

Conference PROGRAMME



First World Water Sustainability – Renewable Energy Congress

25-28 November 2007
MECC Conference Complex, Maastricht, THE NETHERLANDS

Organized by

InterExpo Caribbean N.V

In collaboration with

World Renewable Energy Congress, UK

World Water Sustainability - Renewable Energy Congress and Exhibition

**Maastricht, The Netherlands
25-28 November, 2007**

This is the first of what the organisers and sponsors hope will be an established series of Congresses and Exhibitions on the theme of the current issues facing water technology and renewable energy as a result of global climate change and the depletion of fossil fuels.

There are many hurdles facing the establishment of such a series of meetings and the organisers are grateful to the sponsors: the Mayor and Municipality of Maastricht for their hospitality and support; ISESCO, INTEREXPO, Elsevier and WREN. Our thanks also to the Technical Committee for their contribution.

We are pleased to have succeeded in bringing together more than fifty eminent speakers from all parts of the world to discuss a variety of crucial topics regarding the global shortage of water and energy. The Congress will run for three days alongside a related Exhibition. We are fortunate to be holding this first meeting in The Netherlands where issues of water and energy are receiving both government and private attention. The Netherlands has unparalleled experience in the matters of water technology.

We hope this book of abstracts will be a focal point to those who participate, whether speakers or researchers.

Ali Sayigh
Chairman of Congress

Sunday 25 November

17:00 - 19:00 **Registration, NH Hotel – Lobby**

19:00 - 20:00 **Reception, NH Hotel**

**Conference Registration and Sessions will be at Congress Centre MECC
Monday, Tuesday and Wednesday**

Monday 26 November

08:30 – 17:00 **Registration – MECC
Congress in room 004**

09:30 – 10:00 **Opening Ceremony
Mr. Bert Kersten
Member of the Provincial Executive of Limburg**

10:00 – 10:30 **UNESCO-IHP Role in Sustainable Water Resources
Management in The Arab World**
Radwan Al-Weshah: Regional Hydrologist, UNESCO Cairo
Regional Office, Cairo, Egypt


10:30 – 11:00 Coffee break sponsored by Messrs. Hawle Austria 

11:00 – 12:30 **Elaboration and Implementation of PV Water Pumping Systems
(PVPS) In Arid and Semi-arid Areas(Ghardaia site/Algeria)**
1- Mr. Azzedine Boutelhig, URAER/Ghardaia
2- Mr. Yahia Bakelli, URAER/Ghardaia, Algeria

A sustainable proposal to River Xuquer water management
Laguarda-Miro, N. Garcia-Garrido, J. Garcia-Castello, E. Rodriguez-
Lopez, A.D.
TECAR Group, Chemical and Nuclear Engineering Department,
Polytechnic University of Valencia, Spain

**Application of Expert System in Integrated Water
Resource Management Plan (IWRMP)**
Al Khabouri Abdulbaqi.; Muyibi A. Suleyman1.; Ahmed Thamer2.;
Kabbashi A. Nassereldin3
PhD Candidate, Department of Biotechnology Engineering Faculty
of Engineering, International Islamic University Malaysia Jalan,
Malaysia

**Renewable Hydrogen Production System Research and
Development in Malaysia**
Kamaruzzaman Sopian
Solar Energy Research Institute
Universiti Kebangsaan Malaysia
Malaysia

- 12:30 – 14:00 Lunch break
- 14:00 – 15:30 **The Water Footprint of Eenergy Consumption: An Assessment of Water Requirements of Primary Energy Carriers**
Winnie Gerbens-Leenes, Arjen Y. Hoekstra and Theo van der Meer
University of Twente, Enschede, the Netherland
- Using Phase Change Material to promote seasonal solar energy storage**
Kais CHARFI and Mohamed.J.SAFI
National Engineering School of Tunis, BP 37-1002 Tunis.TUNISIA
- Effect Treated Waste Water and Different Levels of Nitrogen Fertilizer on Yield of Sorghum**
Mohsin Mussalam Alamri: Agricultural research center Oman
- Sustainable water circulation system by using graywater in complex**
Joonkyu Kim, Insang Song, Haeseok Oh, Jisun Jong, Joonhong Park, Younkyoo Choung , Department of Civil & Environmental Engineering, College of Engineering, Yonsei University, Seoul, KOREA
- 15:30 - 16:00 Tea break sponsored by Messrs. Hawle Austria 
- 16:00 - 17:30 **Implementation of coagulation - flocculation treatment in towns with seasonal inhabitant increment**
Rodriguez-Lopez, A.D., Garcia-Garrido, J. , Garcia-Castello, E., Laguarda-Miro, N., Pascual-Garrido, J.
TECAR I+D+I. Dpto. Ingeniería Química y Nuclear. Universidad Politécnica de Valencia. Valencia. Spain.
- Grid Connected Solar Fired Combined RO/TMD SeawaterDesalination Plant**
Hussain Alrobaei: Higher Institute of Engineering, Hoon, Libya.
- Towards a sustainable urban water cycle: technological challenges**
Maarten Nederlof and Ellen van Voorthuizen, Wetsus Centre for Sustainable Water Technology, Leeuwarden, The Netherlands,
- Potential of Kasimir (Hura Crepitans L) and Bintaro (Cerbera Manghas L) Oils for Alternative Biodiesel Feedstock**
Kudrat Sunandar*, Eiji Minami** and Shiro Saka**
*Post-Graduate Student, Doctorate, IPB, Indonesia
Chemical Engineering Department, Institut Teknologi Indonesia
** Graduate School of Energy Science, Kyoto University, Japan

Tuesday 27 November

- 08:30 – 17:00 **Registration – MECC
Congress in room 004**
- 09:30 – 10:30 **Recent Advances in Desalination and Water Reuse Technologies:
A Novel Manipulated Osmosis Desalination Process**
Adel O. Sharif: Centre for Osmosis Research and Applications,
Faculty of Engineering of Physical Sciences, University of Surrey,
Guildford United Kingdom
- Osmotic Power Generation and Reverse Osmosis Desalination
Hybrid System**
Richard L. Stover, C. Peter Darby, U.S.A.
- 10:30 – 11:00 Coffee break
- 11:00 – 12:30 **Steady state Simulation of MSF desalination plant**
M. Abduljawad and A. saadawi: Renewable Energies and Water
Desalination Research Center, Tripoli,Libya
- Concentrate disposal for brackish desalination**
Maarten Nederlof and Ate Oosterhof, Vitens Water Technology,
Leeuwarden, The Netherlands,
- Desalination in the Sultanate of Oman to solve water shortage**
Dr. Ali Al-Alawi
Department of Mechanical and Industrial Engineering, College of
Engineering, Sultan Qaboos University, Sultanante of Oman
- Ultraviolet dose distribution in different water disinfection
reactors: experiments and modeling**
Ben Messaoud Anis*, Shayeb Hedi*, Pic Jean-Stéphane**, Cockx
Arnaud**
* Laboratoire de Modélisation Hydraulique et Environnement, Ecole
Nationale d'Ingénieur de Tunis, Tunisie.
** Laboratoire d'Ingénierie des Procédés de l'Environnement, Institut
National des Sciences Appliquées, Toulouse cedex, France.
- 12:30 - 14:00 Lunch break

14:00 - 15:30

**The hybrid wind pump water supply system – HWPWSS:
An application model for National Park Way Kambas (TNWK)
Lampung – Indonesia**

Ahmad Taufik[#], Nanang Oktaviyanto*, Beny Yudiantoro*, Mega Hariyanto**

[#]Department of Mathematics & Statistic, Curtin University of Technology, Bentley Campus, Perth 8645 Western Australia.

*Pijar Cendekiawan Foundation (YPC), Bandar Lampung, Lampung–Indonesia

**National Park Way Kambas Lampung Indonesia

Mohsin Mussalam Alamri, Agricultural research center , Muscat, Oman

**Swine slurries: environmental problems and possible solutions
applicable to a specific case**

E. Garcia-Castello, J. Garcia-Garrido, A.D. Rodriguez-Lopez, N. Laguarda-Miro Dpto. Ing. Química y Nuclear. Univ. Politécnica de Valencia.

15:30 – 16:00

Tea break

16:00 – 17:30

**Renewable Energies and water treatment to the help of the poor
rural zones**

Mohamed.J.SAFI, National Engineering School of Tunis, TUNISIA

**Strategic study for the development of autonomous units for
desalination in Tunisia**

K. Bourouni, T. Ben M'Barek

Laboratoire Energétique des Bâtiments et Systèmes Solaires,
Département de Génie Industriel

Ecole Nationale d'Ingénieurs de Tunis, M.T. Chaibi

Institut National de Recherche en Génie Rural, Eaux et Forêts

Capacity-building Strategies and Desalination Policy in Algeria

Hacene MAHMOUDI^{a*}, Norredine GHAFfour^b

^aFaculty of Sciences and Engineering Sciences, Hassiba Ben Bouali University, Chlef, Algeria

^bMiddle East Desalination Research Center, Oman

Solar Assisted Dehumidification System for Medical Herbs

Kamaruzzaman Sopian, Solar Energy Research Institute,
Universiti Kebangsaan Malaysia

19:00

Informal dinner at the NH Hotel

Registration for this dinner before November 26th 17.00 hrs.

This dinner will cost 65 euros.

Wednesday 28 November

08:30 – 11:00

Registration – MECC
Congress in room 004

09:30 – 11:00

The Second Generation of the Solar Desalination Systems

Abubaker Awidat Salem & Yasser Fathi Nassar: Solar Energy Laboratory
Faculty of Engineering & Technology – University of Sebha, Libya

Modelling and aquifer artificial recharge: A Tool for management and groundwater protection: A Moroccan case.

H. Sadiki & B. El Mansouri

Geosciences Applied & Water Resources Technologies Lab,
University Ibn Tofail, Morocco.

The hybrid wind pump water supply system – HWPWSS: A field survey of National Park Way Kambas (TNWK) Lampung – Indonesia

Ahmad Taufik[#], Nanang Oktaviyanto*, Beny Yudiantoro*,
Mega Hariyanto**

[#]Department of Mathematics & Statistic, Curtin University of
Technology, Perth 8645 Western Australia.

*Pijar Cendikiawan Foundation (YPC), Lampung–Indonesia;

**National Park Way Kambas Lampung Indonesia (TNWK)

Optimum geometry of a wind turbine by resolving the Inverse problem based on the lifting line theory

Helali Ali^{a*}, Kamoun Baddreddine^{b*}, Afungchui David^c, Safi Mohamed^a

^a National Engineering School of Tunis; Research Unit of
Mechanics and Energetic (URME)

^bFaculty of Sciences of Sfax; Laboratory of Applied Physics (L.P.A),
Tunisia

^cUniversity of Buea, Faculty of Science, Department of physics, Cameroon.

*Corresponding author

11:00 – 11:30

Coffee break

11:30 – 13:30

Expression of glutathione S-transferase in antibiotic resistance organism isolated from the poultry litter

Sridevi Dhanarani¹, Shankar Congeevaram^{1,2}, Michael Dexilin¹,
Joonhong Park², Kaliannan Thamaraiselvi^{1,2}

¹ Department of Eco-Biotechnology, Bharathidasan University, Tamil
Nadu, India

² Department of Civil and Environmental Engineering, Yonsei
University, Seoul, South Korea.

One year of experience in desalting seawater with an autonomous solar-powered membrane distillation system

Fawzi Banat, Nesreen Jwaied

Department of chemical Engineering, Jordan University of Science
and Technology, Irbid-Jordan

The Role of Media in Promoting Water Literacy for Sustainable development.

Dr. Vijaykumar L. Dharurkar: Professor-Director, UGC-Academic Staff College,

Dr. Babasaheb Ambedkar, Marathwada University, Aurangabad.

And, Mr. A.N.Kadam, Secretary, MGM Trust, Aurangabad.

Wind Energy Systems Adapted to the Seawater Greenhouse Desalination Unit Designed for Arid Coastal Countries

Hacene MAHMOUDI^{a*}, Sabah A. ABDUL-WAHAB^b, Mattheus F.

A. GOOSEN^c, Shyam S. SABLANI^d, and Nawel SPAHIS^a,

^a Faculty of Sciences and Engineering Sciences, Hassiba BenBouali University, Chlef, Algeria.

^b College of Engineering, Sultan Qaboos University, Oman,

^c New York Institute of Technology (NYIT)-Amman, Jordan

^d Department of Food Science and Nutrition, Sultan Qaboos University, Oman

13:30 - 14:00

Closing Ceremony NH Hotel: Mayor Leers, Mayor of Maastricht

14:00 - 14:30

Reception