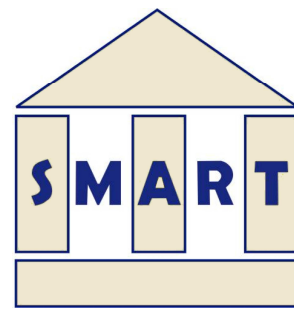


**Integrated Water Resources Management
in the Lower Jordan Rift Valley**

**Sustainable Management of Available
Water Resources with Innovative Technologies**



BMBF IWRM R&D Programme

Funding No.: FKZ 02WM1082

SMART – IWRM

Deliverable No. 903

“Water Quality IWRM Workshop”

Authors and Institutions

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Date

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Deliverable 903 (“Water Quality IWRM Workshop”), Report
SMART Workshop on Managed Aquifer Recharge

Jericho, Feb 29, 2012

The workshop was organized by Al-Quds-University (Dr. Amer Marei), the Ministry of Agriculture (Eng. Omar Bsharat/department of agriculture in Jericho) and the Governorate of Jericho and the Jordan Valley (Eng. Majed Al-Fityani). The lecture program was organized by the speakers of the work package Managed Aquifer Recharge (WP 3.2), Dr. Amer Marei and Dr. Andreas Tiehm. All local SMART partners were invited to participate and to attend the meeting

Approximately 70 participants attended the workshop. The participants were the farmer association, Jericho municipality, Ein Sultan water user association, Environmental Protection Authority, employers of the Palestine Ministry of Agriculture, and students from the Al-Quds-University and other universities. The lectures of the German presenters (Prof. Heinz Hoetzl, Dr. Bernd Rusteberg, Dr. Andreas Tiehm) were given in English and translated to Arabic. The lectures of the domestic speakers were given in Arabic with English transparencies. The activities of the workshop were reported in newspaper and in Palestinian TV. The ministry of agriculture evaluated the workshop as successful, and is interested in organizing additional workshops.

One of the result is that the ministry of agriculture and Al Quds University jointly agreed to publish a groundwater salinity map, SAR-map, and other water quality maps (the logo of SMART, BMBF, and partners are to be included). AQU and the Ministry of Agriculture agree to produce and publish the outcome of this work package, where the three target areas (Jericho, Uja, and Jeftlik) are to be covered (A5-booklet). This will include water quality information (Ec, TDS, SAR, B, Si, volume of groundwater available etc.). The booklet will be in Arabic and English. This activity will help to distribute and disseminate the scientific finding and in addition raise the publicity of the SMART-project.

The workshop program is listed below.



ورشة عمل بعنوان

واقع المياه في غور الأردن "تحديات وآفاق وحلول"

بالتعاون ما بين جامعة القدس ووزارة الزراعة

اربحا - 2012/2/29

Subject	Time
<i>Registration</i>	9:00-9:30
Opening session Speech of Jericho governorate representative. Speech of Al-Quds University representative. Speech of Ministry of Agriculture representative.	9:30-10:00
Overview of the Ministry of Agriculture Policy on Water Resources Management Presentation by: Issam Nofal, Ministry of Agriculture	10:00-10:15
"SMART- Project : Structure and objective" Presentation by: Prof. Heinz Hoetzi (KIT).	10:15-10:30
"Managed aquifer recharge potential and planning at Jericho-Uja" Presentation by: Dr. Bernd Rusteberg (Uni Goettingen)	10:30-10:45
<i>Coffee Break</i>	10:45-11:15
"Reduction of emerging pollutants by soil aquifer treatment " Presentation by: Dr. Andreas Tiehm (TZW –Karlsruhe)	11:15-11:30
"Flushing of dissolved organic carbon (DOC) in Jericho sub-basin springs" Presentation by: Dr. Amer Marei (AlQuds University)	11:30-11:45
"Socio-economic impact of artificial recharge" Presentation by: Dr. Abdel Al-Rahman Tamimi (PHG).	11:45-12:00
<i>Coffee Break</i>	12:00-12:15
"Evaluation of groundwater quality in Jericho areas" Presentation by: Ala Amer & Dr. Amer Mari (AlQuds University)	12:15-12:30
"Assessment of potential artificial recharge by using injection well" Presentation by: Kayan Manasra & Dr. Amer Mari (AlQuds University)	12:30-12:45
Discussion and recommendation	12:45-13:15
<i>Lunch</i>	13:30

Impressions of the workshop



Opening session, from left to right: Eng. Isam Nofal (Ministry of Agriculture, Director of Water Department), Eng. Qasem ADO (Deputy Minister of Agriculture, President of Department Soil and Agriculture), Eng. Majed Al Fityane (Governor of Jericho and Jordan Valley), Dr. Amer Marei (Al Quds University).



Eng. Qasem ADO (Deputy Minister of Agriculture, President of Department Soil and Agriculture)



Eng. Majed Al Fityane (Governor of Jericho and Jordan Valley)



Opening session: Audience.



Lecture and discussion session: Dr. Amer Marei (top left), Dr. Bernd Rusteberg (top right), Dr. Andreas Tiehm (bottom left), Dr. Abdel Al-Rahman Tamimi (bottom right).

Summary of the Discussion

The presentations initiated a discussion about the possible water resources and management options in the region. The SMART activities are supported by the local authorities, and the farmers are interested in any activities making more water available. The questions from the local farmers addressed were:

- A model to predict the spring discharges
- Water quality issues, in particular in reuse of waste water
- Restrictions of waste water reuse in areas where freshwater is available (Jericho)
- the concept to transfer treated waste water from the Al Bireh WWTP to Al Uja for irrigation

Most of the points considered are addressed by SMART. In particular the concept of Managed Aquifer Recharge is new for the area but in general supported by the local authorities.

Visibility of SMART was increased. The workshop had a positive feedback in the newspapers and was also presented in the local TV news.

The MAR workshop successfully stimulated the cooperation with the local stakeholders. SMART representatives were invited to visit the Minister of Agriculture to strengthen the collaboration.

The workshop confirmed that the Jericho – Al Uja Region is suitable for demonstration and implementation activities.

Dr. Andreas Tiehm

(Water Technology Center)

Dr. Amer Marei

(Al Quds University)