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INTRODUCTION FROM EXECUTIVE DIRECTOR, PAUL REITER

The Leading Edge of Technology and Beyond

As you know, IWA is fundamentally committed to supporting its members and the larger water community in advancing the leading edge of technology in water science and practice. As an organisation, we accomplish through our world-class membership supported by top-rated journals, our Specialist Groups and Specialist Conferences, and through the most recent and highly successful addition to the IWA line-up, the Leading Edge Technology Conference series. In this context, I would like to personally encourage you to attend the upcoming Leading Edge Technology Conference in Singapore over the period September 5th through September 8th, 2007.

At the same time, the breathtaking progress occurring in molecular biology is giving rise to entirely new frontiers in the possible solutions to the traditional problems of storage, conveyance and treatment of water and wastewater. As an association, IWA wants to create "space" for this very important yet hard to predict discussion based in bio and nanotechnology applications in water.

Accordingly, we coined the phrase "Frontiers of Technology" within the Association to describe this "space" and created several opportunities within the Beijing Conference programme to formally advance this discussion and identify individuals who wished to shape the future agenda. IWA received very positive feedback for these preliminary steps, and based on this feedback, we are now organising

regional sessions in 2007/2008 to help build a vision and action plan for the Frontiers of Technology effort.

In this context, I have been asked about the difference between the "Leading Edge of Technology", as expressed through our Leading Edge Technology conference programme, and the "Frontiers of Technology" initiative – a very useful question for furthering what I think is an essential progression in thought and practice.

Let me hazard an answer that I hope explains what we are doing and hopefully stimulates discussion within the membership. First the term "Leading Edge" is used to describe a state of understanding (in our case normally associated with solutions), that is at the "edge" of our current knowledge and practice at the present moment.

"Frontiers of Technology" has been used to describe what is beyond the current edge of knowledge and practice but still within the realm of what we might imagine. In other words, the leading edge to come. For example, within the overall Frontiers of Technology discussion in Beijing were specific discussions about engineered bio-chemical agents that could defeat, maintain or develop biofilm formation.

I suppose a third category might be called "Beyond the Frontiers" that would include discussions related to advances in molecular biology and their potential applications directly or indirectly to water. This is a future that is truly beyond our current horizon.

Having made these distinctions, let's appreciate that today's frontier is tomorrow's edge and the next day's status quo. We are dealing with a



pace of change in these fields that is far beyond our experience and maybe, beyond our imagination. For this reason, I believe that it is crucial for IWA to work on all three fronts to remain at forefront of water science and technology – and so do many of our members.

Accordingly, we took a one year break in the Leading Edge Technology conference to think hard about the leading edge of technology and its relations to the frontiers of technology. As a consequence, the upcoming Leading Edge Technology Conference in Singapore has a very impressive programme design that harmonises an exportation of the frontiers of technology with the leading edge of application-based science and practice.

As I said earlier, we will advance the Frontiers of Technology "space" within the Association through a combination of regional meetings and the Vienna programme. The members will shape the form and scope of this emerging programme area.

Finally, through our members, we are working on establishing a dialogue between IWA and ISME (the International Society of Microbial

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Ecology) to explore fundamental (i.e., "beyond the frontier") possibilities by connecting experts that do not normally talk to one another.

IWA's motto is "Solutions Through Innovation". Our commitment as an Association is to support you as members and ultimately the public that we serve, in achieving leading-edge solutions through innovation. Let us know if you see the need for new tools within the Association for furthering this critical objective given the challenging circumstances that we will need to confront.

News update

Congratulations to IWA Member Gatzte Lettinga!

The University of Southern California has awarded the 2007 Tyler Prize for Environmental Achievement to Gatzte Lettinga, a Dutch scientist who invented an anaerobic wastewater treatment in the 1970s and who, by choosing not to patent his work, has strived to make it available all over the world. The technology is now used in three-quarters of the world's anaerobic systems for treating industrial and residential wastewater. The prize, which was created in 1973 by John C. and Alice Tyler and is administered by the university with funds they donated, consists of a \$200,000 award and a gold medal.

Staff Update

Sadly one of the key members of IWA's London team, Maddie Birch-Jackson, will be leaving us on 26 April. Maddie has fulfilled the role of Company Secretary, HR Manager and Executive PA to the Deputy Director for the past two years. She is known to IWA members through her roles supporting the Board and many of the Association's committees such as Strategic Council, Programme Committee and Governing Assembly. Maddie has accepted a new role with a publicly listed company near London and we offer our best wishes.

Young Water Professionals Programme launches Newsletter

Did you know that the Young Water Professionals Programmes launched its Newsletter in March 2007? The IWA Young Water Professionals newsletter provides an insight of the YWP programme. It highlights future events relevant to YWP and includes stories submitted by the young water professionals.

For more information and to view the newsletter please visit

www.iwahq.org/uploads/young%20water%20professionals/newsletter/YWP%20Newsletter%20-%20March%202007.pdf

Young Water Professionals

The 2nd IWA German National Young Water Professionals Conference

4-5 June 2007. Berlin, Germany

This conference follows up on the first NYWP conference organised in Aachen in October 2005. The conference theme is "Membrane technologies for wastewater treatment and reuse". It will provide a forum for young researchers and professionals working in the membrane sector of the wastewater industry to present their work and meet their peers. The conference will consist of formal presentations of papers and posters, and an exchange with water industry professionals providing information on water career opportunities in Germany.

Approximately 150 German and international participants are expected to attend the conference, which will be followed on 7 June 2007 by a workshop and technical tour on "Membrane-based technology for decentralised wastewater treatment".

This event is an initiative of "MBR-Network", the European cluster on the membrane bioreactor technology, gathering about 50 European and international companies and institutions within the four FP6 projects Amedeus, Eurombra, MBR-Train and Puratreat (more info at www.mbr-network.eu).

Website: <http://iwa.kompetenz-wasser.de/>

Young Water Professionals @ ASPIRE

28 October 2007, Perth, Australia

Following the success of the workshops organised during the World Water Congress 2006 (Beijing, China), the IWA Young Water Professional Programme has agreed with the organisers of the 2nd IWA Asia-Pacific Regional Group Conference & Exhibition (ASPIRE) to organise a day of activities/workshops exclusively for Young Water Professionals.

During the session of workshops, the young water professionals will be introduced to IWA and the Young Water Professional Programme highlighting the impact of the Association on the water sector through its programmes and opportunities for participation for the YWPs.

The workshops will also provide an insight into the future of the water sector in the ASPIRE region from a variety of perspectives – encouraging dialogue between delegates and a panel of senior professionals and will determine the career development needs of young water professionals in the ASPIRE region.

The Young Water Professionals @ ASPIRE workshop is sponsored by International Water Centre



Young Water Professionals Conference 2004, The Netherlands

Website:

www.awa.asn.au/AM/Template.cfm?Section=Young_Water_Professionals_Stream

4th IWA Young Water Professionals International Conference

16-18 July 2008. Berkeley, California, USA

The conference organisers extend a warm welcome to the young water professionals from all sectors of the water/wastewater community to join us for a stimulating and enjoyable experience at this biennial meeting.

The conference structure will be similar to that of the highly successful Singapore meeting in May 2006. There will be platform presentations with ample time for discussion, poster presentations and career development sessions. The technical areas of interest include all aspects of water and wastewater treatment, water pollution control and water quality management. Adequate time will be provided for delegates to talk informally and to develop networking connections. Personal relationships like this, made early in ones' career are of lasting and increasing importance.

Conference social events will include a welcoming reception and a banquet at which attendees will have the opportunity to meet renowned experts in the water/wastewater field.

Prizes will be awarded for the best platform papers and posters. Consideration will be given to publishing the conference proceedings through IWA.

Call for Papers Opens: May 2007

Deadline for Abstract Submissions: September 28 2007

Website: www.iwa-ywpc.org

IWA Utilities

IWA Utilities offers a programme of initiatives to provide an additional focus for services to individual and corporate utility members and to enhance networking opportunities for all those involved with or interested in utilities matters.

1st IWA European Utility Conference

As part of an extended offering focused on utilities and their interests, IWA is launching an annual conference series for utilities in Europe. The first conference will be in Maastricht, The Netherlands on 14-16 June 2007. The customer will be the central topic at the first IWA European Utility Conference for the water supply and sanitation sector. Traditionally, water supply and sanitation companies have been technically focused and attention to customers has been neglected in many countries: customers were regarded as connections with a number and not as the reason for the water companies' existence. The goal of the conference is to stimulate water professionals to establish a real 'customer connection'

Utility Leader Forums

Following on from a successful series of Utility CEO and Leader meetings in Berlin, Singapore and Beijing during 2006, plans are well advanced for meetings in Vienna and Perth in 2007 and Munich in 2008. The meeting in Vienna, co-organised by IAWD, on 6-7



September 2007 will focus on the Management of Crises and Disasters. The meeting in Perth on 30th October 2007 will occur during the IWA ASPIRE conference and will focus on a number of issues of relevance to utilities in the Asia-Pacific region including Working in a Water Stressed Environment. Further details and invitations for each of these events will be issued in the coming months.

IWA Conferences

In addition to the dedicated meetings and conferences for utilities, your attention is also

directed towards 4 other IWA conferences with a strong utility focus that are being supported by the IWA Utilities brand: Efficient Use and Management of Urban Water Supply (20-23 May 2007. Jeju Island, Korea), Design, Operation & Economics of Large Wastewaters Treatment Plants (9-12 September 2007. Vienna, Austria), Water Loss (23-26 September 2007. Bucharest, Romania), and Leading Edge Strategic Asset Management (17-19 October 2007. Lisbon, Portugal).

Water Operators Partnerships

During the 4th World Water Forum (Mexico, 16-23 March 2006), the United Nations Secretary-General's Advisory Board on Water and Sanitation (UNSGAB) announced its Compendium of Actions (COA), which aims to help achieve the Millennium Development Goals on water and sanitation. COA is now called "Hashimoto Action Plan" named after the Board's late Chairman. Amongst others, the Action Plan proposes the creation and implementation of a global mechanism to promote water operators partnerships (WOPs), on a not-for-profit basis, between public water and sanitation operators themselves, or between a public operator and any other interested party, for the improvement of the public sector's performance.

Following invitations from the United Nations Secretary General Advisory Board, UNDESA, and UN-HABITAT, IWA is exploring options for becoming involved in the Water Operators Partnership, a mechanism to support practical learning between utilities. Activity to date has been focussed in areas with developing economies, but it must not be forgotten that there should be significant participation from the utilities of developed economies. IWA is the global network of water professionals with 10,000 participants in over 110 countries, of whom over 1200 are utility based water operators. In addition over 100 utilities are corporate members of IWA. As such IWA has been invited by UN-HABITAT to develop and coordinate WOPs-related activities in the developed economies and as an initial action to organise a WOPs meeting in Europe.



World Water Congress & Exhibition- Vienna, 2008

IWA Programme Committee Meeting March 1-2 London

The IWA Programme Committee met in London during the first week of March to commence the development of the technical programme for the 2008 World Water Congress in Vienna. The Programme Committee Chair, Prof. Helmut Kroiss, commenced proceedings by welcoming the six new members of the committee and outlining the 18 month schedule leading up to the Congress.

Over two days the committee discussed the framework of the programme development, and also worked towards finalising significant aspects of the Congress programme, including:

- Finalisation of the tracks and topics for the Congress, which provide an indication of the scope of the technical programme;
- Creation of new cross-cutting themes of emerging and significant interest including Climate Change in Practice: Adaptively Managing Impacts on Water, The Science and Practice of Sustainable Development and Managing Urban Metabolism within the Context of IWRM; and,
- Development of an exclusive poster session dedicated to enhancing the networking opportunities for poster presenters.

Congress Dates: September 7 – 12 2008

Congress Website: www.iwa2008vienna.com



Back row: Norbert Jardin (Vice Chair), Jacques Labre, Don Bursill, Yves Comeau; Middle Row: John Batten, Helmut Kroiss (Chair), Dayanand Panse, Gustaf Olsson (Editor-in-Chief, WST); Front Row: In Kim, Akiça Bahri, Min Yang, Bruno Nguyen, Regina Sommer, Paul Reiter, Gerard Luyet; Not in Attendance: Mino Tashaki, Rhodes Trussell

Key Contacts:

Programme and General Enquiries:
2008Vienna@iwahq.org.uk

Exhibition: roy.agterbos@iwa-exhibitions.com/robert.melaard@iwa-exhibitions.com

Sponsorship: 2008Vienna@iwahq.org.uk

Key Dates:

Call for Papers open: May 30th 2007

Call for papers close: September 15th 2007

Review process:

October 1st 2007 – January 15th 2008

Advance programme: May 2008

Online discussion forums

A new online discussion forum is now open providing an opportunity for IWA members to discuss the important issues related to the Price of Water as part of the Bonn Charter for Safe Drinking Water. This discussion forum will be open throughout April and members are encouraged to join in the discussion to share with a global audience their knowledge and experience of developing, implementing and analysing water pricing strategies. To participate in this online forum, please visit the IWA website

IWA online discussion forums are a new area of the IWA website providing members with a quick and easy way to network. There have been two online discussion forums in the past few months. The first, which was open during November 2006, facilitated a career options discussion between young water professionals and members of the IWA Council for Distinguished Water. The second discussion forum, open during December 2006, discussed issues related to institutional arrangements and drinking water quality, with a focus on the Bonn Charter for Safe Drinking Water. Syntheses of both of these discussions are available online now.

World Water Day, March 22nd 2007

March 22nd was World Water Day – this year focusing on water scarcity - an internationally recognized day marking the link between water, sanitation and development. IWA's Global Development Solutions programme provided the Association with entry points to the debate. To find out more – sort the facts from fiction – visit the following web link.
http://www.iwahq.org/templates/Id_templates/layout_633184.aspx?ObjectId=655645

IWA International Water Association

The poor die young

Half the developing world's people are sick from the same cause

Fact:

- 1.1 billion people live without access to safe water
- Lack of clean, safe drinking water is estimated to kill almost 4,500 children per day

Fiction:

- The problem is lack of technology
- The problem is governments don't have the money

Sort the facts from fiction
www.iwahq.org

IWA Specialist Groups

Specialist Groups form the basis of IWA and are important vehicles for all "water people" interested in interactions on scientific, technical and management topics throughout the world. The Groups, formed as coalitions of individuals around subjects of common interest, provide a sound structure of networks for international specialists to share knowledge, information, skills, and make good professional and business contacts.

For a full list of IWA's specialist groups and their activities view the IWA website - <http://www.iwahq.org.uk/template.cfm?name=groups>. To take advantage of this networking opportunity, and become a member of any

specialist group (or change your group membership) simply contact the IWA membership department (members@iwahq.org.uk) and tell us which groups you would like to join.

This issue of the newsletter features the activities of seven IWA Specialist Groups active in the research and practice of:

- Climate Change and Adaptation
- Diffuse Pollution
- Multiphase Flow and Transport of Contaminants in Porous Media
- Watershed and Riverbasin Management



Climate Change and Adaptation

Managing water resources under changing hydrological conditions poses a new challenge to water professionals. The assessment reports of the Intergovernmental Panel on Climate Change indicate that global warming has already affected hydrological and biological systems. Obvious impacts are an increased risk of flooding, increased incidence of extreme weather events, and decreased water availability in many water-scarce regions. These impacts will directly or indirectly affect both water resources and water supplies.



For years, IWA has had an active interest in Water and Climate. Recent events included the IWA conferences on climate change in Amsterdam (September 2004, 2006), and a special session during the IWA world congress in Beijing (September 2006). These meetings addressed a wide ranging agenda of climate related issues for utilities and water boards including:

1. the impact of climate change on water resources availability (quantity and quality);
2. the contribution of utilities and water boards to Green House Gas emissions;
3. vulnerability of utilities and water boards to changes in water resources availability, changing demands during droughts, changes in costs of operations and production, and vulnerability of the infrastructure (drainage systems, distribution network, etc.).
4. coping mechanisms and adaptive strategies.

Climate change challenges the current practices in the water sector based upon historic data, and call for more flexibility in water systems design and operations, known as

'adaptive management'. In this perspective, IWA has launched a new specialist group, dealing with climate change impacts on water boards and utilities, as well as adaptive strategies and mitigation (Green House Gas reduction measures). The new specialist group was officially installed during IWA's 2nd world conference on climate change in September 2006.

The main objectives of the Specialist Group are 1) to identify climate-related impacts and risks in water utility operations and water resources management, 2) to increase awareness of climate change impacts on water utility operations and water management, 3) to stimulate adaptive actions in utility operations and water management, with the aim to enhance climate robustness, and 4) to connect the different communities involved (water utilities, water management, and climate change research). These objectives are to be achieved by publishing a newsletter, maintaining an electronic discussion forum, and organising regular group meetings, workshops, and conferences.

For further information about the group please go to the group's web-page at:

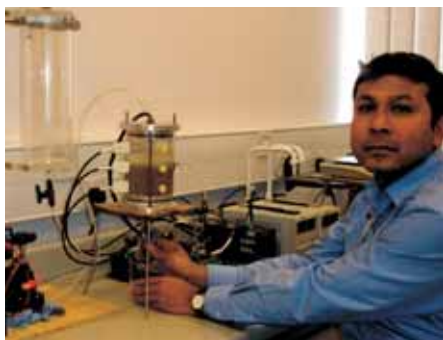
www.iwahq.org/templates/ld_templates/layout_633184.aspx?ObjectId=646784

Chair: Ir. R. Kruize, Waternet, The Netherlands, Vice chair: Prof. P. Kabat, Wageningen University, The Netherlands, Secretary: Dr. J.J.G. Zwolsman, Kiwa Water Research, The Netherlands

Diffuse Pollution

This Specialist Group (SG) handles the unmeasurable part of water management namely Diffuse Pollution. This group is dynamic, inspiring and is probably the most active IWA SG. Due to the enthusiasm of our members we have at least one profitable conference annually in a different part of the world. We specifically focus on parts of the world where the issues of diffuse pollution are relevant or in need expert outreach in the past decade managing diffuse pollution has developed from identifying the problem, to policy development, through to developing good practices, communication and auditing. One of our major strengths as a group is that we bring together technical high standard solutions and practical low threshold solutions from all over the world. We are now on the brink of investigating and developing enforcement and evaluation as the last steps in the policy cycle.

A leading edge and unique Water Framework Directive Implementation (WAFDI) Conference takes place from 1st to 3rd May, 2007 at the Carlton Hotel Dublin Airport. This International event is sponsored by the International Water Association (IWA) and Engineers Ireland and was developed as a regional initiative of the Diffuse Pollution



Specialist Group of IWA. The three-day International event on Measures, Costs, Institutions and Communications with a Seminar on Decision Support Systems is unique in its approach to linking the conference themes above, all of which are burning EU

This conference is designed to provide a forum to ask the hard questions and tease out the latest position on such issues as the definition of status, the classification tools, who are the decision makers and who has most access to them, what are the costs and who should pay, how derogations will apply and what are the incentives and sanctions in relation to meeting the objectives. The issues are as relevant for local authority staff as for MEPs and as relevant for climatologists and flood managers as for biologists.

In addition to a unique learning experience and a packed quality technical programme geared towards maximum delegate participation, the Conference also offers a warm Irish ambience and great camaraderie among like minded colleagues during the conference social events that are all included in the conference programme.

Please log onto www.wfdimplementation.eu to register now and join the Irish, other EU and international delegates from accession countries and further afield for this unique gathering of WFD experts and enthusiasts at the Dublin Airport Carlton Hotel in Ireland in early May.

Other events include Belo Horizonte, 27 – 31 August 2007, www.acquacon.com.br/dpud2007/index.html.

Information on our initiatives you can find on our website www.iwahq.org/templates/ld_templates/layout_633184.aspx?ObjectId=633908

Dr Ralph Heath, chair, Ray Earl, vice chair and Arno van Breemen, secretary

Multiphase Flow and Transport of Contaminants in Porous Media

Multiphase flows are of immense of practical relevance to subsurface contamination problems by nonaqueous phase liquids (NAPLs). While NAPL contamination continues to persist as a problem in the industrialized countries, NAPL contamination has received little attention in the developing world. As lesser-developed

countries continue their rapid paths towards industrialization, it is feared that the same problems that have been discovered in the US and Europe over the last few decades may occur in the developing world. Long term NAPL contamination is also feared because of the effects of the last Tsunami in Asia.

The objectives of this SG are therefore to identify and describe issues of current concern and, advance knowledge on multiphase flow and transport problems in porous media through fundamental and applied research. These objectives are to be achieved by organising group meetings, workshops and/or conferences and publishing peer reviewed paper, books/monographs at regular intervals. The SG committee members have diverse backgrounds and are very well qualified to lead this initiative. For example, the picture shows Dr DB Das, who is the current vice chair of this SG, conducting laboratory scale experiments of dynamic multiphase flow in porous media at the University of Oxford, UK. These experiments are expected to advance current theories of dynamic flow processes and hence, help design more accurate methods for remediation of NAPL contaminated subsurface.

This project has been funded by the Engineering and Physical Science Research Council, UK. For more information on the group, you can contact the group's Chair Prof Tissa H Illangaekare (tissa@mines.edu) and/or Secretary Prof A Niemi (aulli.niemi@geo.uu.se).

Please visit the group web-site at:

www.iwahq.org/templates/ld_templates/layout_633184.aspx?ObjectId=633911&actionObjectId=278696&sgam=1

Watershed and Riverbasin Management

The objective of the Specialist Group is to promote the understanding, benefits and utilisation of integrated catchment management approaches for the beneficial and sustainable use of rivers, lakes and groundwater basins worldwide. It seeks to achieve this by the sharing of expertise and experience among its members

and with other interested individuals and organizations, organizing specialist conferences, issuance of newsletters, undertaking cooperative projects and other activities of the International Water Association.

The Specialist Group has carried out the following activities during the past two years:

- Prepared two newsletters of Group activities and developments
- Convened one specialist conference Calgary 2005/one workshop Marrakech 2004
- Initiated three publications – WEMS book 'River Basin Restoration and Management' 2005, WST Vol 53 No:10 Watershed and River Basin Management 05/06; probable Special Issue on Data Driven Modeling and Evolutionary Optimization for River Basin Management - Journal of Hydroinformatics
- Held two group meetings – Marrakech 2004, Calgary 2005

Up coming events include:

- Groundwater Management in the Danube River Basin & Other Large River Basins. Belgrade, Serbia . 7-9 June 2007 for further information about this event, can be found at the following link www.iwahq.org/templates/ld_templates/layout_633184.aspx?ObjectId=644522
- 11th International Specialised Conference on Watershed & River Basin Management. Budapest, Hungary. 4-5 September 2008 For more information about this conference, can be found on the following link: www.iwahq.org/templates/ld_templates/layout_633184.aspx?ObjectId=655924

Chair: Perri Standish Lee standish-lepp@bv.com, Vice-Chair's: Avi Ostfeld ostfeld@tx.technion.ac.il and János Fehér feher.janos@vituki-consult.hu, Secretary, John M Tyson John@teamytyson.wanadoo.co.uk

For further information about the group please view the group's web-page at the following link:

www.iwahq.org/templates/ld_templates/layout_633184.aspx?ObjectId=633862



Members of the SG on the Athabasca glacier Alberta, Canada on the occasion of their Calgary conference in September 2005

IWA Events update

2nd Annual Mega-city Water Forum: Planning for Sustainable Growth

14–16 May 2007, Atlanta, USA

Water experts from around the world are preparing to meet in Atlanta, one of the only venues in the world where you can have an opportunity to hear keynotes from, and interact with, the leaders of the world's top water agencies, including:

- Paul Reiter (IWA)
- Rebecca West (WEF)
- Diane VanDe Hei (Association of Metropolitan Water Agencies)
- Ken Kirk (National Association of Clean Water Agencies)
- Bob Renner (AWWA Research Foundation)

These leaders, along with many other global experts, will explore sustainability issues for large and growing mega-cities around the world with a focus on environment, infrastructure, capacity-building, and funding. All participants will have a chance to form international partnerships, set long-term goals, and share best practices with their peers.

Email: environment@cifalatlanta.org

Website:

www.cifalatlanta.org/workshops/sustainability/0507/index.htm

3rd International Rainwater Harvesting and Management Workshop

21–23 August 2007, Sydney, Australia

Rainwater harvesting and Management (RWHM) is being practiced in several developing countries and developed nations, so this conference will be very timely, both from a resource management as well as an economic perspective. RWHM is viewed as a cost-effective resource management tool to mitigate the effects of most of the world water problems such as flooding, drought, high energy consumption, dried river and to have an independent, decentralized source of water supply.

It is intended that this workshop will make a contribution to the debate on the impact of rainwater management on the solution of environmental problems. Its recommendations and the gaps in research that it will identify will be the focus of discussion and timely resolution.

The proposed themes, among others, are:

- Water quality and human health aspects of rainwater catchment systems
- Application of novel technologies
- Identifying and overcoming institutional and socio-economic impediments
- Whole of society economic impacts and

lifecycle analysis of rainwater harvesting and WSUD

- Understanding energy and water relationships, and climate change issues
- Rainwater harvesting in areas remote from reticulated water systems
- Monitoring and evaluation of case studies
- Capacity building and community consultation for sustainable outcomes

Email: rainwater2007@tourhosts.com.au

Website: www.rainwater2007.com

IWA Regional Conference for Membrane Technologies in Water & Waste Water Treatment

2–4 June 2008, Moscow, Russia

The aim of the conference is to bring together specialists interested in sharing the results of latest progress and innovation in membrane techniques, processes, operation and to encourage discussions of possible ways of membrane applications.

The conference topics will be primarily focused on MF, UF, NF, RO, electrodialysis, membrane bioreactors and hybrid membrane processes, automatization and control, fouling control, chemical cleaning, ultra pure water production, softening and desalination, potable water production, wastewater treatment and reuse (domestic and industrial).

Email: iwamembranes@sibico.com

Website: www.iwamembranes.ru

12th International Conference on Integrated Diffuse Pollution Management

23–25 August 2008, Khon Kaen, Thailand

The conference on "Diffuse Pollution DIPCON 2008" with the theme entitled "Integrated Diffuse Pollution Management" is aimed to coordinate and share the information in the various aspects on diffuse pollution with the focus on integrated diffuse pollution management. The conference will be such a place for developing the knowledge of diverse group of researchers and participants, each with a critical stake in diffuse pollution, abatement and integrated management. It also provides opportunities for individuals spanning as broad scope which are engineers, hydrologists, biologists, ecologists, economists, attorneys, public officials, and governmental planners among them to present innovative idea and experiences to better understand and achieve the sustainable environmental management through integrated diffuse pollution management programme.

The proposed themes, among others, are:

- Non-Point Source: Agriculture, Transportation
- Urban Pollution
- Eutrophication: processes and case studies
- Nutrient and Pesticide Contamination
- Monitoring
- Policy/Law and regulation environ hit
- Public participation
- Conflict Management

Email : wanpen@kku.ac.th

Website: <http://envi02.en.kku.ac.th/IWA2008/>

8th IWA Symposium in Off-flavours in the Aquatic Environment

5–10 October 2008, Daejeon, Korea

Off- flavours and off-odours are recognized by the water community worldwide to be major causes of consumer complaints and a loss in confidence of drinking water safety by the general public. Such problems arise by natural and anthropogenic means. Algae are a common cause of naturally produced off-flavours. Industrial discharges and spills have caused anthropogenic odours. Off-flavour concerns are also seen in fish tainting and bottled water. Despite considerable research over the past twenty years, many issues remain unresolved.

This Symposium provides specialists and interested participants from water suppliers, academic institutions, research centres, and industry a forum to share their latest findings on the causes, origins, mitigation and management of off-flavours in natural waters, drinking waters and related systems.

Proposed Themes:

- Off-flavour, Taste and Odour in waters
- Treatment processes to solve taste and odour problems
- Odours from wastewater systems
- New analytical methods

Email: baebu@dju.ac.kr

DEADLINES

31 May 2007 for submission of revised full papers for AutMoNet (5 - 7 September 2007, Gent, Belgium)

Contact: Ingmar.Nopens@ugent.be

1 June 2007 for submission of abstracts for Sequencing Batch Reactor Technology (7-10 April 2008, Rome, Italy)

Contact: sbr4abstract@irsa.cnr.it

15 June 2007 for submission of abstracts for (Small Decentralised Systems 2008, 6 - 9 February 2008, Coimbatore, India)

Contact: small2008org@kct.ac.in

60 second interview – Kristina D. Mena

Kristina D. Mena, MSPH, PhD

**Assistant Professor, University of Texas Health
Science Center at Houston**

School of Public Health

El Paso, Texas. USA

Kristina D. Mena is an Assistant Professor of environmental science at the University of Texas - Houston School of Public Health, working as an Environmental Science Faculty member. A water microbiologist by training, she was appointed to develop and manage research programmes focusing on the public health impacts of contaminants in water, food, and the connection between pathogen occurrence in the environment and human health. In addition, she teaches the core course on environmental sciences at the graduate level, and various specialty courses in the areas of microbial risk assessment, water quality, and environmental microbiology. She joined IWA at the beginning of 2005 having recognised the value of the Association through its high quality publications and conferences.

What do you consider to be the most significant recent change in your field of expertise to have occurred in the last 10 years?

If I first look at the past 10 to 15 years, I would say that the biggest change in my field of water microbiology is the development of specific, sensitive, and rapid technology to detect infectious micro-organisms in water.

Narrowing that timeframe to the past 5 years, I feel like we have come to a standpoint with the usefulness of some of the developed methodologies. We've advanced significantly in making fast, simple tests that can detect infectious agents, but there needs to be a better understanding of how these tests can be used to determine the public health impact of infectious agents in water. It's time to ask the question, have we done all we can with these technologies or can we improve them for their optimal use in protecting public health?

What do you consider to be the most significant future challenge that professionals must deal with in the next 10 years?

The general challenge is for water professionals to realise that a multi-disciplinary approach is necessary to fully address the issues I previously mentioned.

Let's take one example. One challenging area is to grasp the specific characteristics of different micro-organisms that relate to human dose response. When you talk about dose-response issues and risk assessment, it leads you into other subjects such as statistics, mathematics and biology. The critical issue is for professionals to be able to adopt a multi-

disciplinary approach to address the problem. Furthermore, instead of looking at a group of pathogens as a whole, we need to appreciate the differences between specific pathogens; differences in infectivity, for example, and their particular dose-response relationship with humans. There is so much more to be learned.

Another area that I think is changing, and will present future challenges, is the recognition of the broad impact of water. Perhaps 20 years ago, water research focused on the investigator's individual region – a specific area in terms of geography or subject matter – and the conclusions were focused on the impact in that area. Now there is a greater awareness of water's broader impact, not just direct water consumption of an individual but the impact of water on food quality or trade between countries. I'm convinced that an area of increasing concern will be how we can better assess and manage potential human health risks related to border issues and water contamination or water contamination of food brought across the border. This is an area I'm increasingly focusing on.

Whom do you consider to be the leading expert in your field, outside of your own organization, and why?

Without a doubt I would have to say Professor Charles Gerba at The University of Arizona. I first came to know of Professor Gerba when I was a research student.

What has impacted and influenced my professional life is no matter where my career has taken me, what State I have moved to, whatever international meetings I have attended, everybody knows him. He is so well known and respected. In terms of science, I have always been intrigued by his ideas. He has a unique combination of innovative thinking, with a colourful personality. As a student, it was interesting and fun and easy to learn from him and to become enthusiastic about laboratory work. He was also challenging; you felt like you were being mentally stretched in the way you should be so that you were prepared for scientific meetings and more generally your professional life in science.

I am still in contact with him, I still consider him a mentor, and I see in his papers and in the research going on in his laboratory that he remains at the cutting edge of thinking. He always seems to be just a little ahead of where water microbiology is going.

In what ways would you like to see IWA change in the next 5 years?

This is a real tough question for me. What I have known about it so far I have been very pleased with! The idea behind IWA becoming more involved in continued professional development sounds like an intriguing one. For



me and my colleagues it would be something that we would be interested to support.

What are the key fracture points – issues of conflict or debate in your specialist area?

In my specific area of risk assessment, the biggest debate and conflict is whether risk assessment methodologies are a useful tool to be used by a regulatory agency to predict public health impact.

My career is focused on examining the microbial risk assessment process - not just as a whole in terms of its application - but also components of risk assessment to see how it can be improved; to better the methodology. Because of all of the assumptions that are intrinsic to risk assessment - the different factors regarding dose-response of individual micro-organisms; the lack of occurrence data of specific micro-organisms in various types of water - it is not always accepted as a valued method especially when used by regulatory agencies.

Forthcoming news of interest...

Over the next few months, I will be completing several research projects. One deals with a specific part of the microbial risk assessment process regarding exposure, in particular water consumption and water source preferences of the population. The U.S. Environmental Protection Agency (USEPA) uses a two litre/person-day drinking water exposure value for regulations, which is based on a few studies and studies not conducted in a hot, arid region, and not necessarily addressing certain demographic issues (race, ethnicity, socio-economic status, seasonal influence). We are surveying about 400 people along the U.S.-Mexico border in both the winter and summer months to determine how much water they drink and what are their water source preferences. I recently completed a study that was funded by Johnson & Johnson where they installed water treatment devices at health clinics within a couple of different colonias where people could get water to take to their home. We are looking at whether we can determine any type of

connection between water quality and health status of those participants.

Another project is with a colleague of mine at Texas A&M, Dr. George Di Giovanni. He and I have a project funded by AwwaRF looking at optimising a cell culture molecular approach to detect infectious viruses in water.

Concluding thoughts...

I think overall the area I am interested in, and which is of interest to others, is trying to examine the connection between water quality

and public health. Not so much a focus on being able to identify outbreaks when there is a significant contamination of the water supply, but to gain a better understanding of the public health significance of low levels of contaminants in water and therefore endemic disease.

Another growing area is the connection between waterborne agents that can lead to more chronic public health conditions than just acute diarrhoeal illnesses. So I think that addressing endemic illness and how much we can attribute to water, if any, will be fundamental in the future.

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Membership news

GOVERNING MEMBERS

With the start of the New Year, all the active Governing Members have received their relative invoices for the 2007 fees. As of Mid April, a total of 18 Governing Members have supported IWA with their contributions. IWA HQ is thankful to the continuous cooperation from the Governing Members of Australia, Austria, Germany, Hong Kong, Latvia, Malaysia, Namibia, Netherlands, Norway, Serbia, Singapore, Slovakia, Slovenia, South Korea, Spain, Sweden, Taiwan, and Uganda.

Making the most of IWA

DEVELOPMENT SOLUTIONS FUND

IWA has substantially revised and renamed the 'Premium Membership' scheme (now referred to as Global Development Solutions Fund), in line with the Association's development of a dedicated programme for development in low, middle and transitional income countries. Moreover, for Governing Members, the Association operates IWA Connections, a solidarity fund between low and high income countries

In return for bronze, silver or gold level contributions to the Global Development Solutions Fund, IWA has revised the available benefits to appeal to contributors. For further information about the work of IWA's Solutions Fund and regional development programme, and why you should be part of the collective effort, contact the IWA London office.

Further details: contact Darren Saywell, Development Director, IWA on +44 (0) 207 654 5542 or by email at darren.saywell@iwahq.org.uk

New Corporate Members 2007

The following list of organisations gives an overview of the type and geographic reach of companies that have recently joined IWA as corporate members. Their expertise and knowledge will give further strength to the wealth of knowledge and expertise already found within our network of members.

- **Environmental Biotechnology Cooperative Research Centre (EBCRC, Sydney, Australia)**
www.ebcrc.com.au

Environmental Biotechnology Cooperative Research Centre (EBCRC) develops advanced technologies based on biological systems to improve efficiency and reduce or utilise waste to benefit a wide range of industries and the environment.

EBCRC brings together the multidisciplinary skills of researchers, engineers and industry participants to complete rapid adoption of novel technologies in environmental, industrial, agricultural, veterinary, mining and medical applications.

- **"JAROSLAV CERNI" A.D Belgrade, Serbia**
english.kwater.or.kr

"JAROSLAV CERNI" A.D is independent institute for research, development, design and consulting services in the fields of hydraulic engineering and integral water resources management, including vast range of services ranging from basic and applied studies and investigations, through water master planning, feasibility studies and designs, to complex multidisciplinary projects.

- **Korea Water Resources Corporation (K-Water) Daejeon, Korea (republic of)**
english.kwater.or.kr

Since its establishment in 1967, K-water has been implementing national water resources management policies regarding multi purpose dams, water supply dams and regional water supply systems. It is also making a great contribution toward the development of the

national economy and improving the quality of life for local people.

We would like to make the following correction regarding one of our new corporates announced in the December issue of the newsletter.

- **PT Tirta Cisadane Jakarta, Indonesia**

Tirta Cisadane is Indonesia's leading water management and services company. Tirta Cisadane specialises in the rehabilitation, operation and maintenance of water treatment plants. It is a wholly Indonesian managed ISO 9001 certified company. It currently runs a government owned water treatment plant in Serpong, on the outskirts of Jakarta. The treated water is distributed to the residents of West and South Jakarta. The water produced in Serpong is used by approximately 1 million households. The Serpong water treatment plant produces 3000l/s of water and is one of the largest treatments plant in Indonesia.

News from IWA Publishing – www.iwapublishing.com

We are delighted to bring you news of TWO NEW SERIES and FOUR NEW BOOKS from IWA Publishing:

* Biological Wastewater Treatment Series *



The series Biological Wastewater Treatment is based on a highly acclaimed set of best selling textbooks. This international version is comprised by six textbooks giving a state-of-the-art presentation of the science and technology of biological wastewater treatment.

Wastewater Characteristics, Treatment and Disposal - Marcos

Von Sperling

Basic Principles of Wastewater Treatment - Marcos Von Sperling

Waste Stabilisation Ponds - Marcos Von Sperling

Anaerobic Reactors - Carlos Augustos de Lemos Chernicharo

Activated Sludge and Aerobic Biofilm Reactors - Marcos Von Sperling

Sludge Treatment and Disposal - Cleveron Vitorio Andreoli, Marcos von Sperling and Fernando Fernandes

* Water21 Market Briefing Series *



This series, associated with Water21 magazine, will include reports on different aspects of the International water sector, each with either a technology or geographic focus.

Municipal Water and Wastewater Services Reform in the Russian Federation - Sergey Ivanov, Sergey Sivaev and Ella Shalukhina

Reform of China's Urban Water Sector - Derin Tao Fu, Miao Chang and Lijin Zhong

Wastewater Sludge - Ludovico Spinosa

* Southeast Asian Water Environment 2 *



Editors: H Furumai, F Kurisu, H Katayama, H Satoh, S Ohgaki, NC Thanh

The Southeast Asian environment has been degraded by the release of industrial and domestic wastes, agricultural and aquacultural chemicals, and pollutants from automobiles. It suffers from water-related disasters, Tsunami, floods, typhoons, etc. In order to deal with these issues an integrated approach from the inhabitants, governments and researchers is essential.

The environmental threats arising from the increasing population, overuse of natural resources, industrialization, urbanization, and natural disasters present ever increasing challenges to pursuing sustainable development of the region. Many developed countries such as Japan have experiences of dealing with severe environmental pollution and this publication is the result of building an academic network among researchers of related fields from different regions to exchange information.

ISBN: 1843391244 · March 2007 · 346 pages · Paperback

IWA Members Price: £63.75 / US\$127.50 / €95.63

* Water Reuse: An International Survey *

Common Practices and Current Needs in the World



Editors: Blanca Jimenez et al

The book describes the different reuse practices in the world classified per region and deals with technical issues related to reuse, such as: technology, public participation, water rights, and legislation.

Technical chapters offer a practical picture on the state of art technology and the current situation of global water reuse.

This title belongs to Scientific and Technical Report Series

ISBN: 1843390892 · April 2007 · 450 pages · Paperback

IWA Members Price: £56.25 / US\$112.50 / €84.38

* Cities of the Future *

Towards integrated sustainable water and landscape management



Editors: Vladimir Novotny, Paul Brown

With urban waters as a focal point, this book will explore the links between urban water quality and hydrology, and the broader concepts of green cities and smart growth. It also addresses legal and social barriers to urban ecological sustainability and proposes practical ways to overcome those barriers.

Cities of the Future features chapters containing visionary concepts on how to ensure that cities and their water resources become ecologically sustainable and are able to provide clean water for all beneficial uses. The book links North American and Worldwide experience and approaches.

ISBN: 1843391368 · May 2007 · 352 pages · hardback

IWA Members Price: £60.00 / US\$120.00 / €90.00

* Organic Waste Recycling *

Technology and Management



Author: Chongrak Polprasert

This book covers the principles and practices of technologies for the control of pollution originating from organic wastes (e.g. human feces and urine, wastewater, solid wastes, animal manure and agro-industrial wastes) and the recycling of these organic wastes into valuable products such as fertilizer, biofuels, algal and fish protein, and irrigated crops.

Each recycling technology is described with respect to: objectives; benefits and limitations; environmental requirements; design criteria of the process; use of the recycled products and public health aspects.

ISBN: 184339121X · May 2007 · 536 pages · Paperback

IWA Members Price: £44.25 / US\$88.50 / €66.38

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