

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

**Activities Summary (January 1 – March 31, 2007):**

**2006/2007 SOW and BRDC Sub-contract**

- The Year 4 sub-contract between IALC/UoA and BRDC is signed,

**Technical Advisory Committee (TAC):**

- Dr. Saad AlAyyash attended the project's TAC meeting in Washington DC on April 28<sup>th</sup>, 2007.
- At the meeting, the progress reports for the different component of the project were presented and the tentative plans for the next project year were discussed.

**Water Conference:**

- Conference proposal has been prepared and sent to UoA for review and approval,
- Technical sessions are finalized and invitations for abstract submission have been sent out by some session heads,
- BRDC started organizational arrangements (including venue, lodging and others).

**Distance Learning Course on Reclaimed Water Irrigation Management**

- The course is concluded as per the JUST agenda in late January 2007,
- Evaluation of the course including content, technical facilities, student-instructor interaction and general setup of the course was prepared and analyzed by JUST staff.

**Required Biosolids Laboratory Training**

- The RSS staff who attended the advanced laboratory training at UoA during November 2006 with other RSS laboratory staff are preparing for the training course for WAJ lab technicians on the required testing of biosolid according to the new standards.

**Development of Drying Bed Sludge Treatment Method**

- This activity will be with RSS to work with the drying bed method aiming at arriving at a permitted "Process to Further Reduce Pathogens" (PFRP),
- The project will be at Madaba WWTP,
- RSS started the preparation for this activity in parallel with the proposal writing,

**Modeling Biosolids Treatment in Jordan**

- This is a continuing activity which was started in Wadi Hassan WWTP,
- Weather station was moved from Wadi Hassan WWTP to Madaba WWTP to prepare for this activity,
- RSS started preparing the proposal for this activity.

### **Application of Treated Biosolids to Land Irrigated with Effluent (Madaba)**

- This activity will test the use of treated effluent to irrigate areas with biosolid application,
- The project will be at Madaba WWTP and (Madaba),
- RSS prepared the proposal for this activity and sent it to UoA for review and approval,
- The land for this activity is assigned within the vicinity of Madaba WWTP.

### **Management Practices of Sludge and Biosolids in Jordan**

- This activity is a continuation of the survey done by the biosolid ad-hoc committee on the management practices at the WWTP's,
- The project will develop three volumes: Manual for Management of Biosolids in the Drying Beds at the WWTP Level (Volume I), Management Practices of On-farm Biosolids Application Manual (Volume II), and Laboratory Procedure Manual (Volume III),
- Volumes I and III will be developed by RSS and Volume II will be developed by JUST in coordination with the other involved parties.
- RSS prepared the work plan for developing Volumes I and III and they are under review while JUST is asked to prepare the work plan for developing Volume II.

### **The Development of Anaerobic Wastewater Treatment Technology for Jordan**

- Sampling and analysis for septage samples was started,
- The cool room for UASB reactor is built and ready for installing the various reactors.
- First progress report was prepared at the end of March 2007 and sent to UoA,

### **Characterization of Septage at Ain Ghazal**

- This activity is with WERSC to characterize the septage and liquid biosolid that are dumped at Ain Ghazal station,
- Proposal for this activity was prepared by WERSC and sent to UoA for review,
- WERSC started taking samples from septage and analyzing them.

### **Rangeland Responses under Biosolids Application**

- Dr. Saad AlAyyash from BRDC will lead this activity
- The activity will look at the hydrologic response of rangeland watershed treated with biosolid,
- The activity will be between BRDC and Hashemite University (HU),
- A concept paper for this activity was prepared and discussed with project director and HU.

### **Linkages for On-Farm Applications and Technology**

- First workshop was organized in late February,
- First progress report was submitted,
- Revised work plan was submitted with the first progress report.

## **Activities Summary for the following period (April 1 – June 30, 2007):**

### **Water Conference:**

- Conference proposal will be reviewed and approved by UoA TAT,
- Papers and abstracts will be received and reviewed by the conference Technical Committee (TC),
- BRDC will sign a contract with the assigned hotel for the conference,
- BRDC will continue organizational arrangements (including venue, lodging and other things).

### **Distance Learning Course on Reclaimed Water Irrigation Management**

- This activity is concluded.

### **Required Biosolids Laboratory Training**

- Training modules will be prepared by RSS,
- Work plan for the training will be finalized and sent to UoA for review and approval.

### **Development of Drying Bed Sludge Treatment Method**

- RSS will finalize the proposal for this activity for review and approval by UoA,
- RSS started sampling and tests for this activity.

### **Modeling Biosolids Treatment in Jordan**

- RSS will finalize the proposal for this activity and send it to UoA for review and approval,
- RSS will start analyzing biosolid samples and taking weather measurements for this activity.

### **Application of Treated Biosolids to Land Irrigated with Effluent (Madaba)**

- The proposal for this activity will be finalized and approved by UoA,
- The land will be prepared and planted,
- RSS will start sampling and analyzing soil and plants samples from the site.

### **Management Practices of Sludge and Biosolids in Jordan**

- Work plans for developing the three manual volumes will be finalized and approved,
- RSS and JUST will start developing the manual volumes.

### **The Development of Anaerobic Wastewater Treatment Technology for Jordan**

- WERSC will continue sampling and analyzing septage samples,
- UASB reactor will be installed and wastewater will be fed to them,
- Water quality from various UASB reactors will be measured.

### **Characterization of Septage at Ain Ghazal**

- Proposal for this activity will be finalized and contract between WERSC and BRDC for this purpose will be prepared,
- WERSC will continue taking samples from septage and analyzing them.

**Rangeland Responses under Biosolids Application**

- Proposal for this activity will be prepared and sent to UoA for review and approval,
- First technical session for discussing work plan for this activity will be organized in mid May,

**Linkages for On-Farm Applications and Technology**

- Second workshop will be organized for late April,
- Participants' responses in the first workshop will be analyzed.

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