

**Quarterly Activity Report: October 1<sup>st</sup> through December 31<sup>th</sup> 2007**  
**IALC Sustainable Development of Drylands in Asia and the Middle East Project**  
**Jordan Component: “Business and Socioeconomic Assessment of Water and**  
**Products for Community-Based Projects in the Badia Region”**

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Quarterly Activities:

The main outcomes from this quarter’s activities are:

- ✓ Finalizing and in-depth econometric analyses of the Mafraq survey data aimed at supporting better informed agricultural water use policy decisions and help farmers improve their irrigation water use efficiency.
- ✓ Continuing with the econometric analysis of the willingness to accept compensation for giving up their water pumping “rights” by Mafraq farmers.
- ✓ Collecting information for the lamb, honey, sheep, and sun-dried tomato enterprises of the Anaqeed Cooperative for the fiscal year ending on October 31, 2007. This information was reviewed during a conference session held in Las Cruces in early December. A few discrepancies and inconsistencies in the data were discovered. It was agreed that additional information will be collected no later than early January 2008. The Anaqeed Cooperative is in the early stages of starting a concrete block manufacturing enterprise. The partial data needed for preparing a financial feasibility study, marketing plan and business plan for this enterprise has been collected but additional information is needed.
- ✓ Preliminary information was collected on the potential domestic and international markets for fiber art products that might be made by Bedouin women from wool from their sheep using natural traditional dyes. Preliminary results indicated that such an enterprise may have the possibility of significantly increasing income opportunities for women in rural communities.
- ✓ Preliminary data were collected on low water use, natural dye plants grown in New Mexico that might also be suited for the Badia region. To gain an understanding of the horticultural processes, the costs of production were estimated for 10 natural dye plant crops. Budget templates were developed for these crops and preliminary market demand data were collected.
- ✓ A one week in-service training session was held in Las Cruces NM in early December for BRDC’s M.S. Ahmad Al-Rawajfeh on: 1) Understanding and preparing accrual accounting statements and 2) How to prepare financial feasibility analyses.
- ✓ Collaboration on an onion planting project in Al-Mudawara continued during this quarter. The plantings took place at Sheikh Khaled’s farm. Sheikh Khaled is a Bedouin farmer and herder, who is responsible for the welfare of a community of over sixty families. The NMSU team working on this project includes Dr. Joe Corgan, a renowned onion breeder who specializes in the varieties of sweet onions being tested in this project. Dr. Corgan is joined by project manager Rich Phillips and a Jordanian graduate assistant Ayman Ghunaim. The BRDC project team is led by Dr. Raed Al-Tabini and engineer Nawras Al-Jazi, who is stationed in Ma’an. The objective of this project is to assist Sheikh Khaled in maximizing the profit on his crops and to get the greatest return per liter of water used.

- ✓ Held a workshop involving Bedouin herders, government land-use agency officials, donor agency and NGO representatives, and other interested parties, to provide them with detailed information about the water harvesting and range restoration techniques used, the cost of implementing these techniques, and economic returns resulting from the enhanced biomass production. The workshop was held for the Tal Rimah rangeland rehabilitation site on December 13, 2007 in the Anaqeed Al-Khair cooperative conference room and at the Tal Rimah rangeland site. Jim Libbin and Derek Bailey participated in the workshop.
- ✓ Assisted U.S. Agricultural Research Service and BRDC personnel plant new areas of the Tal Rimah site to evaluate alternative shrub and grass species.
- ✓ Continue work to encourage others to initiate similar range restoration activities throughout the Badia region of Jordan. Contacts maintained with BRDC, Hashemite Fund for Badia Development, University of Jordan, and Royal Botanical Gardens.
- ✓ Continue with field research to evaluate the impact of control grazing and stocking rates on the study site, and the economic implications of these treatments.
- ✓ Continue to monitor existing rangeland rehabilitation projects and to investigate potential future sites.
- ✓ Continue with the economic feasibility and sustainability analyses of the Wadi farming systems in the Al-Shamia/Ma'an area.
- ✓ Continue to provide advice to M.S. Ismaiel Naser Abuamoud as he begins his doctoral program at NMSU. Progress is being made on selecting the specific topic for Ismaiel's doctoral project.

The NMSU and the BRDC team members responsible for each of these activities were in frequent long-distance communication coordinating and exchanging of information through Skype phone, e-mail and e-mail document attachments. In addition, Derek Bailey and Jim Libbin traveled to Jordan in early December to review the range rehabilitation progress at the Tal Rimah site and to participate in the Tal Rimah workshop. They also discussed the format and process of designing grazing management studies at Tal Rimah and a potential site at Al Moreghah and met with various government agencies to elicit their interest in cooperative work in those sites.

#### Activities Planned for Next Quarter:

In accordance to the year-two work plan, the next quarter activities will include:

- ✓ Writing a report summarizing the results of the econometric analyses of the Mafraq agricultural water use survey data.
- ✓ Continuing with the econometric analyses of the data on the farmer's willingness to accept compensation for giving up their water rights in the Mafraq aquifer.
- ✓ Continue supporting the Anaqeed Al-Kahir and the Tal-Rimah cooperatives in the implementation of the recommended management and enterprise selection adjustments to improve their financial and economic feasibility and performance.
- ✓ Finalize preparation of training materials for workshops using the A'naqeed Al-Kahir and the Tal-Rimah cooperatives as examples to train individuals involved in similar projects throughout Jordan on how to analyze their economic and financial feasibility and use the results from these analyses to improve a cooperatives' business performance.
- ✓ Publish an updated report on the financial results of the A'naqeed Al-Kahir incorporating information from the fiscal year ending October 31, 2007.

- ✓ Continue work on collecting capital investment requirements and operating costs for a concrete block enterprise on the Anaqeed al-Kahir cooperative as part of the process of conducting a financial feasibility study.
- ✓ On the basis of the results of the economic analysis of the community based water harvesting and range restoration activity, continue work to encourage others to initiate similar range restoration activities throughout the Badia region of Jordan.
- ✓ Continue with field research to evaluate the impact of control grazing and stocking rates on the study site, and the economic implications of these treatments. Continue to monitor existing rangeland rehabilitation project and to investigate potential future sites.
- ✓ Continue econometric analysis of the agricultural water use survey in the Al-Shamia area. Work should be completed in the summer of 2008.
- ✓ Continue to provide technical support for Bedouin onion project in Disi basin via video conferencing with NMSU subject matter expert. The NMSU experts will continue to work until harvest in May 2008, when yield and quality data will be collected. Market data and demand in Jordan for these new onion types will also be documented.

As in the previous quarter, the NMSU team members responsible for the different activities will be in frequent long-distance communication with their BRDC counterparts, coordinating and exchanging of information through Skype phone, e-mail and e-mail document attachments. It is also likely that at least two trips to Jordan by NMSU team members will take place during the next quarter. The dates and specific purposes for these trips, however, have not been decided.