

# **Program Schedule**

The 3<sup>rd</sup> International Conference on Water Resources and Arid Environments (2008) and  
the 1<sup>st</sup> Arab Water Forum

The King Fahd Cultural Center  
Riyadh, Saudi Arabia  
16-19 November 2008

Held concurrently with the Awards Ceremony of  
The Prince Sultan Bin Abdulaziz International Prize for Water  
(3<sup>rd</sup> Award 2006-2008)

## Organizers



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Ramtan

**Sunday 16 November 2008**

8:30-10:30 Registration

10:30-12:00 Opening Session

Quran Recitation

1. Opening Speech by Dr. Abdul Malik Abdul Rahman Al Alsheikh,  
Chairman of the Conference's Organizing Committee, General  
Secretary of the Prince Sultan Bin Abdulaziz International Prize for  
Water (PSIPW), and Director of the Prince Sultan Research Center for  
Environment, Water and Desert at King Saud University
2. Speech by Eng. Abdullah Al-Hussien,  
Minister of Water and Electricity – Kingdom of Saudi Arabia
3. Speech by Dr. Mahmoud Abu-Zaid,  
Minister of Water Resources and Irrigation – Egypt and Chairman of the  
Arab Water Council
4. Speech by Dr. Louis Fauchon,  
Chairman of World Water Council
5. Speech of HRH Prince Khaled Bin Sultan Bin Abdulaziz Al-Saud,  
Assistant Minister of Defense and Aviation for Military Affairs, Council  
Chairman of the Prince Sultan Bin Abdulaziz International Prize for  
Water (PSIPW), and the Honorary Chairman of the Arab Water Council
6. Honoring of sponsors and presentation of trophies

12:00 – 13:30 Noon Prayer and Lunch

**\*\* Notes:**

A. Poster sessions will be held on Monday, 17 and Tuesday, 18 November 2008 (From 13:30 to 16:30).

B. Discussion panels will be held on Monday, 17 and Tuesday, 18 November 2008 (From 19:30 to 21:30).

C. The awards ceremony of the Prince Sultan Bin Abdulaziz International Prize for Water will be held on Sunday, 16 November 2008 (From 19:30 to 22:00)

## Sunday 16 November 2008

Hall (A)

1<sup>st</sup> Session

Topic: Arab Water Policy

From 13:30 to 16:10

**Session chair:** *H. E. Eng. Abdullah Al-Hosayen*

**Rapporteur:** *Dr. Abdulaziz S. Al-Turbaq*

From	To	Activity
13:30	13:50	Arab Water Security and the Arab League's Efforts to Conserve Arab Water and Achieve Sustainable Development for Arab Water Resources <i>Chahra Ksia</i> Chief of the Center for Water & Arab Water Security Studies League of Arab States, Syria
13:50	14:10	Water Resources Management In Arid Regions: Water Policy Reforms In The Sultanate of Oman <i>Zaher bin Khalid Al sulaimani<sup>1</sup> and Tariq Helmi<sup>2</sup></i> 1. Public Authority for Electricity & Water, The Sultanate of Oman 2. Water Resources Monitoring Department, Ministry of Regional Municipalities, Environment and Water Resources, The Sultanate of Oman
14:10	14:30	Assessment of the Water Situation In Lebanon <i>Jalal Halwani</i> Health & Environment Department, Lebanese University, Tripoli, Lebanon
14:30	14:50	On the Nuclear Option for Sea Water Desalination in the Arab Countries <i>Mohamed Abdel Rahman Salama</i> National Center for Nuclear Safety & Radiation Control (NCNSRC) Atomic Energy Authority (AEA), Cairo, Egypt.
14:50	15:10	Political Borders Effects on Sustainable Management of the Arab Shared Aquifers Resources <i>Osama Mohammed Sallam</i> The High Commission for the Development of Makkah Al-Mukramah

		Province, Saudi Arabia
15:10	15:30	Afternoon Prayer
15:30	15:50	Point-of-Use/Entry Drinking Water Strategy for Arab Countries <i>M.A. Hamouda, W.B. Anderson and P.M. Huck</i> NSERC Chair in Water Treatment, Dept. Civil and Environmental Engineering, University of Waterloo, ON, Canada
15:50	16:10	Development of Arab Water Sustainability Index Using Principal Component Analysis <i>Hatem M. M. Ali</i> National Water Research Center, Water Quality Unit, Ministry of Water Resources and Irrigation, Egypt
16:10	16:30	Governance of Water Resources In Palestine/Israel in Realization of Future Needs of Peace and Stability <i>Marwan Haddad</i> Environmental Engineering, An-Najah National University, Nablus, Palestine.

Hall (A) Coordinator: *Dr. Abdul-Rahaman Al-Dekhail* (Mobile: 0505672284)

**Sunday 16 November 2008**

Hall (B)

1<sup>st</sup> Session

Topic: Water Resources Management

From 13:30 to 16:30

**Session chair:** *Dr. Wolfgang Kinzelbach*

**Rapporteur:** *Dr. Mohammed Taher Hussein*

From	To	Activity
13:30	13:50	Sustainable use of non conventional water resources in the Mediterranean region <i>Touchan,H.,<sup>1</sup> Oweis,T.<sup>2</sup>, Al-Khatib, M.<sup>1</sup> and Abdel-Majid,G.<sup>1</sup></i> 1: Aleppo University, Syria 2: ICARDA, Syria
13:50	14:10	Optimal Water Management for North Jazira Irrigation Project – Rabaih, Iraq <i>Ahmed Y. Hachum and Muzahim M. Abed</i> Faculty of Engineering, Mosul University, Iraq
14:10	14:30	Group decision support system for ranking of water resources projects <i>Mahdi Zarghami<sup>1</sup> and Ferenc Szidarovszky<sup>2</sup></i> <sup>1</sup> Faculty of Civil Engineering, Univ. of Tabriz, Tabriz, Iran <sup>2</sup> Systems and Industrial Engineering Dept., Univ. of Arizona, Tucson, AZ, USA
14:30	14:50	Evaluation of Economical Aspects of Virtual Water in MENA Region <i>Fakhry Abd el-Hamid, Fatma Shaltout, Mohamed Sami and Tahani Youssef</i> Civil Engineering Department, Faculty of Engineering (Mataria), Helwan University, Cairo, Egypt
14:50	15:10	Afternoon Prayer

15:10	15:30	Public-Private Partnerships in Basic Irrigation Service. West Delta Water Conservation and Irrigation Rehabilitation Project (Egypt) <i>Safwat Abdel-Dayem<sup>1</sup>, Mohamed Anwar<sup>2</sup> and Ahmad Rashad<sup>3</sup></i> West Delta Water Conservation and Irrigation Rehabilitation Project, Ministry of Water Resources and Irrigation, Embaba, Giza, Egypt;
15:30	15:50	Advanced System of Integrated Recovery (ASIR) <i>Ivan Dulic</i> Gauff Ingenieure, Frankfurt, Germany
15:50	16:10	Role of Water Resources Research for Sustainable Development of Wadi Systems <i>Mohamed Sonbol</i> Water Resources Research Institute, National Water Research Center, Delta Barrage , Qalyoubia, Egypt
16:10	16:30	PE100 Pipes – Bimodal Innovation of Pressure Pipe Applications <i>Mohammed Al-Ali</i> Bimodal HDPE Business Manager, SABIC, Saudi Arabia

Hall (B) Coordinator: *Dr. Abdul-Rahaman Al-Dekhail* (Mobile: 0505672284)

## Sunday 16 November 2008

Hall (C)

Topic: Regional Process of the 5<sup>th</sup> World Water Forum

From 13:30 to 17:30

Time	Activity
<i>SESSION 1</i>	
13:30 – 13:40	Introduction to the Regional Process of the 5 <sup>th</sup> World Water Forum, WWC/WWF5 Secretariats
13:40 – 14:00	Introduction to the MNA/Arab Countries preparation of the Regional Report, Dr. Safwat Abdel-Dayem
14:00 – 14:30	Reporting on Chapter ONE, Dr. Munther Haddadin
14:30 – 15:00	Reporting on Chapter TWO, Dr. Shawki El-Barghouti
<i>SESSION 2</i>	
15:30 – 16:00	Reporting on Chapter THREE, Dr. Hammou Laamrani
16:00 – 16:30	Reporting on Chapter FOUR, Dr. Bayoumi Attia
16:30 – 17:00	Reporting on Chapter FIVE, Dr. Abdin Salih
17:00 – 17:30	Discussion

**Sunday 16 November 2008**

The Awards Ceremony of the Prince Sultan Bin Abdulaziz  
International Prize for Water  
3<sup>rd</sup> Award (2006-2008)

– Commences 8:00 PM –

- Qur'an Recitation
- Address of His Royal Highness, Prince Khaled Bin Sultan Bin Abdulaziz, Assistant Minister of Defense and Aviation for Military Affairs and Chairman of the Prize Council.
- Introducing the winners by Dr. Abdulmalek A. Al Alshaikh, General Secretary of the Prize and Director of the Prince Sultan Research Center for Environment, Water and Desert at King Saud University.
- Presenting the awards by the patron of the ceremony, His Royal Highness Prince Sultan Bin Abdulaziz , Crown Prince, Deputy Prime Minister, Minister of Defense and Aviation and Inspector General, followed by each winner's acceptance speech.
- Address of the guest of honor, His Royal Highness, Prince Willem-Alexander, Prince of Orange, heir apparent to the Dutch throne and Chairperson of the United Nations Secretary General's Advisory Board on Water and Sanitation (UNSGAB).
- Dinner.

**Monday 17 November 2008**

Hall (A)

1<sup>st</sup> Session

Topic: Non-Traditional Water Resources (I)

From 8:30 to 12:00

**Session chair:** *H. E. Fuhaid Fahd Al-Sharief*

**Rapporteur:** *Dr. Ibrahim Al-Mu'ataz*

From	To	Activity
8:30	9:00	<b>Keynote Lecture:</b> <i>Dr. Abdul-Wahab Mohammed</i> Deputy Dean & Professor, Universiti Kebangsaan Malaysia
9:00	9:20	Efficiency of Multi-Stage Solar Still With Capillary Film: Effect of Certain Thermo-physical Parameters <i>Kaabi Abdenacer, Rahmani Rym and Khetib Yacine</i> University of Mentouri, Algeria
9:20	9:40	Modeling Temperature and Salt Concentration Distribution in Direct Contact Membrane Distillation <i>Ali K. Abdel-Rahman</i> Department of Mechanical Engineering, Assiut University, Assiut, Egypt
9:40	10:00	Development of Optimization Software of Ro Systems For Water Desalination: 'Desaltop' <i>Mehdi Metaiche<sup>1</sup>, John Palmeri<sup>2</sup> and Patrice David<sup>3</sup></i> 1. Béchar University Center. 2. Theoretical Physical Laboratory, Toulouse University, Toulouse, France. 3. European Membrane Institute, Montpellier, France

10:00	10:20	Salt Water Desalination <i>Peter S. Nevednichenko<sup>1</sup> and Nataliya P. German<sup>2</sup></i> 1. Mechanics Engineer, Polytechnic University, Odessa, Ukraine 2. Merced, CA, USA
10:20	10:40	Break
10:40	11:00	Concentrating Solar Power for Seawater Desalination – AQUA-CSP <i>Franz Trieb</i> Systems Analysis and Technology Assessment, Institute of Technical Thermodynamics, German Aerospace Center (DLR), Germany
11:00	11:20	Integrated Solar Gas Turbine Cogeneration Power Plant <i>Hussain Alrobaei</i> College of Engineering, Baghdad University, Iraq
11:20	11:40	Hybrid Power Supplies to Water Desalination Units for Remote Areas in Iraq <i>Abdul Jabbar N. Khalifa</i> College of Engineering, Al-Nahrain University, Baghdad, Iraq
11:40	12:00	The use of FTIR spectrometry in the autopsy membrane of a RO process of brackish water demineralization (Brédéah plant, Algeria). <i>B. Dahmani<sup>1</sup>; M. Chabane<sup>1</sup> and F. Hadji<sup>2</sup></i> 1. Spectrochemistry and Structural Pharmacology Laboratory, Department of Chemistry, Science Faculty, University of Tlemcen, Algeria. 2. Department of Earth sciences, Sciences Faculty, Tlemcen University, Algeria.
12:20	13:30	Noon Prayer & Lunch

Hall (A) Coordinator: *Dr. Loutfy El-Juhany* (Mobile: 0508860400)

**Monday 17 November 2008**

Hall (A)

2<sup>nd</sup> Session

Topic: Non-Traditional Water Resources (II)

From 13:30 to 16:10

**Session chair:** *Dr. Abdullah Al Al-Sheikh*

**Rapporteur:** *Dr. Jalal Halawany*

From	To	Activity
13:30	13:50	Desalting Goundwater Using Two Vertical Solar Stills In The Desert Of Algeria <i>M. Boukar, A. Harmim and M. Amar</i> Unité de Recherche en Energies Renouvelables en Milieu Saharien, Adrar, Algeria
13:50	14:10	Feasibility of Renewable Energies for Sea Water Desalination Plant <i>Ryohji Ohba, Masahiko Nagai and Hideo Iwahashi</i> Mitsubishi Heavy Industries, Negasaki, Japan
14:10	14:30	Nanomaterials for Water and Environmental Remediation <i>Tarek M. Abdel-Fattah</i> Applied Research Center, Department of Biology, Chemistry and Environmental Science, Christopher Newport University, Newport News, VA, USA
14:30	14:50	Harvest Water and Minimizing Water Problem in the Rural Areas in West-Bank “A Case Study Deir-Sharaf Village” <i>Mohammed Abusafat</i> An-Najah National University, Nablus, Palestine
14:50	15:10	Afternoon Prayer
15:10	15:30	Evaluation of the Quality and Quantity of Harvested Rainfall from Different Catchments Systems, Case Study: North West of Libya <i>Abdul Hakim Almdny</i> University of Al-Fateh, Tripoli, Libya

15:30	15:50	<p>Impact of Water Harvesting Techniques on Rangeland Characteristics of Butana Area, Sudan  <i>Elsadig A. E<sup>1</sup>, A. M. Adeeb<sup>2</sup>, A. Ickowicz<sup>3</sup>, S. Saidi<sup>3</sup>, E. A. Eljack<sup>4</sup> Mustafa Y.M<sup>5</sup> and M. Yousif<sup>6</sup></i></p> <p>1. Department of Agric. Engineering, Faculty of Agric. Sciences, University of Gezira, Wadmedani, Sudan  2. Water Management &amp; Irrigation Institute, University of Gezira, Wadmedani, Sudan.  3. Zootechnicien pastoraliste, Campus Montpellier SupAgro-INRA, France.  4. International Consultant, Range Ecologist, Remote Sensing and GIS, France  5. Department of Soil &amp; water Science, Faculty of Agric. Sciences, University of Gezira, Wadmedani, Sudan  6. Faculty of Agriculture, Alzaeem Alazhari University, Khartoum North, Sudan</p>
15:50	16:10	<p>Modeling and Reliability Assessment for Rainwater Harvesting System  <i>Thamer Ahmad Mohammad, Megat Johari Megat Mohd. Noor, Abdul Halim Ghazali</i>  Department of Civil Engineering, Faculty of Engineering Universiti Putra Malaysia, Selangor, Malaysia</p>

Hall (A) Coordinator: *Dr. Loutfy El-Juhany* (Mobile: 0508860400)

### First Panel Discussion

19:30	21:30	Water Security and Sustainable Development
21:30		Dinner

## Monday 17 November 2008

Hall (B)

1<sup>st</sup> Session

Topic: Environment and Climate (I)

From 8:30 to 12:20

**Session chair:** *Dr. Zekai Sen*

**Rapporteur:** *Dr. Andy Spiess*

From	To	Activity
8:30	9:00	<b>Keynote Lecture:</b> <i>Dr. Hanz- Jörg Barth</i> Heidelberg University, Germany "Possible precipitation trends at the Arabian Peninsula during a global warming scenario"
9:00	9:20	Reducing Water Use of Wheat by Closing Cracks in the Field <i>Hassan Hilmi</i> Soil and Water Engineering, Alzaiem Alazhari University, Khartoum North, Sudan
9:20	9:40	Valuing the environment in crop profitability: A case study of the Kempen, Belgium <i>Abdellatif El-Sebaay<sup>1</sup></i> and <i>Alaa El-Sadek<sup>2</sup></i> 1. Prince Sultan Research Center for Environment, Water and Desert, King Saud University, Riyadh, Saudi Arabia 2. Integrated Water Resources Management, College of Graduate Studies, Arabian Gulf University, Manama, Bahrain
9:40	10:00	Effects of Zeolite on Soil Nutrients and Growth of Barley Following Irrigation with Saline Water <i>Ahmed Al-Busaidi<sup>1</sup></i> , <i>Tahei Yamamoto<sup>2</sup></i> , <i>Mitsuhiro Inoue<sup>2</sup></i> , <i>A. Egrinya Eneji<sup>3</sup></i> , <i>Yasushi Mori<sup>4</sup></i> and <i>Muhammad Irshad<sup>2</sup></i> 1. College of Agricultural & Marine Sciences, Sultan Qaboos University, Oman 2. Arid Land Research Center, Tottori University, Japan 3. College of Agronomy and Biotechnology, China Agricultural University, Beijing, China 4. Shimane University, Matsue, Japan
10:00	10:20	The Environment of Al Asfar Evaporation Lake In Al Hassa, Saudi Arabia: An Integrated Study <i>Ahmed.S. El Mahmoudi</i> , <i>Y.Y. Al-Dakheel</i> , <i>A.H.A. Hussein</i> and <i>M.A. Massoud</i>

		Water Studies Center, King Faisal University, Saudi Arabia
10:20	10:40	Break
10:40	11:00	Development of Dynamic Simulation & Modeling for Bio-P Removal <i>Ahmed El-Zayat,</i> Environmental Engineering Group, Cairo, Egypt
11:00	11:20	Application of Magnetic Technologies in Correcting Under Ground Brackish Water for Irrigation in the Arid and Semi-Arid Ecosystem <i>M. M. Selim</i> Field Crops Research Department, National Research Centre, Dokki, Cairo, Egypt
11:20	11:40	Integrated investigation of stressed groundwater resources in brackish unconsolidated aquifers <i>Toll, M.<sup>1</sup>, Salameh, E.<sup>2</sup> and Sauter M.<sup>1</sup></i> 1 Applied Geology, University of Göttingen, Göttingen, Germany 2 Department of Applied Geology, University of Jordan, Amman, Jordan
11:40	12:00	Optimization of the Water Use in the Olive Tree: The Relationship Between Transpiration and Plant Water Status <i>Dalenda Mahjoub Boujnah<sup>1</sup>, Fethi Ben Mariem<sup>1</sup>, Mohamed Braham<sup>1</sup> and Raoul Lemeur<sup>2</sup></i> 1. Agricultural Research and High Education Institution, Olive Tree Institute, Tunisia 2. Gent University, Bio Engineering Sciences, Applied Ecology and Environmental Biology, Plant Ecology laboratory, Belgium
12:00	12:20	Impacts of Climate Change on Coastal Aquifers <i>M. Elfleet</i> Caledonian Environment Centre, Glasgow Caledonian University, Glasgow, Scotland, UK
12:20	13:30	Noon Prayer & Lunch

Hall (B) Coordinator: *Dr. Abedellatif EL-Sebaay* (Mobile: 0501808743)

**Monday 17 November 2008**

Hall (B)

2<sup>nd</sup> Session

Topic: Environment and Climate (II)

From 13:30 to 16:50

**Session chair:** *H. E. Dr. Khalid Al-Humoudi*

**Rapporteur:** *Dr. Zahir Al-Sulimani*

From	To	Activity
13:30	13:50	Impacts of Climate Change on Water Resources in Saudi Arabia <i>Faisal Macci Al Zawad<sup>1</sup>, Walid Abderrahman<sup>2</sup>, Abdulaziz Al Shaibani<sup>2</sup></i> 1. Presidency of Meteorology and Environment, Dammam, Saudi Arabia 2. King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia
13:50	14:10	How Can Contribute to Carbon Sequestration and Biodiversity in Arid Regions? <i>Tavakoli, H., Filehkesh, E., Ahmadnejad, H., Aliabadi, M. and Kazemi, M.</i> Khorasan Agriculture and Natural Resources Research Center, Mashhad, Iran
14:10	14:30	Arid Environments as A Valuable Source of Information on the Climate Change Impacts <i>Jaroslav Balek</i> The Foundation Aquasana - Water for the Health, Karlsbad, Czech Republic
14:30	14:50	Impact of Climate change and the Human Activities on land degradation in Arid and Semi-arid Region <i>Muna Elhag<sup>1</sup> and Sue Walker<sup>2</sup></i> 1. Faculty of Agricultural Sciences, University of Gezira, Sudan 2. Department of Soil, Crop and Climate, University of the Free State, South Africa
14:50	15:10	Afternoon Prayer

15:10	15:30	<p>Effects of Water Deficit on the Growth and Physiological Performance of <i>Conocarpus erectus</i> and <i>Eucalyptus microtheca</i> Trees Under Field Conditions</p> <p><i>Loutfy, I. El-Juhany<sup>1</sup>, I. M. Aref<sup>2</sup> and A. A. Al-Harby<sup>3</sup></i></p> <p>1. Prince Sultan Research Centre for Environment, Water and Desert, Riyadh, King Saud University, Saudi Arabia</p> <p>2. Plant Production Department, Faculty of Food Sciences and Agriculture, Riyadh, King Saud University, Saudi Arabia</p> <p>3. Afforestation Directorate, King Saud Univ., Riyadh, Saudi Arabia</p>
15:30	15:50	<p>Environmental Flows Indus River System in Pakistan</p> <p><i>Ahmed Kamal</i></p> <p>Federal Flood Commission, Ministry of Water and Power, Government of Pakistan, Islamabad, Pakistan</p>
15:50	16:10	<p>Geo-environmental assessment of a landfill site southeast of Riyadh, Saudi Arabia</p> <p><i>M. Tahir Hussein<sup>1</sup>, Omar Allafouza Loni<sup>2</sup> and Ayman M. Al Rehali<sup>3</sup></i></p> <p>1. College of Science, King Saud University, Riyadh, Saudi Arabia</p> <p>2. Astronomy &amp; Geophysics Research Institute, King Abdulaziz City for Science &amp; Technology, Riyadh, Saudi Arabia</p> <p>3. Prince Sultan Research Center for Environment, Water and Desert, King Saud University, Riyadh, Saudi Arabia</p>
16:10	16:30	<p>Developing Adaptive Capacity for Responding to Climate Change in Saudi Arabia: Uncertainties and Constraints to Linking Water Policies, Sustainable Development and Human Security</p> <p><i>Andy Spiess<sup>1</sup> and Hans-Jörg Barth<sup>2</sup></i></p> <p>1. GCC Network for Drylands Research and Development (NDRD) University of Hamburg, Department of Economics and Policy, Center for International Relations, Seevetal, Germany</p> <p>2. Physische Geographie, Universität Heidelberg, Germany</p>
16:30	16:50	<p>Rangeland degradation in Saudi Arabia – Is there any successful approach towards solving this problem?</p> <p><i>Hans-Jörg Barth<sup>1</sup> and Andy Spiess<sup>2</sup></i></p> <p>1. Physische Geographie, Universität Heidelberg, Germany</p> <p>2. GCC Network for Drylands Research and Development (NDRD), University of Hamburg, Department of Economics and Policy, Center for International Relations, Seevetal, Germany</p>

Hall (B) Coordinator: *Dr. Abedellatif EL-Sebaay* (Mobile: 0501808743)

**First Panel Discussion**

19:30	21:30	Water Security and Sustainable Development
21:30		Dinner

**Monday 17 November 2008**

Hall (C)

Topic: Thematic Process of the 5<sup>th</sup> World Water Forum

From 8:30 to 16:30

Time	Activity
<i>SESSION 1</i>	
8:30 – 8:45	Introduction by WWC/WWF5 Secretariats
8:45 – 9:00	Regional Preparation for the Thematic Process Dr. Safwat Abdel-Dayem
9:00 – 12:00	Break for discussions at topic/session level
<i>SESSION 2</i>	
13:30 – 15:00	Plenary Session, The Way Forward
15:30 – 17:00	Special Session: AWC Program to Climate Change "Part I"
17:00 – 17:30	Maghrib Prayer
17:30 – 19:00	Special Session: AWC Program to Climate Change "Part II"

**First Panel Discussion**

19:30	21:30	Water Security and Sustainable Development
21:30		Dinner

**Tuesday 18 November 2008**

Hall (A)

1<sup>st</sup> Session

Topic: Traditional Water Resources (I)

From 8:30 to 12:00

**Session chair:** *Dr. Walid Abdulrahman*

**Rapporteur:** *Dr. Abdulrahman Al-Dakhil*

From	To	Activity
8:30	9:00	<b>Keynote Lecture:</b> <i>Dr. Wolfgang Kinzelbach</i> Professor of Hydromechanics, ETH Zurich (Swiss Federal Institute of Technology), Switzerland "Sustainable Management of Water Resources in Arid and Semi-Arid Environments"
9:00	9:20	Hydrogeochemistry and Groundwater Quality Assessment in an Arid Region: A Case Study from Al Salameh Area, Shabwah, Yemen <i>Abdulmohsen Saleh Al-Amry</i> Department of Engineering Geology, Faculty of Oil and Minerals, Aden University, Yemen
9:20	9:40	Delineation of Saltwater intrusion into the freshwater aquifer of Lekki Peninsula, Lagos Nigeria <i>Adekunle Abraham Adepelumi</i> Department of Geology, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria
9:40	10:00	Groundwater Resources and Their Protective Zones <i>Jaromir Riha</i> Faculty of Civil Engineering, Institute of Water Structures, Brno University of Technology, Brno, Czech Republic
10:00	10:20	Groundwater Vulnerability and Pollution Risk Assessment of Jizzi Catchment, Sohar, Sultanate of Oman <i>Samir Kotoub</i> Environ. & Water Resources Technical Advisor, Damascus, Syria

10:20	10:40	Break
10:40	11:00	The Environmental Impact and the Economical Feasibility of Disi-Amman Water Conveyor Project <i>Ahmed Al-Salaymeh<sup>1</sup> and Munther Al-Salaymeh<sup>2</sup></i> 1. Mechanical Engineering Department, University of Jordan, Amman, Jordan 2. Mechanical Engineer, Jordan Telecommunication Company, Zarka, Jordan
11:00	11:20	The Role of Geological Expertise in the Characterization of Regional Aquifer Systems <i>Heiko Dirks<sup>1</sup> and Randolph Rausch<sup>2</sup></i> 1. Dornier Consulting, Riyadh, Saudi Arabia 2. GTZ International Services, Riyadh, Saudi Arabia
11:20	11:40	An Operational Decision Support Tool (DST-GW) for Sustainable Groundwater Management in Semi-arid Hard-Rock regions <i>J. Perrin<sup>1</sup>, B. Dewandel<sup>2</sup>, H. H. Khan<sup>3</sup>, S. Ahmed<sup>3</sup> and P. Lachassagne<sup>2</sup></i> 1. BRGM, Water Division, Resource Assessment, Discontinuous Aquifers Unit, Indo-French Centre for Groundwater Research, Hyderabad, India 2. BRGM, Water Division, Resource Assessment, Discontinuous Aquifers Unit, Montpellier, France 3. National Geophysical Research Institute, Indo-French Centre for Groundwater Research, Hyderabad, India
11:40	12:00	Optimizing Groundwater Monitoring Network in Highly Heterogeneous Aquifers Using Geostatistics: Technique Development With a Few Case Studies <i>Shakeel Ahmed<sup>1</sup>, A. Nabi<sup>1</sup>, Kumar<sup>1</sup>, Sreedevi<sup>1</sup> and J. Perrin<sup>2</sup></i> 1. National Geophysical Research Institute, Indo-French Centre for Groundwater Research, Hyderabad, India 2. BRGM, Water Division, Resource Assessment, Discontinuous Aquifers Unit, Indo-French Centre for Groundwater Research, Hyderabad, India
12:00	13:30	Noon Prayer & Lunch

Hall (A) Coordinator: *Dr. Abdul-Aziz Alturbak* (Mobile: 0555412420)

**Tuesday 18 November 2008**

Hall (A)

2<sup>nd</sup> Session

Topic: Traditional Water Resources (II)

From 13:30 to 16:30

**Session chair:** *Dr. Abdulaziz Al-Othman*

**Rapporteur:** *Dr. Saud Kotub*

From	To	Activity
13:30	13:50	Evaluation of risks related to ground water regime changes <i>David Duchan, Ales Drab, Ahmed Khaddour and Tomas Julinek</i> Water Structures Institute, Brno University of Technology, Czech Republic
13:50	14:10	Integration of various geophysical approaches is must in groundwater exploration in Deccan Traps <i>Dewashish Kumar, Sushobhan Dutta, Shakeel Ahmed, Subash Chandra, N.S. Krishnamurthy, Faisal K. Zaidi, Aadil Nabi and P.D. Sreedevi</i> Indo-French Centre for Groundwater Research, National Geophysical Research Institute, CSIR, Hyderabad, India
14:10	14:30	Evaluation of Groundwater in Al-Gazalah City, Hail Region, Saudi Arabia <i>Omar Allafouza Loni, Omar A. AlHari and Abdullah S. AlKhalid</i> King Abdulaziz City for Science & Technology, Riyadh, Saudi Arabia
14:30	14:50	Contribution of Geophysical Methods in Exploration and Assessment of Groundwater in Hard Rock Aquifers <i>Subash Chandra<sup>1</sup>, Dewashish Kumar<sup>1</sup>, Shakeel Ahmed<sup>1</sup>, Jerome Perrin<sup>2</sup> and Benoit Dewandel<sup>3</sup></i> 1. Indo-French Centre for Groundwater Research, National Geophysical Research Institute, CSIR, Hyderabad, India 2. BRGM, Water Division, Resource Assessment, Discontinuous Aquifers Unit, Indo-French Centre for Groundwater Research, Hyderabad, India 3. BRGM, Water Division, Resource Assessment, Discontinuous Aquifers Unit, Montpellier, France
14:50	15:10	Afternoon Prayer
15:10	15:30	Water Quality Factors of Storm Runoff at Two Watersheds in Saudi Arabia: A Comparative Evaluation

		<i>Muhammad Muhitur Rahmana, Muhammad A. Al-Zahranib and Mohammed H. Essac</i> Dept. of Civil Eng., King Fahd University of Petroleum and Minerals (KFUPM), Dhahran , Saudi Arabia
15:30	15:50	Advanced Technique for Rainfall-Runoff Simulation in Arid Catchments, Sinai, Egypt <i>E. A. El-Sayed<sup>1</sup> and Emad Habib<sup>2</sup></i> 1. Water Resources Research Institute (WRRI), National Water Research Center (NWRC), Egypt 2. Department of Civil Engineering, University of Louisiana at Lafayette, USA
15:50	16:10	Simulation of Inundation Process using 2D Finite Element Method in the Tonle Sap Lake <i>Rowshon M.K.,<sup>1</sup> T. Masumoto<sup>2</sup> P.T. Hai<sup>3</sup> and M.S.M. Amin<sup>1</sup></i> 1. Department of Biological and Agricultural Engineering, Faculty of Engineering, Universiti Putra Malaysia, Malaysia 2. Laboratory of Hydrology and Water Resources Engineering, National Institute for Rural Engineering, National Agriculture and Food Research Organization, Tsukuba, Ibaraki, Japan 3. Faculty of Hydrology and Environment, Water Resources University, Hanoi, Vietnam
16:10	16:30	Tracing and Characterising a Historical Rain Water Drainage and Harvesting System Using GIS <i>Salem M. Ben Qadhi and Abdussalam K. Mohammed</i> Faculty of Engineering, University of Aden, Yemen

Hall (A) Coordinator: *Dr. Abdul-Aziz Alturbak* (Mobile: 0555412420)

### **Second Panel Discussion**

19:30	21:30	The Arab Water Council Program on Adaptation to Climate Change
21:30		Dinner

**Tuesday 18 November 2008**

Hall (B)

1<sup>st</sup> Session

Topic: Utilization of New Technologies ( I )

From 8:30 to 12:00

**Session chair:** *lieutenant general Moraiea Hassan Al-Shahrany*

**Rapporteur:** *Dr. Ahmed Hussein Al Al-sheikh*

From	To	Activity
8:30	9:00	<b>Keynote Lecture:</b> <i>Dr. Abdul Malik Abdul Rahman Al Alsheikh &amp; Eng. Ali Wafa Abu Risha</i> Prince Sultan Research Center for Environment Water and Desert, King Saud University, Saudi Arabia "Space Image Atlas of the Kingdom of Saudi Arabia"
9:00	9:20	Management of Groundwater Reservoir in Maghagh Aquifer System Using Modeling and Remote Sensing Technique (Upper Egypt) <i>Abdalla faid<sup>1</sup> and Sohier Mansour<sup>2</sup></i> 1. National Authority for Remote Sensing and Space Sciences, Cairo, Egypt 2. Helwan University, Cairo, Egypt
9:20	9:40	Identification of Groundwater Storage and Flow Through the Analysis of Fracture Systems from Space <i>Amin Shaban</i> Lebanese National Council for Scientific Research, Remote Sensing Center, Beirut, Lebanon
9:40	10:00	Remote sensing and GIS in estimating groundwater balance in semi- arid regions <i>Haris H. Khan, Aadil Nabi, Jerome Perrin and Shakeel Ahmed</i> Indo-French Centre for Groundwater Research, National Geophysical Research Institute, Hyderabad, AP, India
10:00	10:20	Applications of Remote Sensing to Water Resources Management in Syria <i>Marwan Koudmani</i> General Organization of Remote Sensing, Damascus, Syria
10:20	10:40	Break
10:40	11:00	Using Remote Sensing Technique (NDVI) for Monitoring Vegetation

		Degradation in semi-arid lands and its relationship to precipitation: a Case study from Libya <i>Abdussalam Ahmed Ibrahim</i> Nasser University, Tarhuna, Libya
11:00	11:20	Assessment and mapping of desertification sensitivity in some of the western desert oases, Egypt, based on Remote Sensing and GIS <i>Gad, Abdalla.</i> National Authority for Remote Sensing and Space Sciences, Egypt
11:20	11:40	A Comparative Study of Evapotranspiration Calculated from Remote Sensing, Meteorological and Lysimeter data <i>Hassan S.M.H<sup>1</sup>, A.R.M. Shariff<sup>2</sup> and M.S.M. Amin<sup>2</sup></i> 1. Dept. of Horticulture- Faculty of Agriculture- Alzaiem Alazhari University, Khartoum North, Sudan 2. Dept. of Biological & Agricultural Engineering, Faculty of Engineering, Universiti Putra, Malaysia
11:40	12:00	Estimation of Actual Evapotranspiration in Jordan from Satellite Data <i>Ayman Suleiman, Jawad Al-Bakri and Mohammad Duqqah</i> Land, Water and Environment Department, University of Jordan, Amman, Jordan
12:00	13:30	Noon Prayer & Lunch

Hall (B) Coordinator: *Dr. Abdul-Aziz Albassam* (Mobile: 0505402675)

**Tuesday 18 November 2008**

Hall (B)

2<sup>nd</sup> Session

Topic: Utilization of New Technologies (II)

From 13:30 to 16:30

**Session chair:** *Dr. Abdulkader Al-serri*

**Rapporteur:** *Dr. Abdullah Al-Qarni*

From	To	Activity
13:30	13:50	Integration of Remote Sensing, Geophysics and GIS to Evaluate Groundwater Potentiality – A Case Study In Sohag Region, Egypt <i>Awad Abdel-Khalek Ahmed Omran</i> Geology Department, Faculty of Science, Assiut University, Assiut, Egypt
13:50	14:10	Remote Sensing and GIS Application for Groundwater Quality and Risk Mapping <i>Renji Remesan<sup>1</sup> and R.K. Panda<sup>2</sup></i> 1. Water and Environmental Management Research Centre, Department of Civil Engineering, University of Bristol, Bristol, UK 2. Agricultural & Food Engineering Department, Indian Institute of Technology Kharagpur, Kharagpur, India
14:10	14:30	Qatar Groundwater Resources Information System (QaGRIS) <i>Aschalew Debebe<sup>1</sup> and Kamel M. Amer<sup>2</sup></i> 1. Schlumberger Water Services, Abu Dhabi, UAE 2. Department of Agricultural and Water Research, State of Qatar
14:30	14:50	Flood Size Estimation in Wadi Laban by Using Geographical information Systems <i>Hanan Abdullatif Alghilan</i> King Saud University, Saudi Arabia
14:50	15:10	Afternoon Prayer

15:10	15:30	Prediction of Salt Load Flowing to Lake El Manzala Using Artificial Neural Networks <i>Eman Abdel Ghaffar Hasan</i> National Water Research Center, Delta Barrage, Egypt
15:30	15:50	Application of Geographic Information System in Management Air Pollution Index Record Using Mapinfo <i>Mohd. Zulkifli Mohd. Yunus and Ngoi Lee Yee</i> Faculty of Civil Engineering, Universiti Teknologi Malaysia, Malaysia
15:50	16:10	Assessment of Soil Suitability for Agriculture Using GIS Spatial Analyst Model Technique <i>Hala M. Ibrahim Ebaid and Assia A. El Falaky</i> Survey Research Institute, National Water Research Center, Giza, Egypt
16:10	16:30	GIS for Water Resources <i>Hiba Mohamed Tiro</i> Agriculture & Environmental Engineer, Arabian Geosystems Company, Riyadh, Saudi Arabia

Hall (B) Coordinator: *Dr. Abdul-Aziz Albassam* (Mobile: 0505402675)

### **Second Panel Discussion**

19:30	21:30	The Arab Water Council Program on Adaptation to Climate Change
21:30		Dinner

**Tuesday 18 November 2008**

Hall (C)

Topic: Political Process of 5<sup>th</sup> World Water Forum

From 8:30 to 17:30

Time	Activity
<i>SESSION 1</i>	
08:30 – 12:00	Hands-On Training Session on DSS Models for Climate Change
<i>SESSION 2</i>	
15:30 – 17:00	Special Session: Istanbul Urban Water Consensus
17:00 – 17:30	Maghrib Prayer
17:30 -18:30	Messages and Recommendations of the MENA/Arab Region to the 5 <sup>th</sup> World Water Forum

**Second Panel Discussion**

19:30	21:30	The Arab Water Council Program on Adaptation to Climate Change
21:30		Dinner

**Wednesday 19 November 2008**

Hall (A)

1<sup>st</sup> Session

Topic Traditional Water Resources (III)

From 8:30 to 12:00

**Session chair:** *Dr. Mohammed Al-saud*

**Rapporteur:** *Dr. Abdularahman Al-Khumiri*

From	To	Activity
8:30	9:00	<b>Keynote Lecture:</b> <i>Dr. Chih Ted Yang</i> Professor of Water Resources and Director of the Hydrosience and Training Center, Department of Civil Engineering, Colorado State University, USA "GSTARS Computer Models and Sedimentation Control in Surface Water Systems"
9:00	9:20	The Coupling of a Two-Dimensional Hydrodynamic Sediment Routing Model With an Upland Watershed Erosion Model in a Mountain Watershed, Red River, Idaho, USA <i>Ahmed Bdour<sup>1</sup> and Thanos Papanicolaou<sup>2</sup></i> 1. Department of Civil Engineering, Hashemite University, Zarqa, Jordan 2. Iowa Institute of Hydraulic Research, The University of Iowa, Iowa City, Iowa, USA
9:20	9:40	Study of Grid Size Effect for Digital Elevation Model on Runoff Hydrograph <i>Mohammad Ezz-Aldeen Mohammad</i> Water Resources Engineering Department, University of Mosul, Mosul, Iraq
9:40	10:00	Effective rainfall under central Gezira (Sudan) conditions <i>Mustafa Yousif Mohammed</i> Faculty of agriculture, Alzaiem Alazhari University, Khartoum North, Sudan
10:00	10:20	Integrated Simulation System of Dam Availability Using Meteorological and Hydrological Models <i>Ryohji Ohba<sup>1</sup>, Adil Bushnak<sup>2</sup>, Toshiharu Kojiri<sup>3</sup>, Tomonori Matsuura<sup>4</sup></i>

		<p>and <i>Haruyasu Nagai</i><sup>5</sup></p> <ol style="list-style-type: none"> <li>1. Mitsubishi Heavy Industries, Japan</li> <li>2. Bushnak Water Group, Saudi Arabia</li> <li>3. Kyoto University, Japan</li> <li>4. National Research Institute for Earth Science and Disaster Prevention, Japan</li> <li>5. Japan Atomic Energy Research Agency, Japan</li> </ol>
10:20	10:40	Break
10:40	11:00	<p>3D Coupled Stress-Flow Analysis of Jointed Rock Mass Beneath a Concrete Dam</p> <p><i>Moataz A. Al-Obaydi</i><sup>1</sup>, <i>N. K. Samadhiya</i><sup>2</sup> and <i>M. N. Viladkar</i><sup>2</sup></p> <ol style="list-style-type: none"> <li>1. Dept. of Civil Engineering, College of Engineering, University of Mosul, Mosul, Iraq</li> <li>2. Dept. of Civil Engineering, Indian Institute of Technology Roorkee, Roorkee, India</li> </ol>
11:00	11:20	<p>Water Injection Dredging- Application to the Dams Analytic and Experimental Approach</p> <p><i>L. Ouerdachi, M.F. , Habita and H. Boutaghane</i></p> <p>Faculty of Engineering, University Badji Mokhtar, Annaba, Algeria.</p>
11:20	11:40	<p>The Mechanism of Induced Seismicity for Mosul Lake</p> <p><i>Nabeel Hameed Mohammed Al-saigh</i></p> <p>Dams and Water Resources Research Centre, Mosul university, Iraq</p>
11:40	12:00	<p>Comparison of Several evaporation models applied to Reservoir of the Saveh Dam, Iran</p> <p><i>Amin Hassani, Masoud Tajrish and Ahmad Abrishamchi</i></p> <p>Department of Civil Engineering, Sharif University of Technology, Tehran, Iran,</p>
12:00	13:30	Noon Prayer & Lunch

Hall (A) Coordinator: *Dr. Ahmed Alamoud* (Mobile:0555429432)

**Wednesday 19 November 2008**

Hall (A)

2<sup>nd</sup> Session

Topic: Wastewater Treatment and Reuse

From 13:30 to 16:30

**Session chair:** *Dr. Khalid Al-Douwile'a*

**Rapporteur:** *Dr. Saleh Al-Mugren*

From	To	Activity
13:30	13:50	Reclaimed Domestic Wastewater as a Sustainable Unconventional Water Resource <i>A. Tawfik<sup>1</sup>, A. Ohashi<sup>2</sup> and H. Harada<sup>2</sup></i> 1. National Research Center, Water pollution Research Dept., Dokki, Cairo, Egypt. 2. Department of Environmental System Engineering, Nagaoka University of Technology, Kamitomioka, Nagaoka, Niigata, Japan
13:50	14:10	Removal of Some Heavy Metals from Treated Waste Water by Aquatic Plants <i>Adel E.EL-Leboudi<sup>1</sup>, Essam M. Abd-Elmoniem<sup>1</sup>, Ezzat M.Soliman<sup>2</sup> and Ola F. M. El-Sayed<sup>3</sup></i> 1. Soil Dept., Faculty of Agriculture, Ain Shams University, Cairo, Egypt 2. Institute of environmental studies and research, Ain Shams University, Cairo, Egypt 3. National organization for potable water & sanitary drainage, Cairo, Egypt
14:10	14:30	Advanced Anaerobic Membrane Bioreactor Technology for Wastewater Treatment and Effluent Reclamation in Tunisia <i>Sami Sayadi</i> Bioprocesses Laboratory, Centre of Biotechnology at Sfax, Sfax, Tunisia
14:30	14:50	Sensitivity Analysis of Simulated Dissolved Oxygen in Bahr Hadus Drain, Egypt <i>Manar Z. El-Beshry</i> Water Quality Unit, Ministry of Water Resources and Irrigation, Cairo, Egypt

14:50	15:10	Afternoon Prayer
15:10	15:30	Commissioning of Abandoned Drainage Water Reuse Systems in Egypt, A Case Study of Upgrading the Umoum Project, Nile Delta <i>Hussein A. A. El Gammal and Hatem M. M. Ali</i> National Water Research Center, Water Quality Unit, Ministry of Water Resources and Irrigation, Egypt
15:30	15:50	The Importance of Accounting for and Disclosing the Costs of Industrial Water Pollution and its Impact on Drafting Investment Policy <i>Salih Al-Shabaney</i> College of Administration and Economics, Mosul University, Mosul, Iraq
15:50	16:10	Polymer-Enhanced Ultrafiltration Process for Heavy Metals Removal From Industrial Wastewater <i>Barakat M.A.<sup>1&amp;2</sup> and Schmidt E.<sup>1</sup></i> 1. Central Metallurgical R&D Institute, Egypt 2. University of Wuppertal, Germany
16:10	16:30	Jordanian Standards & Regulations for Reuse of reclaimed Wastewater in Irrigation <i>Adel Shoubaki</i> National Center for Agriculture Research & Extension, Jordan

Hall (A) Coordinator: Dr. Ahmed Alamoud (Mobile: 0555429432)

16:30 - 17:30	Closing Address & Recommendations
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**Wednesday 19 November 2008**

Hall (B)

1<sup>st</sup> Session

Topic: Water Conservation

From 8:30 to 12:00

**Session chair:** *Dr. Ali S. Al-Tokhais*

**Rapporteur:** *Dr. Yousef Al-Romikhani*

From	To	Activity
8:30	9:00	<b>Keynote Lecture:</b> <i>Dr. Zainuddin Abd Manan</i> Professor of Chemical Engineering and the founder of Process Systems Engineering Centre, Universiti Teknologi Malaysia "A Holistic Approach for Benchmarking and Cost-Effective Water Minimisation"
9:00	9:20	Increasing Rice Productivity, Water Use Efficiency and Water Saving in North Delta, Egypt <i>A.Z. El-Bably<sup>1</sup>, M.E. Meleha<sup>2</sup>, A.A. Abd Allah<sup>3</sup> and W.M. El-Khoby<sup>3</sup></i> 1. Soil, Water and Environment Research Institute, Agric. Res. Center, Egypt 2. Water Management Research Institute, National Water Research Center, Cairo, Egypt 3. Rice Research and Training Center, Field Crops Research, ARC, Egypt
9:20	9:40	Determination of the Best of Irrigation System For Water Conservation <i>M.A. Kassem and Abdulrahman M. AL-Moshileh</i> Faculty of Agriculture and Veterinary Medicine, Qassim University, Unayzah, Saudi Arabia
9:40	10:00	Improving water efficiency: The irrigation advisory service of Crete, Greece <i>K. Chartzoulakis, I. Kasapakis and Tzobanoglou</i> NAGREF-Institute for Olive Tree and Subtropical Plants, Dept. of Irrigation and Water Resources, Crete, Greece

10:00	10:20	Water Conservation and Yield Advantage from Intercropping Maize With Peanut <i>Amr Saad Abd El-Hakeem Ahmed Shams</i> Agricultural Research Center, Field Crops Research Institute, Giza, Egypt
10:20	10:40	Break
10:40	11:00	Cellulose-Based Superabsorbent Hydrogels as Water Resources Preservation in Agricultural Applications <i>Alessandro Sannino</i> Department of Innovation Engineering, University of Salento, Monteroni, Italy
11:00	11:20	Water Hammer in Residential Buildings with Elevated Storage Tanks <i>Abdulrahman M. Al-Khomairi</i> Civil Engineering Dept., Faculty of Engineering, King Saud University, Riyadh, Saudi Arabia
11:20	11:40	Reducing Water Losses using Welded Polyethylene Piping Systems <i>David Walton and Khalfan Al Muhairi</i> Borouge Pte Ltd, Abu Dhabi, UAE
11:40	12:00	Water Conservation Programs and Technologies in the US <i>Rasheed Ahmad</i> Senior Watershed Manager, Department of Watershed Management, City of Atlanta, Atlanta, GA, USA
12:00	13:30	Noon Prayer & Lunch

Hall (B) Coordinator: *Dr. Abdul-Aziz Al-Hamed* (Mobile:0505215737)

**Wednesday 19 November 2008**

Hall (B)

2<sup>nd</sup> Session

Topic: New Methods in Water Resources Management

From 13:30 to 16:30

**Session chair:** *Dr. Abdulaziz Al-Turbaq*

**Rapporteur:** *Mr. David Walton*

From	To	Activity
13:30	13:50	Application of an object oriented approach based on the concepts of system dynamics in Integrated Water Resources Management <i>Ali Bagheri<sup>1</sup>, Maryam Ghashghaei<sup>1</sup> and Amin Sarang<sup>2</sup></i> 1. Faculty of Agriculture, Tarbiat Modares University, Tehran, Iran 2. Civil Engineering Department, Sharif University of Technology, Tehran, Iran
13:50	14:10	Estimation of Evapotranspiration Using Fused Remote Sensing Image Data and M-Sebal Model for Improving Water Management in Arid Mountainous Area <i>Ayoub Almhab and Ibrahim Busu</i> Department of Remote Sensing, Faculty of Geoinformation Science & Engineering, Universiti Teknologi Malaysia
14:10	14:30	Water Harvesting and Groundwater Recharge in Arid and Semi-Arid Regions (Tehran Mega City's 2008 Water Crisis Challenges) <i>Fowad Vojdani</i> Abazma Strategic Water Research Center, Tehran, Iran
14:30	14:50	Concept of Integrated Water Management on the Command Areas of Irrigation Improvement Project (Case Study) <i>Gamal El-Kassar and Nahla Abou El-Fotouh</i> Water Management Research Institute, National Water Research Center, Egypt
14:50	15:10	Afternoon Prayer

15:10	15:30	Application of Decision Support Tools for Water Resources Management in Coastal Arid Areas (Case study: Aden, Yemen) <i>Mansour Haidera</i> and <i>Abdullah Noaman</i> Faculty of Engineering, Sana'a University, Sana'a, Yemen
15:30	15:50	Community Groundwater Abstraction Redistribution Policy in Wadi As SIRR: A Task for the Local Water User Associations <i>Taha M. Taher</i> <sup>1</sup> and <i>Rafik A.M. Al-Sakkaf</i> <sup>2</sup> 1. Civil Engineering, Faculty of Engineering, Sana'a University, Sana'a, Yemen 2. Freelance Consultant, Sana'a, Yemen
15:50	16:10	Role of Dams in the Economic Growth of Pakistan <i>Zahid Majeed</i> <sup>1</sup> , <i>Awais Latif Piracha</i> <sup>2</sup> and <i>Khwar Munir</i> <sup>1</sup> , 1. Hydro Planning Organization, Pakistan Water and Power Development Authority, Lahore, Pakistan 2. School of Social Sciences, University of Western Sydney, Australia
16:10	16:30	The Hydrogeology of Al Hassa Springs <i>Ali Saad Al Tokhais</i> <sup>1</sup> and <i>Randolf Rausch</i> <sup>2</sup> 1. Ministry of Water & Electricity of the Kingdom of Saudi Arabia, Riyadh, Saudi Arabia. 2. GTZ International Services Riyadh, Saudi Arabia

Hall (B) Coordinator: *Dr. Abdul-Aziz Al-Hamed* (Mobile: 0505215737)

16:30 -17:30	Closing Address & Recommendations
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**Wednesday 19 November 2008**

Hall (C)

Topic: Water Demand Management

From 8:30 to 16:00

Time	Activity
<i>SESSION 1</i>	
08:30 – 12:00	Water Demand Management Initiative in MENA (A)
12:00 – 13:30	Noon Prayer & Lunch
<i>SESSION 2</i>	
13:30 – 15:00	Water Demand Management Initiative in MENA (B)

15:00 – 16:00	Closing Address & Recommendations
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## Poster Sessions

**Monday 17 November 2008**

From 13:30 to 16:30

<p>Fate of Coliforms in Sewage Treatment Plants <i>A. A. Kazmi Vinay Kumar Tyagi,</i> Department of Civil Engineering, Indian Institute of Technology Roorkee, India</p>
<p>Micronutrients Release and Uptake from Different Bio-Composts Under Chloride and Sulphate Salinity <i>Zahoor Ahmad<sup>1</sup>, Waleed H. A. El-Hassan<sup>1</sup>, Faridullah<sup>1</sup>, Toshimasa Honna<sup>2</sup>, Yamamoto Sadahiro<sup>2</sup> and Tsuneyoshi Endo<sup>2</sup></i> 1. The United Graduate School of Agricultural Sciences, Tottori University, Tottori, Japan 2. Faculty of Agriculture, Tottori University, Tottori, Japan</p>
<p>Heavy metals accumulation in <i>Globularia alypum</i> L. and <i>Ruta chalepensis</i> L. <i>B. Tabti, S. Merghache and M. Hamza</i> Department of Chemistry, Faculty of Sciences, Laboratory of Organic Chemistry, Natural Substances and Analysis, University of Tlemcen, Tlemcen, Algeria</p>
<p>Solvent Extraction of Phenol from Aqueous Solutions Using Tributyl Phosphate as Extractant <i>N. Messikh</i> Department of Process Engineering, Faculty of Engineering, University of Annaba, Annaba, Algeria</p>
<p>Optimization of NPS Pollution Control <i>Nevin Said<sup>1</sup> and Yasser Rihan<sup>2</sup></i> 1 Menoufia High Institute of Engineering, El-Bagor, Egypt 2 Atomic Energy Authority, Hot Lab. Centre, Inshas, Egypt</p>
<p>The Fabrication of Novel Nanomaterials to Decontaminate Water Resources from Toxic Organic Pollutants <i>Sofian M. Kanan</i> Department of Biology &amp; Chemistry, American University of Sharjah, Sharjah, UAE</p>

<p>Laboratory Study of Scour Downstream Gabions Protecting Rockfill Weirs  <i>Bahzad M.A.Noori<sup>1</sup> and Ibrahim A.I.Al-Hafith<sup>2</sup></i>  1. Dept. of Water Resources, College of Engineering, University of Mosul, Mosul, Iraq  2. Dams and Water Resources Research Center, University of Mosul, Mosul, Iraq</p>
<p>Solar energy: an efficient alternative for water desalination in MENA region  <i>Iskander Tlili and Maher Allegue</i>  National Engineering School of Monastir, Laboratory of hydraulic and energy System,  Tunisia</p>
<p>Optimal Operation Policy of Multi-Objective Reservoir System Using Goal Attainment Method  <i>Kamel A. Al-Mohseen</i>  Water Resources Engineering Department, University of Mosul, Iraq</p>
<p>Mapping water seepage from Nasser Lake (Egypt) using VLF-EM method - A case study.  <i>Mohamed A. Khalil<sup>1&amp;2</sup> Fernando A. Monteiro Santos<sup>2</sup>, Sameh M. Moustafa<sup>3</sup> and Usama M. Saad<sup>1</sup></i>  1. National Research Institute of Astronomy and Geophysics, Egypt  2. Universidade de Lisboa, Centro de Geofísica da Universidade de Lisboa-IDL, Lisboa, Portugal.  3. Aswan Seismological Center, Aswan, Egypt.</p>
<p>Monitoring of Fresh/ Saline Groundwater Interface in the Nile Delta Region Prior to the Expected Climatic Change  <i>Nahed El Arabi</i>  Research Institute for Groundwater, NWRC, Cairo, Egypt</p>
<p>Treatment of cuttlefish effluent by UF and MF ceramic membranes: comparative study using commercial and elaborated Tunisian clay membranes  <i>S. Khemakhem, S. Saïdi and R. Ben Amar</i>  Laboratoire des Sciences de Matériaux et Environnement, Faculté des Sciences de Sfax, Sfax, Tunisie.</p>

<p>Increasing Water Treatment Plants Capacity and improving effluent Quality by introducing locally available filter media  <i>Sati .M.Al-Rawi<sup>1</sup></i> and <i>Kahtan A. Al-Najjar<sup>2</sup></i>  1. Mosul University, Kirkuk, Iraq  2. Iraq University, Iraq</p>
<p>Environmental Pollution of a Foggara by Waste Oil in the Desert of Algeria  <i>M. Boukar<sup>1</sup></i>, <i>A. E. Hamdi<sup>2</sup></i>, <i>A. Harmim<sup>1</sup></i> and <i>M. Amar<sup>1</sup></i>  1. Unité de Recherche en Energies Renouvelables en Milieu Saharien, Adrar, Algeria  2. Farmer, ommanat Aoulef, Adrar, Algeria</p>
<p>Model in Carbon Storage And Biomass on Stand of <i>Populus Nigra</i> in Zakho  <i>Mohammed Younis Salim Al-Allaf</i>  Remote Sensing Center, Mosul University, Mosul, Iraq</p>
<p>Biomass and Carbon Sequestration on Stand of <i>Populus</i> Northen Iraq  <i>Muzaham Saeed Younis</i>  College of agriculture and forestry, Mosul University, Mosul, Iraq</p>
<p>Studies on the Structure of Humic Substances Extracted from Different Soils  <i>Taha, A.A.</i>  Soils Dept., Fac. of Agric., Mansoura Univ., Egypt</p>
<p>Wastewater Treatment of Khanssa Hospital by Using Muds  <i>Soad Abid Abawee</i> and <i>Halla Nabeel Elea</i>  Dept of Civil Eng., college of Engineering, University of Mosul, Iraq</p>
<p>Use of Bentonite Clay With Lime for Removing of Lead And Cadmium From Drinking Water  <i>Mohammed Salim Shihab, Musab A.A</i> and <i>Abdullah A.</i>  Civil Engineering Department, College of Engineering, University of Mosul, Mosul, Iraq</p>
<p>Patching null data holes in SRTM (DEM) prior to catchment's topographic analysis  <i>Ahed Alhamamy</i>  Faculty of Education, Mosul University, Mosul, Iraq</p>

Spatial Variability of Irrigation Water Percolation Rates and its Relation to Rice Productivity

*Aimrun W. and M.S.M. Amin*

Smart Farming Technology Lab, Institute of Advanced Technology, Universiti Putra Serdang, Selangor, Malaysia.

Using of GIS and Remote Sensing Data in Spatial Analysis to Select Forest Trees in Bashiqa Area North Mosul

*Basman Y. Hameed, Mohammed Y. S. Al-Allaf and Khansaa A. Ahmed*

Remote sensing Centre, Mosul University, Mosul, Iraq

Passive Containment Cooling System (Pccs) Adapted to the Solar Seawater Greenhouse Desalination Unit Designed for Arid Coastal Countries

*Nawel Spahis and Hacene Mahmoudia*

Faculty of Sciences and Engineering Sciences, Hassiba Ben Bouali University, Chlef, Algeria

Spatial Variability of Hydraulic Properties of New Valley Soils, Egypt

*Rasha Mohsen Gamie*

Vrije Universiteit Brussel, Brussels, Belgium

Poster Session Coordinator: *Dr. Abdul-Rahaman Al-Dekhail* (Mobile: 0505672284)

**Tuesday 18 November 2008**

From 13:30 to 16:30

Brackish Water Desalination by Means of a Parabolic Solar Concentrator

*Béchir Chaouach and Slimane Gabsi*

Unité de Recherche Environnement Catalyse et Analyse des Procédés,

Ecole Nationale d'Ingénieurs de Gabès, Gabès, Tunisie

Chitosan-Grafted Agricultural wastes Activated Carbons for the Remediation of Inorganic and Organic Contaminants in Industrial Wastewater

*Amuda O.S.<sup>1&2</sup>, Alade A. O.<sup>3</sup> and Amoo I.A.<sup>4</sup>*

1. Analytical/Environmental Chemistry Unit, Department of Pure and Applied Chemistry, Ladoke Akintola University of Technology Ogbomoso, Nigeria

2. Department of Chemical Sciences, Wesley University of Science and Technology, Ondo Nigeria

3. Department of Chemical Engineering, Ladoke Akintola University of Technology, Ogbomoso, Nigeria

4. Department of Chemistry, Federal University of Technology, Akure, Nigeria

Effect of drinking water in the risk lithiasis, Study in vivo

*S. Ghalem<sup>1</sup>, M. Beghalia<sup>1&2</sup> H. Allali<sup>1</sup> and A. Belouatek<sup>2</sup>*

1. Laboratory of Organic Chemistry, Natural Products and Analysis (COSNA), Department of Chemistry, Faculty of Sciences, University Abou bakr Belkaïd, Tlemcen, Algeria.

2. Department of Biology, Faculty of Sciences, University of Abdel Hamid Ibn Badis, Mostaganem, Algeria

Use of New Generation Polymer for Clarification of Water

*Sanjay Kumar Dubey, Lim Aun Siong and Eddy Wong Choon Hoe*

Kuala Langat Power Plant, Genting Sanyen Power, Malaysia

A Risk-based Management Model for Optimal Allocation of Water Resources in Arid Regions

*A. Malekian, M. Mahdavi, M. Mohseni Saravi and Gh. R. Zehtabian*

University of Tehran, Tehran, Iran

<p>Development of a Water Quality Monitoring Strategy for Arab Region  <i>A. El Sayed and Hussam Fahmy</i>  Drainage Research Institute, National Water Research Centre, El-Qanater El-Khairya, Egypt</p>
<p>Determination of Watershed's Hydrological Parameters for Water Harvesting in Wadi Elkangar, Sudan - Using Remote Sensing and GIS  <i>Mustafa Y.M<sup>1</sup>, Eltaib S. G<sup>2</sup> and Hassan S. M<sup>1</sup></i>  1. Faculty of agriculture, Alzaiem Alazhari University, Khartoum North, Sudan  2. Remote Sensing Authority, Ministry of Science and technology, Sudan</p>
<p>The Role of Brackish Groundwater for Water Resources Management in South Sinai (Case Study)  <i>Gamal abdallah, Abdel Hafez H. Mohammed and Madiha Mustafa</i>  Water Resources Research Institute, Ministry of Irrigation and Water Resources, Cairo, Egypt</p>
<p>Matching the Technical Solution with the Society Requirements for the Flash Flood Protection Works for the City of Dahab (South Sinai, Egypt)  <i>Gamal Kotb</i>  Water Resources Research Institute, National Water Research Center, El-Qanater El-Khairya, Egypt</p>
<p>Water Resource Management and Protection "Dams" a Micro-Hydro Power Project in Sironko  <i>Grace Nadunga</i>  Sironko District Administration, Mbale, Uganda</p>
<p>Water Harvesting Search in Ninevah Governorate Using Remote Sensing Data  <i>Hekmat S. Al-Daghastani</i>  Remote Sensing Center, Mosul University, Iraq</p>
<p>Evaluation of Groundwater Quality in the Nile Delta Aquifer- Egypt  <i>Mohamed Rashed Ali Ahmed<sup>1</sup>, Tarek M. Labib<sup>2</sup> and El Sayed I. Gaber<sup>2</sup></i>  1. Research Institute for Ground Water, National Water Research Center, Cairo, Egypt  2. Cairo University, Cairo, Egypt</p>

The Use of Remote Sensing and GIS for Modelling Flash Floods in Dryland Catchments: Eastern Desert, Egypt

*Mohammed El Bastawesy<sup>1</sup>, Kevin White<sup>2</sup> and Ayman Nasr<sup>1</sup>*

1.National Authority for Remote Sensing and Space Sciences, Cairo, Egypt

2.Geography Department, Reading University, UK

Evaluation of the Structural and Hydrogeological Aspects of the Natural Springs at Wadi El-Raiyan Area, Egypt

*Osama Abdel-Raouf*

Water Resources Research Institute, El-Qanater El-Khairya, Egypt

From Headwaters to the Coastal Zone - Systemic Approach for Water Resources Management and Protection: a Case Study for the Itapicuru River Basin, Northeastern Brazil.

*S.S.P.Mestrinho<sup>1</sup> and J.M.L. Dominguez<sup>2</sup>*

1. UCSAL, Brazil

2. UFBA, Brazil

Calibrated Radar Derived Rainfall Data for Rainfall- Runoff Modeling: A Case Study on Upper Bernam River Basin, Malaysia

*Waleed A.R.M<sup>1</sup>, M.S.M Amin<sup>2</sup>, G. Abdul Halim<sup>1</sup>, A.R.M. Shariff<sup>2</sup> and W. Aimrun<sup>3</sup>*

1. Department of Civil Engineering, Universiti Putra Malaysia, Malaysia

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3. Institute of Advanced Technology, Universiti Putra Malaysia, Malaysia

Research Based on Real Time Monitoring System of Digitized Agricultural Water Supply

*Weiru Li*

Shandong University Jinan, Shandong, China

The role of membrane technologies in supplying drinking water in Iran: operational problems and environmental impact

*Meadeh Pakzad Shahabi and Bitay Ayati*

Tarbiat Modares University, Civil Engineering Department, Environmental Engineering Division, Tehran , Iran

Research on Managing the Groundwater by the Technology of Digital Signal Processing

*Yunpeng Zhang*

Shandong University Jinan, Shandong, China

Climate change impact on hydrological extremes in Belgium

*O. Boukhris and P. Willems*

Hydraulics Laboratory, Katholieke Universiteit Leuven, Belgium.

Estimating Water Budget in Arid Land by Modified Experimental Formula (MEF): Case Study, TORBATEJAM

*A. R. Nejadmohammad Namaghi and Z. Gholizade*

Hasheminejad High Education Center, Khorasan Razavi, Mashhad, Iran

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