

Quarterly Activity Report: July 1 through September 30 2008
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”

Principal Contact: Terry Crawford, New Mexico State University
E-mail: Crawford@nmsu.edu, Phone (505) 646-3215

Quarterly Activities:

The main outcomes from this quarter’s activities are:

- ✓ Final review was completed of a report summarizing the results of the economic and policy 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. This report was published in June and is titled tal Rimah Range Rehabilitation—Recreating a Valuable Resource, Report # 4, Jordanian Project Series Reports, New Mexico State University.
- ✓ Completed reports on the the economic analysis of water use in the Mafraq Disi basins. Published as Reports: # 6 and # 7, Jordanian Project Publication Series, September, 2008.
- ✓ Collected information 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 dyes. Preliminary results indicated that such an enterprise might have the possibility of significantly increasing income opportunities for women in rural communities. Information was collected on the skills and interest of various Bedouin women cooperatives on manufacturing handicrafts made of domestic sheep designed to sell in the US market during a trip to Jordan in August. Several cooperatives expressed great interest.
- ✓ Work continued on the onion-growing project in Al-Mudawara. To date, this project has shown that there is substantial potential for profitably growing high-quality low-pungency onions in Jordan. It also appears that there is a significant market niche for this product. Most of the market analysis and onion variety research was completed by June 30. Shaikh Al Otoun, the Jordanian farmer participating on the onion project, visited New Mexico from June 14 through June 25. He visited with NMSU onion specialists and onion growers, packing sheds and equipment distributors. A report summarizing this work was published in July and is titled Report # 5: fall Planted Onions on a Bedouin Farm in al-Mudawara, Jordan Applied Economic Development, Jordanian Project Series.
- ✓ Continued work to encourage initiation of range restoration activities throughout the Badia region of Jordan. In this regard, contacts were maintained with BRDC, Hashemite Fund for Badia Development, University of Jordan, and Royal Botanical Gardens.
- ✓ Continued with field research to evaluate the impact of controlled grazing and appropriate stocking rates and the economic implications of these treatments. Began evaluation of shrub and perennial grass seedings established during December 2007 at Tal Ramah and Ghrain (Al Muraygha) sites. Collected data on plant germination and survival at both sites in August to determine which species and varieties were most adaptable to Jordan range conditions.

- ✓ Planned next phase of the germplasm study to include: seedings with minimal water harvesting structures and seedings simulating fly-on conditions (spreading seeds on top of the soil surface with no mechanical action).
- ✓ Continued to monitor existing rangeland rehabilitation projects and to investigate potential future sites.
- ✓ Continued with the economic feasibility and sustainability analyses of the Wadi farming systems in the Al-Shamia/Ma'an area.
- ✓ Continued to provide advice to M.S. Ismaiel Naser Abuamoud on his doctoral program at NMSU. Progress is being made on selecting the specific topic for Ismaiel's doctoral research. While in Jordan in August, we visited several potential sites to be included in a comprehensive rural development through tourism analysis. The tourism packages might be built around cultural tourism, ecotourism, or archaeological / historical sites tourism.

The NMSU and the BRDC team members responsible for each of these activities made a field visit to Jordan in July and were in frequent long-distance communication coordinating and exchanging of information through Skype phone, e-mail and e-mail document attachments.

Activities Planned for Next Quarter:

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

- ✓ Submitting a paper with the results of the econometric analyses of the Mafraq agricultural water use survey data for publication in a peer-reviewed water resources journal.
- ✓ Continuing with the econometric analyses of the data and publish a report on the farmer's willingness to accept compensation for giving up their water rights in the Mafraq aquifer.
- ✓ Disseminate training materials 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.
- ✓ Continue work on the feasibility study of starting a fiber arts crafts business that is mainly producing handmade products using natural dyes primarily for export markets as a means of providing employment to women in the Badia.
- ✓ Begin the evaluation of growing organic medicinal herbs and natural dye plants as a possible high value but low water use crop by community groups in the Badia.
- ✓ 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.
- ✓ Formalize the data analysis to evaluate and identify superior shrub and perennial grass species from seeding evaluation study initiated in December 2007 for use in future restoration activities.
- ✓ Continue with field research to evaluate the impact of controlled 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 with the analysis of data collected through the agricultural water use survey in the Al-Shamia area.
- ✓ 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.

Libbin and Bailey will collect data, plant new experiments, conduct evaluations, and hold public presentations of work progress at both the Tal Ramah and Ghraim (Al Muraygha) sites during their

January 2 through 12, 2009 visit. During this visit, Libbin and Bailey plan to meet with BRDC, Hashemite Fund for Badia Development, University of Jordan, and possibly with the Royal Botanical Gardens.