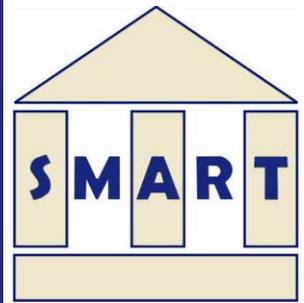
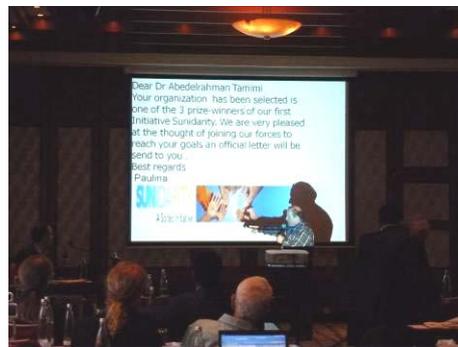


# Integrated Water Resources Management in the Lower Jordan Rift Valley

## Sustainable Management of Available Water Resources with Innovative Technologies



### SMART II Newsletter no. 3, second half year 2012



**Compiled by Wasim Ali**

Karlsruhe Institute of Technology (KIT),

Institute of Applied Geosciences, Division of Hydrogeology

January 2013

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## INTRODUCTION

The newsletter for the second half year 2012 (July - December 2012) gives a short overview about the activities of the SMART project members in various work packages during these months.

### 6<sup>th</sup> SMART SCM in Karlsruhe

The 6<sup>th</sup> SMART Scientific Coordination Meeting from 18<sup>th</sup> - 20<sup>th</sup> took place in Karlsruhe in connection with the IWRM Karlsruhe 2012 International Conference. All SMART project members have been invited, including the speakers of the 9 work packages and several representatives of partner institutions in addition to all PhD students of the of the project.

New results of the activities of all work packages of SMART II were presented during the SMART project meeting.

<b>BMBF – Integrated Water Resources Management (IWRM)</b>	<b><u>ACCOMMODATION AND MEETING ADDRESS</u></b>	<b><u>GOALS</u></b>
<b>Project SMART II</b>	<b>Hotel Renaissance Karlsruhe Mendelssohnplatz 76131 Karlsruhe</b> Phone: +49 721 37170 Fax: +49 721 3771 56 Email: stefanie.haag@renaissancehotels.com	After the compact Istanbul meeting in March 2012 the 6 <sup>th</sup> SCM will be again organized as a plenary meeting of all SMART members. We would appreciate the participation of all involved colleagues, including our PhD students, to discuss jointly the status of our project, the problems of ongoing work, the achieved results as well as the necessary next steps to make progress towards our aims. The possible continuation of SMART studies in the region will be also discussed.
	The accommodations during the SMART scientific coordination meeting and during the IWRM conference (17 <sup>th</sup> - 23 <sup>rd</sup> November) as well as all conference fees will be covered for SMART project members by the project coordination budget of the Karlsruhe Institute of Technology (KIT). Additional costs (travel, prolongations, telephone, double room costs for accompanying persons, drinks, internet access out of meeting rooms, etc.) have to be paid by the participants themselves.	In addition we connected the 6 <sup>th</sup> SCM with the International Conference "IWRM Karlsruhe 2012" dedicated to "Interaction of Water with Energy and Materials in Urban Areas and Agriculture" which is organized by the Karlsruhe Fair, Fraunhofer IOSB and the Karlsruhe Institute of Technology. This conference will give us the chance to present our results to an international audience. Vice versa we can inform ourselves of new insight and findings from parallel IWRM projects.
<b>6<sup>th</sup> Scientific Coordination Meeting</b> <b>18<sup>th</sup> - 20<sup>th</sup> November 2012</b> <b>Karlsruhe</b>		Due to time problems in the past we have extended the SCM over three days. The detailed program is given on the next pages. The SCM will be followed on 21 <sup>st</sup> and 22 <sup>nd</sup> of November by the IWRM Conference.
		
In connection with		
<b>IWRM Karlsruhe 2012 International Conference</b> <b>21<sup>st</sup> – 22<sup>nd</sup> November 2012</b> <b>Karlsruhe Convention Centre</b>		

A detailed program and all the presentations are available for SMART partners at the project homepage: <http://iwr-smart2.org/>



*Participants of the 6<sup>th</sup> SMART Scientific Coordination Meeting in Karlsruhe*

## **SMART project members say farewell and good bye to Dr. Hans Joachim Metzger from the BMBF project agency in Karlsruhe**

During the SMART project meeting all members of the SMART project said farewell and good bye to the long year supervisor and friend Dr. Hans Joachim Metzger from the BMBF project agency in Karlsruhe in the occasion of his retirement. The SMART coordination team and all SMART members are thankful for the continuous support of Dr. Metzger to all Middle East Projects (GIJP, Ein Feshkha and SMART).



*Dr. Hans Joachim Metzger say farewell to all SMART members in the occasion of his retirement (Photo J. Klinger)*

## Participation on the IWRM Karlsruhe 2012 conference 'Interactions of Water with Energy and Materials in Urban Areas and Agriculture'

68 members of SMART II project participated on the 2<sup>nd</sup> IWRM conference in Karlsruhe from 21<sup>st</sup> to 22<sup>nd</sup> November 2012. Numerous presentations of SMART members have been delivered during the IWRM conference. In addition a SMART project stand in frame of the IWRM conference exhibition informed visitors of the main objectives und activities of SMART project.

Following are the titles of the contributions from SMART members on the conference

### **Presentations:**

Schmidt N. et al: Classification of Emerging Pollutants for Managed Aquifer Recharge in the Lower Jordan Valley

Riepl D. et al: A framework for local IWRM strategies in the Lower Jordan Valley

Tamimi, A. et al: The implementation of integrated water resources management under uncertain socio-economic, political and climate change conditions, West Bank case study

Rahman, M. A. et al: Optimization framework for groundwater resources allocation and use in a rural water resources management context

Salameh. E. et al: Genesis of the groundwater on the eastern side of the Jordan Valley area

Nofal, I.: Vision for Increasing Irrigation Water Availability in the Jordan Valley through Improving IWRM.

Rusteberg, B.: IWRM strategy pre-screening for allocation of water resources of different qualities, focusing on sustainable agricultural development and socio-economic assessment

### **Posters:**

Alfaro, P. et al: Coupling of a Water Evaluation and Planning System Model with a Groundwater Model in Wadi Shueib, Jordan. (This poster was nominated as one of 3 best posters at the IWRM conference; see <http://www.iwr-smart2.org/index.php/news/114-iwr-mawardalfaro>)

Ali, W. et al: The need of water resources management strategy for Libya

Van Afferden, M. et al: Ways towards a Centralized Management of Decentralized Wastewater Treatment Clusters: A new approach to enhance investments in innovative infrastructures for Jordan

Heinz, I. et al: Cost Benefit Analysis of IWRM Strategies by applying the Water Evaluation and Planning Model (WEAP)

Klinger, J. et al: Adapting an approach to integrated urban waste water management from Germany to an urbanized karst spring catchment in Jordan

Rahman, K. Z. et al: Sludge drying reed beds (SDRBs) for eco-technological sludge treatment in Jordan. (This poster was nominated as one of 3 best posters at the IWRM conference, [www.iwrm-karlsruhe.com/de/der\\_kongress/poster\\_session/poster\\_session\\_1.jsp](http://www.iwrm-karlsruhe.com/de/der_kongress/poster_session/poster_session_1.jsp))

Saravia, F. et al: Nanofiltration for Partial Desalination in Palestine: perspective and limitations

Schlapp, C. et al: MBR - An Innovative Technology for Artificial Groundwater Recharge with Treated Wastewater in Jordan

Zemann, M. et al: Pharmaceuticals as long term tracers for intentional and unintentional waste water reuse in the lower Jordan Valley

## SMART Project stand at the IWRM Conference in Karlsruhe

SMART project participated also on the exhibition of the IWRM conference with 4 different poster showing the main activities of the 9 work packages of the SMART project in addition to a SMART photo slide show and a film showing the test sites and the different activities of SMART members.



*Left: Entrance of IWRM conference in Karlsruhe, Right: SMART PhD students at IWRM conference exhibition in Karlsruhe (Photos J. Sahawneh)*

## **Additional PhD student meeting on the 23<sup>rd</sup> of November 2012 after SMART and IWRM meeting**

In addition to the PhD session during the SMART project coordination meeting an additional PhD student meeting took place on the 23<sup>rd</sup> of November 2012.

The main objectives of this additional PhD meeting were: how can the PhD students profit from the work of other colleagues. The exchange of data and experiences were also discussed.

## **Participation of SMART project partners on international conferences**

### **Water Resources and water security in the Middle East and Mediterranean Region**

13-17 May 2012, Amman, Jordan

Ali, W. (2012): The necessity of an Integrated Water Resources Strategy for the Middle East

### **The 1<sup>st</sup> international colloquium REZAS'12 on Water resources in the arid and semiarid regions: challenges and prospects. Case of the African continent**

14-16 November 2012, Béni Mellal, Morocco

Hasan J., Drabea, A. (2012): Delineation of Wellhead Protection (WHP) plans in karst aquifer limitations

Ghanem, M. (2012): Hydrochemical characteristics of the runoff in Anata catchment, Palestine

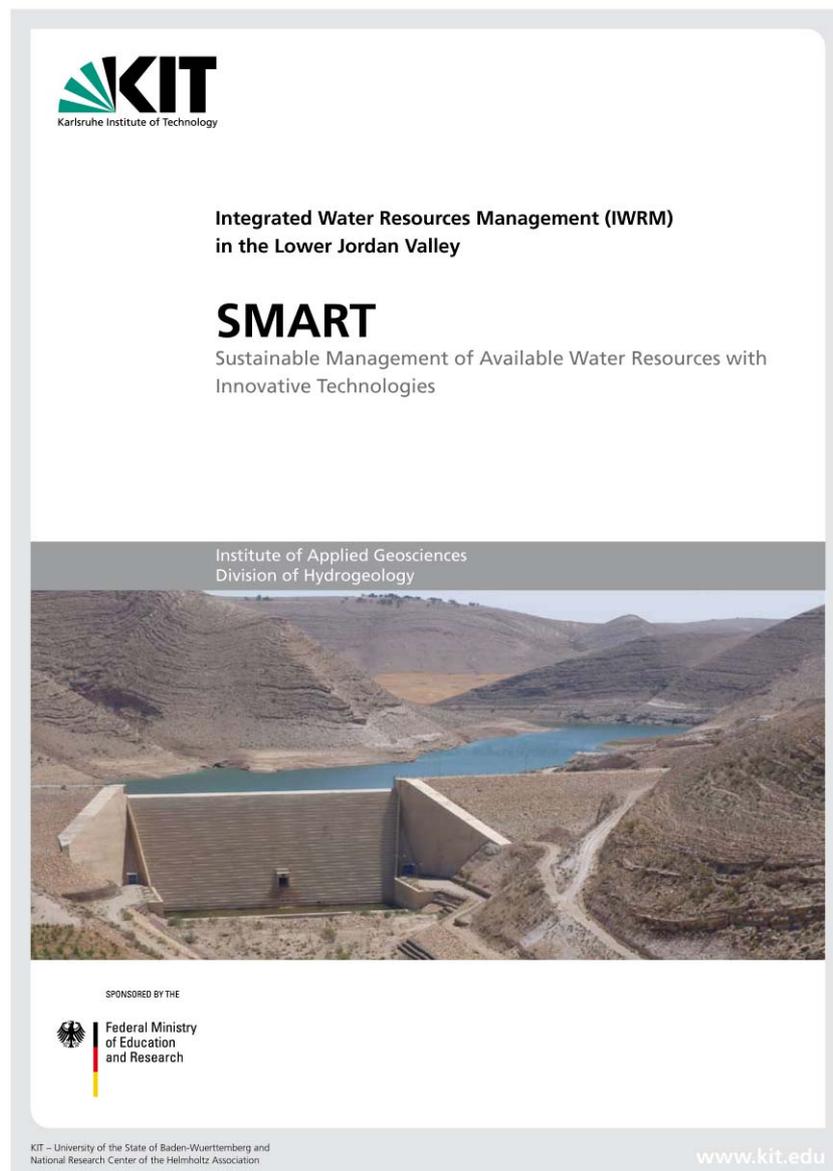
Ali, W., Hoetzi, H., Goldscheider, N., Liesch, T., Klinger, J. (2012): Integrated Water Resources Strategy for the Jordan Valley as a case study for an IWRM for the Middle East and the Southern Mediterranean

## **Workshop on trans-boundary groundwater modelling**

On the 3<sup>rd</sup> and 4<sup>th</sup> December 2012 an additional meeting dealt with the progress and the activities of the trans-boundary groundwater model of the SMART region took place at the Institute of Applied Geosciences (AGW, Division of Hydrogeology) in Karlsruhe. Participants of that meeting were Prof. H. Hötzl, Prof. M. Sauter, Dr. J. Bensabat, Dr. J. Klinger, Dr. J. Sahawneh and PhD student P. Alfaro. A work plan to complete the model was discussed. A new meeting for the progress of the groundwater model in February 2013 in Karlsruhe was confirmed.

## SMART project brochure

The Karlsruhe coordination team of SMART project issued a brochure in October 2012 including detailed information about project objectives, structures, research region, partners and obtained results. In addition an attempt to formulate an IWRM concept for the Lower Jordan Valley and possible implementation of results in future projects in the region are discussed in the brochure. More information about SMART brochure can be found at (<http://iwrsm-smart2.org/>)



*Cover of the SMART project new brochure October 2012*

## SMART project coordination members visit SMART test sites and SMART members in the region

The SMART project coordination team Karlsruhe (Dr. Wasim Ali and Dr. Jochen Klinger) visited our partners and test sites in Jordan and Palestine between the 3<sup>rd</sup> and the 9<sup>th</sup> of July 2012. The aim of the visit was to get informed about the progress of the research activities of SMART partners in Jordan and Palestine. They visited also the new opened SMART office (NICE) in Amman in the building of the Ministry of water and Irrigation (MWI).



*SMART coordination team members (Dr. Ali and Dr. Klinger) during their visit to the region in July 2012. Left by Jordan Research Foundation, Prof. Al-Zoubi und his team in Amman and right visiting the SMART demonstration and visitors center and test site Fuheis by Salt, Jordan*