

Quarterly Report-IV
(July 1 – September 30, 2003)

**Sustainable Development of Drylands in Asia and
the Middle East**

A Cooperative Agreement (No. EEE-A-00-02-00050-00)

between

the U.S. Agency for International Development

and

the International Arid Lands Consortium

December 23, 2003

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Activities Summary (July 1 – September 30, 2003):

General Project

- Travel resumed normally during this period for Jordan and India. Travel continued to be restricted for Afghanistan and Pakistan for the planned trip by the U.S. based team. Travel for the U.S. members was expected to be approved for the next quarter. Sub-contractors continued to make adequate progress in spite of the travel restrictions on the U.S. team.
- The Technical Advisory Committee held a meeting in conjunction with the IALC Board meeting in Albuquerque, NM. The meeting was well attended by the members. USAID Project CTO was in attendance, as well. Component directors reported as did the Project Director. The draft Cooperative Agreement was reviewed by both the TAC and by the IALC Board. Expansion of the TAC to include members from Jordan and Israel was discussed and approved by the Board.

Component Activities

- For the 1st Component, Afghanistan-Pakistan, three training courses were delivered to Afghan participants from various institutions, in spite of the difficulties of travel. The training was held at the Northwest Frontier Province Agricultural University, Peshawar. All training was performed by faculty from the NWFP-AU under contract to UIUC and under the guidance of Dr. Qayyum, UIUC Field Director. This arrangement between UIUC and the AU is accomplished under the existing Memorandum of Agreement which will be renewed when the U.S. project team is able to travel to Pakistan. Course evaluations are included later in this document.
- For the 2nd Component, Jordan, the Scope of Work is being addressed through the technical assistance being provided by the University of Arizona (UofA) faculty and through the sub-contract with the Badia Research and Development Programme (BRDP). The primary cooperating institutions at this time are the Jordan University of Science and Technology (JUST), the University of Jordan (UJ), the Water Authority of Jordan (WAJ), and the Royal Scientific Society (RSS). USAID-Amman participated extensively in the discussions and drafting of the document.
- The identification of faculty willing to travel to Jordan and/or work with Jordanian counterparts to provide technical assistance continues to grow. During this quarter the UofA based technical assistance team grew to 18 faculty and one advanced graduate student.
- The UofA has now hired Dr. Akrum Tamimi, as the Jordan Component Project Coordinator. Dr. Tamimi will allocate .30 FTE of his time to assist the project in accomplishing the defined scope of work and to provide on-the-ground presence to insure activities continuity. He will meet as necessary with USAID-Amman, the BRDP and with the other cooperating institutions. When able to do so, Dr. Tamimi will travel to the U.S. for reporting, assisting in study tours, and attending project meetings.
- The 3rd Component, India, saw activity during this period. The Project Director and component team leader, Dr. Peter Ffolliot, met with Dr. Satish Chandra, former head

of the National Institute of Hydrology for initial activity definition and identification of contacts.

- Following establishment of initial contacts with USAID, the government of India, research institutions and regional universities and through the assistance of the CTO, Project Director Freitas traveled to India to initiate the activity.
- The re-designed project web site (<http://ag.arizona.edu/oals/susdev/Home/Home.htm>) has now gone “live” during this quarter and maybe accessed for reports and activities by the project.

Activities Summary for the following period (October 1, 2003 – December 31, 2003):

- Travel to Jordan. Trips are planned by Dr. Livingston, Dr. Erin Addison, and Ms. Karen Vitkay, from Landscape Architecture and Planning, UofA. Additionally, Project Director Freitas will travel to Jordan to initiate the planning for the Scope of Work for 2003/2004.
- Travel to Pakistan. The U.S. based project team will travel to Pakistan and Afghanistan in October. Travel clearances have been promised on the part of USAID to allow this to be accomplished. While there the team will meet with USAID-Islamabad and Kabul, RAMP project personnel, the NWFP Agricultural University faculty and administration, and a number of Afghan governmental and NGO representatives.
- Visits to the U.S. A technical study tour visit to the U.S. by by faculty and professionals from Jordan has been confirmed for late November early December period. The goal is to have ten persons visiting the U.S. on the initial study tour but this may be difficult to achieve with the continuing visa restrictions. Planning for this visit will be a major activity for the UofA faculty team as lectures and laboratory exercises in addition to field site visits will take place.
- A Cooperative Agreement renewal is expected to be in place. The Agreement will be for four additional years, with year-to-year funding from ANE and Mission buy-ins anticipated. The renewal of the cooperative agreement will see the addition of another project component, that of Capacity and Institutional Building of the Agricultural Faculty of the University of Sana’a, Yemen through participation by IALC member institution New Mexico State University.
- Website materials will continue to be added to the project site.

Following are sections of reports have been submitted by two of the primary Project components, for Afghanistan-Pakistan, by UIUC, and for Jordan by the Badia Programme with UofA participation. Editing and writing by the project director has been done in these sections.

Afghanistan-Pakistan Activities
Quarterly Report-IV
Sustainable Development of Drylands Project
IALC-UIUC

Introduction:

Some of July and August were spent gathering input and assembling information that could flow into the proposal which requested a four-year extension of our Cooperative Agreement. Numerous drafts and iterations of the narrative and budget were submitted and reviewed at various levels, starting with the field office in Pakistan and proceeding through the progression of individuals to USAID/Washington. This process worked its way to a conclusion in early September, with a few delays due to vacation and annual leave plans of most project personnel. When the proposal was finalized, our attention during the month of September was given to preparations for an October TDY in Pakistan and Afghanistan.

Activities of this period (July 1 – September 30):

While assembling pieces for the Cooperative Agreement proposal, the Illinois-based project managers continued to monitor progress in the field as training programs actually got underway. Two organized short courses were completed during the month of August: 1) Enterprise Development and Management Skills (twelve participants); and 2) Irrigation and Water Management Practices (fourteen participants).

A third course was completed during the month of September. That course, “Post Harvest Management and Marketing Skills”, was delivered to seventeen participants. Summary information on the forty-three participants who attend these one-month training courses is available. Also, outlines which give details on content included and instructional methods used in all three courses are available. Summaries of the end-of-course evaluation forms completed by all participants are included in this report. We are especially pleased that the three courses could be completed during year one of the Cooperative Agreement.

During the Albuquerque meeting in August, the TAC expressed some concern and reservations about the risks of doing business in countries where travel restrictions severely limit the ability of the US based team to closely monitor the project activities. The members also expressed the concern that chances of failure are great. A recommendation to the IALC Board was made, however, to proceed with the Afghanistan-Pakistan training activities although there was some concern on the part of the TAC that quality control be maintained. The reservations on the part of the TAC were due to the long-distance relationship of the training being provided by the NWFP-AU and the lack of ability to closely monitor the delivery of the instructional activities.

The UIUC project manager was requested by the TAC group that more complete information was needed on what has been accomplished within this component thus far and what is

planned for the years ahead. The Committee asked that the information from Illinois be channeled to them through Project Director Freitas.

With the extension of our agreement approved, the need for on-site long-range planning and a training needs assessment survey became more urgent and critical. Although travel warnings remained posted by the Department of State for both Afghanistan and Pakistan, we decided to move ahead with plans for a TDY in October. Coordinating all elements of this visit and getting all arrangements made, not the least of which is country-clearance, was a time-consuming task. The Illinois project managers (Myers and Santas) will be joined on this TDY by Project Director Freitas. Dr. Qayyum will be the fourth member of our team. Dr. Qayyum was asked to handle logistical arrangements and to make appointments with appropriate individuals and organizations in spite of his being fully occupied with the third short course during September.

As was explained in the previous quarterly report, these three short course topics were selected as a result of a week-long visit to Kabul (June 15-22) made by Field Office Director, Dr. Abdul Qayyum Khan. During that visit he met with various organizations and ministries that were potential sponsors of short course participants. Dr. Qayyum made a follow-up visit to Kabul in late July, during which time he delivered tickets and advance information packets to all persons accepted for these courses. The packets were given to each sponsoring organization for delivery to their nominees. This visit was useful in providing answers to any remaining questions.

Although Quarterly reports will not usually be the vehicle for providing detailed information contained in consultants or field directors' reports, in this case the initial short courses completion should be highlighted because of the accomplishment in spite of numerous difficulties. The following is a brief note about the two of the three courses, with some participant commentary and finally the results of the course evaluations. The evaluation of the third course will be reported in the next report.

COMPLETION OF SHORT-TERM TRAINING COURSES

Both of the short-term training courses entitled *IRRIGATION AND WATER MANAGEMENT PRACTICERS* and *ENTERPRISE DEVELOPMENT* which started on August 5, 2003 were concluded on August 30th, 2003, in a ceremony attended by the NWFP Minister for Science and Technology Mr. Hussain Ahmad Kanju, the Vice Chancellor, NWFP Agricultural University, and Dr. Abdul Qayyum Khan, Director, University of Illinois Field Office. In addition, Deans of five Faculties, Chairmen of twenty-two departments, Research and Outreach staff of the NWFP Agricultural University were also in attendance. During the ceremony Dr. Qayyum explained the salient features of the human resource development program for Afghanistan. Professor Dr. Syed Iqbal Shah, Vice Chancellor, NWFP AU assured the full support for training of Afghan nationals at the NWFP AU. Course Directors Professor Dr. Muhammad Jamal Khan and Dr. Farzand Ali Jan explained the effectiveness of the training methodologies adopted for both of these courses. Mr. Khawaja Issac, a participant of Irrigation and Water Management Practices course and Mr. Amanullah, a participant of Enterprise Development Course represented the respective course participants and explained their opinions on both of the short-term courses. The NWFP Minister for Science and Technology welcomed the Afghan participants and appreciated the training program for them by the University of Illinois at Urbana Champaign supported by the United States Agency for International Development (USAID). The Minister further stressed the

importance of agricultural scientists and researchers to carry out extensive research on plants, crops and in the field of biotechnology for introducing quality consumer goods.

PARTICIPANTS' OPINIONS:

Khawaja M. Issac, a participant and representative of the Irrigation and Water Management course said:

“ I, on behalf of Engineers and participants from the Ministry of Agriculture and Livestock, have to appreciate all activities and performance of Water Management Department especially Professor Dr. M. Jamal Khan during his teaching and lectures that he acted sympathetic as a brother and devoted his valuable time for us to learn something in the field of Irrigation and Water Management. We undertook many field visits of Agricultural Research Stations and Irrigation Systems. We evaluate these were so much useful. Also we wish to continue this procedure and looking for more different courses to renew and extend our experience. A thing should be mentioned that, if the group of engineers were separated from Agronomists, it would have been better. I wish to appear our gratefulness to USAID and Dr. A. Qayyum Khan for providing top facilities in Pakistan. Going back to Afghanistan we wish to use the exercise and experience that we learned during the course for renovation of our destroyed home”.

Amanullah, a participant and representative of Enterprise Development Course said:

“I am representing the group of participants who attended Enterprise Development Course. This course was so interesting that everybody took keen interest in it. We appreciate our lecturers. They worked hard with us and spent more time than was scheduled for us. As you know, Afghanistan is totally destroyed. All sides of the country are damaged. Academic side of the country is destroyed too. So the training course of Enterprise Development and Management Skills was very important for us. We managed to get new business knowledge from this course and will take it back to our work place in Afghanistan. If not 100%, we would be able to apply it 50% of the knowledge that we have learnt over here. We appreciate Dr. Abdul Qayyum Khan of the University of Illinois at Urbana Champaign who arranged this course. In order to enhance academic relationship between two neighboring countries Pakistan and Afghanistan, it is vitally important too, to keep such type of training program going. In this respect Dr. Abdul Qayyum Khan of University of Illinois at Urbana Champaign as an initiator and the concerned department of the University as an academic center can play a great role”.

The following is a newspaper article giving local press coverage to the event and crediting the USAID funding:



EVALUATION OF THE COURSES:

The course evaluation forms were developed in three languages viz. English, Pushtu and Dari. The participants were of the view that since Dari is an official language used in official communications, therefore one evaluation form in Dari language be used for evaluation of the course by the trainees. All of the participants of both the training courses therefore evaluated the courses in Dari language and the results of course evaluation by the trainees are shown on page 3 and 4 below.

RESULTS OF COURSE EVALUATION BY TRAINEES

COURSE: *IRRIGATION AND WATER MANAGEMENT PRACTICES*

Legend: A = Strongly Agree, B = Agree, C = Disagree, D =Strongly Disagree, E = No opinion

Number of participants who evaluated the course: 14

COURSE EVALUATION

		A	B	C	D	E
1.	The course was relevant to your professional responsibilities	8	6	-	-	-
2.	The course improved your knowledge to a great extent	13	1	-	-	-
3.	Enough time was given for classroom lecture/discussion	14	1	-	-	-
4.	Enough time was given for field visits	13	1	-	-	-
5.	Recent developments in research and latest knowledge of the subject was imparted	12	2	-	-	-
6.	Problems and issues which you usually encounter during your professional duties were discussed during the course	5	9	-	-	-

TRAINING METHODOLOGY

1	Lectures were informative and very helpful in communication of knowledge	8	6	-	-	-
2.	Group discussions and consultations with instructions provided an excellent opportunity for sharing of experience	11	3	-	-	-
3.	Field visits provided the chance to perform practical work as discussed in the classroom	12	2	-	-	-
4.	Teaching methodology was effective	13	1	-	-	-
5.	Group discussions are more helpful than the lecture	8	6	-	-	-
6.	Course duration was about right.	10	3	1	-	-

TRAINER'S PERFORMANCE

Give response about the trainer of the course through following statements

1.	He has good knowledge of the subject	11	3	-	-	-
2.	He presented the subject matter nicely and speaks clearly	9	5	-	-	-
3.	He has the ability to relate subject matter with solutions of existing problems	12	2	-	-	-
4.	He answers trainees' questions satisfactorily	10	4	-	-	-
5.	His overall performance was good.	11	3	-	-	-

Suggestions for further improvement of the course (if any): In future irrigation and water management practices course should be held separately for Engineers and Agronomists.

RESULTS OF COURSE EVALUATION BY TRAINEES

COURSE: *ENTERPRISE DEVELOPMENT AND MANAGEMENT SKILLS*

Legend: A = Strongly Agree, B = Agree, C = Disagree, D =Strongly Disagree, E = No opinion

Number of participants who evaluated the course: 12

COURSE EVALUATION

		A	B	C	D	E
1.	The course was relevant to your professional responsibilities	1	10	1	-	-
2.	The course improved your knowledge to a great extent	3	9	-	-	-
3.	Enough time was given for classroom lecture/discussion	3	4	5	-	-
4.	Enough time was given for field visits	1	4	5	1	1
5.	Recent developments in research and latest knowledge of the subject was imparted	2	8	1	-	1
6.	Problems and issues which you usually encounter during your professional duties were discussed during the course	1	8	3	-	-

TRAINING METHODOLOGY

1	Lectures were informative and very helpful in communication of knowledge	4	8	-	-	-
2.	Group discussions and consultations with instructions provided an excellent opportunity for sharing of experience	2	3	7	-	-
3.	Field visits provided the chance to perform practical work as discussed in the classroom	1	4	7	-	-
4.	Teaching methodology was effective	2	9	1	-	-
5.	Group discussions are more helpful than the lecture	-	4	4	1	3
6.	Course duration was about right.	4	6	2	-	-

TRAINER'S PERFORMANCE

Give response about the trainer of the course through following statements

1.	He has good knowledge of the subject	7	4	-	-	1
2.	He presented the subject matter nicely and speaks clearly	4	8	-	-	-
3.	He has the ability to relate subject matter with solutions of existing problems	2	9	-	-	1
4.	He answers trainees' questions satisfactorily	7	4	1	-	-
5.	His overall performance was good.	3	8	-	-	1

Suggestions for further improvement of the course (if any): More group discussions and field visits to various commercial enterprises should be arranged in future training programs.

Activities Planned for the Following Period (October 1 – December 31):

Plans were made for Drs. Myers and Santas to depart Illinois on October 8th for travel to Islamabad and to be joined by Project Director Freitas on October 12. This will allow Qayyum to have completed his responsibilities to the series of three courses. After business in Islamabad, the team will visit the NWFP-AU in Peshawar followed by a one-week stay in Afghanistan. Wrap-up contacts will be made back in Islamabad prior to an October 24th departure, which will have our TDY completed before start of the one-month Ramadan observance.

Our team believes that on-site contacts in Pakistan and Afghanistan are important to the successful continuation of our training activities, especially at this juncture, so that exemption from the existing State Department and University of Illinois travel ban is justified.

Following the return from travel, it is expected that the Training Needs Assessment will be continued to be developed by the Senior Advisor, Oval Myers. Interviews for this assessment will be conducted while in Afghanistan.

Planning by Dr. Qayyum will continue for the next set of short-courses to be delivered by the AU. It is anticipated that most of these courses, in the short run, will continue to be delivered at the AU in Peshawar, however some courses will be delivered in Kabul during the next phase.

Jordan Activities
Quarterly Report-IV
Sustainable Development of Drylands Project
IALC-BRDP

Introduction:

Travel to Jordan smoothed out during this period and the difficulties and advisories of the previous quarter were lifted. This allowed an increase in project activities through the provision of technical assistance by UofA faculty, the initiation of a demonstration project, and the placement of a project coordinator.

Activities of this period (July 1 – September 30, 2003):

For the 2nd Component, Jordan, the Scope of Work continues to be the focus of the project activities. The emphasis within the SoW during this period was on the two demonstration sites of Wadi Musa and of Aqaba. There are multiple objectives being pursued at each site and the visits by Drs Peter Waller, Chris Choi and Akrum Tamimi are beginning to have the effect of increased project definition. Reports were submitted on the subjects of irrigation efficiency of re-use systems for treated wastewater, and of the use of treated bio-solids.

Ms. Dima Kayed traveled to Jordan during this period. Ms. Kayed, working under the supervision of Dr. Chuck Gerba, completed the 2nd part of the Laboratories Capabilities. The study objectives were to provide a careful analysis of current capabilities in the primary environmental labs of Jordan and to assess where technical assistance would be most beneficial.

The UofA-IALC has now hired Dr. Akrum Tamimi, as the Jordan Component Project Coordinator. Dr. Tamimi will allocate .30 FTE of his time to assist the project in accomplishing the defined scope of work and to provide on-the-ground presence to insure activities continuity. He will meet as necessary with USAID-Amman, the BRDP and with the other cooperating institutions, such as the Royal Scientific Society pursuing bio-solids characterization work. When able to do so, Dr. Tamimi will travel to the U.S. for reporting, assisting in study tours, and attending project meetings.

Dr. Tamimi initiated, with the BRDP, the identification of candidates from the principal cooperating institutions to send two candidates each to the U.S. for the initial technical study tour. The tour will focus on the primary topics of bio-solids and wastewater or reclaimed water use. Topics on safe, effective and culturally appropriate uses will be offered during the study tour. The technical assistance team from the UofA will be the primary lecturers and guides for the participants, however, other entities such as Pima County Wastewater, the City of Tucson Reclaimed Water Facility, and the Pinetop-Lakeside Sanitation District Wastewater Treatment Facility may offer lectures and demonstrations.

The identification of faculty willing to travel to Jordan and/or work with Jordanian counterparts to provide technical assistance continues to grow. During this quarter the UofA based technical assistance team grew to 18 faculty and one advanced graduate student.

Activities Planned for the Following Period (October 1 – December 31):

Travel to Jordan:

Trips are planned by Dr. Livingston, Dr. Erin Addison, and Ms. Karen Vitkay, from Landscape Architecture and Planning, UofA, to initiate the activities related to the landscape design for the Wadi Musa Visitors's center and for Aqaba's Water Friendly/Desert Plants/Low Water Use Garden employing reclaimed water. These projects will be done in concert with the BRDP, the Petra Regional Authority, and the Aqaba Special Economic Zone Authority, among other institutions from Jordan.

Project Director Freitas will travel to Jordan in October to initiate the planning for the Scope of Work for 2003/2004 and visit all major project sites to gauge progress.

Visits to the U.S:

A technical study tour visit to the U.S. by faculty and professionals from Jordan has been confirmed for late November early December period. The goal is to have ten persons visiting the U.S. on the initial study tour -- but this may be difficult to achieve with the continuing visa restrictions. Planning for this visit will be a major activity for the UofA faculty team as lectures and laboratory exercises in addition to field site visits will take place.

India Activities
Quarterly Report-IV
Sustainable Development of Drylands Project
IALC-BRDP

Introduction:

The India component's activities were initiated during this period. Beginning with a visit to the UofA by Dr. Satish Chandra, former head of the National Institute of Hydrology, Project Director Freitas and component team leader, Dr. Peter Ffolliot, Professor, School of Renewable Resources, UofA, met to discuss the concept of focusing on water and energy policies that affect on-farm water use in arid and semi-arid lands in India. Dr. Chandra made a number of suggestions which were incorporated into the concept and suggested that the initial geographic focus be Rajasthan.

Following establishment of initial contacts with USAID-New Delhi with the assistance of CTO John Wilson, the Project Director traveled to New Delhi and then to Rajasthan. Mr. Freitas met with representatives of USAID-New Delhi, the government of India, research institutions and regional universities in Rajasthan.

Activities of this period (July 1 – September 30, 2003):

During the two week trip by the Project Director to initiate contacts and discuss the energy and water policy study leading to demonstration projects, the reception was positive. Following a meeting at USAID with Larry Paulson, John Smith-Sreen, Archana Walia and Kristen Easter, Mr. Freitas met with Dr. J.S. Samra, Deputy Director General, Natural Resources, Indian Council of Research, Gov. of India. Dr. Samra provided the Indian government's perspective and also personally made the contacts with the Vice-Chancellor of Maharana Pratap University of Agriculture and Technology (MPUAT), Udaipur and the Director of the Central Arid Zone Research Institute (CAZRI), Jodhpur. This personal touch on the part of Deputy Director General "opened the doors" at both of those institutions and also indicated his interest in the concept.

In traveling to Udaipur and Jodhpur, Mr. Freitas held a series of meetings at both institutions mentioned above and discussed at some length the concept of studying the effects of water and energy policies on agricultural water use. The study concept was met with positive comments and interest in working together to bring attention to bear on the incentives and disincentives to use agricultural water wisely and efficiently. In all cases, the watershed as the geographic unit was felt to be appropriate. In Udaipur the discussion concluded that a "farm" focus was possible and desirable, while in Jodhpur, with its drier climate, a silvo-pastoral agricultural system dominates and a broader agricultural perspective to include grazing animals will be needed.

The method of bringing a small team of expatriates (4 to 6) was felt to be appropriate and the desire to work directly with Indian scientists was met with enthusiasm on the part of the administration and faculty at both institutions. Timing was discussed and the period of January/February, 2004, was felt to be a good time period for the arrival of the initial study

team. Four to five days at each institution would allow some time in the field if there were appropriate existing demonstration sites of soil/water/energy conservation practices (to which reference was made during the discussions).

Contacts with NGOs were initiated but more time is needed to pursue these leads. NGOs may provide the needed local capability to carry out any recommended demonstration project. Mr. Freitas met with Mrs. C.L. Bharti, of the NGO Vidya Bhawan Krishi Vigyan Kendra (VBKVK), Badgaon-Udaipur. This NGO is currently working on joint projects with MPUAT, some of which include soil and water conservation. Additionally, Mr. Freitas met with another NGO representative Ramesh Ramal, V.P. of the BAIF Development Research Foundation based in New Delhi which has done community-based water related projects in Rajasthan. There was insufficient time to follow up on USAID's Kristen Easter's contact with the Jal Bhagirathi Foundation, for Jodhpur which is important to pursue as CAZRI does not have an NGO with which it is currently working.

Activities Planned for the Following Period (October 1 – December 31):

Dr. Peter Ffolliott, School of Renewable Natural Resources (SRNR), the University of Arizona, as the designated team leader for this effort, will organize the team that will look to depart for India in late January, 2004.

Dr. Ffolliott will also write the draft concept paper and circulate this to USAID, the team and potential participating institutions in India.