



NEWS AND INFORMATION

International Association of Hydrogeologists

The international groundwater organisation

Since 1956 a world-wide forum on the management of groundwater for the benefit of mankind and the environment

Over 300 Meet in Africa to Discuss Groundwater and Climate Change

From 24-28 June more than 300 participants met at the Speke Hotel and Resort, Munyonyo to attend the conference on Groundwater and Climate Change in Africa. Most remarkably, the audience and discussion panel members included several members of the Ugandan Parliament who throughout the conference contributed some occasionally heartfelt and forthright views from the frontline of their own experiences of bringing improved and sustained water services to their constituents.

The primary objective of the conference was to enable climate and groundwater scientists living or working in Africa to meet together, and thereby to improve our understanding of the potential impacts of climate change on groundwater resources and the development which depends on these resources. Further, the conference enabled them to meet with colleagues from government departments, NGOs, private sector representatives, donors, and the international agencies to share knowledge and to consider and debate the policy implications of their work.



Co-chair Callist Tindimugaya provides explanation at the Bujagali dam site

The very full scientific programme comprised keynote and supporting presentations spread over six sessions with accompanying poster sessions on the second, third and fourth days, and special evening discussion sessions on improved networking for African climate and groundwater scientists, bringing more African scientists into the UNESCO GRAPHIC programme and on monitoring and data collection. Part of the programme related to groundwater management under variable climates was supported and led by the World Bank GWMATE team, and the senior

How to contact IAH

PO Box 4130, Goring, Reading RG8 6BJ, UK
Tel: +44 (0)870 762 4462; Fax: +44 (0)870 762 8462
E-mail: info@iah.org; Web: www.iah.org

To join IAH please visit the web site and either join on-line or download the membership application form

Inside this issue	Page
Conference in Africa	1-2
President's Column	5
UNESCO IHP Meeting	6-8
News from National Chapters	9-11
Third Tripoli Conference	12
IAH News	14-15
Conference Calendar	16

water resources adviser in the World Bank attended (see note below). The final day field trip took participants to the Namubale (Owen Falls) hydro-electric power station on the White Nile at Jinja, to the Bujagali Falls and dam site and to the 'source' of the river at its outlet from Lake Victoria.

The scientific debate partly focussed on the value of global, large scale studies of climate change and the need to support and link them to studies undertaken at the national and river basin scale - the scales at which management and adaptation strategies will need to be developed. Both are needed; the former to enable large-scale scenarios to be explored and risks to be depicted, the latter to translate the possible impacts of climate change to the scale at which the hydrological processes determining groundwater recharge actually operate and can be observed.

Uncertainty about the direction and magnitude of changes in mean rainfall, compared to the possible accentuation of variability and extreme events were emphasised, together with the difficulty of distinguishing the impacts of climate change from



Conference participants at the Namubale power station

those of land use. Moreover, land use and climate change are not going to be completely independent variables in the way that they affect groundwater recharge processes. All agreed that Africa was poorly served by existing monitoring and data collection by which these processes could be distinguished (and management measures assessed), and that it was difficult to persuade national governments and development partners to invest in monitoring.

In the sometimes lively debates and discussions between scientists, practitioners and policy makers, the importance of placing groundwater in the wider context of land and water resources, and integrating it in their overall management was stressed. As a profession, we are probably better at doing this than we were, but clearly still have more to do. We need to learn the language of negotiation, policy debate and compromise.

The main scientific proceedings will be published in the IAHS 'red book' series and in the Hydrological Sciences Journal. The presentations and the summary statement distilled from the session rapporteurs will shortly be available from the conference website <http://www.gwclim.org>. The conference co-chairs Richard Taylor and Callist Tindimugaya can feel justly proud of their achievement in bringing this ambitious task to fruition so successfully. The conference was supported by IAH and presented a rare opportunity for members in Africa to get together, and moreover an excellent chance for the Secretariat and Council members present to encourage membership of the Association by groundwater professionals in the region. As a result, we have returned tired but happy from Kampala with long lists of follow-up actions and with new members and potential sponsored members.

John Chilton

“Downstream of Kampala”

Dr Vahid Alavian, the current focal point for all water resource projects and issues at the World Bank, was the first senior water resources adviser ever to have attended a major IAH-promoted groundwater conference (see item above). Vahid commented that “he detected something of an identity crisis amongst groundwater specialists” and believed that the answer to this was not just wearing a groundwater-badged polo shirt (smart as they were) but forcefully articulating the socio-economic value of the resource and the benefits from investing more in its sustainable development and effective management.

Stephen Foster



Dr Vahid Alavian

Philip LaMoreaux (1920-2008)

IAH mourns the passing of one of its Past Presidents

Philip LaMoreaux, a senior member and Past President of IAH, died peacefully at home on 23 June 2008. His work spanned more than 60 years of service to the professional and scientific community, working for the US Geological Survey in Alabama, the University of Alabama and his own consulting firm of P.E. LaMoreaux and Associates.

Philip LaMoreaux was born in Chardon, Ohio on May 12, 1920. He graduated from Denison University with a BA in 1943, obtained an MSc from the University of Alabama in 1949 and an Honorary Doctor of Science from Denison University in 1972. He began his career in hydrogeology with the USGS in Tuscaloosa, Alabama in 1943. From 1945 to 1958 he was District Geologist of the USGS's Groundwater Office in Alabama.

In 1958 Philip LaMoreaux was appointed Division Hydrologist in charge of water resources programmes in the 14-state mid-continent area of the US, and a year later, became Chief of the Groundwater Branch of the USGS in Washington, D.C. In 1961 he was appointed Alabama State Geologist and Oil and Gas Supervisor. During his 15-year tenure as State Geologist, the Alabama State Survey grew to become one of the leading state surveys in the US. From 1945 to 1983, he also served as adjunct professor in the University of Alabama Geology Department. Philip LaMoreaux established the consulting firm of P E LaMoreaux and Associates, Inc., serving as President (1970-1987), Chairman of the Board (1987-1990), and Senior Hydrogeologist (1991-2008).

Philip LaMoreaux had an interest and enthusiasm for hydrogeology and hydrogeologists worldwide. He joined IAH in 1962, one of the first from the US to contribute to an organisation which had its origins in Europe. He encouraged membership within and outside the USGS and the inauguration of the US National Chapter. He travelled widely with his wife Bunny and was an enthusiastic contributor to IAH congresses and conferences. There are many in our profession and our Association around the world who will remember Philip's warmth, enthusiasm and interest in them and their work. Philip contributed to IAH publications helping to establish the IAH "Blue



Book" monograph series and was Chairman of the IAH Commissions on Karst and Mineral and Thermal Waters. He was inaugurated as President of IAH at the Birmingham Congress in 1977 and served until the Paris Congress in 1980. He was elected an honorary member in 1989 at the time of the International Geological Congress in Washington.

In addition to IAH Philip LaMoreaux worked with and was honoured by many other organisations; he was President of the AGI, Chairman of the GSA's Hydrogeology Division and American Geophysical Union's Hydrology Division. In 1986 Philip LaMoreaux was presented with the Award for Distinguished Service in Hydrogeology by GSA; in 1990, he was the recipient of the Ian Campbell Award of the American Geological Institute (AGI). In 1989, he was elected to the National Academy of Engineers. He received the "Commanders Medal" of the US Corps of Engineers, the William B Heroy Award of AGI, and a gold medal from the Russian Academy of Science.

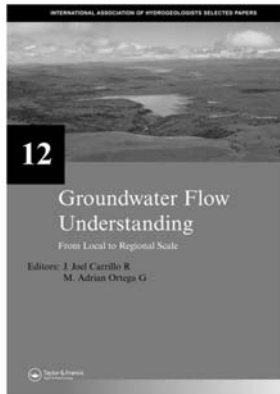
He is survived by his wife of 65 years and by a large family including second son Jim, an IAH member and President of the company his father founded to all of whom IAH sends its condolences.

IAH Executive

New IAH Publications - 60% Discount to IAH Members

Groundwater Flow Understanding

J. Joel Carrillo R. & M. Adrian Ortega G.

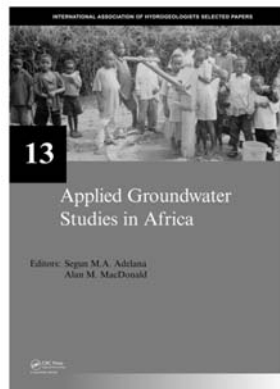


April 2008: 246x174: 196 pp: HB: ISBN 978-0-415-43678-6:
IAH-membership price: £18.80

Any sustainable groundwater development programme requires knowledge of the prevailing flow system, extending from local to regional scale. This book of selected papers discusses integral groundwater management with scale flow issues and presents methods of defining, preventing, controlling and mitigating negative environmental impacts related to groundwater. It highlights specific issues such as transboundary groundwater flow, groundwater recharge, groundwater mining, groundwater flow in thick aquifers, and stresses the importance of the sustainable development of groundwater and its social and economic implications. The book provides new insights into the procedures and processes that are influenced by the scale of the groundwater flow system.

Applied Groundwater Studies in Africa

Segun M.A. Adelana & Alan M. MacDonald



September 2008: 246x174: 474 pp: HB: ISBN 978-0-415-45273-1:
IAH-membership price: £24.00

Groundwater is Africa's most precious natural resource, providing reliable water supplies to many people, and the potential to supply many more. However, sustainable groundwater development is not a trivial task. It depends critically on an understanding of hydrogeology and skilled people to make informed decisions on how best to develop and manage groundwater. Scant attention has been paid to the systematic gathering of information on groundwater resources in the past few decades, with the result that data are patchy, knowledge is limited and investment is often poorly targeted.

This book aims to bridge the knowledge gap. The 29 chapters are written both by practitioners and researchers (mainly from within Africa) and are based on experience from recent and ongoing projects. It highlights the variety and complexity of issues surrounding the development and management of groundwater resources across Africa, and provides a snapshot of groundwater research in the early 21st century. The book will inform practitioners within Africa as well as the wider international community working towards better water coverage in Africa and elsewhere.

IAH books are published for IAH by Taylor and Francis pub.NL@tandf.co.uk

IAH members can order books at a discount by using the form at <http://www.iah.org/iahbalkema.htm>

The series editor for IAH is Nick Robins nsro@bgs.ac.uk

President's Column FROM THE WATER TABLE

AGENDA FOR A SECOND TERM

The statutes of our Association (unlike those of the USA) wisely preclude the possibility of a second term of office for the President. So with my period as IAH President (2004-08) drawing to a close, I am taking stock of progress made and opportunities lost.

During this period the IAH Executive chose to put special emphasis on improving "member services (especially the now outstanding *Hydrogeology Journal*), strengthening and broadening our congresses (with memorable events in Beijing and Lisbon), supporting the efforts of the Burdon Network (relating to groundwater for rural water-supply in Sub-Saharan Africa) and on advocating the importance of groundwater resources and their governance in international water and environmental policy fora (the subject of my previous column in *News and Information*).

Various things also come to mind that I would have liked to have reformed (or at least have changed) - although in drawing-up such an "agenda" I am conscious that, rather than serving as a manifesto for re-election, it can only represent "friendly unsolicited advice" for possible consideration by the IAH Council 2008-12. Given the inertia of our Association, some ideas are difficult to implement within the term of a "single council" unless embarked upon from day one.

Firstly, I think action needs to be taken on improving the age (not to mention the gender) balance of Council. Perhaps the easiest way of doing this would be to establish a Deputy (or Alternate) for the Secretary General, the Vice-President Programme and Science, and the Vice-President Finance and Membership - stipulating that these should be filled by people under the age of 45 or 50.

Secondly, the timing of the election for President should be moved forward (probably by 2 years) such that it is staggered with respect to that of the Council. This would enable the sort of structure summarised in the table (in which dates given are merely for illustrative purposes).

Council	2020-24	
Period	2020-22	2022-24
Chair	President 2020-24	
Deputy Chair	Past President 2016-20	President Elect 2024-28

This would have various advantages over the present system - such as ensuring greater continuity between successive Councils, enabling the President to consult with the President Elect on the process of shortlisting candidates for the next Council election, and not ruling out any unsuccessful candidates in the election for President from possible service in the succeeding Council.

Thirdly, and perhaps most important of all, the role and function of IAH Commissions requires radical overhaul. During the 2004-08 Council only 5 out of 10 Commissions could be said to have been functioning in the way and at the level intended. Others were almost dysfunctional or operating as "one-man-bands". My sincere recommendation (even after hearing some impassioned arguments to the contrary) would be to abandon the term "Commission" altogether as outdated and inappropriate, and replace it with two new types of group:

- Specialist Interest Groups (SIGs): potentially large groups concerned with longstanding subject areas (such as Hydrogeological Maps, Thermal and Mineral Waters, Geophysical Techniques, etc), producing 'ad hoc' products but not receiving support from the IAH beyond website facilities.
- Expert Advisory Panels (EAPs): smaller groups convened specifically to address topical themes and generate authoritative statements within an agreed timeframe. Their work would help develop stronger outreach platforms in support of the advocacy function of the Executive and could expect to receive financial support from the IAH Secretariat and/or other agencies.

Beyond this the most pressing issues facing the Association are related to financial sustainability (something all IPAs or NGOs are experiencing). During 2004-08 we have been successful in keeping the costs of running the Association down but less than successful in income growth and membership retention, although in 2007 we reached the highest-ever membership figure of 3,860 and still have a chance of passing the elusive 4,000 target during the life of the present Council.

Stephen Foster

UNESCO-IHP 18TH IGC - "FROM IHP VI TO IHP VII" Paris, France: 9-12 June 2008

As a longstanding and active partner of the UNESCO International Hydrological Programme (IHP), IAH attended the 18th Meeting of its Inter-Governmental Council (IGC) and were represented in part by Stephen Foster (President) and in part by John Chilton (Executive Manager). The Council Meeting (with an attendance of over 100 persons including representatives of the 30 nations comprising the current IHP Council) could have

been aptly titled "From IHP VI to IHP VII" since the biennia mainly under detailed consideration 2006-08 (for reporting) and 2008-10 (for planning) represented the final years of IHP VI and the first of IHP VII. Additionally a lot of time was taken-up in mobilising an appeal against funding cuts totalling 16% reducing the budget to about US\$ 7.5 million per annum.

IHP-VII : 2008-12 - WATER DEPENDENCIES Systems under Stress and Societal Responses

PROGRAMME

Themes and Focal Areas

Theme 1: Adapting to the impacts of global changes on river basins and aquifer systems

- 1.1 Global changes and feedback mechanisms of hydrological processes in stressed systems
- 1.2 Climate change impacts on the hydrological cycle and consequent impact on water resources
- 1.3 Hydro-hazards, hydrological extremes and water-related disasters
- 1.4 Managing groundwater systems' response to global changes
- 1.5 Global change and climate variability in arid and semi-arid regions

Theme 2: Strengthening water governance for sustainability

- 2.1 Cultural, societal and scientific responses to the crises in water governance
- 2.2 Capacity development for improved governance; enhanced legislation for wise stewardship of water resources
- 2.3 Governance strategies that enhance affordability and assure financing
- 2.4 Managing water as a shared responsibility across geographical and social boundaries
- 2.5 Addressing the water-energy nexus in basin-wide water resources

Theme 3: Ecohydrology for sustainability

- 3.1 Ecological measures to protect and remediate catchment processes
- 3.2 Improving ecosystem quality and services by combining structural solutions with ecological biotechnologies
- 3.3 Risk-based environmental management and accounting
- 3.4 Groundwater-dependent ecosystems identification, inventory and assessment

Theme 4: Water and life support systems

- 4.1 Protecting water quality for sustainable livelihoods and poverty alleviation
- 4.2 Augmenting scarce water resources, especially in small island developing states (SIDS)
- 4.3 Achieving sustainable urban water management
- 4.4 Achieving sustainable rural water management

Theme 5: Water education for sustainable development

- 5.1 Tertiary water education and professional development
- 5.2 Vocational education and training of technicians
- 5.3 Water education in schools
- 5.4 Water education for communities, stakeholders and mass-media professionals

The main opportunity for IAH input came under Agenda Item 13.2 and it will be of interest to Members to see a transcript of the IAH President's presentation:

IHP President, Council, Secretary, Secretariat, Observers:

As current President of the LAH (the International Association of Hydrogeologists) permit me to give you a brief overview of the Association and its recent involvement and potential future cooperation with the IHP. But first, for those of you new to "this circle", let me clear up some points of potential confusion:

- *LAH and LAHS are two Associations with such similar acronyms that you might be justified in thinking that they were actually married or close relatives - but (as will be revealed later) you would be wrong - as society press would put it, we are 'just very good friends'!*
- *Although the LAH is primarily focused on groundwater - you would be wrong to think that it does not have a holistic vision of the water cycle or is violating the principles of IWRM - far from it, we are also fully aware of the drivers of land-use change and water demand which so strongly influence the availability, quality and status of "our resource" and of the "down-flux" interests of groundwater-dependent ecosystems - and are thus strong advocates of ILWRM (Integrated Land and Water Resources Management).*

In many ways these days the LAH would be better named the Worldwide Groundwater Association - because we have a multidisciplinary membership of almost 4,000 individual groundwater specialists from more than 140 countries, in part organised into over 40 National Groups with a regional structure based on 8 Regional Vice Presidents democratically nominated and elected on a 4-year cycle.

Returning to our friendship with LAHS, however, I am pleased to be able to inform you that this extends to the joint organisation and promotion of two major events in the "water calendar" for 2008-09 (both of which enjoy strong IHP interest and support):

- *Africa - Groundwater and Climate Conference in Kampala-Uganda later this very month, which all-time will be the third major groundwater specialist event for Sub-Saharan Africa;*
- *the Joint LAHS/LAH Congress in Hyderabad-India (September 2009), which will give in-depth consideration to the hydrological dimensions of key Asian water resource issues.*

The IHP Secretary has already given some generous publicity to LAH support for the IHP and through alignment of our

Specialist Commissions and Working Groups in IHP VI we have been a major collaborative partner on such topics as: Groundwater Information and Mapping (WHYMAP), Internationally-Shared Aquifer Resource Management (ISARM), Managed Aquifer Recharge (MAR), Urban Water Management (UWMP), Groundwater for Emergency Situations (GWES) and Groundwater-Related Ecosystems - the lattermost topic having also been the subject of our highly successful 35th Congress in Lisbon, Portugal (October 2007), which was strongly supported by UNESCO, UNEP and the EC.

LAH membership comes as much from practice (environmental regulators and resource developers) as it does from academia. We are, therefore, extremely conscious of the key scientific issues arising from the socio-political economy of groundwater resources, and given the make-up of the present IHP Council, I would like to mention one important example from each continent of the "developing world":

- *in Sub-Saharan Africa to have any chance of achieving the MDG for domestic water-supply, it will be necessary to construct in the order of 1.5 million successful water-supply boreholes (individually small yielding and at low densities in rural areas but at high densities in the urban environment) but unless scientific understanding and know-how can be effectively mobilised in this task there will be many failures (due variously to inadequate yield, unacceptable quality, faulty design and resource unsustainability) and the unit cost of water-supply provision will rise steeply to unaffordable levels*
- *South and East Asia have by-far-and-away the largest numbers of groundwater users "on the globe" and, for example, groundwater irrigation in countries like India and Pakistan is probably responsible for over 60% of all food production and with many aquifers suffering serious depletion and/or salinisation moving from uncontrolled development to scientifically sound community based management is a critical need for food security*
- *in Latin American cities (like those of Asia) private self-supply from groundwater has escalated in the last 20-25 years, in response to the widely serviced levels of municipal water-supply and there is an urgent need to diagnose the implications (benefits, risks and financial consequences) of this phenomena as the basis for an input into future water-supply and management strategies.*

In all these cases the 'science and society interface' is very evident and thus when we look at the thematics for IHP VII we find the agenda exciting, relevant and topical - and are keen to play an active role in its implementation. However, on hearing about the (albeit well justified) trend towards increased IHP

(Continued over..)

...UNESCO-IHP

regionalisation and about UNESCO's increasing bureaucratic complexity, we are concerned about the logistic impediments and overhead cost of mobilising our unquestionable in-depth expertise and sincere goodwill to the benefit of programme implementation. This will be a major challenge for any international professional NGO like ourselves, which has only one senior salaried staff member (our Executive Manager, John Chilton, whom many of you will have met earlier in the week) and depends heavily upon the voluntary effort of its senior members. We will need your sympathy and your help to find ways around this challenge.

The IHP-VII programme has been formulated and published, and a summary document was distributed at the IGC meeting. The themes and sub-themes summarised here are taken from this document; more details can be found on the UNESCO IHP website. The Association now needs to take up the challenge outlined by Stephen in his presentation to the meeting, and Commission Chairs and Regional Vice-Presidents are urged to consider how their work programmes and activities can be aligned to the IHP themes and contribute to achieving the programme's objectives.

John Chilton and Stephen Foster

Kampala Post Script



Mjemah Ibrahimu Chikira from Tanzania and Mchpherson Nkhata from Malawi, who were supported by the British National Chapter to attend the Kampala conference as part of a new twinning arrangement between chapters, with John Chilton (Secretariat) and Richard Boak (British NC treasurer). The Kampala conference has produced new opportunities for sponsorship of young African colleagues and for National Chapters to twin with fledgling African chapters. The Secretariat would like to hear from members and national chapters wishing to participate in these efforts, and other news from National Chapters, reports of events or notice of coming activities at jchilton@iah.org or knicholson@iah.org.

John Chilton

Time Capsule Project

Two new interviews were released in May within the framework of the Hydrogeologist Time Capsule project.

Both were recorded during the workshop "Current Technology in Karst Hydrogeology and Water Resources" at the Southwest University (SWU) of China in Beibei, Chongqing by Nico Goldscheider, Wu Yuexia, Priscilla Baker, and Chris Groves.

The first is an interview of William B. and Elizabeth L White who played a key role in understanding of Karstic aquifers. The second interview provides a fascinating journey through the life of one of the most influential hydrogeologists in China, Yuan Daoxian (pictured).



The two videos are accompanied by their respective Profiles in Hydrogeology Journal. The site also contains video interviews with Jacob Bear, C V Theis, and Paul Witherspoon. Be sure to check out the Hydrogeologist Time Capsule at <http://timecapsule.ecodev.ch/>.

Philippe Renard

News From National Chapters

Below are two reports on events hosted and organised by IAH National Chapters. We are always keen to promote and publicise the activities of national chapters before they happen and to report them afterwards, so please keep the information coming to the Secretariat.

IAH HUNGARY

The Hungarian opening event for the International Year of Planet Earth (IYPE) was held between 17-20 April in the National History Museum in Budapest. It attracted about 6,500 visitors and was opened by Eduardo de Mulder, Executive Director of IYPE. The Hungarian National Chapter of the IAH was responsible for organizing the groundwater pavilion to support this broad geoscience education event. Colleagues from many institutes and universities helped in the organisation, and Teodora Szocs, chair of the National Chapter, gratefully acknowledges the contributions of colleagues from the Eotvos Lorand Science University, the Geological Institute of Hungary and Golder Associates, and also the students who were present every day.

Demonstrations in the groundwater pavilion included a model of a bank filtration system with a well and a pump. The builder of this model, an undergraduate student from the Eotvos Lorand Science University, was the winner of the international student award and attended the opening meeting of IYPE in Paris. Teodora reports that both adults and children were attracted by this model. As the whole drinking water supply of Budapest and about 40% of the supply of Hungary is provided by bank filtration systems, it was a very attractive and useful demonstration. The first bank filtration system for Budapest was built in 1868 and at present the water use of the city is about 550,000 m³ /day, rising to 700,000 m³ /day in summer time.

A water tasting game for different salinities and a game in which people could try to match the sites of bottled Hungarian mineral waters on a magnetic board were also great fun. There were infiltration experiments (as shown in the picture, right) through different “sediments”, in which children could measure the speed and the amount of infiltration. Real “field” measurements could be carried out for electrical conductivity and temperature. The intensity of the colours of the waters correlated with their concentrations, the darkest being the one with the highest TDS, to help focus attention on groundwater protection. Real oil cleaning equipment was on display.



The very young generation was also active at “fishing”, at colouring, and at a river crossing game. Children could cut out fish and glue them onto a badge, cut out and draw water droplets, or colour the copy of our groundwater poster or the “Thirstin’s Water Cycle Adventure”, a colouring game from the US EPA translated into Hungarian. In the middle of the hall a “river” with small islands was built. The islands were filled with gravels of different sizes. Here children could cross the same river twice or more, and could try to find out the size of the gravels of the islands. The photo (right) shows children crossing the river. These games about general water and groundwater topics were provided by the Eotvos Lorand Science University and the University of Miskolc, and gave children new information in a playful way.





Former Chair of the Hungarian National chapter Gyula Danko (centre) talks to visitors and to Krisztina Kármán (with tie), the international student prize winner

Finally, short educational films could be also seen on a computer screen, and in the conference room there were one or two oral presentations each day with the topics: “What we should know about our groundwater” and “Protection of groundwater”. Teodora thanks the International Secretariat Office for providing supporting material for the displays and the posters provided by the Secretariat were translated into Hungarian for the event. For its part, the Secretariat is keen to encourage National Chapters to follow the Hungarian example and is always willing to provide support in this way.

Teodora Szocs

IAH SLOVENIA

The palatial facilities of the Grand Union Hotel in Ljubljana were the venue for a meeting of the EC DG Environment Working Group on Groundwater on 22 April 2008 attended by some 70 participants from 22 Member and Associate States plus various stakeholders including senior IAH representation by Stephen Foster (President), Didier Pennequin (Vice President – Europe) and John Chilton (Executive Manager). The meeting, hosted by the Slovenia Ministry of Environment & Spatial Planning, was one in a series to review, interchange and elaborate formal guidance on EC Directive (WFD & GWD) implementation and disseminate related EC-funded research.



Stephen Foster chairs the opening session

Discussion focused on finalising Guidance on the Definition of Groundwater Status, Trends & Threshold Values, and on advancing the elaboration of Guidance on Integrated Groundwater Risk Assessment & Management which is directed at the EC-WFD 2nd Cycle of River Basin Management Planning. The meeting also heard about the preliminary implications of an informal consultation on the current status of WFD Article 5 returns on groundwater body delineation. A key question is to assess what proportion of the variation of response on groundwater bodies is justifiable by genuine hydrogeological variability rather than methodological differences, and how to better handle groundwater body visualisation in a 3-d sense. The meeting also received reports on the progress of relevant EC-funded applied research projects.

Following the precedent established in Lisbon of linking these regular meetings with IAH events, the Working Group Meeting was followed on 23 April 2008 by an IAH Symposium on ‘European Transboundary Groundwater Bodies – from Scientific Understanding to Practical Management’. This was organised for the IAH Slovene National Chapter by Andrej Juren and chaired by Stephen Foster, and was a very timely initiative in as much as over 250 transboundary groundwater bodies have been identified by member states during the informal consultation on EC-WFD Article 5 implementation. The Symposium attracted some 55 participants (including around 40 from the Working Group Meeting) and comprised four main presentations:

- *Assessment of Transboundary Groundwaters in South-Eastern Europe* by John Chilton;
- *Kravanke karstic groundwater body* by Mihael Brencic (Slovenia) and Walter Poltnig (Austria);
- *Istria Peninsula dinaric karst aquifer system* by Joerg Prestor/Mitja Janza (Slovenia) and Bozidar Biondic (Croatia);
- *Kras karstic aquifer* by Franci Gabrovsek (Slovenia) and Luca Zini (Italy).



John Chilton describes his work for UNECE in the region

These were followed by a roundtable discussion of the implications in terms of the EC-WFD & GWD for practical groundwater resource management and quality protection. The Symposium was followed by an IAH Karst Commission Meeting chaired by Heinz Hoetzl and attended by some 20 participants which discussed priority topics for consideration by the commission during 2008-12 and possible commission leaders to address this new agenda (this meeting and its follow-up will be reported on separately in due course). The IAH Slovene National Chapter is to be congratulated on the organisation of such a timely and focused event.

John Chilton (words); Andrej Juren (photos)

Elections in the Portuguese National Chapter

Teresa Melo writes to inform us that the IAH Portuguese Chapter has recently held elections and as a result now have new governing bodies:

COUNCIL

President: Luís Filipe Tavares Ribeiro (*luis.ribeiro@ist.utl.pt*)
Vice-President: José Paulo Geraldes Monteiro (*jpmonte@ualg.pt*)
Treasurer: Judite Fernandes (*judite.fernandes@ineti.pt*)
General-Secretary: Maria Teresa Condesso Melo (*teresa.melo@ist.utl.pt*)
Secretary: Albino Luís de Carvalho Medeiros (*albinoalbino@gmail.com*)

GENERAL ASSEMBLY

President: Manuel Oliveira da Silva (*mosilva@fc.ul.pt*)
Secretaries: Rosário Carvalho (*mdrcarvalho@fc.ul.pt*) and José Virgílio M. F. Cruz (*Jose.VM.Cruz@azores.gov.pt*)

STATUTORY AUDIT COMMITTEE

President: António Chambel (*achambel1@gmail.com*)
Secretaries: Manuel Augusto Marques da Silva (*mmsilva@ua.pt*) e José Serrano (*jose.serrano@ccdr.pt*)

She hopes that the new council of the Portuguese Chapter will maintain the same excellent collaboration with the IAH Secretariat, Executive and Council, and with other national chapters. For our part, we extend our welcome to the new council and can assure them of our continuing support.

IAH Executive

Potential New Chapters

During the Kampala conference, initiatives to start National Chapters in Tanzania, Malawi and Zambia and possibly other locations were further discussed. The Secretariat will support Segun Adelana, Vice President for Sub-Saharan Africa, to help bring these efforts to fruition. The new and thriving chapters in Uganda and Ethiopia will also lend their support and very relevant experience. We hope to bring you further news soon.

IAH Executive

Third International Conference on Managing Shared Aquifer Resources in Africa

The third Tripoli Conference on Managing Shared Aquifer Resources in Africa followed those in 1999 and 2002. For the third meeting, more than 150 participants from 20 African countries, UN Organizations and international institutions gathered in Tripoli, Libya from 25-27 May. Based on the publications and the presentations from previous meetings, as well as extensive continent-wide reports, it can be said that a good understanding of the main issues has been reached. Much of the support to the process has been provided by the International Hydrological Programme of UNESCO, the Global Environmental Facility's International Waters Programme and several African universities. Among the most important of the 38 Transboundary Aquifer Systems in Africa, some have been well evaluated (eg the Nubian Sandstone Aquifer and the North Sahara Aquifer System) and some still require extensive evaluation, exploration drilling and resource assessments. Under the guidance of the IAH's TARM Commission, hydrogeological evaluations are carried out and the socio-economic background, applicable legal framework and the institutional settings and the importance to ecosystems are also assessed.

Reflecting this multi disciplinary approach, conference presentations and posters were made on the scientific aspects of aquifers, the current socio-economic drivers, and the linkages between domestic legislation and the available international legislative instruments. The participants were also informed about the main contents of the Draft Articles on the Law on the Use of Transboundary Aquifers by the Special Rapporteur of the United Nations International Law Commission, Ambassador Yamada, and took note of the relevance of this international legal instrument for the African continent.

The 3rd Tripoli Conference was also the opportunity to launch a Regional Centre on Shared Aquifer Resources Management for Africa and the Arab States. The Centre has been established by the Libyan Government in Tripoli under the auspices of UNESCO. Such a Centre is unique for Africa, as sharing water resources is an issue that is much in the news but lacks authoritative information from within the continent.

The participants, some of whom are seen in the photo below, also agreed the text of a formal Statement from the 3rd Tripoli Conference. This contains a call to the international community to address shared aquifer issues more explicitly and to incorporate groundwater use effectively into national socio-economic development. The Statement is available on the IAH website. A full conference report and proceedings are also being prepared and will be available in due course.

Shammy Puri



2008 Hydrology Prize - Jean Margat

The International Association of Hydrological Sciences (IAHS) has awarded its 2008 International Hydrology Prize to Professor Jean Margat, one of IAH's most distinguished elder statesmen. The presentation was made on 10 June during the 18th meeting of the Council of UNESCO's International Hydrological Programme in Paris. In his citation the IAHS President, Arthur Askew, paid generous tribute to Jean's long and productive career as a leader in the science and practice of hydrology for more than 60 years. Jean Margat has made it his life's mission to discover groundwater resources and to make their presence known to the world: to map it, assess it, develop it wisely and to protect it, and this has been recognised by the first award to a hydrogeologist.

Jean Margat was born in Paris, studied at the Sorbonne and the Ecole Nationale Supérieure de Géologie in Nancy, qualifying in 1947 as a geological engineer. As with so many of his compatriots, he spent much of his early professional life in North Africa. For 14 years he studied the groundwaters of Morocco, publishing his findings and working for the rational development of these precious resources. He then returned to France to work in Orléans for the Bureau de Recherches Géologiques et Minières (BRGM). There he took on the challenge of founding the Hydrogeology Department which he then headed for the next 10 years. This gave him the opportunity to apply the experience he had gained in Morocco to launch hydrogeological mapping in France.

In 1972 he was promoted to Deputy Director of BRGM, a post that he held for 17 years, completing a total of 27 years with the Bureau. During this period he undertook numerous missions, bringing his expertise to countries as diverse as Bolivia, Libya, Saudi Arabia and Mali - to quote only four from a very long list.

He was also active within Europe and helped to compile the first European inventory of sites for nuclear waste disposal. Within France he launched and became Chief Editor of the new journal "Hydrogéologie" and was a key figure in establishing a methodology for the national water resource assessment.

Jean Margat formally retired in 1989 at the age of 65, but retirement has had no real meaning, and he initiated a whole

range of new projects, including the Plan Bleu for the Mediterranean: a UNEP project based in Sophia-Antipolis near Nice in the South of France. He maintained his worldwide contacts as a consultant for such bodies as the World Bank, UNESCO, UNDP and FAO - his focus being on the mapping and assessment of groundwater resources and on terminology. Particular mention may be made of his close involvement in work on the 1:5,000,000 International Groundwater Map of Africa and the 1:25,000,000 map of the Groundwater Resources of the World published by IAH and UNESCO in 2007.

IAHS is not the first body to recognise the great contribution that Jean Margat has made to the science and practice of hydrology. As far back as 1961 he received the Henri Milon Prize of the Société Hydrotechnique de France. Twenty years later he was awarded the Louis Barrabé Prize of the Société Géologique de France. In 1998 he was made an Honorary Member of IAH and two years ago was awarded our President's Prize.

In his response, Professor Margat confessed that he had not recovered from the surprise at being told by IAHS that he was to be awarded the International Hydrology Prize. In his typically modest way, he wondered whether it was really merited when he thought of the eminent previous winners, and felt jokingly that in his case it might perhaps be a reward for survival rather than for what he had done. However, he saw this as a positive sign of progress in breaking down the barriers between the sciences of the water cycle, linked to an improved appreciation of the inter-dependence between surface water and groundwater. He said he could claim no credit for having understood this from the very start of his

professional life because, in the arid zone of Morocco, the evidence was there before his very eyes. Jean paid warm tribute to the colleagues and collaborators who had inspired him and with whom he had worked over the years and who had provided him with the encouragement to persevere.



(From left) Andras Szollosi Nagy (UNESCO), Arthur Askew (IAHS), Jean Margat and Gabriel Arduino (WMO) at the presentation

There could be no more deserving recipient of the International Hydrology Prize, and the Association adds its own congratulations to the words of the IAHS President summarised above and the warm applause from the UNESCO delegates in Paris. The photo shows the presentation in Paris.

John Chilton

RHYMA at Malaga

New MSc on Water Resources & Environment

A new MSc Course on Water Resources and Environment (Recursos Hídricos y Medio Ambiente -RHYMA- in Spanish) will be offered by the recently created Centre of Hydrogeology at the University of Málaga in Andalucía-Spain, under the coordination of Prof. Bartolome Andreo. (*andreo@uma.es*).

The RHYMA MSc (*http://www.cehiuma.uma.es*) will commence in academic year 2008-08 (October 2008) and is sponsored by Spanish Geological Survey (IGME), Andalusian Water Agency, UNESCO and several public and private companies. Professors from various Spanish universities and also from France, England and Morocco, together with other specialists, will deliver the course.

The main aim of the RHYMA MSc is to form specialists in water resources, with an aptitude for aquifer evaluation and the protection and sustainable management of groundwater, compatible with environmental preservation. The course includes the following modules: (1) the water cycle and its components (2) exploration for groundwater resources (3) hydrogeological characterisation and modelling of different aquifer media (4) water quality, contamination and pollution prevention (5) environmental aspects of water (6) water resources management (7) European Water Directives and water resource economics.

The official language will be Spanish and graduates from Spain, Latin America, Portugal, North Africa (mainly Morocco) and worldwide with enough knowledge of Spanish may be interested. Only 20 postgraduate students will be accepted, and several study grants will be available (*aimarin@uma.es*).

.....

Conference in Paris organised under the EU Presidency

Following the now well-established path of associating IAH meetings with sessions of the EU Working Group C hosted under the rotating European Presidency (Lisbon, autumn 2007; Slovenia, spring 2008), the French National Chapter and BRGM, supported by many national colleagues and also by UNESCO, is planning a meeting for November 2008. The title is "EU Groundwater Policy Developments: Good Status Objectives and Integrated Management Planning". This meeting will present a timely opportunity (in relation to

key milestones in the WFD implementation timetable) for the science and policy communities to get together to share experiences. There will be two days of presentations and poster sessions on 13 and 14 November, and a field visit around Paris on 15 November.

Further details are at *www.groundwater2008paris.fr* and in the conference listing in this newsletter. This will be an excellent chance to follow progress with WFD implementation. You are urged to support Ariane Blum, Laurence Chery and their colleagues in this effort.

.....

Spanish National Chapter Active at Expo Zaragoza

The Spanish National Chapter will host and organise two events during this summer's Expo Zaragoza. Felipe Ortuño, a member of the Spanish Executive Committee of IAH writes to draw our attention to:

A Round Table entitled: "Groundwater and Climate Change" on 30 July 2008 from 20:15 to 22:00 in the El Faro Pavilion. Participants will be: Jesús Carrera (CSIC - Barcelona); Jorge Molinero (AIH-Spanish Group President); Felip Ortuño (Catalan Water Agency); Javier Samper (University of La Coruña); Juanjo Durán (Spanish Geological Service); Isabel Escaler (CetAQUA, Barcelona). This is a contribution to the week "Water and Climate Change".

A Round Table entitled: "Groundwater in Africa" on 7 September 2008 from 20:15 to 21:45 also in the El Faro Pavilion. The participants will include Stephen Foster (IAH President), with the participation of "UM-DRAIGA" and "Geologists of the World". This is a contribution to the week "Human Rights to Water and Sanitation".

Details of these events can be found at: (*www.elfaro2008.org*).

.....

Council Election 2008

IAH is run by a Council of 13 members elected every four years. IAH is a charitable, incorporated organisation and so the members of its Council are its Directors and Trustees of the Charity. Twelve posts are being contested in the 2008 elections. The retiring president, Stephen Foster, will hold the thirteenth post of Past President by reason of previous office.

The process of electing the new Council began with the call for nominations at the beginning of 2008. Nominations closed on 31 May after which it was verified that all nominees fulfill the criteria specified in the IAH rules. The final list, shown below, was published on the IAH web site on 30 June 2008.

Each IAH member has one vote for each of the twelve posts. Three of these posts have more than one candidate. The ballot opens on 1 September 2008 and votes are accepted up to 28 October, the day of the General Assembly. New members joining during the ballot period are entitled to vote.

Members with functioning e-mail addresses are sent their unique registration code and voting details by e-mail. Other members are sent this information by mail. Members can vote either on-line or by postal ballot. The registration code only works once so having two methods of voting does not mean two votes!

Candidate List

President		Wilhelm STRUCKMEIER (Germany)
Secretary General		Shaminder PURI (United Kingdom)
Vice President - Finance and Membership		Antonio CHAMBEL (Portugal)
Vice President - Programme and Science Coordination		Ken HOWARD (Canada)
Vice President - Asia	2 candidates	Shivendra Nath RAI (India) WANG Yanxin (China)
Vice President - Australasia and the Pacific		Ian ACWORTH (Australia)
Vice President - Eastern Europe and Central Asia		Igor ZEKTSER (Russia)
Vice President - Europe (West and Central)	2 candidates	Didier PENNEQUIN (France) Andrzej WITKOWSKI (Poland)
Vice President - Latin America and the Caribbean		Luiz AMORE (Brazil)
Vice President - Middle East and North Africa	2 candidates	Mohammed ABOUFIRASS (Morocco) Omar SALEM (Libya)
Vice President - North America		Leonard KONIKOW (USA)
Vice President - Sub-Saharan Africa		Segun ADELANA (Nigeria)

Conference Listing

Summary details of conferences with e-mail or web addresses are given below. For a fuller list of conferences and more details, including links to web sites visit www.iah.org/confs/

2008

1-4 Sep. Montpellier, FRANCE. XIIIth IWRA World Water Congress. Web: <http://www.c2008.msem.univ-montp2.fr>

1-4 Sep. Brisbane, AUSTRALIA. 11th International River Symposium - A Future of Extremes. Web: <http://www.riverfestival.com.au>

7 Sep. Zaragoza, SPAIN. Groundwater in Africa. Round table session, part of Expo Zaragoza 2008, within El Faro Pavilion. Web: <http://www.elfaro2008.org>

7-12 Sep. Vienna, AUSTRIA. World Water Congress and Exhibition. Web: <http://www.iwa2008vienna.org>

14-18 Sep. Freiberg, GERMANY. Uranium Mining and Hydrogeology. Web: <http://www.geo.tu-freiberg.de/umh/>

15-18 Sep. Prague, CZECH REPUBLIC. HydroPredict'2008 -- International Interdisciplinary Conference on Predictions for Hydrology, Ecology and Water Resources Management: Using Data and Models to benefit Society. Web: <http://www.natur.cuni.cz/hydropredict2008/>

15-17 Sep. Korsor, DENMARK. GroPro - Groundwater Protection Plans and Implementation in a North European Perspective. Web: <http://www.polytec.dk/gropro/>

15-19 Sep. Leuven, BELGIUM. Water and Urban Development Paradigms: Towards an integration of engineering, design and management approaches. Web: <http://www.urbanwaterconference.be/>

21-24 Sep. Edmonton, CANADA. GeoEdmonton 08. Including 9th Joint CGS/IAH-CNC Groundwater Conference. Web: <http://www.geoedmonton08.ca>

24-26 Sep. Costa Mesa, USA. GRA 17th Annual Meeting and Conference. Web: <http://www.grac.org/am08.asp>

5-9 Oct. Houston, USA. GSA Joint Annual Meeting: Celebrating the International Year of Planet Earth. Web: <http://www.geosociety.org/meetings/>

7-8 Oct. Fez, MOROCCO. Climatic Changes and Water Resources in the Middle East and North Africa. Web: <http://www.german-arab-scientific-forum.de>

8-10 Oct. Athens, GREECE. 8th International Hydrogeological Congress of Greece & 3rd Workshop on Fissured Rocks Hydrology. Web: <http://iah-hellas.geol.uoa.gr>

13-19 Oct. Lahore, PAKISTAN. 20th International Commission on Irrigation and Drainage (ICID) Congress. Web: <http://www.icid.org>

13-14 Oct. Portland, Oregon, U.S.A. Non-renewable groundwater resources - sociotechnical aspects of non-renewable groundwater resources; half-empty, half-full, top-down, bottom-up, and some paths forward. Web: <http://www.ngwa.org/DEVELOPMENT/conferences/details/0810135055.aspx>

14-17 Oct. Hannover, GERMANY. International Symposium. Web: <http://www.bgr.bund.de/EN/symposium2008>

15-16 Oct. Sacramento, USA. Applications of Optimization Techniques to Groundwater Projects Symposium. Web: <http://www.grac.org/optimization.asp>

26-31 Oct. Toyama City, JAPAN. 36th Congress of IAH; Integrating Groundwater Science and Human Well-being. Web: <http://www.lni.co.jp/iah2008/>

13-15 Nov. Paris, FRANCE. EU Groundwater Policy Developments: Good Status Objectives and Integrated Management Planning. Web: <http://www.groundwater2008paris.fr>

19-20 Nov. San Jose, USA. Emerging Contaminants 2008 Symposium. Web: <http://www.grac.org/contaminants.asp>

24-28 Nov. Ibadan, NIGERIA. Nigerian Association of Hydrogeologists 3rd International Conference. Water, environment and sustainable development: Emerging issues. Web: <http://www.nahweb.org>

24-26 Nov. Barcelona, SPAIN. Jornadas sobre el agua y las infraestructuras en el medio subterráneo (Groundwater and civil engineering). Web: <http://www.aih-ge.org>

1-6 Dec. Irvine, California, U.S.A. International Conference on Water Scarcity, Global Changes and Groundwater Management Responses. Web: <http://www.waterunifies.com>

2 Dec. London, UK. Groundwater and Extreme Events. Web: <http://www.geolsoc.org.uk>

14-17 Dec. Djibouti, REPUBLIC OF DJIBOUTI. Symposium on Hydrogeology of Volcanic Rocks. Web: <http://www.sihd-2008.com>

2009

16-21 Feb. Bangkok, THAILAND. IGS - TH 2009. International Symposium on Efficient Groundwater Resources Management: The Challenge of Quantity and Quality for Sustainable Future. Web: <http://www.igsth2009.com>

17-20 Mar. Adelaide, AUSTRALIA. Workshop on Water Recycling via Aquifers. Email: peter.dillon@csiro.au

20-23 Apr. Vienna, AUSTRIA. HydroEco'2009. 2nd International Multidisciplinary Conference on Hydrology and Ecology: Ecosystems Interfacing with Groundwater and Surface Water. Web: <http://www.natur.cuni.cz/hydroeco2009/>

7-12 Sep. Hyderabad, INDIA. Sustainable development and management of groundwater resources of hard rock terrains. Joint IAH/IAHS International Convention combining 37th IAH Congress and 8th IAHS Scientific Assembly. Email: iahs@ensmp.fr or w.struckmeier@bgr.de

23-26 Sep. Plitvice Lakes, CROATIA. Sustainability of the Karst Environment - Dinaric Karst and Other Karst Regions. Email: jadranka.pejnovic@gs.t-com.hr