# SUSTAINABLE DEVELOPMENT OF DRY LANDS IN ASIA AND THE MIDDLE EAST: JORDAN COMPONENT

JORDAN VISIT REPORT JULY 23 TO JULY 24, 2006

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#### **PREPARED**

By

AKRUM H. TAMIMI, PH.D.
ASSISTANCE PROFESSOR AND PROJECT COORDINATOR
IALC, OFFICE OF ARID LANDS STUDIES
THE UNIVERSITY OF ARIZONA
1955 E. SIXTH ST. (BLDG. 184)
TUCSON, AZ 85719-5224

## **Table of Contents**

Table	of Contents	.2
I.	Introduction	.3
II.	Objectives of the Visit	.3
III.	Badia Research and Development Center (BRDC)	3
1.	Conference: Can Water Resources Be Sustained in Drylands? The Challenge for the	e
	Present and Future	.3
2.	Capacity Building Courses	3
a. b	Technologies	.4
a. b c. 4.	Basic Biosolids Laboratory Training	4 4
a	Application of Treated Biosolids to Land Irrigated with Reclaimed Wastewater a Madaba Wastewater Treatment Plant	
b	Development of Drying Bed Sludge Treatment Method to a Permitted Process to Further Reduce Pathogens	

#### I. Introduction

On his way through Jordan traveling to Tucson, AZ, Dr. Akrum Tamimi held a meeting with BRDC staff discussing activities developed through the previous visit to be included in the Scope of Work for fiscal year 2006-2007. This report documents the discussions and the points made by BRDC staff members.

### II. Objectives of the Visit

The main objective of visiting Jordan was to fly to Tucson, AZ through Queen Alia International Airport in Jordan. While passing through Amman another object was set. Meet with Mr. Mohammad Shahbaz at BRDC to confer with him and with Dr. Saad Al-Ayyash on draft zero of fiscal year 2006-2007 Scope of Work.

## III. Badia Research and Development Center (BRDC)

On July 24, 2006 Dr. Tamimi met with Mr. Mohammad Shahbaz and Dr. Saad Al-Ayyash from BRDC. During the meeting the draft version of the Scope of Work developed by Dr. Tamimi based on feed back and needs assessment obtained during previous visits with Dr. Al-Ayyash was presented to the different Jordanian partners. Please see report 2006-002 dated July 20, 2006 for more information and details concerning these visits.

Most of the proposed activities for the 2006-2007 Scope of Work were presented during the meeting. The ones that generated discussion are listed in the following subsections.

## 1. Conference: Can Water Resources Be Sustained in Drylands? The Challenge for the Present and Future

The conference has been discussed and Dr. Tamimi indicated that the conference would probably be postponed until the fall of 2007 due to the time required for planning and due to the high cost required for the venue since the summer is a high season in Jordan. Dr. Saad indicated that if the framework is set differently then maybe we can save money; meaning that a limit on the cost coverage for participants be imposed and covering the cost be limited only to the key note speakers. More discussions will be held during project director Mr. Bob Freitas visit to Jordan in August.

#### 2. Capacity Building Courses

## a. Reclaimed Water Irrigation Management Utilizing Distance Learning Technologies

The delay from JUST was discussed and Mr. Shahbaz indicated that in planning future courses we need to send official documents to the president of JUST discussing the feasibility of offering the course. He suggested that during Bob's visit we should visit with JUST president to expedite the process of getting the course listed and marketed at the university level.

#### b. Statistical Methods and Experimental Design

Mr. Shahbaz indicated that to offer this course justification has to be presented. If this course is required to develop or enforce the standards then it should be tied to the standards development and as a prerequisite for lab analysis of wastewater and biosolids.

## 3. Capacity Building Technical Training and Study Tours

#### a. Advanced Biosolids Laboratory Training

Mr. Shahbaz indicated that after the training is completed, the project should look for the participants to develop a manual and guidelines based on the training to be delivered to BRDC for sustainability and distribution purposes.

#### b. Basic Biosolids Laboratory Training

Mr. Shahbaz and Dr. Saad indicted that the process can be subcontracted to RSS through BRDC to perform the training.

## c. Wastewater and Sludge/Biosolids Management Practices Study Tour

Since the request for this activity came from WAJ, Mr. Shahbaz indicated that WAJ should send an official request and a proposal to BRDC for further considerations. Dr. Tamimi indicated that there was communications from Engr. Malkawi and Engr. Ulimat regarding this and the communications were made with the project TAT and Dr. Saad was aware of the communication. It is believed that what Mr. Shahbaz wanted to see is a request coming from the Secretary General himself for the study tour.

#### 4 Biosolids Related Activities

## a. Application of Treated Biosolids to Land Irrigated with Reclaimed Wastewater at Madaba Wastewater Treatment Plant

Mr. Shahbaz indicated that this activity can be conducted in cooperation with Hashemite University. The person to be contacted is Dr. Eid Tarazeh: Dean of Environment and Earth Sciences at Hashemite University. Dr. Tamimi indicated that biosolids lab testing will be required for this study and the capabilities exist at RSS/ERC. It was agreed to wait until the level of funding is known to determine who should participate in this activity.

Dr. Tamimi indicated that the next logical study to be conducted in the future should concentrate on determining the affects of the reuse of wastewater and biosolids to grow fodder for the animals and specifically on the meat and milk produced by the cattle fed with the fodder.

## b. Development of Drying Bed Sludge Treatment Method to a Permitted Process to Further Reduce Pathogens

Mr. Shahbaz indicted that this study will be very interesting and will develop a wealth of information for the treatment of biosolids.