for the second simulated field trip and input from Paul Wattenburger obtained in this regard. Arrangements for Dan Hilleman to videotape the Niazbeg irrigation system were made.

Invitation letters to individuals and organizations interested and involved in irrigation system rehabilitation were sent in April, May, and June. A number of other appropriate individuals will be invited to the conference this July.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Mohammed Haider	1.00	ppm 1.50 ppm	CSU	Economics
David Karmeli		ppm 1.50 ppm	CSU	Agricultural Engr
Tom Sheng	.50	ppm .50 ppm	CSU	Civil Engr.

8. WORLDWIDE Rehabilitation Game Revision

Code Number: 2-13-018-86

Status: Initiated Lead University: Cornell University

Summary of Work: The Rehab Game was tested again at Cornell's Irrigation Forum in May. A hard card and a manual for its use have been designed to permit the computer control of a slide projectore. A set of slides to illustrate rehabilitation problems in the Gal Oya context was produced. Roelef Sikkens has begun work on an Africa version of the Rehab Game. A draft of the game manual was written.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Robert Oaks	2.0 gsm	5.0 gsm	Cornell	Ag. Engineering
Roelef Sikkens	2.0 gsm	2.0 gsm	Cornell	Ag. Engineering
Claudia Rullman	0.25 tpm	0.25 tpm	Cornell	Computer Graphics
Ed Vander Velde	0.50 ppm	0.75 ppm	Aquinas Coll.	Geography
Tammo Steerhuis	0.25 ppm	0.75 ppm	Cornell	Ag. Engineering

9. WORLDWIDE Conference on Lessons Learned

Code Number: 2-07-019-86

Status: Initiated Lead University: Cornell University

Summary of Work: The first annual Forum on Irrigation Systems Research and Applications was held at Cornell University, May 13-15, 1986. The Workshop was divided into three major components: Analysis of Irrigation Systems Management, Research on Irrigation in Africa, and a Workshop on Irrigation Project Design. Papers were given by invited participants for the first two topics. The Design workshop began with summaries of various WMS-II project experiences. Following this session, conference participants broke up into smaller groups to draw up guidelines for irrigation project design efforts. The conclusions of these groups were summarized at a final plenary session and will be circulated to AID/W and other interested parties.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Michael Walter	0.75 ppm	1.00 ppm	Cornell	Ag. Engineering
Nancy St. Julien	3.00 gsm	3.00 gsm	Cornell	Planning
Randy Barker	0.25 ppm	0.25 ppm	Cornell	Ag. Economics
E.W. Coward	0.25 ppm	0.25 ppm	Cornell	Rural Sociology
B.D. Lynch	0.25 ppm	0.25 ppm	Cornell	Rural Sociology

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 completed his data collection activities at Moulella and Galmi, two ONAHA perimeters and at Koumassa, a traditional onion gardening site. Anthropologist Eric Arnould assisted Norman, and developed a preliminary version of an interview protocol designed to elicit information on cooperative and perimeter management. Norman returned to the United States at the end of April and has subsequently been concentrating on data analysis. Goldring arrived in Niger in late March to complete the social science component of the Galmi and Moulella perimeters. In addition, she is collaborating with Adji Souley, a Nigerian social scientist studying social problems on the Konni perimeter. Both the Galmi and Moulella and the Konni studies will be presented to ONAHA with an overview of key issues by Goldring. Barbara Lynch visited Goldring in late June to supervise her research activities and to draw up plans in conjunction with AID and ONAHA for the final social science product.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Ray Norman	3.0 gsm	18.5 gsm	Cornell	Agri. Engineering
Eric Arnould	0.5 ppm	0.5 ppm	IDA	Anthropology
Mike Walter	0.0 ppm	0.75 ppm	Cornell,	Agri. Engineering
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	"
Luin Goldring	3.0 gsm	3.0 gsm	Cornell	Rural Sociology
Barbara Lynch	1.25 ppm	0.25 ppm	Cornell	"
Adji Souley	2.0 gsm	2.0 gsm	ONAHA	Sociology

2. SRI LANKA - Interfacing OFWM

Code Number: 3-04-009-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Data collection began for Yala season for the special studies team of John and Pat Wilkens-Wells and Susan Smolnick in Sri Lanka. They have hired several local consultants to assist in the data collection which will continue through September.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
John Wilkens-Wells	2.25 ppm	6.75 ppm	CSU	Sociology
Pat Wilkens-Wells	2.25 ppm	6.75 ppm	CSU	Sociology
Dan Lattimore		ppm 1.00 ppm	CSU	Tech. Journ.
Susan Smolnik		ppm 2.00 ppm	CSU	Civil Engr.
WJW Arambepola	3.00 ppm	7.00 ppm	Consultant	
K Chandrasekere	3.00 ppm	9.00 ppm	Consultant	
Delunghawatta	3.00 ppm	9.00 ppm	Consultant	
SR Gunasekera	3.00 ppm	6.00 ppm	Consultant	
RJ Gunawardena	3.00 ppm	9.00 ppm	Consultant	
NK Labutale	3.00 ppm	6.00 ppm	Consultant	
DM Wimalasiri		ppm 3.00 ppm	Consultant	

3. SRI LANKA - Landsat '86

Code Number: 3-04-011-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Tim Martin went to Sri Lanka to complete his ground truth data gathering to use in the Landsat study of the four irrigation systems being studied in the Special Study project. He also worked on mapping the two systems not mapped last summer during his TDY in Sri Lanka.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Jan Cipra	1.00 ppm	1.00 ppm	CSU	Agronomy
Tim Martin	1.50 ppm	4.50 ppm	CSU	Agronomy

4. THAILAND - Special Studies

Code Number: 3-04-008-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Kanda Parakian completed interviews with key informants and farmers in the Lam Chamuak irrigation system. Dr. Alan Early spent two weeks in Thailand developing a workplan for the coming irrigation season and discussing progress to date on the special studies.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Al Early	0.50	ppm 1.50 ppm	CSU	Agricultural Engr.
William Laitos		ppm .75 ppm	CSU	Sociology

5. WORLDWIDE - Interfacing/Backstopping

Code Number: 3-04-010-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Data from Pakistan were computerized for analysis. Also, a paper on Managing Rehabilitation was prepared by Dr. David Karmeli suggesting various interface management inputs in rehabilitating a system.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Ramchand Oad	0.50	ppm 1.00 ppm	CSU	Ag. & Chem. Engr.
Dennis Wendell		ppm 1.50 ppm	CSU	Sociology
Al Early		ppm .25 ppm	CSU	Ag. & Chem. Engr.
Dave Freeman	1.50	ppm 2.00 ppm	CSU	Sociology
Dave Karmeli	.76	ppm 1.50 ppm	CSU	Ag. & Chem. Engr.
Dan Lattimore		ppm .50 ppm	CSU	Tech. Journ.
Sarwat Rizwani	3.00	ppm 5.00 ppm	CSU	Sociology
Ed Shinn	3.00	ppm 4.00 ppm	CSU	Sociology

6. WORLDWIDE - Irrigation Project Analysis and Management

Code Number: 3-04-005-86

Status: Initiated

Lead University: Utah State University

Summary of Work: This "Main Systems" activity continued during the quarter with major emphasis on preparing the software for application in Thailand. The Unit Command Area Model and the Main System Hydraulic Model were adapted to a Hewlett-Packard 236 microcomputer. The microcomputer was purchased by Utah State University under a PIO/C and taken to Thailand with Mr. Gary Merkley in early June. He is expected to set the system up at the Regional Headquarters in the Northeast as well as train the operating personnel and initiate the necessary field phase of implementation.

Contacts with USAID Missions in India, Pakistan, Sri Lanka, Thailand and Egypt were made regarding a short visit by Professors Walker and Skogerboe to demonstrate and discuss the main systems software. Only Sri Lanka was unable to schedule the visit. As a consequence, arrangements were made to visit IMMI as part of one of their short courses. These visits should provide Missions with sufficient understanding of the software capabilities to determine whether or not future applications would be worth investigating.

Work continued to adapt the software to IBM PC systems. An IBM-AT system with color graphics is nearly completed for the software, and it is expected that this will also be transported to Thailand in the near future.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
Wynn R. Walker	0.00 ppm	0.92 ppm	USU	Irrig. Engineering
Gary Merkley	3.00 ppm	4.50 ppm	USU	Irrig. Engineering
Willem Vlotman	0.00 ppm	1.00 ppm	USU	Irrig. Engineering
Andy Keller	1.00 gpm	1.00 gpm	USU	Irrig. Engineering
Hubert Eisele	1.00 gpm	1.00 gpm	USU	Irrig. Engineering
Francis Gichuki	1.00 gpm	1.00 gpm	USU	Irrig. Engineering

7. ZIMBABWE - Joint Field Study Planning

Code Number: 3-04-500A86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Dr. Podmore went to Zimbabwe to discuss plans for the proposed field study. He also prepared a draft Scope of Work for that activity. It was reworked by Drs. Podmore, McConnen and Lattimore, and resubmitted to the African Bureau. It was approved by the African Bureau.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Terry Podmore	0.50 ppm	0.50 ppm	CSU	Agricultural Engr.

C. FY86

C.4 Administration

CSU Administration FY 86

Code Number: 0-02-998-86

Status: Initiated

Lead University: Colorado State University

Summary of Work:

Project support included assistance in various activities but particularly the Sri Lanka long-term, Pakistan Command Water Management, Rehabilitation Seminar, and Egypt Redesign.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION AREA
	Quart.	Cum.		
Vicki Duneman	1.00	ppm 1.50 ppm	CSU	Tech. Journ.
Dave Freeman		ppm 1.00 ppm	CSU	Sociology
Dan Lattimore	2.50	ppm 4.50 ppm	CSU	Tech. Journ.
Mary Lindburg	2.25	ppm 6.75 ppm	CSU	Support Staff
Al Madsen		ppm 1.00 ppm	CSU	Economist
Vonni McPhaul	1.00	ppm 6.00 ppm	CSU	Support Staff
Beverly Meyer	3.00	ppm 8.50 ppm	CSU	Support Staff
W. Schmehl		ppm .92 ppm	CSU	Agronomy
Tom Sheng		ppm .50 ppm	CSU	Civil Engr.

24

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
E. Walter Coward, Jr.	1.00 ppm	1.00 ppm	Cornell	Rural Sociology
Barbara D. Lynch	2.5 ppm	5.0 ppm	Cornell	Rural Sociology
Fua M. Hazelman	0.0 ppm	3.0 ppm	Cornell	Secretarial
Andrea Fudala	2.0 ppm	2.00 ppm	Cornell	Secretarial
Beth Rose	0.0 ppm	0.5 ppm	Cornell	Editing
Betty Van Amburg	0.75 ppm	1.50 ppm	Cornell	Secretarial
Grace Saatman	1.5 ppm	3.0 ppm	Cornell	Accounts Coordinating

WORLDWIDE - Administration

Code Number: 0-02-997-86

Status: Initiated

Lead University: Utah State University

Summary of Work: During the quarter of April through June a number of varied activities took place. Jack Keller and Bryant Smith attended a CPMT/JPMT meeting in Denver to discuss the Triad Synthesis activities, the African program and budgeting for the last year of the Project. In addition, Derrick Thom went to Washington D.C. to attend meetings with CID, AID, Cornell and CSU regarding the best strategy for the African activities. Pam Riley participated in the Forum on Irrigation Assistance Research and Application at Cornell University for Utah State University. This was for the purpose of familiarizing her with sociological issues in water management and preparing her for future TDY assignments under WMS II. Bryant Smith discussed with University of Utah and Brigham Young University officials possible candidates with foreign language capability for TDY assignments. Finally, Jack Keller went to Washington D.C. with Thomas Weaver to be lecturers at an ARDO conference. The purpose of the activity was to explain the Water Management Synthesis II Project to agricultural and rural development officers from various AID Missions.

Team members were selected, consulting agreements were negotiated and travel arrangements were made for individuals on the Niger activity; and travel arrangements were made for the following activities: (1) Niger: Owen Gwathmey, Eric Arnould, Tom Zalla, and Willis McCuistion; (2) Irrigation Project Analysis and Management: Wynn Walker, Gaylord Skogerboe, and Gary Merkley; (3) Thailand O&M Training: Gaylord Skogerboe, Gary Merkley and Thomas Cronkite; (4) Paraguay: Edwin C. Olsen; (5) Irrigation Experience Transfer: Jack Keller, Robert Chambers and Allen LeBaron; and (6) Peru - Finishing Plan MERIS: Kern Stutler. In spite of the difficulty and time involved in assembling a high quality team for Niger, we found a large number of French-speaking agronomists, sociologists and economists from diverse sources such as the United States, Canada, France, Morocco and Benin who would be well qualified for future assignments under WMS II.

The following reports were prepared or in the process of being completed from the administrative budget: the Egypt Irrigation Sector Survey Report, the Chad Report, the Pakistan Post '87 Strategy for Irrigation Report, the African Irrigation Overview, the second quarterly WMS II report and the CID mid-year report. In addition, a large amount of correspondence on the Project was carried out. Finally, computers were packaged and sent out to Thailand.

Staffing:

PERSON	ACTIVITY TIME		AFFILIATION	SPECIALIZATION
	Quart.	Cum.		
<u>Professional:</u>				
Jack Keller	1.00 ppm	3.93 ppm	USU	Irrig. Engineering
Bryant D. Smith	2.25 ppm	6.75 ppm	USU	Institutional
<u>Support Staff:</u>				
Angie Ballam	0.75 spm	2.25 spm	USU	Secretarial/Typing
JoAnn Biery	2.00 spm	8.00 spm	USU	Secretarial/Acctg.
Linda Fields	3.00 spm	8.00 spm	USU	Secretarial/Typing
Donna Gossner	0.75 spm	2.25 spm	USU	Secretarial/Typing
<u>Students:</u>				
Dean Mathias	0.12 gpm	0.12 gpm	USU	Clerical
M. Mulik	1.00 gpm	1.00 gpm	USU	Irrig. Engineering
B. Sawant	1.00 gpm	1.00 gpm	USU	Irrig. Engineering
Camille Loveland	0.37 gpm	1.80 gpm	USU	Clerical

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: Kenya

Title of Activity: Small-Scale Irrigation Analysis

Code Number of Activity: 1-02-042-86 Finished Date: 5/85

Lead University: Cornell University

Description of Activity: 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:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
E.W. Coward, Jr.	Cornell	Rural Sociology
Richard McConnen	CID	Ag. Economics
Ramchand Oad	CSU	Ag. Engineering
Joseph Ssenyonga	Consultant	Anthropologist
Leo Arao	Consultant	Ag. Economics
Francis Gichuki	CSU	Ag. Engineering
Barbara Lynch	Cornell	Rur. Soc./Editor
Pierre LaRamee	Cornell	Editor

Significant Findings and Results:

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.

Reports/Documents

Completion Date

Distribution

Watering the Shamba,
E.W. Coward et al.
WMS Report #40

April 1986

AID/Nairobi,
AID/Washington
CID, USU, CSU,
Cornell

Country: Paraguay

Title of Activity: Technical Assessment

Code Number of Activity: 1-02-067-86

Completion Date: 5/86

Lead University: Utah State University

Description of Activity: To provide irrigation and drainage recommendations for the Salesian Agricultural Institute (IAS) "Carlos Pfannl", Coronel Oviedo, Paraguay.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Edwin C. Olsen	USU	Irrig. Engineering

Significant Findings and Results:

Climate: The general impression among small farmers is that rainfall is more than sufficient and irrigation is not required in the region. The more astute farmers, however, recognize that rainfall is inadequate to assure a good economic return for high value crops and irrigate to supplement the rainfall.

An analysis of the climatological data shows that the potential crop evapotranspiration rate exceeds the dependable rainfall every month of the year except June when they are just equal. This confirms what the better farmers recognize when they irrigate. In addition, the high intensity and duration of the rainfall causes a portion of the dependable precipitation to not be "effective" towards meeting the crop water requirements. The latter factor causes severe drainage problems to exist in low lying areas where adequate surface drainage does not exist to evacuate the excess water.

Irrigation Requirement and Frequency: The amount and frequency of irrigation were determined for both shallow and deep rooted crops growing on the soils found within the IAS boundaries.

Irrigation Water Supply: Alternative potential and existing sources for irrigation water were inspected relative to the proposed site for developing a small irrigated area for training and/or commercial purposes. It was decided to begin with the existing pump/pipe system, and to invest in future water development after having some experience in irrigated farm operations and teaching requirements.

Irrigation Systems: A small portable, hand-move, gravity sprinkler system capable of irrigating 1.25 ha with the existing water supply and pipe delivery system was recommended and specifications given.

Drainage: Two main low lying pasture areas typically had drainage problems due to high intensity rainfall described above. The farm manager had already incorporated effective, inexpensive means of evacuating and avoiding collected rainfall runoff in these problem areas. A thorough inspection of the problem areas after some days of intense rain was conducted. The drainage works conceived by the farm manager were very effective in minimizing the drainage problem. Some additional improvements and continued maintenance practices were suggested to maintain the land in good condition with a minimum amount of effort and expense.

Education: If the IAS expands its curriculum to include on-farm irrigation principles and practices certain steps should be made:

1. The staff should include individuals trained and experienced in the subject matter;
2. Basic texts should be available in the library for student use;
3. Certain field and laboratory soil moisture equipment should be available;
4. The meteorological station should be equipped with sufficient instrumentation to estimate crop water requirements by various climatological methods; and
5. Any microcomputer made available to the IAS should have sufficient capacity and software to enable its multiple use in training, accounting, and administration.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Trip Report	5/86	JPMT, USAID/ Paraguay

SRI LANKA: Extension of Long-Term

Code Number: 1-02-047-86

Finished Date: June 30, 1986

Lead University: Colorado State University

Description of Activity:

Activity was cancelled.

FINISHED ACTIVITIES

B. Training and Technology

INDIA - DA Workshop/Madhya Pradesh

Code Number: 2-02-031-84

Finished Date: December 31, 1984

Lead University: Colorado State University

Description of Activity:

Diagnostic Analysis Workshop to train Government of Madhya Pradesh Irrigation and Agriculture Department field officers in identifying the major constraints confronting operation and maintenance of minor irrigation subsystems. A workplan for testing recommended solutions and implementing them was to be prepared.

Staffing:

Personnel	Affiliation	Specialization
Mohan Reddy Junna	CSU	Ag. Engineering
Al Madsen	CSU	Ag. Economics
David Redgrave	CSU	Agronomy
Tom Sheng	CSU	Civil Engineering
Larry Nelson	CSU	Agronomy
Robby Laitos	CSU	Sociology

Significant Findings and Results:

A Diagnostic Analysis Workshop was held January 16 to February 17, 1984 in Madhya Pradesh, India. Bhopal was selected as the site for the workshop because training and hotel facilities were available at the Academy of Administration, and Bhopal is near Dahod Tank Irrigation Project, the study area.

The purpose of the workshop was to impart to the officials from Madhya Pradesh to the knowledge and skills needed for interdisciplinary analysis before they began to plan, design, and construct several USAID minor irrigation schemes. The Government of Madhya Pradesh also asked the workshop teams to identify the Dahod Irrigation Project's constraints and to develop a workplan for improving the project.

The program involved 25 professionals from the fields of engineering, agronomy, economics, and farm extension, and sociology. The participants worked in four interdisciplinary teams, each assigned to separate minors off the Left Bank Canal in the Dahod Irrigation Project. An initial two-day reconnaissance survey served as the basis for a subsequent ten-day detailed study. After completing the detailed studies, individual teams analyzed their data and wrote disciplinary and interdisciplinary reports. Their major findings include:

- * Lack of an equitable and reliable supply of water;

- * Excessive water loss in the Left Bank Canal's masonry duct and flagstone-lined sections due to improper construction and lack of maintenance;
- * Need for a prescribed maintenance schedule;
- * Need for an operational plan for water distribution;
- * Lack of watercourses;
- * Significant deviations in field elevations leading to non-uniform water distribution;
- * Lack of a surface drainage network and insufficient cross-drainage;
- * Small flow rates compared to field size;
- * Lack of effective, organized farm family involvement in system management;
- * Absence of agricultural information and training for farm women;
- * Poor communication breakdown of information between irrigation officials and farmers; and
- * Lack of a farm recordkeeping system.

WMSII Report #25 presents the data and conclusions generated during the training program as well as a workplan for renovating the Dahod Irrigation System. The teams recommend that several activities be experimental in the early stages of the rehabilitation to test the suitability of the activity. The significant recommendations that follow are not ordered by priority. Our recommendations are:

- * Line the masonry duct and repair the flagstone-lined sections of the Left Bank Canal. Review the alignment and capacity of all minors and reconstruct them if necessary.
- * Establish a regular maintenance schedule and inspect the system frequently.
- * Institute a rotational water distribution schedule.
- * Build watercourses and drains and promote land leveling.
- * Permit and encourage farmers and farm women to participate fully in system rehabilitation, maintenance, and management.

100

- * Encourage farmers to build effective farmer organizations.
- * Provide agricultural information and training for extension personnel, farmers, and farm women.
- * Introduce a farm recordkeeping system, and evaluate potential economic impacts of improvements.
- * Improve availability of fertilizers, seeds, and credit.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Interdisciplinary Diagnostic Analysis and Workplan for Dahod Tank Irrigation Project, Madhya Pradesh, India, Report #25	May 1984	JPMT, Mission, Government of Madhya Pradesh
Women's Roles in Agriculture: 1984 Diagnostic Analysis Workshop, Dahod Tank Irrigation Project, Madhya Pradesh, India	June 1984	JPMT, Mission, AID/WID Office

INDIA: Development of Handbooks

Code Number: 2-13-027-85

Finished Date: September 30, 1985
Terminated

Lead University: Colorado State University

Description of Activity:

Identify priority subjects, develop outlines, and write handbooks for use by field irrigation water management staff in India. Host country professionals were to assist in planning and writing the handbooks. The India Mission could not get approval for WMSII staff to come to India to work on this project; therefore, it was terminated at the end of FY85.

Staffing:

Personnel	Affiliation	Specialization
Ramchand Oad	CSU	Ag. Engineering
A.R. Robinson	CSU	Ag. Engineering

Significant Findings and Results:

Proposals, outlines, and workplans were prepared and two engineers -- A.R. Robinson and Ramchand Oad -- made preparations to consult with the India counterparts, but were not permitted to come to India during 1985. Part of this was due to the death of Mrs. Gandhi. We did not get approvals for about one year for staff to enter India.

Reports/Documents	Completion Date	Distribution
Proposal for Handbook Designing Farm Irrigation Structures	March 30, 1985	Informal dis- tribution only

WORLDWIDE: Increasing Water Management Capability

Code Number: 2-11-020-83

Finished Date: June 30, 1984

Lead University: Colorado State University

Description of Activity:

To provide relevant overseas development experience for junior faculty and/or graduate students. They will be integrated into an on-going activity as a full participant.

Staffing:

<u>Personnel</u>	<u>Affiliation</u>	<u>Specialization</u>
Wayne Honeycutt	CSU	Agronomy

Significant Findings and Results:

The graduate student made a significant, professional contribution to the India Diagnostic Analysis Workshop as an agronomist. He learned the DA process, well as having an overseas development experience.

<u>Reports/Documents</u>	<u>Completion Date</u>	<u>Distribution</u>
Report #25	May 1984	JPMT, Mission

FINISHED ACTIVITIES

C. Special Studies

WORLDWIDE - Interfacing Farm Water Management

Code Number: 3-04-045-84

Finished Date: September 30, 1984

Lead University: Colorado State University

Description of Activity:

This activity is the continuing special study that is investigating the interface issues between on-farm and main system management of irrigation systems in Sri Lanka. A progress report was published, but the final reports will not be ready until FY87.

Staffing:

Personnel	Affiliation	Specialization
Mohammed Haider	CSU	Ag. Economics
Robby Laitos	CSU	Sociology
Ed Shinn	CSU	Sociology
John Wilkens-Wells	CSU	Sociology
Kanda Parankian	CSU	Sociology
David Freeman	CSU	Sociology
Al Early	CSU	Ag. Engineering
Al Madsen	CSU	Ag. Economics
Lynn Gibson	CSU	Ag. Economics

Significant Findings and Results:

The year was spent investigating potential sites for the field study. Thailand and the Philippines were visited, but did not prove to be the best places for us to do the study. Sri Lanka was determined to be the country we would like to carry out the study beginning in FY85.

Reports/Documents	Completion Date	Distribution
TDY Report-Thailand/ Philippines	February 1984	JPMT
"Improving Irrigation System Performance through Farmer Participation in Management"	January 1984	JPMT, Philippines, Mission
"Improved Strategies for Farmer Participation"	January 1984	JPMT, Thailand Mission
Proposal for Sri Lanka Special Studies	December 1984	AID, Sri Lanka Mission, CID
FY84 Special Studies Report	December 1984	JPMT

VI. COMMITTEES

None reported 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.

108

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)QUARTERLY REPORT
FOR THE PERIOD ENDING JUNE 30, 1986FISCAL 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 MAR. 31, 86	CURRENT QUARTER	THROUGH JUN. 30, 86	
MINISTRATION:								

WORLDWIDE								
EPD ADMINISTRATION	0-01-995-86	CID	APPR	63,157	0	11,121	11,121	52,036
EPD ADMINISTRATION	0-01-999-86	CID	FORM	191,810	135,117	48,238	183,355	8,455
CU ADMINISTRATION	0-02-996-86	CU	FORM	208,124	75,952	0	75,952	132,172
USU ADMINISTRATION	0-02-997-86	USU	APPR	233,089	90,477	65,418	155,895	77,194
CSU ADMINISTRATION	0-02-998-86	CSU	INIT	246,600	114,924	67,704	182,628	63,972
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 \$				942,780	397,012	192,481	589,493	353,287
TECHNICAL ASSISTANCE:								

AFRICA:								
African Irrigation Overvi	1-02-108-84	USU	INIT	169,651	170,342	6,057	176,399	(6,748)
CHAD:								
Irrigated Agric. Assessme	1-02-073-85	USU	FINI	116,022	103,988	1,651	105,639	10,383
EGYPT:								
Irrigation Sector Assessm	1-02-052-86	USU	INIT	128,383	94,210	1,008	95,218	33,165
Egypt Redesign	1-02-071-86	CSU	INIT	61,739	0	16,508	16,508	45,231
EL SALVADOR:								
PP Development	1-02-077-85	USU	COMP	164,814	154,690	0	154,690	10,124
HAITI:								
Cayes Plain-Distrib. Bene	1-02-084-85	CU	FINI	10,197	10,009	0	10,009	188
INDIA:								
TA/Fld Stu/TR-Maha Irr T&	1-01-021-84	USU	FINI	415,096	414,908	72	414,980	116
Socio-Technical Feas. Stu	1-04-059-86	CSU	FINI	3,183	1,320	23	1,343	1,840
INDONESIA:								
Small-scale irr. workshop	1-02-009-85	CU	INIT	200,658	57,503	-1	57,502	143,156
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	INIT	105,516	78,896	0	78,896	26,620

FISCAL YEAR 1986 WORK PLAN ACTIVITIES

ACTIVITY	CODE	UNIV.	STATUS	APPROVED BUDGET	/ - - E X P E N D I T U R E S - - \ THROUGH MAR. 31, 86	CURRENT QUARTER	THROUGH JUN. 30, 86	BUDGET BALANCE
MOROCCO:								
PID Development	1-02-002-85	USU	COMP	47,629	48,702	0	48,702 (	1,073)
NEPAL:								
Nepal Rapid Appraisal	1-02-087-85	CSU	FINI	125,690	98,070	25,428	123,498	2,192
NIGER:								
Niger Project Paper	1-02-070-86	USU	INIT	110,682	0	36,951	36,951	73,731
PAKISTAN:								
Irrigation Consultation	1-02-060-86	USU	INIT	37,986	23,595	368	23,963	14,023
PARAGUAY:								
Technical Assessment	1-02-067-86	USU	FINI	9,721	0	6,718	6,718	3,003
PERU:								
Plan MERIS	1-01-112-84	USU	COMP	579,000	548,285	2,222	550,507	28,493
Finishing Plan MERIS	1-02-061-86	USU	FINI	60,000	18,830	27,281	46,111	13,889
RWANDA:								
Water Management & Drainage	1-02-062-86	USU	FINI	9,051	197	8,969	9,166 (	115)
SRI LANKA:								
Long Term Wtr Mgmt Speci	1-01-109-84	CSU	INIT	276,811	179,954	19,680	199,634	77,177
Socioeconomic studies - r	1-02-004-85	CU	INIT	82,673	26,007	0	26,007	56,666
Model Calibration	1-02-005-85	USU	INIT	37,600	43,833	0	43,833 (	6,233)
ARTI-Continuing Support	1-02-045-86	CU	FORM	72,440	0	0	0	72,440
Ext. of LT Water Mgt Spec	1-02-047-86	CSU	TERM	56,725	0	0	0	56,725
FY 86 Central Support	1-02-048-86	CSU	INIT	66,782	25,172	18,456	43,628	23,154
WORLDWIDE:								
Meeting recurrent costs o	1-02-062-85	CU	FINI	51,345	41,030	0	41,030	10,315
Shortcourse Staff Assista	1-02-068-86	CID	APPR	11,127	0	5,564	5,564	5,563
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	5,462	5,462	0	5,462	0
ZIMBABWE:								
Small Scale Irrigation	1-02-050-86	CSU	INIT	58,000	14,324	9,317	23,641	34,359
TOTAL TECHNICAL ASSIST. \$				3,099,652	2,174,658	186,272	2,360,930	738,722
TRAINING AND TECHNOLOGY TRANSFER:								
BOLIVIA:								
Course - On-Farm Water Mn	2-01-011-85	USU	COMP	4,383	4,384	0	4,384 (	1)
DOMINICAN REPUBLIC:								
On-Farm Water Mngment Cou	2-14-030-85	USU	APPR	9,909	0	0	0	9,909
ECUADOR:								
Finish Original Training	2-03-054-84	USU	COMP	167,676	159,759	1,591	161,350	6,326
GUATEMALA:								
Evaluation of Guatemala M	2-02-064-86	USU	INIT	28,252	10,349	15,185	25,534	2,718
INDIA:								
Demo. Workshop	2-02-051-86	USU	INIT	90,147	203	0	203	89,944

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 MAR. 31, 86	CURRENT QUARTER	THROUGH JUN. 30, 86	
Video Modules	2-03-075-85	USU	FINI	74,001	66,058	0	66,058	7,943
Senior Officer's Workshop	2-04-053-84	USU	INIT	74,337	50,216	63	50,279	24,058
MOROCCO:								
Internat'l Irrigation Cen	2-04-027-86	USU	INIT	58,997	53	1,007	1,060	57,937
PAKISTAN:								
Mngmnt Officials Trngng -	2-01-065-85	CSU	INIT	28,628	19,593	-104	19,489	9,139
Baluchistan DA	2-02-065-86	CSU	INIT	164,235	47,320	54,237	101,557	62,678
Sr Officer's Workshop/Sem	2-04-019-84	CSU	INIT	85,281	32,496	361	32,857	52,424
Management Tr. Key Offici	2-04-080-85	CSU	COMP	14,583	14,430	151	14,581	2
Baseline Survey	2-04-083-85	CSU	COMP	41,554	41,208	284	41,492	62
Micro Computer Workshop	2-14-032-85	CSU	INIT	44,821	49,468	-4,819	44,649	172
Command Water Management	2-14-114-84	CSU	INIT	932,410	789,466	96,674	886,140	46,270
THAILAND:								
O&M Training & Applied Study	2-02-069-86	USU	INIT	42,86	0	9,441	9,441	33,420
Maintenance Workshop	2-14-088-85	USU	COMP	17,129	10,766	0	10,766	6,363
WORLDWIDE:								
Expert Cons. on Water Cha	2-02-063-86	USU	INIT	18,475	551	328	879	17,596
Rev&Development of Videot	2-03-004-86	CSU	INIT	50,215	20,331	2,491	22,822	27,393
Seminar Irrig. System Reh	2-05-006-86	CSU	INIT	133,195	15,958	11,073	27,031	106,164
Seminar on Irrig System R	2-05-033-85	CSU	FINI	53,030	54,138	451	54,589	(1,559)
Conference on Lessons Lea	2-07-019-86	CU	INIT	65,251	0	3,010	3,010	62,241
Irrig. Experience Transfe	2-07-026-86	USU	APPR	101,276	0	0	0	101,276
Strategy for Training	2-09-049-84	CSU	COMP	27,378	24,332	1,172	25,504	1,874
Professional Visitors	2-11-016-86	CU	INIT	14,280	0	0	0	14,280
Professional Visitors & N	2-11-039-84	CSU	INIT	10,284	9,198	523	9,721	563
French Language Training	2-11-041-85	USU	INIT	10,650	1,947	304	2,251	8,399
Brochures, Newsletters, P	2-12-044-84	CSU	FINI	39,976	40,800	-1	40,799	(823)
Revision of Training Manu	2-13-003-86	CSU	INIT	44,775	11,455	9,652	21,107	23,668
Rehabilitation Game Revis	2-13-018-86	CU	INIT	66,840	14,285	0	14,285	52,555
Triad Synthesis Phase I	2-14-035-86	CSU	INIT	9,998	0	7,361	7,361	2,637
Triad Synthesis Phase I	2-14-036-86	USU	INIT	10,000	39	801	840	9,160
Triad Synthesis Phase I	2-14-037-86	CU	INIT	10,000	5,356	3,265	8,621	1,379
Lessons Learned: Irr Sys	2-14-039-85	USU	INIT	103,209	43,267	21,850	65,117	38,092
Syn-Local Resource Mob. I	2-14-053-86	CU	FORM	82,810	0	0	0	82,810
WKSP Anal.Irrig.Bureaucra	2-14-054-86	CU	FORM	63,703	0	0	0	63,703
Irr Sys Mgmt Task Force	2-14-060-84	USU	INIT	44,284	16,948	10,962	27,910	16,374
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$				2,838,833	1,554,374	247,313	1,801,687	1,037,146
SPECIAL STUDIES:								
AFRICA:								
JFS-REHAB-COUNTRY B	3-04-501-86	USU	FORM	124,700	0	0	0	124,700

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 MAR. 31, 86	CURRENT QUARTER	THROUGH JUN. 30, 86	
JFS-Comm Mgn'd Cuntrey C	3-04-502-86	CU	APPR	149,474	0	0	0	149,474
JFS-Comm Mgn'd Country D	3-04-503-86	CID	APPR	210,594	0	0	0	210,594
Africa Plann Act	3-04-505-86	CU	FORM	0	13	0	13 (	13)
MOROCCO:								
Moroccan Case Studies	3-04-043C85	USU	FINI	29,433	25,495	0	25,495	3,938
NIGER:								
Small Scale Irrigation St	3-04-023-86	CU	INIT	109,577	31,844	0	31,844	77,733
Trad & Devel Small-Scale	3-04-052-85	CU	INIT	108,081	43,504	0	43,504	64,577
SRI LANKA:								
Interfacing OF Water Mana	3-04-009-86	CSU	INIT	165,361	49,074	33,773	82,847	82,514
Landsat 86 - Remote Sensi	3-04-011-86	CSU	INIT	45,001	17,192	14,163	31,355	13,646
Phys & Oper Rehab Impact	3-04-097-84	CU	FINI	26,492	279	0	279	26,213
THAILAND:								
Overseas '86	3-04-008-86	CSU	INIT	50,027	27,956	13,642	41,598	8,429
Thailand Case Study	3-04-043B85	USU	FINI	44,067	42,330	2,046	44,376 (	309)
WORLDWIDE:								
Irrig Proj Analysis and M	3-04-005-86	USU	INIT	155,012	21,189	21,407	42,596	112,416
Interfacing O.F. Water Mg	3-04-010-86	CSU	INIT	103,561	27,137	34,106	61,243	42,318
Rapid Irr. Project Apprai	3-04-042-85	USU	FINI	73,710	73,034	0	73,034	676
Irrigation System Model D	3-04-043A85	USU	FINI	87,623	86,013	1,616	87,629 (	6)
Interdisciplinary Mn Sys	3-04-043E85	USU	FINI	27,848	23,743	4,347	28,090 (	242)
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	3-04-054-85	CU	INIT	97,099	11,077	0	11,077	86,022
Rural Employment & Sys Pe	3-04-055-85	CU	INIT	16,150	16,734	0	16,734 (	584)
Indirect Invest Strat. 86	3-04-055-86	CU	INIT	171,290	0	0	0	171,290
Irr Sys Prfrmnce-Mgmt In	3-04-056-85	CU	INIT	69,615	59,385	0	59,385	10,230
Sml-Scl Irr Sys Spcl Stdy	3-04-069-84	CU	INIT	57,059	57,853	0	57,853 (	794)
Zimbabwe:								
Zimbabwe JFS	3-04-500-86	CSU	APPR	201,440	0	0	0	201,440
JFS Workshop Development	3-04-500A86	CSU	INIT	21,192	0	9,406	9,406	11,786
TAL SPECIAL STUDIES \$				2,161,941	636,913	134,506	771,419	1,390,522
TAL FY 86 ACTIVITIES \$				9,043,206	4,762,957	760,572	5,523,529	3,519,677

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)EXPENDITURE REPORT
AS OF JUNE 30, 1986CID / 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 0-01-995-86	7,120	0	2,999	0	0	10,119	1,002	11,121	63,157
EPD ADMINISTRATION 0-01-999-86	97,747	17,001	24,251	12,448	17,499	168,946	14,409	183,355	191,810
TOTAL UNIVERSITY SUPPORT \$	104,867	17,001	27,250	12,448	17,499	179,065	15,411	194,476	254,967
TECHNICAL ASSISTANCE:									
EGYPT:									
Egypt Redesign 1-02-071-86	0	1,520	6,010	0	0	7,530	745	8,275	CSU
INDIA:									
TA/Fld Stu/TR-Maha Irr T&M Prj 1-01-021-84	0	1,488	0	0	0	1,488	147	1,635	USU
KENYA:									
Small Scale Irrig. Analy. 1-02-042-86	6,575	2,986	0	0	1,801	11,362	1,140	12,502	CU
NEPAL:									
Nepal Rapid Appraisal 1-02-087-85	0	0	327	0	0	327	32	359	CSU
WORLDWIDE:									
Meeting recurrent costs of irr 1-02-062-85	21,462	171	959	0	5,129	27,721	2,237	29,958	CU
Shortcourse Staff Assistance 1-02-068-86	5,063	0	0	0	0	5,063	501	5,564	11,127
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	5,462
TOTAL TECHNICAL ASSIST. \$	33,100	6,165	26,216	0	6,930	72,411	22,086	79,086	31,920

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
RAINING AND TECHNOLOGY TRANSFER:									
INDIA:									
Senior Officer's Workshop 2-04-053-84	0	10,747	19,268	0	0	30,015	2,971	32,986	USU
PAKISTAN:									
Mngmnt Officials Trngng - Plnng 2-01-065-85	7,520	1,869	2,740	0	0	12,129	1,377	13,506	CSU
Command Water Management Prog 2-14-114-84	3,164	0	106	0	0	3,270	324	3,594	CSU
WORLDWIDE:									
Strategy for Training 2-09-049-84	0	156	780	0	0	936	93	1,029	CSU
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	10,684	12,772	22,894	0	0	46,350	26,851	51,115	0
SPECIAL STUDIES:									
AFRICA:									
JFS-Comm Mgn'd Country D 3-04-503-86	0	0	0	0	0	0	0	0	210,594
THAILAND:									
Overseas '86 3-04-008-86	0	1,789	9,180	0	0	10,969	1,086	12,055	CSU
Thailand Case Study 3-04-043885	0	416	1,176	0	0	1,592	157	1,749	USU
TOTAL SPECIAL STUDIES \$	0	2,205	10,356	0	0	12,561	28,094	13,804	210,594
TOTAL FY 86 ACTIVITIES \$	148,651	38,143	86,716	12,448	24,429	310,387	28,094	338,481	497,481

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

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

EXPENDITURE REPORT
AS OF JUNE 30, 1986

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 O&A	TOTAL ACTIVITY EXPENSE	APPROVED ACTIVITY BUDGET
UNIVERSITY SUPPORT ACTIVITIES:									
ADMINISTRATION:									
EPD ADMINISTRATION									
0-01-999-86	0	0	0	0	0	0	0	0	CID
COLORADO STATE UNIV.									
0-02-998-86	83,413	6,397	32,689	0	48,002	170,501	12,127	182,628	246,600
CLOSED OUT CSU ADMIN									
0-99-998-84	-577	0	-333	0	-328	-1,238	-90	-1,328	0
TOTAL UNIVERSITY SUPPORT \$	82,836	6,397	32,356	0	47,674	169,263	12,037	181,300	246,600
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:									
Egypt Redesign									
1-02-071-86	5,336	0	70	0	2,157	7,563	670	8,233	61,739
INDIA:									
Socio-Technical Feas. Study									
1-04-059-86	861	21	0	0	352	1,234	109	1,343	3,183
INDONESIA:									
Small-scale irr. workshop, etc									
1-02-009-85	13,535	9,676	104	0	5,129	28,444	2,616	31,060	CU
KENYA:									
Small Scale Irrig. Analy.									
1-02-042-86	6,700	3,860	214	0	4,299	15,073	1,236	16,309	CU
NEPAL:									
Nepal Rapid Appraisal									
1-02-087-85	51,772	20,452	18,293	0	22,999	113,516	9,623	123,139	125,690
SRI LANKA:									
Long Term Wtr Mgmt Specialist									
1-01-109-84	117,716	4,049	20,967	7,590	32,845	183,167	16,467	199,634	276,811

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
Ext. of LT Water Mgt Spec'lst 1-02-047-86	0	0	0	0	0	0	0	0	56,725
FY 86 Central Support 1-02-048-86	19,648	8,547	609	0	11,493	40,297	3,331	43,628	66,782
Zimbabwe: Small Scale Irrigation 1-02-050-86	10,273	4,947	462	0	6,257	21,939	1,702	23,641	58,000
TOTAL TECHNICAL ASSIST. \$	235,138	52,420	44,082	7,590	90,401	429,631	49,130	466,724	648,930
TRAINING AND TECHNOLOGY TRANSFER:									
PAKISTAN:									
Mngmnt Officials Trnng - Plnng 2-01-065-85	4,042	0	0	0	1,455	5,497	486	5,983	28,628
Baluchistan OA 2-02-065-86	38,705	2,304	26,503	0	26,938	94,450	7,107	101,557	164,235
Sr Officer's Workshop/Seminar 2-04-019-84	16,789	4,247	1,435	0	8,089	30,560	2,297	32,857	85,281
Management Tr. Key Officials 2-04-080-85	8,292	1,565	43	0	3,565	13,465	1,116	14,581	14,583
Baseline Survey 2-04-083-85	10,022	8,973	9,298	0	10,185	38,478	3,014	41,492	41,554
Micro Computer Workshop 2-14-032-85	23,689	0	6,913	0	11,017	41,619	3,030	44,649	44,821
Command Water Management Prog 2-14-114-84	469,925	60,495	103,023	3,753	177,523	815,496	67,827	882,546	932,410
WORLDWIDE:									
Rev&Development of Videotapes 2-03-004-86	8,571	57	3,883	4,080	4,992	21,583	1,239	22,822	50,215
Seminar Irrig. System Rehab 2 2-05-006-86	15,960	1,113	972	0	7,200	25,245	1,786	27,031	133,195
Seminar on Irrig System Rehab 2-05-033-85	29,345	1,098	5,920	0	13,063	49,426	3,599	53,025	53,030
Strategy for Training 2-09-049-84	14,682	492	1,745	0	5,882	22,801	1,674	24,475	27,378
Professional Visitors & Netwkg 2-11-039-84	2,670	3,199	820	0	2,370	9,059	662	9,721	10,284
Brochures, Newsletters, Publ. 2-12-044-84	19,565	478	7,911	0	10,063	38,017	2,767	40,784	39,976
Revision of Training Manual 2-13-003-86	13,343	0	747	0	5,622	19,712	1,395	21,107	44,775
Triad Synthesis Phase I 2-14-035-86	4,072	842	0	0	1,961	6,875	486	7,361	9,998

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
Triad Synthesis Phase I 2-14-036-86	0	535	0	0	213	748	53	801	USU
Triad Synthesis Phase I 2-14-037-86	0	2,179	0	0	870	3,049	216	3,265	CU
ITAL TRAINING AND TECHNOLOGY TRANSFER \$	679,672	87,577	169,213	7,833	291,008	1,236,080	147,884	1,334,057	1,680,363
SPECIAL STUDIES:									
SRI LANKA:									
Interfacing OF Water Managmnt. 3-04-009-86	29,521	7,371	22,155	0	17,148	76,195	6,652	82,847	165,361
Landsat 86 - Remote Sensing 3-04-011-86	9,698	2,104	9,834	0	7,522	29,158	2,197	31,355	45,001
THAILAND: Overseas '86 3-04-008-86	10,963	4,840	3,734	0	7,795	27,332	2,211	29,543	50,027
WORLDWIDE: Interfacing O.F. Water Mgmt. 3-04-010-86	37,418	1,332	2,506	0	15,847	57,103	4,140	61,243	103,561
Zimbabwe: Zimbabwe JFS 3-04-500-86	0	0	0	0	0	0	0	0	201,440
JFS Workshop Development 3-04-500A86	2,609	3,543	83	0	2,488	8,723	683	9,406	21,192
TOTAL SPECIAL STUDIES \$	70,209	19,190	38,312	0	50,800	198,511	163,767	214,394	586,582
TOTAL FY 86 ACTIVITIES \$	1,087,855	165,584	283,963	15,423	479,883	2,033,485	163,767	2,196,475	3,162,475

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)EXPENDITURE REPORT
AS OF JUNE 30, 1986CORNELL 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									
0-02-996-86	33,407	4,822	6,764	0	26,505	71,498	4,454	75,952	208,124
CLOSED OUT CU ADMIN									
0-99-996-84	-7,553	-830	-190	0	-4,904	-13,477	-849	-14,326	0
TOTAL UNIVERSITY SUPPORT \$	25,854	3,992	6,574	0	21,601	58,021	3,605	61,626	208,124
TECHNICAL ASSISTANCE:									
CHAD:									
Irrigated Agric. Assessment									
1-02-073-85	7,102	303	4,556	0	7,324	19,285	1,184	20,469	USU
HAITI:									
Cayes Plain-Distrib. Benefits									
1-02-084-85	0	5,781	724	0	2,860	9,365	644	10,009	10,197
INDONESIA:									
Small-scale irr. workshop, etc									
1-02-009-85	1,626	0	10,113	0	2,924	14,663	1,162	15,825	200,658
KENYA:									
Small Scale Irrig. Analy.									
1-02-042-86	6,232	10,754	7,703	0	12,504	37,193	2,444	39,637	105,516
PERU:									
Plan MERIS									
1-01-112-84	10,094	4,346	851	0	9,108	24,399	1,514	25,913	USU
Finishing Plan MERIS									
1-02-061-86	0	0	0	0	0	0	0	0	USU
SRI LANKA:									
Socioeconomic studies - rehab.									
1-02-004-85	4,646	9,732	357	0	9,813	24,548	1,459	26,007	82,673
ARTI-Continuing Support									
1-02-045-86	0	0	0	0	0	0	0	0	72,440

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	504	0	4,002	10,435	637	11,072	51,345
TOTAL TECHNICAL ASSIST. \$	32,856	33,689	24,808	0	48,535	139,888	12,649	148,932	522,829
TRAINING AND TECHNOLOGY TRANSFER:									
Seminar Irrig. System Rehab 2 2-05-006-86	0	0	0	0	0	0	0	0	CSU
Seminar on Irrig System Rehab 2-05-033-85	0	885	0	0	591	1,476	88	1,564	CSU
Conference on Lessons Learned 2-07-019-86	0	0	0	0	0	0	0	0	65,251
Professional Visitors 2-11-016-86	0	0	0	0	0	0	0	0	14,280
Brochures, Newsletters, Publ. 2-12-044-84	0	0	8	0	6	14	1	15	CSU
Rehabilitation Game Revision 2-13-018-86	6,864	0	2,160	0	4,368	13,392	893	14,285	66,840
Triad Synthesis Phase I 2-14-037-86	645	2,406	0	0	2,003	5,054	302	5,356	10,000
Syn-Local Resource Mob. Irrig. 2-14-053-86	0	0	0	0	0	0	0	0	82,810
WKSP Anal. Irrig. Bureaucracies 2-14-054-86	0	0	0	0	0	0	0	0	63,703
Irr Sys Mgmt Task Force 2-14-060-84	0	0	0	0	0	0	0	0	USU
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	7,509	3,291	2,168	0	6,968	19,936	13,933	21,220	302,884
SOCIAL STUDIES:									
AFRICA:									
JFS-Comm Mgn'd Cuntrey C 3-04-502-86	0	0	0	0	0	0	0	0	149,474
Africa Plann Act 3-04-505-86	0	0	7	0	5	12	1	13	0
IRIGER:									
Small Scale Irrigation Study 3-04-023-86	9,434	4,455	7,228	0	8,636	29,753	2,091	31,844	109,577

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
Trad & Devel Small-Scale Irr 3-04-052-85	11,676	6,951	13,976	0	7,629	40,272	3,232	43,504	108,081
SRI LANKA: Phys & Oper Rehab Impact 3-04-097-84	0	0	156	0	108	264	15	279	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 3-04-054-85	2,281	3,971	0	0	4,206	10,458	619	11,077	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
Indirect Invest Strat. 86 3-04-055-86	0	0	0	0	0	0	0	0	171,290
Irr Sys Prfrmnce-Mgmt Intnsts 3-04-056-85	34,365	90	1,533	0	19,835	55,823	3,563	59,385	69,615
Sml-Sci Irr Sys Spcl Stdy Comp 3-04-069-84	32,071	0	4,427	1,176	16,566	54,240	3,613	57,853	57,059
AL SPECIAL STUDIES \$	109,971	15,467	33,223	1,176	68,206	228,043	29,641	243,750	822,372
AL FY 86 ACTIVITIES \$	176,190	56,439	66,773	1,176	145,310	445,888	29,641	475,528	1,856,209

120

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)EXPENDITURE REPORT
AS OF JUNE 30, 1986UTAH 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.									
0-02-997-86	90,184	4,696	12,801	0	37,554	145,235	10,660	155,895	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 \$	87,502	4,696	12,802	0	36,696	141,696	10,395	152,091	233,089
TECHNICAL ASSISTANCE:									
AFRICA:									
African Irrigation Overview									
1-02-108-84	54,736	14,044	41,953	0	34,817	145,550	11,112	156,662	169,651
GHANA:									
Irrigated Agric. Assessment									
1-02-073-85	0	8,198	50,713	0	20,042	78,805	6,217	85,170	116,022
EGYPT:									
Irrigation Sector Assessment									
1-02-052-86	16,462	8,079	40,927	0	22,914	88,382	6,836	95,218	128,383
EL SALVADOR:									
PP Development									
1-02-077-85	8,700	3,230	124,176	0	13,347	148,525	5,237	154,690	164,814
INDIA:									
TA/Fid Stu/TR-Maha Irr T&M Prj									
1-01-021-84	208,320	33,594	49,522	8,707	82,718	382,861	30,484	413,345	415,096
INDONESIA:									
Small-scale irr. workshop, etc									
1-02-009-85	1,640	5,756	60	0	2,386	9,842	775	10,617	CU
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	1,624	5,227	327	0	2,512	9,690	758	10,448	CU

121

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
MOROCCO:									
PID Development									
1-02-002-85	18,910	13,603	797	0	11,659	44,969	3,733	48,702	47,629
NIGER:									
Niger Project Paper									
1-02-070-86	0	0	25,501	0	8,925	34,426	2,525	36,951	110,682
PAKISTAN:									
Irrigation Consultation									
1-02-060-86	35	0	16,503	0	5,788	22,326	1,637	23,963	37,986
PARAGUAY:									
Technical Assessment									
1-02-067-86	2,637	1,958	0	0	1,608	6,203	515	6,718	9,721
PERU:									
Plan MERIS									
1-01-112-84	63,184	53,131	234,209	21,927	115,512	487,963	36,631	524,594	579,000
Finishing Plan MERIS									
1-02-061-86	18,981	12,322	213	0	11,031	42,547	3,564	46,111	60,000
RWANDA:									
Water Management & Drainage									
1-02-062-86	6,030	85	116	0	2,181	8,412	754	9,166	9,051
SRI LANKA:									
Model Calibration									
1-02-005-85	16,258	13,587	333	0	10,333	40,466	3,322	43,833	37,600
TOTAL TECHNICAL ASSIST. \$	417,517	172,814	585,350	30,634	345,773	1,550,967	124,495	1,666,188	1,895,973
TRAINING AND TECHNOLOGY TRANSFER:									
BOLIVIA:									
Course - On-Farm Water Mngmnt									
2-01-011-85	666	0	2,360	0	1,059	4,085	299	4,384	4,383
DOMINICAN REPUBLIC:									
On-Farm Water Mngmnt Course									
2-14-030-85	0	0	0	0	0	0	0	0	9,909
ECUADOR:									
Finish Original Training Mduls									
2-03-054-84	105,567	1,665	8,277	0	34,830	150,339	11,011	161,350	167,676
GUATEMALA:									
Evaluation of Guatemala Model									
2-02-064-86	6,499	7,574	3,460	0	6,137	23,670	1,864	25,534	28,252
INDIA:									
Demo. Workshop									
2-02-051-86	0	0	140	0	49	189	14	203	90,147

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
Video Modules 2-03-075-85	26,799	0	17,825	1,397	15,619	61,640	4,418	66,058	74,001
Senior Officer's Workshop 2-04-053-84	0	2,186	9,926	0	3,877	15,989	1,304	17,293	74,337
MOROCCO: Internat'l Irrigation Center 2-04-027-86	0	696	36	0	256	988	72	1,060	58,997
THAILAND: O&M Training & Applied Study Pgrm 2-02-069-86	0	6,106	410	0	2,280	8,796	645	9,441	42,861
Maintenance Workshop 2-14-088-85	5,369	1,976	0	0	2,571	9,916	850	10,766	17,129
WORLDWIDE: Expert Cons. on Water Charges 2-02-063-86	0	607	0	0	212	819	60	879	18,475
Conference on Lessons Learned 2-07-019-86	0	2,077	0	0	727	2,804	206	3,010	CU
Irrig. Experience Transfer 2-07-026-86	0	0	0	0	0	0	0	0	101,276
French Language Training 2-11-041-85	1,524	0	44	0	528	2,096	155	2,251	10,650
Triad Synthesis Phase I 2-14-036-86	0	0	27	0	9	36	3	39	10,000
Lessons Learned: Irr Sys Mngmt 2-14-039-85	35,893	6,974	2,076	0	15,683	60,626	4,491	65,117	103,209
Irr Sys Mgmt Task Force 2-14-060-84	17,090	2,292	18	0	6,589	25,989	1,921	27,910	44,284
AL TRAINING AND TECHNOLOGY TRANSFER \$	199,407	32,153	44,599	1,397	90,426	367,982	151,808	395,295	855,586
ACIAL STUDIES:									
AFRICA: JFS-REHAB-COUNTRY B 3-04-501-86	0	0	0	0	0	0	0	0	124,700
MOROCCO: Moroccan Case Studies 3-04-043C85	8,655	9,073	14	0	5,968	23,710	1,785	25,495	29,433
THAILAND: Thailand Case Study 3-04-043B85	9,673	2,364	20,060	0	7,333	39,430	3,197	42,627	44,067
WORLDWIDE: Irrig Proj Analysis and Mgmt 3-04-005-86	13,652	6,576	4,125	7,309	8,523	40,185	2,411	42,596	155,012

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
Rapid Irr. Project Appraisal									
3-04-042-85	3,855	533	49,169	0	15,083	68,640	4,394	73,034	73,710
Irrigation System Model Devel.									
3-04-043A85	55,809	2,157	2,884	0	20,755	81,605	6,024	87,629	87,623
Interdisciplinary Mn Sys Wkshp									
3-04-043E85	14,211	0	5,175	0	6,785	26,171	1,919	28,090	27,848
TOTAL SPECIAL STUDIES \$	105,855	20,703	81,427	7,309	64,447	279,741	171,538	299,471	542,393
TOTAL FY 86 ACTIVITIES \$	810,281	230,366	724,178	39,340	537,342	2,340,386	171,538	2,513,045	3,527,041

Best Available Document

124

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)QUARTERLY REPORT
FOR THE PERIOD ENDING JUNE 30, 1986

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 MAR. 31, 86	CURRENT QUARTER	THROUGH JUN. 30. 86	
ADMINISTRATION:								
WORLDWIDE								
EPD ADMINISTRATION	0-01-999-83	CID	COMP	145,937	145,772	-50	145,722	215
EPD ADMINISTRATION	0-01-999-85	CID	FINI	191,810	241,094	0	241,094	(49,284)
CU ADMINISTRATION	0-02-996-85	CU	FINI	206,932	184,399	0	184,399	22,533
USU ADMINISTRATION	0-02-997-85	USU	FINI	233,126	218,551	-1,435	217,116	16,010
CSU ADMINISTRATION	0-02-998-83	CSU	COMP	281,382	281,317	0	281,317	65
CSU ADMINISTRATION	0-02-998-85	CSU	COMP	231,641	231,988	-350	231,638	3
TOTAL ADMINISTRATION \$				1,290,828	1,303,121	-1,815	1,301,286	(10,458)
TECHNICAL ASSISTANCE:								
BANGLADESH:								
Water Mgmt Sys Proj Paper	1-02-072-84	CU	CLOS	20,719	30,343	0	30,343	(9,624)
DOMINICAN REPUBLIC:								
Weed Control Specialist	1-02-091-84	USU	COMP	3,354	3,102	0	3,102	252
EGYPT:								
Egypt Water Use & Mngmt	1-02-066-85	USU	COMP	41,268	25,828	0	25,828	15,440
IMS Evaluation Team	1-02-072-85	CSU	COMP	56,009	54,569	0	54,569	1,440
EL SALVADOR:								
PID Preparation	1-02-059-85	CSU	COMP	22,500	22,491	-1	22,490	10
Evaluation Team	1-02-107A84	CID	COMP	107,449	107,090	-2	107,088	361
HAITI:								
Irrigation Sector Survey	1-04-017-84	USU	COMP	50,658	50,368	0	50,368	290
HONDURAS:								
Irrigation Development Pr	1-02-060-85	USU	COMP	12,309	7,929	0	7,929	4,380
INDIA:								
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	19,836	2,169	22,005	4,467
Maharashtra Minor Irrig	1-02-018-84	USU	FINI	171,970	160,882	0	160,882	11,088
Madhya Pr Mnr Irr+Socio-Tch	1-02-023-84	USU	TERM	174,989	18	0	18	174,971
Institutional Analysis	1-02-047-83	CID	COMP	32,647	21,498	0	21,498	11,149
Hill Irrig Proj Prep II	1-02-074-84	CU	COMP	61,218	111,838	0	111,838	(50,620)

125

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 MAR. 31, 86	CURRENT QUARTER	THROUGH JUN. 30, 86	
Curriculum Development	1-02-094-84	CSU	COMP	10,682	11,008	-1	11,007	(325)
Short Course	1-02-100-84	USU	COMP	84,388	75,985	0	75,985	8,403
Irr Sector Eval & Strtgy	1-02-103-84	USU	FINI	227,461	216,363	0	216,363	11,098
INDONESIA:								
Small Scale Irrig & Mgmt	1-02-011-84	CU	COMP	54,468	151,783	0	151,783	(97,315)
Cost Recovery	1-02-074-85	CSU	COMP	12,611	11,957	0	11,957	654
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:								
SR. On Farm WM Advisor	1-02-014-84	USU	COMP	4,767	5,844	0	5,844	(1,077)
Irrigation Sector Study	1-04-013-84	USU	COMP	31,429	19,186	0	19,186	12,243
MAURITANIA:								
River Valley - Plan of Ac	1-02-076-85	USU	FINI	45,915	20,139	0	20,139	25,776
NEPAL:								
Sm/Med Scale Irrigation	1-02-067-85	USU	COMP	89,481	62,952	-1	62,951	26,530
PAKISTAN:								
Curriculum Development	1-02-071-85	CSU	COMP	74,443	58,664	0	58,664	15,779
Long-Term Strategies	1-02-101-84	USU	COMP	9,369	1,856	0	1,856	7,513
Command Area Management	1-02-106-84	USU	COMP	16,068	14,066	0	14,066	2,002
PERU:								
Expansion of Irrig. Syste	1-02-035-84	USU	COMP	53,681	60,073	0	60,073	(6,392)
Special Study	1-04-027-82	USU	COMP	93,755	72,454	0	72,454	21,301
SRI LANKA:								
Central Support	1-02-003-85	CSU	COMP	48,241	48,111	124	48,235	6
Farmer Organization Progr	1-02-007-84	CU	COMP	64,466	63,647	0	63,647	819
Water Mgmt Central Support	1-02-022-84	CSU	COMP	67,902	67,207	0	67,207	695
Irr Sys Mgmt Proj Desig.	1-02-102-84	CSU	COMP	172,000	123,902	0	123,902	48,098
SWAZILAND:								
Irrigation Priorities	1-02-069-85	CSU	COMP	25,843	24,014	0	24,014	1,829
TANZANIA:								
Tanzania Irrig Study	1-02-082-84	USU	COMP	12,567	11,752	0	11,752	815
WORLDWIDE:								
Shortcourse Staff Assista	1-02-070-85	CID	COMP	14,590	10,990	0	10,990	3,600
TOTAL TECHNICAL ASSIST. \$				2,041,481	1,751,720	2,288	1,754,008	287,473
TRAINING AND TECHNOLOGY TRANSFER:								
AFRICA:								
Africa Workshop	2-14-113-84	CSU	COMP	14,333	14,623	-367	14,256	77
BOLIVIA:								
Tarija Short Course	2-01-095-84	CU	COMP	64,995	5,228	0	5,228	59,767
Course - Small-Scale Irr	2-14-010-85	USU	COMP	41,333	16,576	0	16,576	24,757

124

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 MAR. 31, 86	CURRENT QUARTER	THROUGH JUN. 30, 86	
ECUADOR:								
Equipar Video	2-03-054-83	USU	COMP	204,837	204,737	0	204,737	100
INDIA:								
DA Workshop Madhya Prades	2-02-031-84	CSU	COMP	135,470	143,898	0	143,898 (	8,428)
DA Workshop - WID	2-02-090-84	CID	FINI	21,980	5,531	0	5,531	16,449
Senior Officials	2-04-007-83	USU	COMP	1,054	1,055	0	1,055 (	1)
Development of Handbooks	2-13-027-85	CSU	TERM	79,956	29,729	0	29,729	50,227
Farmer Organization Works	2-14-017-85	CU	FINI	81,141	2	0	2	81,139
NEPAL:								
DA Workshop Planning	2-02-003-84	CSU	COMP	21,842	21,447	0	21,447	395
Diagnostic Anal. of Irr.	2-02-031-85	CSU	COMP	126,479	125,820	0	125,820	659
WORLDWIDE:								
Videotape Modules	2-03-021-83	CSU	COMP	90,755	90,799	0	90,799 (	44)
ICID Conference	2-04-048-84	CSU	COMP	20,678	20,239	0	20,239	439
Main System Mgmt Task For	2-06-077-84	CU	COMP	7,557	1,087	0	1,087	6,470
DA Trainers Workshop	2-08-040-84	CSU	COMP	29,736	37,087	0	37,087 (	7,351)
Survey & Strategy for Tra	2-09-019-83	CSU	COMP	34,267	33,441	0	33,441	826
Computer Applications	2-10-022-83	CSU	COMP	70,020	69,734	0	69,734	286
Micro Applications for DA	2-10-051-84	CSU	COMP	62,615	62,452	0	62,452	163
Increasing WM Capabilitie	2-11-020-83	CID	COMP	57,569	49,932	0	49,932	7,637
French Language Training	2-11-059-84	USU	COMP	10,650	5,946	0	5,946	4,704
Professional Visitors	2-11-068-84	CU	INIT	9,673	5,170	0	5,170	4,503
Increasing WM Capabilitie	2-11-081-84	CID	COMP	20,847	16,244	0	16,244	4,603
Instructors Guide for DA	2-13-042-84	CSU	INIT	24,881	24,778	0	24,778	103
"Rehab.", A Game Simulati	2-13-048-85	CU	FINI	33,445	16,898	0	16,898	16,547
Lessons Learned Wkshop: A	2-14-049-85	CU	APPR	41,790	3,216	0	3,216	38,574
Jt Seminar on Current Res	2-14-050-85	CU	FINI	94,372	60,113	0	60,113	34,259
Small Scale Irrigation Wo	2-14-064-84	CU	FINI	47,163	32,756	0	32,756	14,407
Tsk Frc Sml-Scl Comm-Mgd	2-14-065-84	CU	COMP	20,741	7,686	-1	7,685	13,056
Farmer Participation Wksp	2-14-066-84	CU	COMP	36,193	24,583	-1	24,582	11,611
AID/FAO Expert Consul WM	2-14-067-84	CU	COMP	9,288	12,779	0	12,779 (	3,491)
Planning for Seminar	2-14-075-84	CU	COMP	9,889	6,737	0	6,737	3,152
FAO Workshop Participants	2-14-078-84	CID	INIT	26,000	12,140	0	12,140	13,860

TAL TRAINING AND TECHNOLOGY TRANSFER \$

1,551,549 1,162,463 -369 1,162,094 389,455

SPECIAL STUDIES:

AFRICA:

Dev. Of Social Parameters 3-04-057-83 USU COMP 67,039 58,685 0 58,685 8,354

GHANA:

Sml-Scl Irr & Wtr Mgmt, P 3-04-098-84 CU COMP 5,508 5,986 0 5,986 (478)
 Traditional & Dev. SSI 3-04-111-84 CU INIT 14,825 17,844 0 17,844 (3,019)

Best Available Document

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 MAR. 31, 86	CURRENT QUARTER	THROUGH JUN. 30, 86	
SRI LANKA:								
Sri Lanka Interfacing On-	3-04-036885	CSU	COMP	130,907	69,118	0	69,118	61,789
Landsat85-Remote Sensing	3-04-038-85	CSU	COMP	34,442	34,237	0	34,237	205
JORLOWIDE:								
Communication of Tech Tra	3-04-024-83	CSU	COMP	52,783	52,761	-2	52,759	24
Irrigation Systems Manage	3-04-025-83	CSU	COMP	156,507	156,463	0	156,463	44
Interfacing On-Farm Wtr M	3-04-036A85	CSU	COMP	86,390	66,728	0	66,728	19,662
Small Scale Irrigation	3-04-045-83	CU	INIT	160,697	104,179	0	104,179	56,518
Interfacing Farm & Manage	3-04-045-84	CSU	COMP	223,239	107,189	0	107,189	116,050
Small scale irrigation	3-04-045B83	CU	INIT	3,416	3,416	0	3,416	0
Comp Anal of Ind Invst St.	3-04-053-85	CU	FINI	15,031	32,683	0	32,683	(17,652)
On-Farm Irrigation System	3-04-058-83	USU	COMP	47,146	18,524	0	18,524	28,622
Main System Management	3-04-059-83	USU	COMP	146,905	108,876	0	108,876	38,029
Main System Management	3-04-059B83	CSU	COMP	14,716	42	0	42	14,674
Monitoring Projects	3-04-061-83	USU	POST	18,350	0	0	0	18,350
Main Sys Design, Mgmt Reh	3-04-061-84	USU	COMP	221,424	167,844	0	167,844	53,580
Interdisp. Irrig. Sys. Se	3-04-062-84	USU	COMP	62,430	34,561	0	34,561	27,869
DA Evaluation	3-04-063-83	CID	COMP	7,163	0	0	0	7,163
Management Intensity	3-04-096-84	CU	INIT	77,238	63,724	0	63,724	13,514
TOTAL SPECIAL STUDIES \$				1,546,156	1,102,860	-2	1,102,858	443,298
TOTAL PRIOR YEARS ACTIVITIES \$				6,430,014	5,320,164	82	5,320,246	1,109,768

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

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

EXPENDITURE REPORT
AS OF JUNE 30, 1986

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 O&A	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
TOTAL UNIVERSITY SUPPORT \$	85,909	26,358	42,289	518	19,347	174,421	15,163	189,584	191,810
TECHNICAL ASSISTANCE:									
BANGLADESH:									
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	89,888	9,827	99,715	107,449
INDIA:									
University Curricula 1-02-013-85	0	459	1,974	0	0	2,433	240	2,673	USU
Maharashtra Minor Irrig 1-02-018-84	0	21,467	23,330	0	3,309	47,806	4,735	52,841	USU
Institutional Analysis 1-02-047-83	0	3,354	12,608	0	3,706	19,418	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:									
Curriculum Development 1-02-071-85	0	4,857	31	0	0	4,888	484	5,372	CSU
Long-Term Strategies 1-02-101-84	0	749	0	0	0	749	74	823	USU

129

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
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
SRI LANKA:									
Water Mgmt Central Support									
1-02-022-84	0	3,540	0	0	0	3,540	350	3,890	CSU
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
WORLDWIDE:									
Shortcourse Staff Assistance									
1-02-070-85	10,000	0	0	0	0	10,000	990	10,990	14,590
TOTAL TECHNICAL ASSIST. \$	18,142	56,705	159,990	0	10,785	245,072	40,064	270,523	154,686
TRAINING AND TECHNOLOGY TRANSFER:									
INDIA:									
DA Workshop Madhya Pradesh									
2-02-031-84	0	15,097	0	0	0	15,097	1,505	16,602	CSU
DA Workshop - WID									
2-02-090-84	0	2,006	0	0	0	2,006	199	2,205	21,980
NEPAL:									
Diagnostic Anal. of Irr. Sys.									
2-02-031-85	0	0	0	0	0	0	0	0	CSU
WORLDWIDE:									
DA Trainers Workshop									
2-08-040-84	0	3,079	6,210	0	0	9,289	919	10,208	CSU
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	11,046	0	0	0	11,046	1,094	12,140	26,000
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	0	33,239	6,210	0	0	39,449	43,980	43,365	68,827
SPECIAL STUDIES:									
NIGER:									
Traditional & Dev. SSI									
3-04-111-84	0	0	0	5,797	0	5,797	0	5,797	CU

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
WORLDWIDE:									
Interfacing On-Farm Wtr Mngmt									
3-04-036A85	0	0	2,197	0	0	2,197	217	2,414	CSU
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
TAL SPECIAL STUDIES \$	0	0	3,240	5,797	0	9,037	44,300	9,357	7,163
TAL PRIOR YEARS ACTIV. \$	104,051	116,302	211,729	6,315	30,132	467,979	44,300	512,829	422,486

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

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

EXPENDITURE REPORT
AS OF JUNE 30, 1986

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	2,764	35,224	136,032	9,690	145,722	CID
EPD ADMINISTRATION 0-01-999-85	31,912	181	3,212	0	12,710	48,015	3,495	51,510	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
COLORADO STATE UNIV. 0-02-998-85	118,983	7,618	32,125	0	57,198	215,510	15,714	231,638	231,641
TOTAL UNIVERSITY SUPPORT \$	353,802	16,867	101,314	22,168	169,306	663,043	46,730	710,187	513,023
TECHNICAL ASSISTANCE:									
EGYPT:									
IMS Evaluation Team 1-02-072-85	24,528	11,445	1,077	0	13,338	50,388	4,181	54,569	56,009
EL SALVADOR:									
PID Preparation 1-02-059-85	5,990	3,630	5,773	0	5,534	20,963	1,563	22,490	22,500
Evaluation Team 1-02-107A84	4,557	187	310	0	1,819	6,873	500	7,373	CID
INDONESIA:									
Curriculum Development 1-02-094-84	7,113	0	312	0	2,673	10,098	909	11,007	10,682
INDONESIA:									
Small Scale Irrig & Mgmt 1-02-011-84	13,698	15,737	482	0	10,036	39,953	3,241	43,194	CU
Cost Recovery 1-02-074-85	4,620	3,470	50	0	2,930	11,070	887	11,957	12,611
NEPAL:									
Sm/Med Scale Irrigation 1-02-067-85	11,591	6,889	25	0	4,071	22,576	2,083	24,659	USU

132

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
PAKISTAN:									
Curriculum Development									
1-02-071-85	18,313	8,289	524	0	9,765	36,891	3,036	39,927	74,443
SRI LANKA:									
Central Support									
1-02-003-85	28,743	6,389	153	0	9,119	44,404	3,831	48,235	48,241
Water Mgmt Central Support									
1-02-022-84	24,169	21,203	1,751	148	10,915	58,186	5,131	63,317	67,902
Irr Sys Mgmt Proj Design Team									
1-02-102-84	27,519	12,283	4,531	0	11,409	55,742	4,874	60,616	172,000
SWAZILAND:									
Irrigation Priorities									
1-02-069-85	10,740	5,310	249	0	5,868	22,167	1,847	24,014	25,843
TOTAL TECHNICAL ASSIST. \$	181,581	94,832	15,237	148	87,477	379,311	78,813	411,358	490,231
TRAINING AND TECHNOLOGY TRANSFER:									
AFRICA:									
Africa Workshop									
2-14-113-84	4,929	4,683	89	0	3,493	13,194	1,062	14,256	14,333
INDIA:									
DA Workshop Madhya Pradesh									
2-02-031-84	61,871	23,774	7,280	0	24,355	117,280	10,016	127,296	135,470
DA Workshop - WID									
2-02-090-84	783	1,572	0	0	738	3,093	233	3,326	CID
Development of Handbooks									
2-13-027-85	18,030	2,468	96	0	7,096	27,690	2,039	29,729	79,956
NEPAL:									
DA Workshop Planning									
2-02-003-84	7,041	6,355	1,566	0	4,970	19,932	1,515	21,447	21,842
Diagnostic Anal. of Irr. Sys.									
2-02-031-85	55,747	21,389	15,542	0	23,134	115,812	10,008	125,820	126,479
WORLDWIDE:									
Videotape Modules									
2-03-021-83	33,483	17,850	13,525	0	19,230	84,088	6,711	90,799	90,755
ICID Conference									
2-04-048-84	13,416	0	456	0	4,994	18,866	1,373	20,239	20,678
DA Trainers Workshop									
2-08-040-84	14,624	1,469	2,330	0	6,632	25,055	1,824	26,879	29,736
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

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
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
Increasing WM Capabilities									
2-11-020-83	4,211	8,102	2,867	0	4,878	20,058	1,558	21,616	CID
Increasing WM Capabilities									
2-11-081-84	1,301	0	0	0	468	1,769	129	1,898	CID
Instructors Guide for DA Wkshp									
2-13-042-84	16,013	0	950	0	6,107	23,070	1,708	24,778	24,881
Jt Seminar on Current Research									
2-14-050-85	1,220	1,552	0	0	610	3,382	300	3,682	CU
Tsk Frc Sol-Scl Comm-Mgd System									
2-14-065-84	0	496	0	0	178	674	49	723	CU
Farmer Participation Wksp									
2-14-066-84	0	1,943	0	0	700	2,643	192	2,835	CU
<hr style="border-top: 1px dashed black;"/>									
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	318,838	92,986	64,068	11,787	143,974	631,653	128,110	680,950	711,032
SOCIAL STUDIES:									
<hr style="border-top: 1px dashed black;"/>									
SRI LANKA:									
Sri Lanka Interfacing On-Farm									
3-04-036885	26,306	17,105	7,764	0	12,513	63,688	5,430	69,118	130,907
Landsat85-Remote Sensing Recon									
3-04-038-85	13,604	6,553	4,607	0	6,959	31,723	2,514	34,237	34,442
WORLDWIDE:									
Communication of Tech Trans									
3-04-024-83	34,812	594	755	0	13,018	49,179	3,580	52,759	52,783
Irrigation Systems Management									
3-04-025-83	99,136	7,208	1,019	0	38,393	145,756	10,707	156,463	156,507
Interfacing On-Farm Wtr Mngmnt									
3-04-036A85	39,554	0	5,656	0	14,628	59,838	4,476	64,314	86,390
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	3,166	0	25,846	99,658	7,531	107,189	223,239
Small scale irrigation									
3-04-045B83	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	13,608	1,222	14,830	USU
Main System Management									
3-04-059B83	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	25,304	1,943	27,247	USU

134

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
TOTAL SPECIAL STUDIES \$	302,498	46,232	23,049	0	123,343	495,122	166,019	533,031	698,984
TOTAL PRIOR YEARS ACTIV. \$	1,156,719	250,917	203,668	34,103	524,100	2,169,129	166,019	2,335,526	2,413,270

135

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)EXPENDITURE REPORT
AS OF JUNE 30, 1986CORNELL 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:									
CORNELL UNIVERSITY									
0-02-996-85	83,693	9,718	16,531	0	63,573	173,515	10,884	184,399	206,932
TOTAL UNIVERSITY SUPPORT \$	83,693	9,718	16,531	0	63,573	173,515	10,884	184,399	206,932
TECHNICAL ASSISTANCE:									
BANGLADESH:									
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
INDIA:									
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
Irr Sector Eval & Strtgy Revu									
1-02-103-84	6,161	4,346	10	0	6,369	16,886	1,041	17,927	USU
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
PAKISTAN:									
Curriculum Development									
1-02-071-85	4,937	3,515	327	0	3,717	12,496	869	13,365	CSU
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. \$	72,154	58,782	9,399	545	72,554	213,434	24,777	227,327	200,871

12/86

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
RAINING AND TECHNOLOGY TRANSFER:									
BOLIVIA:									
Tarija Short Course 2-01-095-84	0	0	66	0	45	111	7	117	64,995
INDIA:									
Farmer Organization Workshop 2-14-017-85	0	0	2	0	0	2	0	2	81,141
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	CID
Professional Visitors 2-11-068-84	0	0	2,885	0	1,999	4,884	286	5,170	9,673
Increasing WM Capabilities 2-11-081-84	3,072	0	0	0	733	3,805	304	4,109	CID
"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	1,504	0	405	0	1,118	3,027	189	3,216	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
Small Scale Irrigation Works 2-14-064-84	9,497	716	10,905	0	9,547	30,665	2,091	32,756	47,163
Tsk Frc SmI-Scl Comm-Mgd System 2-14-065-84	2,240	591	820	0	1,761	5,412	361	5,773	20,741
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 \$	39,462	17,189	47,658	0	45,171	149,480	35,103	159,805	456,247
SPECIAL STUDIES:									
NIGER:									
SmI-Scl Irr & Wtr Mgmt, Prelim 3-04-098-84	4,237	0	2	0	1,327	5,566	420	5,986	5,508

157

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
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
Comp Anal of Ind Invst Stratgy 3-04-053-85	16,987	0	3,242	0	10,452	30,681	2,003	32,683	15,031
Management Intensity 3-04-096-84	38,517	415	752	0	20,111	59,795	3,929	63,724	77,238
TOTAL SPECIAL STUDIES \$	109,208	19,211	10,871	0	62,123	201,413	48,894	215,203	273,299
TOTAL PRIOR YEARS ACTIV. \$	304,517	104,900	84,459	545	243,421	737,842	48,894	786,734	1,137,349

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)EXPENDITURE REPORT
AS OF JUNE 30, 1986UTAH 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:									
UTAH STATE UNIV. 0-02-997-85	116,715	9,511	23,469	3,354	49,247	202,296	14,820	217,116	233,126
TOTAL UNIVERSITY SUPPORT \$	116,715	9,511	23,469	3,354	49,247	202,296	14,820	217,116	233,126
TECHNICAL ASSISTANCE:									
DOMINICAN REPUBLIC:									
Weed Control Specialist 1-02-091-84	674	1,511	1	0	700	2,886	216	3,102	3,354
EGYPT:									
Egypt Water Use & Mngmnt Eval 1-02-066-85	0	97	17,506	0	5,633	23,236	2,592	25,828	41,268
HAITI:									
Irrigation Sector Survey 1-04-017-84	26,062	8,242	892	0	11,296	46,136	3,876	50,368	50,658
HONDURAS:									
Irrigation Development Project 1-02-060-85	3,280	2,211	52	0	1,774	7,317	612	7,929	12,309
INDIA:									
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	59	0	4,313	17,794	1,538	19,332	26,472
Maharashtra Minor Irrig 1-02-018-84	16,846	25,222	33,793	0	24,275	100,136	7,905	108,041	171,970
Mdya Pr Mnr Irr:Socio-Tch Feas 1-02-023-84	0	0	13	0	4	17	1	18	174,989
Hill Irrig Proj Prep II 1-02-074-84	5,315	14,751	30,945	0	16,324	67,335	5,773	73,108	CU
Short Course 1-02-100-84	14,303	10,060	23,414	0	15,289	63,066	5,049	68,115	84,388

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
Irr Sector Eval & Strtgy Revw 1-02-103-84	48,380	9,915	92,590	0	35,013	185,898	12,538	198,436	227,461
INDONESIA:									
Small Scale Irrig & Mgmt 1-02-011-84	7,487	15,635	828	0	7,664	31,614	2,517	34,131	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:									
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	10,067	877	10,944	31,429
MAURITANIA:									
River Valley - Plan of Action 1-02-076-85	9,175	4,583	19	0	4,820	18,597	1,542	20,139	45,915
NEPAL:									
Sm/Med Scale Irrigation 1-02-067-85	10,730	6,297	9,717	0	8,558	35,302	2,990	38,292	89,481
PAKISTAN:									
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	10,415	920	11,199	16,068
PERU:									
Expansion of Irrig. Systems 1-02-035-84	0	10,586	20,603	0	9,980	41,169	3,559	44,728	53,681
Special Study 1-04-027-82	31,541	6,291	6,273	0	15,060	59,165	5,047	64,212	93,755
SRI LANKA:									
Irr Sys Mgmt Proj Design Team 1-02-102-84	21,128	8,529	1,262	0	9,894	40,813	3,461	44,274	CSU
TANZANIA:									
Tanzania Irrig Study 1-02-082-84	2,880	280	5,083	0	2,637	10,880	872	11,752	12,567
TOTAL TECHNICAL ASSIST. \$	216,070	133,831	252,459	0	179,717	781,857	77,543	844,800	1,195,693
MINING AND TECHNOLOGY TRANSFER:									
BOLIVIA:									
Tarija Short Course 2-01-095-84	1,488	2,047	47	0	1,146	4,728	383	5,111	CU

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
<hr style="border-top: 1px dashed black;"/>									
Course - Small-Scale Irr Design									
2-14-010-85	5,988	348	5,180	0	3,685	15,201	1,375	16,576	41,333
ECUADOR:									
Equivar Video									
2-03-054-83	97,023	9,519	34,432	0	49,341	190,315	14,422	204,737	204,837
INDIA:									
Senior Officials									
2-04-007-83	0	0	728	0	255	983	72	1,055	1,054
WORLDWIDE:									
Increasing WM Capabilities									
2-11-020-83	6,683	5,706	86	0	4,075	16,550	1,372	17,922	CID
French Language Training									
2-11-059-84	3,211	0	1,020	0	1,296	5,527	419	5,946	10,650
Increasing WM Capabilities									
2-11-081-84	0	5,573	84	0	1,810	7,467	560	8,027	CID
Jt Seminar on Current Research									
2-14-050-85	4,783	6,051	105	0	3,501	14,440	1,171	15,611	CU
Tsk Frc SmI-Sci Comm-Mgd System									
2-14-065-84	0	820	18	0	268	1,106	83	1,189	CU
Farmer Participation Wksp									
2-14-066-84	0	1,268	0	0	406	1,674	126	1,800	CU
<hr style="border-top: 1px dashed black;"/>									
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	119,176	31,332	41,700	0	65,783	257,991	97,526	277,974	257,874
SPECIAL STUDIES:									
<hr style="border-top: 1px dashed black;"/>									
AFRICA:									
Dev. Of Social Parameters									
3-04-057-83	24,650	13,578	2,736	0	13,440	54,404	4,281	58,685	67,039
WORLDWIDE:									
On-Farm Irrigation Systems Sel									
3-04-058-83	12,476	373	91	0	4,303	17,243	1,281	18,524	47,146
Main System Management									
3-04-059-83	34,237	22,354	8,186	0	22,672	87,449	6,597	94,046	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
<hr style="border-top: 1px dashed black;"/>									
TOTAL SPECIAL STUDIES \$	164,973	42,179	34,048	131	79,648	320,979	121,814	345,267	563,294
<hr style="border-top: 1px dashed black;"/>									
TOTAL PRIOR YEARS ACTIV. \$	616,934	216,853	351,676	3,485	374,395	1,563,123	121,814	1,685,157	2,249,987

144

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)QUARTERLY REPORT
FOR THE PERIOD ENDING JUNE 30, 1986CLOSED OUT ACTIVITIES

DESCRIPTION	CODE	UNIV.	DATE CLOSED	APPROVED AMOUNT
MINISTRATION:				
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

GENERAL ADMINISTRATION				1,225,837
TECHNICAL ASSISTANCE:				
BANGLADESH:				
Scope of Work	1-02-006-82	CSU	Mar. 31, 1985	16,221
Water Management Systems	1-02-015-82	CU	Dec. 31, 1985	106,858
Consultant, Legal	1-03-029-82	CSU	Mar. 31, 1985	14,671
BAU Collaboration Team	1-03-030-82	CSU	Dec. 31, 1985	66,986
BURMA:				
Wakema Pump Scheme Study	1-02-036-84	CU	Dec. 31, 1985	4,359
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
Water Management Spec.	1-02-110-84	CSU	Dec. 31, 1985	19,102
HAITI:				
Irrigation Project Evalua	1-02-039-83	USU	Mar. 31, 1985	25,083
INDIA:				
Hill Area Land & Water De	1-02-013-83	CU	Dec. 31, 1985	43,004
WM & Training	1-02-014-83	CID	Mar. 31, 1985	23,710
Water Management & Traini	1-02-020A82	CSU	Mar. 31, 1985	16,901
Water Management & Traini	1-02-020B82	USU	Dec. 31, 1985	24,026
Development of Solutions	1-02-024-82	CSU	Dec. 31, 1985	61,190
Evans Project Preparation	1-02-033-83	CSU	Mar. 31, 1985	12,581
Slyaa's TDY	1-02-035-83	CSU	Mar. 31, 1985	2,888

CLOSED OUT ACTIVITIES

DESCRIPTION	CODE	UNIV.	DATE CLOSED	APPROVED AMOUNT
Olsen's TDY	1-02-037-83	USU	Mar. 31, 1985	12,448
DA Workshop Planning	1-02-044-83	CSU	Dec. 31, 1985	31,736
INDONESIA:				
OAD'S TDY	1-02-030-83	CSU	Dec. 31, 1985	16,200
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:				
WM (CWM) Meeting	1-02-029883	CSU	Dec. 31, 1985	3,164
CLYMA'S TDY	1-02-031-83	CSU	Mar. 31, 1985	8,165
Mayfield's TDY	1-02-040-83	USU	Dec. 31, 1985	15,505
SRI LANKA:				
Various TDY's	1-02-008-82	CU	Mar. 31, 1985	67,471
THAILAND:				
Equipment Engineer	1-02-005-82	CID	Mar. 31, 1985	32,012
JORLOWIDE:				
Water Resource Econ	1-02-042-83	CSU	Dec. 31, 1985	19,597
TAL TECHNICAL ASSISTANCE				----- 785,929
TRAINING AND TECHNOLOGY TRANSFER:				

BANGLADESH:				
DA Workshop	2-02-007-82	CSU	Dec. 31, 1985	234,110
INDIA:				
Measurement for System Mg	2-07-026-82	CSU	Mar. 31, 1985	17,324
Watercourse Handbooks	2-13-025-82	CSU	Dec. 31, 1985	20,254
INDONESIA:				
DA Workshop	2-02-010-84	CSU	Dec. 31, 1985	8,257
NEPAL:				
Small Scale Systems	2-14-050-83	CU	Mar. 31, 1985	41,554
SRI LANKA:				
DA Workshop	2-02-028-83	CSU	Dec. 31, 1985	120,519
DA Workshop - WID	2-02-034-83	CSU	Mar. 31, 1985	16,386
THAILAND:				
Improving Allocations	2-14-062-83	CID	Dec. 31, 1985	44,221
WORLDWIDE:				
DA Review	2-02-080-84	CID	Dec. 31, 1985	13,448
Workshop (Tech. & Sac. AS	2-04-023-83	CSU	Mar. 31, 1985	63,241
Workshop (Tech & Sac ASP)	2-04-050-84	CSU	Mar. 31, 1985	44,999
Short Term Non-Degree	2-08-056-83	USU	Dec. 31, 1985	27,795
Increasing WM Cap. Intern	2-11-037-84	CID	Mar. 31, 1985	6,367
Prochures; 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

CLOSED OUT ACTIVITIES

DESCRIPTION	CODE	UNIV.	DATE CLOSED	APPROVED AMOUNT
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				\$ 701,439
SPECIAL STUDIES:				
Development of Handbook	3-00-000-83	USU	Dec. 31, 1985	4,616
TOTAL SPECIAL STUDIES				\$ 4,616
TOTAL CLOSED OUT ACTIVITIES				\$ 2,717,821

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

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

EXPENDITURE REPORT
AS OF JUNE 30, 1986

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:									
BANGLADESH:									
Water Management Systems 1-02-015-82	0	0	9,641	0	0	9,641	954	10,595	154,287
CHINA:									
Bell's Study Tour 1-02-038-83	0	0	2,381	0	0	2,381	236	2,617	0
INDIA:									
Hill Area Land & Water Dev 1-02-013-83	0	0	1,574	0	0	1,574	156	1,730	140,949
WM & Training 1-02-014-83	0	0	21,574	0	0	21,574	2,136	23,710	24,398
Development of Solutions 1-02-024-82	0	0	3,826	0	0	3,826	379	4,205	63,936
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	68,222	0	0	68,222	6,827	74,977	383,570

TRAINING AND TECHNOLOGY TRANSFER:

143

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
<hr style="border-top: 1px dashed black;"/>									
BANGLADESH:									
DA Workshop 2-02-007-82	0	0	29,436	0	0	29,436	2,914	32,350	219,174
INDIA:									
Measurement for System Mgmt 2-07-026-82	0	0	3,987	0	0	3,987	395	4,382	0
Watercourse Handbooks 2-13-025-82	0	2,530	0	0	0	2,530	250	2,780	15,188
THAILAND:									
Improving Allocations 2-14-062-83	0	34,909	553	0	5,248	40,710	3,511	44,221	44,250
<hr style="border-top: 1px dashed black;"/>									
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	0	37,439	33,976	0	5,248	76,663	13,897	83,733	278,612
<hr style="border-top: 1px dashed black;"/>									
TOTAL CLOSED OUT ACTIV. \$	0	38,142	102,227	0	5,248	145,617	13,897	159,514	662,182
<hr style="border-top: 1px dashed black;"/>									

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHEIS II PROJECT
(AID/DAN 4127-C-00-2086-00)EXPENDITURE REPORT
AS OF JUNE 30, 1986COLORADO 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	15,011	1,210	16,221	0
Consultant, Legal									
1-03-029-82	5,868	4,135	0	0	3,601	13,527	1,067	14,671	0
BAU Collaboration Team									
1-03-030-82	20,928	10,208	9,208	0	12,600	52,944	4,218	57,162	84,243
DOMINICAN REPUBLIC:									
Water Management Spec.									
1-02-110-84	7,530	2,142	3,339	0	4,684	17,803	1,407	19,102	26,813
INDIA:									
Water Management & Training									
1-02-020A82	5,415	6,073	0	0	4,136	15,624	1,277	16,901	27,991
Development of Solutions									
1-02-024-82	27,582	12,226	1,835	0	10,625	52,268	4,717	56,985	63,936
Evans Project Preparations									
1-02-033-83	4,034	4,545	0	0	3,089	11,668	913	12,581	0
Clyma's TOY									
1-02-035-83	1,224	739	0	0	707	2,670	218	2,888	0
JAWA Workshop Planning									
1-02-044-83	17,523	4,002	158	0	7,806	29,489	2,247	31,736	28,149
JONESIA:									
JAD'S TOY									
1-02-030-83	4,527	7,360	84	0	2,951	14,922	1,278	16,200	14,408

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

PAKISTAN:									
WM (CWM) Meeting									
1-02-029883	2,143	0	0	0	772	2,915	249	3,164	9,931
CLYMA'S TDY									
1-02-031-83	2,449	3,116	0	0	2,003	7,568	597	8,165	0
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. \$	116,925	60,996	14,951	0	61,772	254,675	47,160	275,373	275,174

TRAINING AND TECHNOLOGY TRANSFER:									

BANGLADESH:									
DA Workshop									
2-02-007-82	91,121	38,551	13,343	790	43,310	187,115	14,645	201,760	219,174
INDIA:									
Measurement for System Mgmt									
2-07-026-82	4,856	4,805	39	0	2,134	11,834	1,108	12,942	0
Watercourse Handbooks									
2-13-025-82	9,254	2,525	57	0	4,261	16,097	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
SRI LANKA:									
DA Workshop									
2-02-028-83	41,877	32,539	11,453	0	25,739	111,608	8,911	120,519	121,475
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

TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	220,761	88,554	45,460	790	108,366	463,994	83,595	500,366	370,940

TOTAL CLOSED OUT ACTIV. \$	552,869	157,343	104,411	790	266,137	1,081,644	83,595	1,165,145	646,114

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)EXPENDITURE REPORT
AS OF JUNE 30, 1986CORNELL 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:									

BANGLADESH:									
Water Management Systems									
1-02-015-82	27,521	22,515	12,156	1,695	26,219	90,106	6,157	96,263	154,287
BAU Collaboration Team									
1-03-030-82	2,779	3,561	0	0	2,856	9,196	628	9,824	84,243
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
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. \$	60,063	45,956	26,919	1,695	58,983	193,616	37,926	206,777	384,238
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

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

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	41,485	55,527	11,833

TOTAL CLOSED OUT ACTIV. \$	274,109	71,055	73,872	5,054	190,666	614,756	41,485	656,241	396,071

CONSORTIUM FOR INTERNATIONAL DEVELOPMENT

WATER MANAGEMENT SYSTHESIS II PROJECT
(AID/DAN 4127-C-00-2086-00)EXPENDITURE REPORT
AS OF JUNE 30, 1986UTAH 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	86,054	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	23,247	1,836	25,083	0
INDIA:									
Hill Area Land & Water Dev 1-02-013-83	0	841	7,726	0	2,999	11,566	848	12,414	140,949
Water Management & Training 1-02-020882	0	4,121	12,460	0	5,803	22,384	1,642	24,026	22,802
Olsen's TOY 1-02-037-83	7,964	247	174	0	2,935	11,320	1,020	12,340	0
ORDAN:									
Review of Curriculum 1-02-041-82	2,390	4,334	77	0	2,380	9,181	730	9,911	0
ALI:									
OFWM Specialist 1-02-006-83	6,086	4,846	323	0	3,939	15,081	1,227	16,421	0
PAKISTAN:									
Mayfield's TOY 1-02-040-83	0	4,987	5,606	0	3,708	14,301	1,204	15,505	15,666

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
TOTAL TECHNICAL ASSIST. \$	33,735	52,188	71,341	0	55,042	212,193	44,618	228,802	179,417
TRAINING AND TECHNOLOGY TRANSFER:									
WORLDWIDE:									
DA Review									
2-02-080-84	4,961	4,420	34	0	3,013	12,428	1,020	13,448	0
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
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	4,991	418	5,409	0
TOTAL TRAINING AND TECHNOLOGY TRANSFER \$	24,409	12,268	6,570	0	14,153	57,400	49,031	61,813	37,909
SPECIAL STUDIES:									
Development of Handbook									
3-00-000-83	3,201	0	52	0	1,041	4,294	322	4,616	4,615
TOTAL SPECIAL STUDIES \$	3,201	0	52	0	1,041	4,294	49,353	4,616	4,615
TOTAL CLOSED OUT ACTIV. \$	282,992	83,055	121,786	34,916	164,819	687,455	49,353	736,921	221,941

Consortium For International Development
 Water Management Synthesis II
 Summary Financial Report With Budget Comparison
 For The Period April 1, 1986 Through June 30, 1986

Fiscal Year 1986 Work Plan Activities

	Total FY 1986 Work Plan Budget	Current Qtr. Period Expenditures	Cumulative Expenditures Inception To Date	Unexpended Balance	Percent Of Budget Unexpended
<u>DIRECT COSTS:</u>					
Salaries & Benefits	2,726,909	345,022	2,222,977	503,932	18 %
Travel & Per Diem	681,285	58,993	490,532	190,753	28 %
Other Direct Costs	1,477,869	132,264	1,161,630	316,239	21 %
Equipment	147,666	755	68,387	79,279	53 %
CID - DBA	39,227	2,498	17,829	21,398	54 %
	-----	-----	-----	-----	-----
Total Direct Costs \$	5,072,956	539,532	3,961,354	1,111,601	21 %
	-----	-----	-----	-----	-----
<u>INDIRECT COSTS:</u>					
University	1,859,079	167,709	1,186,964	672,115	36 %
CID - G&A	616,658	53,331	375,211	241,447	39 %
	-----	-----	-----	-----	-----
Total Indirect Costs \$	2,475,737	221,040	1,562,175	913,562	36 %
	-----	-----	-----	-----	-----
<u>TOTAL PROJECT COSTS \$</u>	7,548,693	760,572	5,523,529	2,025,163	26 %
	=====	=====	=====	=====	=====

153

Consortium For International Development

Water Management Synthesis II

Project Expenditure by University

Cumulative to Date As Of June 30, 1986

Fiscal Year 1986 Work Plan Activities

	Colorado State University	Utah State University	Cornell University	Consortium For International Development	Total Costs
<u>DIRECT COSTS:</u>					
Salaries & Benefits	1,087,855	810,281	176,190	148,651	2,222,977
Travel & Per Diem	165,584	230,366	56,439	38,143	490,532
Other Direct Costs	283,963	724,178	66,773	86,716	1,161,630
Equipment	15,423	39,340	1,176	12,448	68,387
CID - DBA	10,526	6,967	0	336	17,829
	-----	-----	-----	-----	-----
Total Direct Costs \$	1,563,351	1,811,132	300,577	286,294	3,961,354
	-----	-----	-----	-----	-----
<u>INDIRECT COSTS:</u>					
University	479,883	537,342	145,310	24,429	1,186,964
CID - G&A	153,241	164,571	29,641	27,758	375,211
	-----	-----	-----	-----	-----
Total Indirect Costs \$	633,124	701,913	174,951	52,187	1,562,175
	-----	-----	-----	-----	-----
<u>TOTAL PROJECT COSTS \$</u>	2,196,475	2,513,045	475,528	338,481	5,523,529
	=====	=====	=====	=====	=====

Consortium For International Development

Water Management Synthesis II

Project Expenditure by University

Cumulative to Date As Of June 30, 1986

Prior Years Work Plan Activities

	Colorado State University	Utah State University	Cornell University	Consortium For International Development	Total Costs
<u>DIRECT COSTS:</u>					
Salaries & Benefits	1,156,719	616,934	304,517	104,051	2,182,221
Travel & Per Diem	250,917	216,853	104,900	116,302	688,972
Other Direct Costs	203,668	351,676	84,459	211,729	851,532
Equipment	34,103	3,485	545	6,315	44,448
CID - DBA	5,921	7,573	0	1,488	14,982
	-----	-----	-----	-----	-----
Total Direct Costs \$	1,651,328	1,196,521	494,419	439,885	3,782,153
	-----	-----	-----	-----	-----
<u>INDIRECT COSTS:</u>					
University	524,100	374,395	243,421	30,132	1,172,048
CID - G&A	160,098	114,241	48,894	42,812	366,045
	-----	-----	-----	-----	-----
Total Indirect Costs \$	684,198	488,636	292,315	72,944	1,538,093
	-----	-----	-----	-----	-----
<u>TOTAL PROJECT COSTS \$</u>	2,335,526	1,685,157	786,734	512,829	5,320,246
	=====	=====	=====	=====	=====

Consortium For International Development
 Water Management Synthesis II
 Summary Financial Report With Budget Comparison
 For The Period April 1, 1986 Through June 30, 1986

Prior Years Work Plan Activities

	Prior Years Work Plan Budget	Current Gr. Period Expenditures	Cumulative Expenditures Inception To Date	Unexpended Balance	Percent Of Budget Unexpended
<u>DIRECT COSTS:</u>					
Salaries & Benefits	1,019,040	-460	2,182,221	(1,163,181)	(114) %
Travel & Per Diem	340,683	787	688,972	(348,289)	(102) %
Other Direct Costs	1,477,869	246	851,532	626,337	42 %
Equipment	5,000	0	44,448	(39,448)	(788) %
CID - DBA	12,857	-5	14,982	(2,125)	(16) %
	-----	-----	-----	-----	-----
Total Direct Costs \$	2,855,449	568	3,782,153	(926,706)	(32) %
	-----	-----	-----	-----	-----
<u>INDIRECT COSTS:</u>					
University	620,352	-492	1,172,048	(551,696)	(88) %
CID - G&A	204,778	6	366,045	(161,267)	(78) %
	-----	-----	-----	-----	-----
Total Indirect Costs \$	825,130	-486	1,538,093	(712,963)	(86) %
	-----	-----	-----	-----	-----
<u>TOTAL PROJECT COSTS \$</u>	<u>3,680,579</u>	<u>82</u>	<u>5,320,246</u>	<u>(1,639,669)</u>	<u>(44) %</u>
	=====	=====	=====	=====	=====