



**Conference**  
**Hydrogeology of Arid Environments**  
Federal Institute for Geosciences and Natural Resources (BGR)  
Hannover  
**14.-17.03.2012**

**FINAL PROGRAMME**

**Wednesday, 14.03.2012**

10:00 **Registration and Poster-mounting**

13:30 **Welcome Addresses and Opening**

Conference hall

14:00 **Keynote Lecture**

*25 min + 5 min discussion*

Conference hall

***Integrated Groundwater Management in the Kingdom of Saudi Arabia***

*Al Saud, M., Ministry of Water & Electricity, Riyadh, Kingdom of Saudi Arabia*

*Co-Author: Rausch, R.*

14:30 **Session - IWRM**

*all 15 min + 5 min discussion*

Conference hall

**How Much Water is Left? – An Economic Approach to the Quantification of Non-Renewable Groundwater Resources**

*Dirks, H., GIZ Dornier Consulting, Riyadh, Kingdom of Saudi Arabia*

*Co-Authors: Holtkemper, S., Al-Saud, M., Rausch, R.*

**Moving Well Solution to Optimal, Multi-Objective Groundwater Use – Method and Application**

*Siegfried, H., hydrosolutions Ltd., Zurich, Switzerland*

*Co-Author: Kinzelbach, W.*

**Demand Management as a Potential Unconventional Source of Water, The West Bank Governorates**

*Abusaada, M., Palestinian Hydrology Group, Ramallah, West Bank - Palestinian Authority*

*Co-Authors: Tamimi, A., Sauter, M.*

**Water Balance for the Aleppo Basin, Syria – Implications of Land Use on Simulated Groundwater Abstraction and Recharge**

*Schlote, A., Federal Institute for Geosciences and Natural Resources (BGR), Hannover, Germany*

*Co-Authors: Hennings, V., Schäffer, U.*

15:50 **Coffee Break**

Foyer & gallery

16:20 **Keynote Lecture**

*25 min + 5 min discussion*

Conference hall

***Parameterization of Large-scale Groundwater Models in Arid Regions***

*Teutsch, G., Helmholtz Centre for Environmental Research (UFZ), Leipzig, Germany*

16:50 **Session - IWRM (continued)** *all 15 min + 5 min discussion*

Conference hall

**Water Resources Protection for the Water Supply of Beirut**

*Margane, A., Federal Institute for Geosciences and Natural Resources (BGR), Hannover, Germany*

*Co-Author: Makki, I.*

**Linkage of WEAP and MODFLOW Models for the Azraq Basin**

*Reuß, R., Technical University of Munich (TUM), Munich, Germany*

*Co-Authors: Zoßeder, K., Maßmann, J.*



**Historical Background of Water Resources and Current Management Initiatives in the Semi-Arid Plain of Souss-Chtouka (Morocco)**

Fakir, Y., *University Cadi Ayyad of Marrakech (UCAM), Marrakech, Morocco*

Co-Authors: Le Page, M., Aslikh, A., Fanzi, A., Huber, M.

**Case Study of Groundwater Resources Usage for a Coastal Arid Region in the Al Batinah, Oman**

Walther, M., *Technical University of Dresden, Dresden, Germany*

Co-Authors: Delfs, J.-O., Graf, T., Al-Saidi, A., Grundmann, J., Kolditz, O., Liedl, R.

18:30 **Conference Buffet**

Foyer & gallery

**Thursday, 15.03.2012**

08:30 **Registration**

09:00 **Keynote Lecture**

*25 min + 5 min discussion*

Conference hall

**Agricultural Irrigation – A Critical Nexus for Groundwater Resources in More Arid Climates**

Foster, S., *Global Water Partnership, Goring, United Kingdom*

09:30 **Session - Groundwater recharge**

*all 15 min + 5 min discussion*

Conference hall

**Groundwater Recharge in the Lake Chad Basin**

Vassolo, S., *Federal Institute for Geosciences and Natural Resources (BGR), Hannover, Germany*

**Integrated Remote and in situ Assessment of a Playa Lake Groundwater System in Northern Chile**

Markovich, K., *The University of Texas, Austin, USA*

Co-Author: Pierce, S. A.

**Stable Isotope Studies in Semiarid, Karstic Environments Reveal Information for Sustainable Management of Water Resources in Damascus, Syria**

Königer, P., *Federal Institute for Geosciences and Natural Resources (BGR), Hannover, Germany*

Co-Authors: Toll, M., Himmelsbach, T., Shalak, K., Hadaya, A., Rajab, R.

10:30 **Coffee Break**

Foyer & gallery

10:50 **Poster Session**

Gallery

11:40 **Session - Groundwater recharge (continued)**

Conference hall

*all 15 min + 5 min discussion*

**Investigations of Recharge to an Arid Zone Freshwater Lens**

Fadlelmawla, A., *Kuwait Institute for Scientific Research, Safat, Kuwait*

Co-Authors: Hadi, K., Zouari, K.

**Groundwater Recharges in Dryland Alluvial Megafans: Geomorphology versus Lithofacies Controls, Examples from Central Iran**

Arzani, N., *University of Payme Noor, Tehran, Iran*

**Identification of Potential Groundwater Recharge Using 3D-Spatial Soil Moisture Observations in the Ad-Dahna Desert, Kingdom of Saudi Arabia**

Rödiger, T., *Helmholtz Centre for Environmental Research (UFZ), Halle/Saale, Germany*

Co-Authors: Meier, A., Siebert, C., Königer, F., Kallioras, A., Forestier, P., Fuest, T., Schüth, C.,

Rausch, R., Al-Saud, M., Dietrich, P.

**Combining Field Measurements and Modeling of Soil Water Dynamics to Quantify Groundwater Recharge in Dryland Savanna, Namibia**

Gröngröft, A., *University of Hamburg, Hamburg, Germany*

Co-Authors: Landschreiber, L., Classen, N., Duijnisveld, W., Eschenbach, A.



- 13:00 **Lunch** BGR Restaurant
- 14:00 **Keynote Lecture** *25 min + 5 min discussion* Conference hall
- Climatic Caused Variations of Groundwater Recharge in the Middle East and its Consequences for the Future Water Management***  
Hötzl, H., *Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany*
- 14:30 **Session - Case studies** *all 15 min + 5 min discussion* Conference hall
- Application of Thermal Data for Groundwater Studies in Arid Regions at the Example of the Dead Sea**  
Mallast, U., *Helmholtz Centre for Environmental Research (UFZ), Halle/Saale, Germany*  
Co-Authors: Siebert, C., Schwonke, F., Wagner, B., Rödiger, T., Geyer, S., Gloaguen, R., Sauter, M., Kühn, F., Merz, R.
- Saltwater Intrusion Balances in the Nubian Aquifer System**  
Gossel, W., *Martin Luther University Halle, Halle, Germany*  
Co-Authors: Sefelnasr, A., Wycisk, P.
- Assessment of Natural Radioactivity Occurring in Saudi Arabian Sandstone Aquifers**  
Michelsen, N., *Technical University of Darmstadt, Darmstadt, Germany*  
Co-Authors: Schubert, M., Schüth, C., Rausch, R., Al Saud, M.
- Wadi System Components Under Arid Climate to Estimate Transmission Losses and Groundwater Recharge through Analytic/Numeric Solutions**  
Sorman, A. U., *Middle East Technical University, Ankara, Turkey*
- 15:50 **Coffee Break** Foyer & gallery
- 16:20 **Session - Case studies & monitoring network** Conference hall  
*all 15 min + 5 min discussion*
- Hydrological and Hydrochemical Process of the Sebkhia Oum El Khialette, South East of Tunisia**  
Nesrine, N., *National School of Engineering of Tunisia, Tunis, Tunisia*  
Co-Author: Rachida, B.
- Integrated Examinations of Hydraulic Conductivity, Apparent Resistivity and Hydrochemical Characteristics of Aquifers in a View to Minimize Failure Rates of Wells in Weybo River Catchment, Southern Ethiopia, East Africa**  
Damtew, A. D., *Ruhr University of Bochum, Bochum, Germany*
- Mitigating the Current and Future Challenges for the Drinking Water Supply of Damascus, Syria**  
Toll, M., *Federal Institute for Geosciences and Natural Resources (BGR), Hannover, Germany*  
Co-Authors: Shalak, K., Al-Safadi, M., Hadaya, A., Abdullah, A., Rajab, R., Houben, G., Himmelsbach, T.
- The Upper Mega Aquifer System on the Arabian Peninsula – Delineation of Sub-Aquifer Interaction using Hydrochemical and REE+Y Patterns**  
Siebert, C., *Helmholtz Centre for Environmental Research (UFZ), Halle/Saale, Germany*  
Co-Authors: Rödiger, T., Rausch, R., Döhler, J., Michelsen, N., Al-Saud, M.
- Monitoring of Water Resources in Arid Regions**  
Vogel, K., *SEBA Hydrometrie GmbH & Co. KG, Kaufbeuren, Germany*  
Co-Author: Döhler, J.
- Design and Setup of a High Resolution Hydrometric Monitoring Network in a Semi-Arid Karst Environment – West Bank**  
Schmidt, S., *Georg-August-University Göttingen, Göttingen, Germany*  
Co-Authors: Fischer, S., Toll, M., Ries, F., Zayed, O., Guttman, J., Marei, A., Weiss, M., Geyer, T., Sauter, M.

- 18:30 **Conference Dinner** BGR Restaurant
- 20:00 **Multimedia Presentation** 140 min Conference hall
- “Deserts of the Earth”* by Michael Martin

## Friday, 16.03.2012

- 08:30 **Registration**
- 09:00 **Keynote Lecture** 25 min + 5 min discussion Conference hall
- Modelling of the Hydrology and Hydraulics of the Okavango Delta**  
Kinzelbach, W., *ETH Zurich, Zurich, Switzerland*
- 09:30 **Session - Modelling** all 15 min + 5 min discussion Conference hall
- Modeling Ecological Water Releases to the Lower Tarim River**  
Wang, H., *ETH Zurich, Zurich, Switzerland*  
Co-Authors: Yang, P., Kinzelbach, W.
- Groundwater Modeling in Al Malih Basin, Jordan Valley**  
Sabri, R., *Technical University of Freiberg, Freiberg, Germany*  
Co-Authors: Ghanem, M., Abu Madi, M., Merkel, B.
- Large Scale Groundwater Recharge Estimation with Hydrological Models in Arid Environments – Case Study Arabian Peninsula**  
Keim, B., *Ingenieurgesellschaft Prof. Kobus und Partner GmbH, Stuttgart, Germany*  
Co-Authors: Rausch, R., Al-Saud, M., Pfäfflin, H., Bárdossy, A., Bendel, D., Lorenz, M.
- 10:30 **Coffee Break** Foyer & gallery
- 10:50 **Poster Session** Gallery
- 11:40 **Session - Modelling (continued)** all 15 min + 5 min discussion Conference hall
- The Water Resources of the Eastern Mediterranean: Present and Future Conditions**  
Menzel, L., *Heidelberg University, Heidelberg, Germany*  
Co-Author: Törnros, T.
- Evaluating Uncertainty Introduced to MABIA-WEAP-FAO56 Soil Water Balance Simulation Model by Using Limited Meteorological Data**  
Sahli, A., *National Institute of Agronomy of Tunisia (INAT), Tunis, Tunisia*  
Co-Authors: Jabloun, M., Hennings, V., Müller, H.-W., Sieber, J., Purkey, D.
- Modeling of Seawater Intrusion Due to Climate Change Impacts in North Gaza Coastal Aquifer Using SEAWAT**  
Sarsak, R. F., *Environmental Health Department, UNRWA, Nablus, Palestine*  
Co-Author: Almasri, M. N.
- Development of a 3D Groundwater Flow Model in Semi-Arid to Arid Region: The Western Drainage Basin of the Dead Sea (Israel and West Bank)**  
Gräbe, A., *Helmholtz Centre for Environmental Research (UFZ), Halle/Saale, Germany*  
Co-Authors: Rödiger, T., Kolditz, O., Rink, K., Fischer, T., Sun, F., Wang, W.

- 13:00 **Lunch** BGR Restaurant



14:00 **Session - Groundwater balance & artificial recharge**

Conference hall

*all 15 min + 5 min discussion*

**Groundwater Modelling Considering Climate Change and Significant Change in Recharge by Urban Development Along the Western Coast of Saudi Arabia**

Prein, A., *CDM Consult GmbH, Alsbach, Germany*

Co-Authors: Weiß, J., Makhoul, R. S.

**Characterization of Water Storage Dynamics in Arid Areas by Satellite Gravimetry**

Riegger, J., *University of Stuttgart, Stuttgart, Germany*

Co-Author: Tourian, M. J.

**Managed Aquifer Recharge of Reclaimed Water: Storage and Treatment Opportunities in Arid Lands**

Winslow, F., *Schlumberger Water Services, Riyadh, Kingdom of Saudi Arabia*

Co-Authors: Maliva, R. G., Herrmann, R.,

**The Khadin Water Harvesting System of Peru – An Ancient Example for Future Adaption to Climatic Change**

Mächtle, B., *Ruprecht-Karls-University Heidelberg, Heidelberg, Germany*

Co-Authors: Ross, K., Eitel, B.

**Preparatory Hydrogeological Investigations for the Large-Scale Strategic ASR-Project in the Liwa Desert of the Abu Dhabi Emirate**

Koziorowski, G., *German Agency for International Cooperation (GIZ), Abu Dhabi, United Arab Emirates*

15:40 **Closing Remarks**

Conference hall

**Saturday, 17.03.2012**

08:30 **Excursion**

Departure and arrival (14:00) at

**Wastewater treatment plant, Braunschweig**

BGR, Stilleweg 2, 30655 Hannover

