

NEWS

&information

THE INTERNATIONAL GROUNDWATER ORGANISATION

Since 1956 a worldwide forum on the management of groundwater for the benefit of mankind and the environment

MAY 2010

BRAND NEW LOOK FOR THE NEWSLETTER

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FEEDBACK WELCOMED

As announced on the website at the end of last year, we have been busy developing a new look for the IAH newsletter, and this May 2010 edition is the result. With our design partners, we have prepared an updated layout and moreover are able to print in full colour at no extra cost. We are still developing the new format, but hope you like it.

This issue contains an excellent, thought-provoking message from our President Willi Struckmeier. With my own (slight) personal bias, it's certainly good to see water quality coming more sharply into focus on the international stage in 2010. We should take up Willi's challenge to help raise the profile of groundwater as an important resource that often (but not always) has good natural quality but always needs protection from the impact of human activities. IAH will be trying to do this at Stockholm Water Week, amongst other events throughout the year and our congress in Krakow provides us with another good opportunity.

Two very important current activities within the Association are also brought up to date for members in this issue. The review of our commissions by Ken Howard has been completed and the conclusions and proposed reforms are being circulated to the present commission chairs before being made available to the wider membership. The intention is that Council approval for the changes will be given at Krakow in September 2010, with a view to implementation in 2011.

Secondly, we have decided that the best way to make progress with the Forward Look review of



what type of organisation IAH should be and how it should develop over the next ten years is to hold a meeting specifically to discuss these issues in depth. This meeting will take place at Reading University on 2nd, 3rd and 4th of July. Before the meeting, we want to collect the views of as many members as possible. See the article on page 2 for more details, and let me add my weight to that of the Executive and urge you to complete the questionnaire available on our website so that we have as wide a basis as possible for deciding on our future.

Finally, just to remind you again that this newsletter welcomes news of activities from members, corporate members, national chapters and commissions. Now that we have the full colour option, photos will look much nicer, so try to send us more pictures of fieldwork or field trips, conferences, exhibitions and so on.

JOHN CHILTON



INTERNATIONAL
ASSOCIATION OF
HYDROGEOLOGISTS

2010 is a year of reviews for the Association

IAH NEWS

IAH Forward Look

We again urge you to put forward your views of where and how you would see the Association heading in the next decade

As reported in the December 2009 newsletter and on the website IAH is undertaking a Forward Look process to review its current status and consider our strategy for future developments up to the year 2020. Part of this process will be a discussion meeting which will take place at Reading, UK from 2nd to 4th July this year. The members of IAH Council have been invited, and the Commissions and National Chapters will also be represented, but this is also your chance to contribute to the future of IAH!

To have the widest possible basis for the review, we must gather the views of as many members of the Association as soon as possible. On the IAH website you will find a brief questionnaire. We would value your honest opinions regarding the Association, and your views about the future of IAH.

Based on the responses received to the questionnaire, up to five IAH members will be invited to the Forward Look Initiative meeting in Reading,

UK. There these individuals will act as additional representatives for the ordinary membership of the Association alongside members from the IAH Council, National Chapters, Commissions, Burdon Network and those working on the Hydrogeology Journal. The Executive is also keen to maintain an age and gender balance in the discussions and will take this into account when issuing invitations to the meeting. Expenses for travel and accommodation will be covered by IAH.

To assist with planning we set the end of April as a deadline for the receipt of responses. However as the meeting is not until early July we would still welcome feedback from our members. During May the IAH Executive will review initial comments and nominate individuals to participate in the Forward Look meeting.

To access the questionnaire see http://www.iah.org/news_current_popup.asp?id=99

IAH BURDON NETWORK

We also seek your views on how the Burdon Network should develop

Another reason why 2010 is a year of reviews is that we have agreed that the time has come to look back at what has been achieved by the Burdon Network and to consider what should be done over the next few years.

One issue of course would be the types of activities that the Network has been carrying out and the geographical focus of its work. Should the emphasis continue to be on Africa, or is there justification for broadening its scope? What types of activities should be undertaken?

To facilitate this review, a one day meeting will be

held on 1st July this year, the day before the Forward Look meeting. This will also be at Reading University to enable some participants to attend both. To help us prepare background papers and an agenda, we are inviting IAH members to give their own views about what the Burdon Network should be doing. We would particularly like to hear from those who have benefited from the work of the Burdon Network, and those who would like to benefit in future. Please send any comments and suggestions to Alan MacDonald at amm@bgs.ac.uk and copied to John Chilton at jchilton@iah.org. Like the Forward Look discussions, this review is important for the future of IAH and we look forward to hearing from you.



AVAILABILITY OF IAH'S PUBLICATION BACKLIST



From time to time the IAH international office receives requests from members and non-members and from libraries for one of our book publications that are long out of print. We have had vague ideas of scanning them and making them available via the website. From time to time, the Secretariat and the Books Editor Nick Robins have been thinking about this, and have been gradually trying to accumulate full sets of the earlier books. We are now more or less complete.

In the meantime scanning technology has moved on considerably in both speed and efficiency of scanning and in terms of quality

of output and, moreover, become much cheaper too. Some of the details of where and how this material might be hosted and what would be the mechanisms, conditions and practicalities of its availability remain to be sorted out with publishers and our web hosting partners. Nevertheless, the Executive agreed in Paris that this was a very simple, useful and visible contribution to our educational and scientific objectives, and also a service to our members, and has budgeted for the work to begin in 2010. Watch this space.

NICK ROBINS AND JOHN CHILTON

IAH EXECUTIVE, PARIS MEETING REPORT

JOHN CHILTON

The IAH Executive met at the offices of the Division of Water Science of UNESCO in Paris on 11-13 February. President Willi Struckmeier, Secretary-General Shammy Puri, VP Finance and Membership Antonio Chambel and VP Science and Programme Ken Howard were joined by the Executive Manager John Chilton, Executive Assistant Kellie Nicholson and VP Western Europe Didier Pennequin. During the meeting we had a useful session with UNESCO staff working on the seventh IHP to explore opportunities for closer linkages with the work of IAH. With a very long agenda and some important items needing quite a lot of time for discussion, the meeting was extended to provide four full half day sessions.

One of the most important items on this long agenda was to consider the recommendations about the future development of the IAH Commissions. Our Commissions have historically been one of the cornerstones of the Association, and they remain very important to the scientific and technical endeavours of IAH, and need to operate as effectively as they can. The outcome of the review and its recommendations are reported separately.

The draft accounts for 2009 were reviewed. Membership numbers and income held up well in 2009 despite the recession, and publication royalties were also better than we had budgeted for. Costs were down somewhat on the budget partly because the journal printing costs were lower than anticipated and also because the proposed Forward Look meeting has been held over to 2010.

The result is that, despite setting a deficit budget for 2009, we have in fact achieved a surplus of some €30,000, and the Association's finances remain very healthy. Council's decision not to raise the membership fee for 2010 is, therefore, clearly vindicated.

Although it is prudent for the Association to maintain reasonable financial reserves, the Executive agreed that we may have been over-cautious and could be challenged on this by the Charities Commission and perhaps by our membership. While we obviously should continue to watch our expenditure on running the Association, we clearly could direct some additional expenditure towards meeting our educational and scientific objectives. Ideas in this respect were discussed, and include the possibilities of providing some support to the Commissions once the review has been completed, support to National Chapters with publicity and further developments of the website. In addition, the Executive has taken the decision to set aside funds to enable us to proceed with a meeting to take the next steps in an overall strategic forward look at all aspects of the activities of IAH, as reported separately.



NEWS FROM THE KARST COMMISSION

MEETING REPORT

NEVEN KRESIC

In early December 2009 several current and past members of the IAH Karst Commission (Yuan Daoxian, Petar Milanovic, Derek Ford, Jiang Guanghui, Ralf Benischke, Ognjen Bonacci, Cao Jianhua, Chris Groves, Liu Zaihua and Neven Kresic) attended the first meeting of the Academic Committee of the International Research Centre on Karst (IRCK), recently established under the auspices of UNESCO in Guilin, China. Together with other international and Chinese karst experts, they will guide the academic and research efforts of the IRCK during its first five year term.

During their stay in Guilin the team also contributed to a Training Course on Karst Hydrogeology and Karst Ecosystems attended by 17 young scientists from developing countries. The course included both



theoretical and practical field work sessions, as well as field trips through one of the world's most spectacular karst regions. The closing ceremony of the training course was attended by Dr. Willi Struckmeier, president of IAH, and representatives of UNESCO, Chinese academic institutions and government agencies.

More on IRCK activities and organisation can be found at: <http://www.irck.edu.cn>.

IAH COMMISSIONS AND WORKING GROUPS

REFORM UPDATE

KEN HOWARD

In the last issue of News and Information I reported that the Executive was undertaking a thorough examination of services provided to members, with special focus on the roles of its Commissions and Working Groups. As Vice-President responsible for the Association's scientific and technical programme, I spearheaded this review, and am now pleased to report that we are close to completion and that a detailed proposal for reform will be presented to IAH Council in Krakow, Poland in September 2010. The reform process has a long history. It was initiated by Council in Stana de Vale (Romania) in 2002 and was advanced further in 2006 following an exhaustive survey of members. However, despite considerable discussions, no firm actions were taken.

In 2009 I re-kindled the process with a detailed questionnaire which was sent to Commission Chairs. I

also sought additional opinions from Members of Council, National Committee representatives and the broader membership during the Hyderabad Congress in September 2009. Based on my findings, a draft proposal for reform was presented to the IAH Executive during its meeting at UNESCO in Paris in February 2010. It was agreed that there should be one final consultation with Commission Chairs during the summer of 2010 before the proposal is tabled at the Krakow Council meeting. Subject to approval by Council, it is believed that the reforms could be fully implemented as early as July 1st 2011. Recognising that the reform proposals will not be finalised until August 2010, I reiterate now my previous invitation to all members of the Association who have opinions on the work and activities of Commissions and Working Groups to correspond with me urgently at gwater@utsc.utoronto.ca.

IAH Book Series

Proposals urgently sought for the International Contributions to Hydrogeology series

NICK ROBINS

IAH has two parallel book series which are published for us by CRC Press/Balkema within the Taylor and Francis Group. The green books are the Selected Papers collection and the blue ones the International Contributions to Hydrogeology. The green book series is thriving and mainly contains selected papers from conferences and many of the IAH Congresses. These are intended as a record of a specific theme from a particular meeting.

The blue book series is intended for reference books with a longer anticipated lifespan which document reviews or project work that is of major interest to the international hydrogeological community. The last of these, *Methods in Karst Hydrogeology* by Nico Goldscheider and David Drew, was published three years ago. There is only one more book

in this series currently in preparation. These blue books are written either by an individual or a group of authors, perhaps one author writing one section and working alongside co-authors wherever they may be.

It is said that every person has at least one book in them. If you have not written your book yet then this is your big chance! We urgently need proposals for the International Contributions to Hydrogeology series in order to keep the series going. Possible ideas could be use of GIS in hydrogeological investigation, 3D groundwater modelling, process modelling, hydrogeochemical investigations. If you have an idea, any idea, please talk to me at nsro@bgs.ac.uk and together we can work up a proposal to submit to CRC Press/Balkema. If this book series is to survive, we need your help right now!

PAUL EGON GROBA

1925 - 2010

Paul Egon Groba was born at Döbeln in Saxony/Eastern Germany and studied geology after the Second World War at the famous mining academy (Bergakademie) of Freiberg/Saxony. His thesis was about the origin of the coastal sediments and their structure in the area of the Baltic Sea Islands Darß and Zingst, where he had already proven his talent for associating science with practice.

He became a hydrogeologist for the Geological Survey of Lower Saxony at the Hannover "geological campus" at a time when it was the centre of IAH activity in Europe during the IAH Presidency (from 1964 to 1968) of Professor Martini, Director of the German Geological Survey. In 1968 Egon Groba was elected IAH Treasurer in succession to Professor Fricke and he continued in that role for five successive Councils from 1964 to 1989 during which time the IAH treasury function and much of the support services to members was administered from Hannover.

The IAH Council had long held the ambition for IAH to increase its standing and influence by a publication programme and Egon Groba, through his personal friendship with Christian Heise, the owner-director of a German Publishing House, was

instrumental in IAH achieving this goal. The first initiative was the series International Contributions to Hydrogeology, the first volume of which was published in 1984. After Egon left the Council in 1989, and subsequently took up residency in the United States, this initiative was continued, firstly with a second book series Selected Papers, the first volume of which was published in 1990, and then with the first issue in 1992 of the Journal Applied Hydrogeology, subsequently renamed Hydrogeology Journal. These publications continue although the link with the Heise company came to an end in 1996 (books) and 1998 (journal).

At the XXVI Congress of IAH held in Edmonton Canada in 1995, Egon Groba was elected to honorary membership of IAH in recognition of his long and significant service to the Association. Egon Groba was known within IAH for his German English, but he was well respected for his constructive and sociable attitude. IAH has lost a great supporter and an ambitious fellow of IAH of its early days.

ANDREW SKINNER AND WILLI STRUCKMEIER

PRESIDENT'S PAGE

Water quality is the principal theme issue of this year 2010, as both the World Water Day on 22 March and the Stockholm World Water Week in September have chosen the motto "Clean water for a healthy world".



WILLI STRUCKMEIER

By chance the theme of the IAH Congress in Krakow right after Stockholm is also related to sustainability issues about groundwater quality. It therefore nicely echoes the overwhelming political themes with particular emphasis on the medium most IAH members are dealing with, ie groundwater. Thus our congress is covering an important and very timely issue and has the potential to contribute effectively to the global water agenda.

CLEAN WATER FOR A HEALTHY WORLD

Groundwater quality has numerous facets. In many regions of the world the natural quality of groundwater is fit for human consumption and meets the drinking water standards of the World Health Organisation or other guidelines. However groundwater resources are becoming increasingly jeopardised by all kinds of impacts, with water quality deterioration being a very common cause of groundwater degradation.

The good chemical status of water bodies is the overwhelming goal of the European Water Framework Directive and its Groundwater Directive. Their implementation is in a crucial phase, since monitoring programmes and counter measures for the recovery of surface water and groundwater bodies at risk are to be established. In addition, in all bodies showing a negative trend of water quality the trend has to be stopped and reversed. The new legal requirements for improvement of the chemical status apply chiefly to groundwater bodies that are affected by so-called diffuse pollution, since remediation and clean-up measures for point pollution sources are already common practice in many industrialised countries. However, remediation measures are usually very costly, and even the environmental Superfund programme in the USA has been exhausted more quickly than anticipated.

In many regions of intensive agriculture the excessive use of fertilisers and agrochemicals are presenting a major threat to the natural quality of surface water and groundwater resources. High nitrate concentrations are already frequently observed in the uppermost aquifers in most countries with intensive agriculture, and more and more traces of pesticides are being detected.

Rare are the cases where groundwater polluted from diffuse sources has been cleaned up, mainly because of the very high costs and long timescales. There are a few examples of decreasing content of nitrate and pesticides in groundwater in Germany, where both water suppliers and farmers have been cooperating for a groundwater-friendly sustainable agriculture for a long period. Farmers usually receive compensation for their losses in agricultural production when they use less fertiliser, and for increased manual work if they do not use pesticides. This compensation, usually called "water-penny", is collected by the water utilities via a minimally increased water bill to customers. While there was some resistance to this practice years ago, the advantages of this water protection approach are now obvious to all stakeholders concerned - the farmers who have insignificant income reductions; water companies which can produce clean and healthy water from protected groundwater resources without costly treatment or blending procedures; the customer who is able to consume safe and clean water at reasonable cost and last but not least the natural environment. I hope such multilateral win-win situations may serve as a shining model.

Another field in which win-win situations with very large benefits can be obtained is the coupling of sanitation and groundwater protection. Groundwater quality degradation from infiltrating wastewater is probably the most important and most frequent phenomenon in rural and urban developing areas throughout the world (see: www.susana.org - sustainable sanitation & groundwater protection). In many cases even small improvements in the sanitation infrastructure not only directly help to improve the health and living conditions of the people, but also help in preventing pollution of groundwater resources from excreta, particularly in shallow vulnerable aquifers. Both groups - the sanitation and the groundwater communities have to join hands and cooperate intensively to meet the target of providing better sanitation and groundwater protection.

I hope this year's water quality motto will create increased awareness of the urgent need to protect the quality of our water resources. Many creative solutions will be presented and discussed at the IAH Congress in Krakow in Poland, that demonstrate the potential of our science to contribute to maintaining clean water for a healthy world.

IAHS RECENT PUBLICATIONS

The first four of these books are products of the joint IAHS/IAH convention in Hyderabad

Ecohydrology of Surface and Groundwater Dependent Systems: Concepts, Methods and Recent Developments

Editors M. Thoms, K. Heal, E. Bøgh, A. Chambel & V. Smakhtin

Publ. 328 2009 978-1-901502-99-2

240 + viii pp. £51.00

<http://www.iahs.info/redbooks/328.htm>

Trends and Sustainability of Groundwater in Highly Stressed Aquifers

Editors M. Taniguchi, A. Dausman, K. Howard, M. Polemio & E. Lakshmanan

Publ. 329 2009 978-1-907161-00-1

318 + x pp. £62.50

<http://www.iahs.info/redbooks/329.htm>

Improving Integrated Surface and Groundwater Resources Management in a Vulnerable and Changing World

Editors Günter Blöschl, Nick Van De Giesen, D. Muralidharan, Liliang Ren, Frédérique Seyler, Uttam Sharma & Jaroslav Vrba

Publ. 330 2009 978-1-907161-01-8 382 + x pp. £71.50

<http://www.iahs.info/redbooks/330.htm>

Hydroinformatics in Hydrology, Hydrogeology and Water Resources

Editors I. D. Cluckie, Y. Chen, V. Babovic, L. Konikow, A. Mynett, S. Demuth & D. A. Savic

Publ. 331 2009 978-1-907161-02-5 528 + viii pp. £92.00

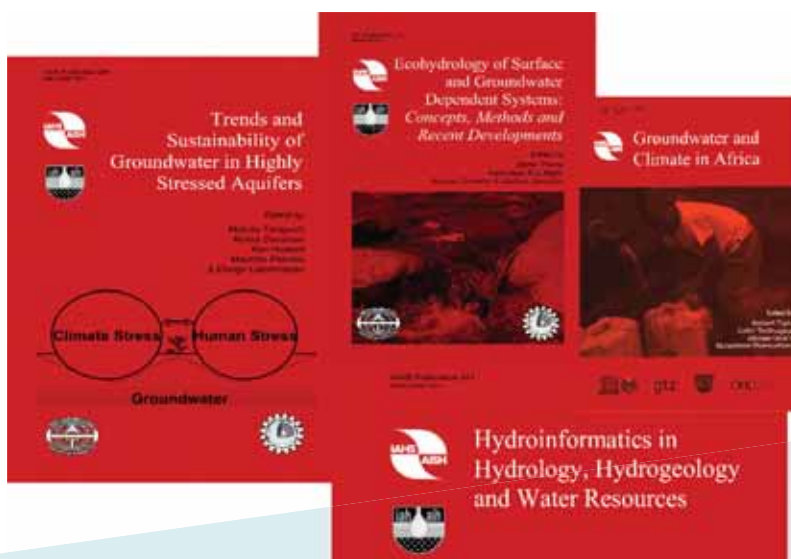
<http://www.iahs.info/redbooks/331.htm>

Groundwater and Climate in Africa

Edited by R. Taylor, C. Tindimugaya, M. Owor & M. Shamsudduha

Publ. 334 2009 978-1-907161-05-6 276 + xii pp. £65.00

<http://www.iahs.info/redbooks/334.htm>



ORDERING DETAILS:

Jill Gash, IAHS Press, Wallingford, Oxfordshire OX10 8BB, UK

jilly@iahs.demon.co.uk

fax: +44 1491 692448

Please email articles and high quality images to jchilton@iah.org

Morocco

Successful conference held in Agadir

The Moroccan National Chapter reports that their conference which took place in March was highly successful and much appreciated. Around 300 participants attended the first day and 200 each of the second and third days, drawn from some 50 countries. During the conference a new committee was elected for the next three years and 15 new IAH members were recruited. A more detailed report will appear in the next newsletter and the conference programme can be seen at <http://www.fsa.ac.ma/gire3d/>, where the presentations will also appear soon.

LHOUSSAINE BOUCHAOU

Celebration of eminent hydrogeologist

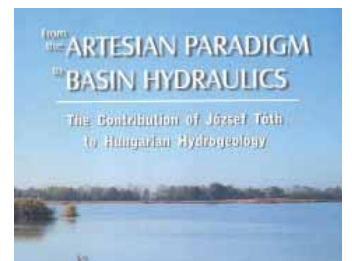
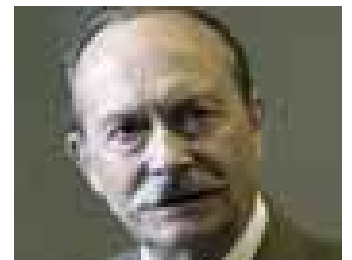
HUNGARY

Book release - From the artesian paradigm to basin hydraulics: The Contribution of József Tóth to Hungarian Hydrogeology

A new book dedicated to József Tóth and his activity in Hungary has just been released. Professor Tóth had to leave Hungary, his homeland, in 1956 when the revolution collapsed. In Canada he became a well-known and respected hydrogeologist of world-wide reputation, whose professional activity triggered a fundamental turn in the development of hydrogeology.

Responding to an invitation he revisited Hungary in 1994 and since then has been in regular contact with Hungarian hydrogeologists. József Tóth resettled in Hungary in 2005 and he became honorary professor at Eötvös Loránd University in Budapest.

This book summarises the results of the research projects



he has contributed to while at Eötvös Loránd University.

It can be obtained from:

[http://www.interkonyv.](http://www.interkonyv.hu/)

[hu//konyvek/en/From%20](http://www.interkonyv.hu/konyvek/en/From%20the%20artesian%20Paradigm%20to%20basin%20Hydraulics)

[the%20artesian%20](http://www.interkonyv.hu/konyvek/en/From%20the%20artesian%20Paradigm%20to%20basin%20Hydraulics)

[Paradigm%20to%20](http://www.interkonyv.hu/konyvek/en/From%20the%20artesian%20Paradigm%20to%20basin%20Hydraulics)

[basin%20Hydraulics](http://www.interkonyv.hu/konyvek/en/From%20the%20artesian%20Paradigm%20to%20basin%20Hydraulics)

MÁDLNÉ SZOENYI JUDIT

KRAKOW 2010

Our Polish colleagues report that responses so far for the congress have been enormous

The Polish Chapter of IAH, AGH – University of Science and Technology and the Jagiellonian University would like to renew their invitation to the XXXVIII Congress on “Groundwater Quality Sustainability” in Krakow, Poland from 12 to 17 September 2010.

Krakow is the ancient capital of Poland and considered by many to be its cultural capital. The city offers a long and rich history and traditions which have led to its inclusion on the UNESCO World Heritage List, and in the year 2000



Krakow was proud to hold the title of European City of Culture. Krakow has been a university town since 1364, with its most famous students being Nicolaus Copernicus (1491-95) and Pope John Paul II (1938-39, 1942-46) and currently has about 180,000 students.

EVENT PROGRAMME

The technical programme will include plenary sessions with invited speakers, and parallel sessions with oral presentations accompanied by thematic poster sessions. In addition round-table discussions are planned on groundwater quality issues in the context of the UNESCO Year of Water Quality. There will be a field trip midweek, as well as meetings of the IAH Commissions, the IAH General Assembly. An IAH Council Meeting is also planned to consider the outcomes



Auditorium Maximum

of the Forward look process.

The social programme will include a Reception, a musical performance at the Mariacki Church, and a Banquet at the Slowacki Theatre. Three optional Post-Congress tours are to the Tatra mountains, to Upper Silesia or Lower Silesia.

LATEST NEWS - great prospects

Over 400 abstracts have been submitted for oral and poster presentations, with around 500 delegates expected to attend.

Extended Abstracts will be published as a conference volume and on a CD which participants will receive on registration.

View latest news on

<http://www.iah2010.org>

Special report by Professor Stephen Foster, IAH Past President

10TH YEAR OF GW-MATE

Promoting Investment and Disseminating Know How in Groundwater Management

Over the past decade GW-MATE, the World Bank Groundwater Management Advisory Team has facilitated groundwater related investments in World Bank funded projects worldwide. It has also disseminated practical experience on the management and protection of groundwater, primarily through its Sustainable Groundwater Management – Briefing Note Series and Case Profile Collection.

The GW-MATE Briefing Note Series provides an introduction to the theory and practice of groundwater management, especially in the developing-nation context, by answering frequently asked questions.

The Series is written for all professional disciplines working in the water sector and is divided into four separate thematic sub-areas (see over).

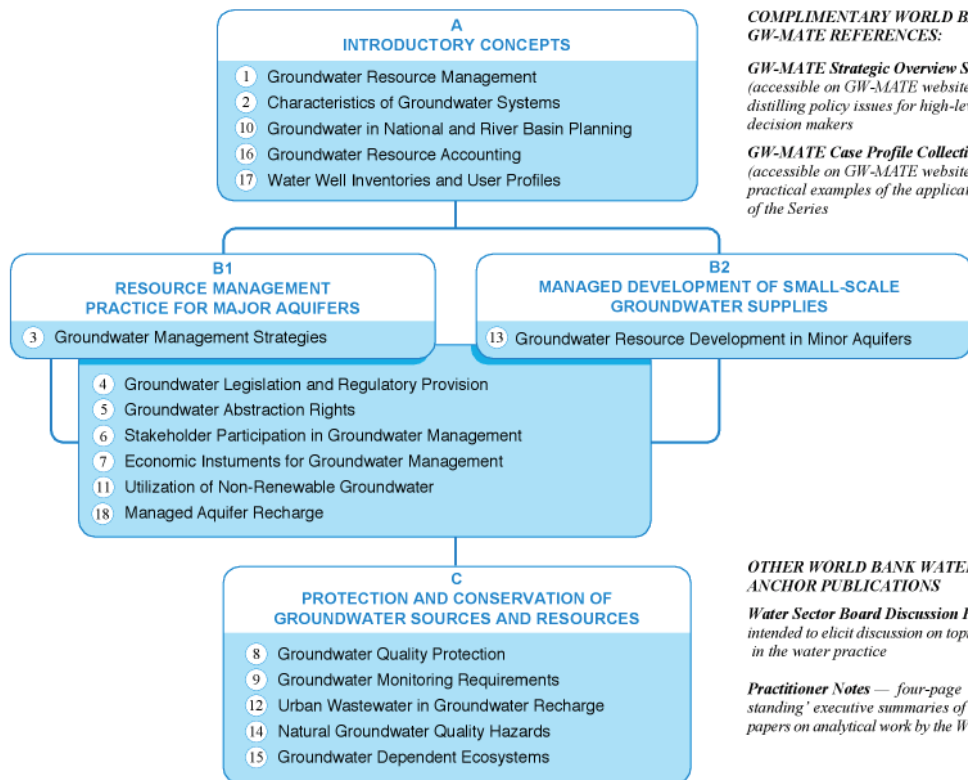
Groundwater sustainability is closely linked to policy issues influencing water and land use and represents one of the major challenges in natural resource management.

Groundwater management action plans founded on sound technical diagnosis are typically a balance between:

(a) community awareness raising, participation and self-regulation; (b) resource administration and use regulation; (c) policy interventions to constrain demand; and (d) demand-side and/or supply-side engineering. The appropriate balance between such measures depends on the local hydrogeological and socioeconomic setting and a standardised blueprint is simply inadequate.

In promoting advances in groundwater management, numerous misconceptions have to be overcome

In promoting advances in groundwater management, numerous misconceptions have to be overcome. These include the view that resource deficits can be met by supply side measures alone, when in reality measures to control demand will always be necessary and that improvements in irrigation efficiency alone will lead to real groundwater resource savings, when the reverse is quite often found to be the case. There is also a reluctance to recognise non-renewable groundwater resource exploitation, which requires proper planning and justifiable economic returns.



COMPLIMENTARY WORLD BANK GW-MATE REFERENCES:

GW-MATE Strategic Overview Series (accessible on GW-MATE website) — distilling policy issues for high-level decision makers

GW-MATE Case Profile Collection (accessible on GW-MATE website) — practical examples of the application of the Series

OTHER WORLD BANK WATER ANCHOR PUBLICATIONS

Water Sector Board Discussion Papers intended to elicit discussion on topical issues in the water practice

Practitioner Notes — four-page 'self-standing' executive summaries of longer papers on analytical work by the World Bank

Thematic areas of the GW-MATE Briefing Series

During 2010, with groundwater increasingly in the spotlight as climate-change adaptation issues loom ever larger, GW-MATE will continue country level project work in Africa, Brazil, China, India and Peru.

A major effort will also be put into synthesising past experience into a number of strategic policy overviews dealing with:

- (a) groundwater governance;
- (b) conjunctive use of groundwater and surface water;
- (c) Urban groundwater use policy;
- (d) Groundwater management in irrigated agriculture.

We will be working to develop, from existing GW-MATE products, a 'Training the Trainers' Module on Groundwater in ILWRM for Africa and

producing updated versions of earlier Case Profiles No 9 on the Guarani Aquifer Initiative and no 15 on Transboundary Groundwater Management in Sub-Saharan Africa. The team will also be making a major contribution to the World Bank Publication 'Deep Wells and Prudence – Towards Pragmatic Action for Addressing Groundwater Overexploitation in India'.

See www.worldbank.org/gwmate for more information.

Watch the GW-MATE website for updates during 2010
www.worldbank.org/gwmate

2010

25-29 May: Ohrid, REPUBLIC OF MACEDONIA. Conference on Water Observation and Information System for decision Support (BALWOIS 2010). email: secretariat@balwois.com; web: <http://www.balwois.com/2010>

9-11 June: Santiago, CHILE. Water in Mining - International Congress on Water Management in the Mining Industry. email: wim@wim2010.com; web: <http://www.wim2010.com>

15-17 June: San Francisco, USA. Toward Sustainable Groundwater in Agriculture: An International Conference Linking Science and Policy. Organised by Water Education Foundation and the University of California, Davis. web: <http://www.ag-groundwater.org>

21-25 June: S. Miguel, Azores, PORTUGAL. 21st Salt Water Intrusion Meeting. Organised by CVRM Geo-Systems Centre, IST - Lisbon Technical University and CVARG Centre of Volcanology and Evaluation of Geological Risks - University of Azores. web: <http://www.swim21-azores2010.com/swim21.html>

16-20 August: Guanajuato, MEXICO. Water-Rock Interaction (WRI-13). web: <http://wri13.cicese.mx/>

11-13 October: San Diego, USA. The Changing Physical and Social Environment: Hydrologic Impacts and Feedbacks. Organised by Elsevier. email: hydrologyconference@elsevier.com; web: www.hydrologyconference.com

18-22 October: Adana, TURKEY. Seventh International Symposium on the Geology of the Eastern Mediterranean. Organised by Cukurova University. email: jeosempozyum@cu.edu.tr; web: <http://www.geology.cu.edu.tr/ISEMG2010/>

31 October - 4 November: Canberra, AUSTRALIA. Groundwater2010 - the challenges of sustainable management. Organised by GSA Engineering, Environmental and Hydrogeology Specialist Group and IAH Australia NC. web: <http://www.groundwater2010.com>

23-26 November: Santiago, CHILE. Mine Closure 2010 - V International Conference on Mine Closure. email: mc@mineclosure2010.com; web: <http://www.mineclosure2010.com>

6-8 December: Paris, FRANCE. Transboundary Aquifers - Challenges and New Directions. Organised by UNESCO IHP and IGCP Programmes, IAH and UNEP. email: isarm2010@unesco.org; web: <http://www.isarm.net>

For a fuller list of conferences and more details, including links to websites visit www.iah.org/conf/

We are happy to accept information concerning upcoming groundwater events from organisers email knicholson@iah.org with full details.

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