



<http://www.cig.ensmp.fr/~iahs>

IAHS Newsletter

No. 76

November 2002

*With sincere
thanks to
Penny Kisby
retiring after 30 years
with IAHS Press (see page 2)*

Photo courtesy Norman (Jake) Peters



IAHS at Sapporo—July 2003

Deadlines for abstracts, page 17

Hydrological Sciences Journal
impact factor for 2001 was 1.22;
HSJ now ranks fifth in the ISI list
of 50 water resources journals

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From Kuni Takeuchi, IAHS President

I would like to briefly review with you some important IAHS activities that are in progress.

The PUB kick-off will be in Brasilia, 20–22 November 2002; by the time you read this Newsletter the successful results will be reported at the IAHS web site. I am pleased to see the growing number of people expressing interest in PUB and joining its activities. I thank the many enthusiastic supporters and the local organizing committee, especially Dr Sergio Koide for their efforts in preparing for the meeting.

Preparations for IUGG/IAHS Sapporo 2003 are progressing well. Since the theme of HS02: *Water Resources Systems—Global Change, Risk Assessment and Water Management*, attracted

very many abstracts, it has been decided to subdivide it. Two symposia (HS02a and HS02b) will be held and two separate Red Books produced. I thank the Japanese Local Organizing Committee and conveners for their hard work.

As a contribution to the UN International Year of Freshwater, IAHS jointly with the Italian IHP National Committee, is organizing an international symposium: *The Basis of Civilization—Water Science?* in Rome, Italy, on 5–7 December 2003. This is a special symposium to relocate our hydrological sciences in a historical and philosophical framework. See the IAHS web site for a complete description. I urge your participation; abstracts should be sent to John Rodda.

An IAHS brochure is planned to mark the 80th Anniversary of IAHS. The objective is an attractive digest of contemporary hydrological sciences aimed at students (potential Association members), the public, governmental and non-governmental organizations and politicians, as well as of interest to IAHS members and research and practising hydrologists. Every IAHS Commission has been requested to contribute an article. This publication will be launched at the 3rd World Water Forum in Kyoto/Osaka/Shiga in March 2003, and distributed at subsequent conferences, as well as to members.

The election of new IAHS officers for the term 2003–2007 (for presidents 2005–2009) is now at the nomination stage. The deadline is the end of December. These nominations are decisively important to the future of IAHS. I request all members to seriously consider the nominations and talk to your IAHS national committees or any members of the current IAHS administrative officers.

Nominations for the 2003 Tison Award and the 2003 International Hydrology Prize are also due on the same date. Please contact Pierre Hubert with proposals.

Mrs Penny Kisby will retire from her post as IAHS Press Manager early next year and Dr Cate Gardner has been appointed as her successor by the Board of IAHS Ltd. On behalf of IAHS, I would like to express my sincere thanks to Penny for her long and dedicated work as the anchor of the IAHS publication activities. I welcome Cate to this very difficult position and wish her and the new team all the best in maintaining the high reputation that IAHS Press has.

I was informed by Zbigniew Kundzewicz, our Editor, that the Science Citation Index (impact factor) of *Hydrological Sciences Journal* is 1.22 for 2001. I would like to express special thanks to him and his editorial associates and staff for this achievement and congratulate ourselves. But the index changes every year and we need continuous effort to keep it high!

I would like to report my recent visits to Norway, China and Malaysia. I appreciate the

IAHS Newsletter

The International Association of Hydrological Sciences (IAHS) is a nongovernmental scientific organization dedicated to serving the science of hydrology and the worldwide community of hydrologists. The IAHS Newsletter is issued three times a year and is distributed free of charge to individuals (not libraries) at the discretion of the Secretary General. All members of IAHS receive a copy. Both this Newsletter and previous issues may be downloaded from the IAHS web site: <http://www.cig.ensmp.fr/~iahs>

Newsletter 77 will coincide with the publication and distribution of the IAHS 80th Anniversary publication. Therefore NL77 will be brief focusing on announcements of upcoming meetings. Articles and reports which cannot be included in NL77 will be included in NL78, due for publication in July 2003.

Articles should be sent to the IAHS Secretary General, preferably by e-mail to iahs@ensmp.fr, or on diskette in Word, Rich Text Format or ASCII format, or by fax or mail to:

Pierre Hubert, Secretary General IAHS
Ecole des Mines de Paris,
F-77305 Fontainebleau, France
tel.: +33 1 64694740; fax: +33 1 64694703

Next deadline for copy

Articles must be received six weeks before the month of publication. **The next issue, NL77 will be published in March 2003 and the deadline for articles is 24 January 2003.** The following issue, NL78, will probably come out early in July 2003. The deadline for copy will be 23 May 2003.

This Newsletter was edited by Cate Gardner and published by IAHS Press, Centre for Ecology and Hydrology, Wallingford, Oxfordshire OX10 8BB, UK

warm receptions I received. I was invited by the Nordic Hydrology Conference held at Roros, Norway in August. Roros is an old mining community in the midst of Scandinavian mountains and is designated as a UNESCO World Heritage site. There are small wooden houses with turf roofs growing wild grasses. A vast golden pasture on an undulating glacier-made field was so beautiful.

I was invited to two international meetings in Beijing in September. The first, on *Flood Defence*, was jointly organized by the China Institute of Water Resources and Hydropower Research and Qinghua University (see report p.16). The second was *Dialogue on Water and Climate in the Yellow River Basin* jointly organized by the Chinese Academy of Sciences, the Commission of Hydrology for the Geographical Society of China, and the China Technical Advisory Committee of the Global Water Partnership (GWP China). Besides the strong focus on the Yellow River by all participants, it was a pleasant surprise for me to see the rapid urban development and clean atmosphere in Beijing. It has changed a great deal in a year. Beijing is preparing for the 2008 Olympics: there are many new buildings and factories have closed or moved out to the suburbs of Beijing. The discussions were exciting with the timely theme of the hot spot of world water problems. The new Water Law of China, which was issued on 1 October, was also presented.

The 10th anniversary of the IHP Regional Steering Committee for Southeast Asia and the Pacific (RSC) was held in Port Dickson, Malaysia, with a preceding symposium in Kuala Lumpur. The symposium was a joint event with the International Conference on *Urban Hydrology for the 21st Century* organized by the Humid Tropics Center of Malaysia. The hydrologists in the region celebrated the decadal achievements of RSC that was established in the then vacuum of regional communication in hydrology and water resources. The achievements include the well known *Catalogue of Rivers for Southeast Asia and the Pacific*, with four volumes published covering 94 rivers from 13 countries. Port Dickson is located between Kuala Lumpur and Malacca. I also enjoyed swimming in the Malacca Strait. The water was warm (probably nearly 30°C) and relatively clean. The sunset into Sumatra Island was just great with the thirteen-day moon on the other side of the sky.

Kuni Takeuchi

Penny Kisby

Was it as long ago as 1971 or 1972 that Penny Kisby started to work for IAHS? Perhaps the exact date is a little difficult to pinpoint as, at first, because of the Association's modest publication programme, she was the part-time Assistant Editor. The 1972 *Hydrological Sciences Bulletin*, as it then was, contained 463 pages with Penny's name inside the front cover. The December issue commemorated the Fiftieth Birthday of the Association with papers to mark this event by the current President (Jean Rodier) as well as Tison, Langbein and others. Due to Penny the Association's famous "Red Book" series took on a new look with Publication no. 100: *Mathematical Models in Hydrology* which was post published in 1974, but it was the proceedings of the *Hydrology of Lakes Symposium* (Publ. no. 109), published a year earlier which changed things even more. The Lakes symposium, held in Helsinki, was the first to be pre-published by Penny and this set a new pattern. Subsequently the majority of the Red Books between 109 and the current volumes (publications now up to number 276) have been pre-published and this with the success of the *Hydrological Sciences Journal* has given a firm financial footing for the Association. IAHS Press now has a staff of four, with Penny as the Manager. The Journal comes out six times a year, there are 6–10 Red Books a year, the Newsletter, the Blue Book Series and other publications.

Dedication, patience, the ability to lead a team, pride in what is being done—these are among the attributes which have made Penny such a success and have given the IAHS Press such a high reputation. Over her 30 years with IAHS, Penny has transformed the Association's publishing process from a "part-time, amateur" operation into a highly professional venture with an annual turnover approaching £200 000. She has become a dab hand at office moves, having been shunted round the Wallingford site on innumerable occasions, but Penny's unflappability, humour and enthusiasm have always shrugged off such challenges. The smart new offices near the front of the CEH Wallingford site are a fitting tribute to her vision, drive and dedication to IAHS.

Penny leaves on a high note, but come to think of it I have never heard her sing. Something for the future perhaps amongst the travelling, gardening, grandmothering and Craig's clocks!

John Rodda
Past-President

PRICE REDUCTIONS ON IAHS PUBLICATIONS

From 1 January 2003, the price of all IAHS titles produced more than 10 years earlier is **£10.00** each. See page 7 for details of 1990, 1991 and 1992 books (minimum price—no discounts on this price)



Penny with the present IAHS Press team,
Cate Gardner, Frances Watkins and Jill Gash,
at her retirement dinner

Its goodbye to Penny and hello to Cate Gardner

Penny Kisby will retire on 5 February 2003. Following adverts for her replacement, interviews were held at Wallingford on 24 October, with a panel of Prof. Des Walling (Chairman) (Chair IAHS Ltd), Dr Pierre Hubert (IAHS Secretary General), Dr Zbyszek Kundzewicz (HSJ Editor), and Frank Farquharson (Secretary to IAHS Ltd) interviewing five short-listed candidates. The Board are pleased to announce the appointment of Dr Cate Gardner as Penny's successor. Cate will take up her post early next year, and her promotion from within the existing IAHS Press team leaves a vacancy for a production editor, for which interviews are being held on 12 November.

The Board would wish to add their enthusiastic thanks to Penny for the way she has transformed the IAHS Press office from a very small part-time operation into the successful major publishing operation we all benefit from today. Penny will be hard to replace, but in Cate we are confident that IAHS Press will continue to develop and flourish.

Frank Farquharson
CEH, Wallingford, UK

News from Commissions

International Commission on Continental Erosion

In September 2002, ICCE had a very successful symposium on "The Structure, Function and Management Implications of Fluvial Sedimentary Systems" at Alice Springs, Australia (see meeting reports). ICCE thanks the symposium organizers (Fiona Dyer, Martin Thoms and John Olley) and the supporting organizations (IAHS, UNESCO, Land & Water Australia) for doing a super job.

At the Alice Springs symposium, Des Walling was awarded the title of "Honorary President of ICCE" in recognition of his exceptional

contributions to ICCE. ICCE President Wojciech Froehlich presented the award, and provided a statement summarizing Professor Walling's accomplishments, from which the following is extracted:

.....Des Walling has been actively involved with the activities of ICCE for more than 25 years. He was elected Secretary in 1975 and served in this position for two terms from 1975 to 1983. In 1983 he was elected President and again served in this position for two terms from 1983 to 1991. During this time he made a major contribution to raising the profile of ICCE both within IAHS and more generally within the international scientific community. He was instrumental in initiating the regular series of ICCE symposia which continues to this day and in establishing the field of interest of ICCE across a wide area, including both soil erosion and sediment yields and embracing both monitoring and modelling, sediment quality and even the dissolved loads of rivers. Under his influence, ICCE has created its own identity as a coherent group straddling the divide between hydrology, geomorphology, civil engineering, agricultural engineering, sedimentology and geochemistry.

.....Des has also helped to promote the strong links between ICCE and UNESCO and International Atomic Energy Agency (IAEA) and has been involved in editing two UNESCO Technical Reports produced by ICCE.

Des Walling's contribution to the field of erosion and sedimentation extends well beyond ICCE. He has made a major contribution. His list of publications now extends to 22 books and edited volumes and more than 350 papers in journals, edited volumes and conference proceedings. He has also served as President of the International Association of Sediment Water Science (IASWS), he has been heavily involved in the recent activities of IAEA in promoting the use of radionuclide tracers in erosion and sedimentation investigations and he has been active in the work of the International Geosphere Biosphere Programme (IGBP) through PAGES, LOICZ and its Water Group. His PhD students have gone on to build on his work. Three of his former students are participating in this symposium and I suspect that he has served as external examiner for several other participants!

During the Alice Springs symposium, plans for several future symposia were discussed. The next meeting in which ICCE is involved is Symposium HS01 *Erosion Prediction in Ungauged Basins (PUBs): Integrating Methods and Techniques* at the IAHS General Assembly, in Sapporo (see Calendar of Meetings, page 24). Preparation of the Red Book papers for this two-day symposium is well underway. I am looking forward to seeing many of you in Sapporo.

Dirk de Boer, Secretary ICCE

Hydrology for 2020

The Hydrology 2020 Working Group was created in January 2002 to explore how hydrological sciences can meet the world water challenges that are expected to prevail by 2020 (see IAHS Newsletter no. 74). The group of young scientists, which represents a large range of hydrological research fields, met for a second time (11–12 June 2002, Paris) to continue discussions on identifying possible and recommended directions for hydrology in future.

Each group member presented the state-of-the-art in his/her field of interest. The main hydrological themes concerned scientific research as well as applications: global hydrology, ground-water, tracers, erosion, runoff generation processes, snow hydrology, eco-hydrology, assessment of global reservoir water resources, water quality, remote sensing techniques, modelling approaches, atmospheric model downscaling and impact studies, hydrology in the international policy arena, and application of hydrology to water resources management. For each theme, the most important research of the past 20 years was reviewed, and its impact on the present state of the field was explored. Major gaps in hydrological knowledge and understanding were assessed in order to identify the future directions to be explored. Finally, each member gave a personal view of the future evolution of his/her field of interest.

Subsequent discussion focused on the current gaps within hydrological science and expected trends within the discipline over the next 20 years. Although hydrology is linked to many other disciplines (ecology, soil science, climatology, geology, etc.), there are many aspects that are unique to hydrology. For example, hydrology is the only science dedicated to investigating water issues such as temporal availability/variability of water resources, water quality or water resources in a changing environment. The group also discussed several “bottlenecks” that are current obstacles to progress within the discipline. These bottlenecks ranged from scientific obstacles to institutional, funding, and policy-related issues. Great hopes for future developments in hydrology are founded on technological advances for providing new sensors and tracers, improved communication tools (e.g. the Internet), remote sensing techniques and modelling improvements. Finally, it is the Working Group’s view that hydrology should be a more pro-active problem-solving science, with closer connections to the societal challenges and with better cooperation between the various hydrological sub-disciplines.

Over the next year members will produce an interim report that will deal with four critical questions: the uniqueness of hydrology, the needs of society, advances in technology, and critical

bottlenecks. This report will be disseminated at the IAHS meeting in Sapporo (July 2003). The Working Group will organize an open workshop at Sapporo, to meet and discuss with a large panel of hydrologists and other scientists. The debate between HY2020 members and other participants will focus on a set of critical questions concerning scientific and political choices, for instance:

- Do we need sophisticated physically-based models when the data sets are not sufficient?
- How can different measuring and modelling scales be combined?
- Should hydrology be integrated into other sciences or be an integrator of other sciences?
- How can the field of hydrology more effectively influence water policy?
- How can hydrology effectively respond to the needs of the developing countries?
- Will hydrologists succeed in promoting and helping to develop international networks for measurement, knowledge and cooperation?

Can we attract the necessary quality and quantity of young scientists to the field of hydrology that are required to meet the water challenges of the future?...

The HY2020 group invites everybody interested in discussing such questions to participate in the Sapporo workshop:

<http://www.cig.enscm.fr/~iahs/sapporo/iahs-sapporo.htm>.

Contact for comments and suggestions

taikan@iis.u-tokyo.ac.jp

Election of Officers to the IAHS Bureau and IAHS Commissions

The officers of the IAHS Bureau (President-Elect, three Vice-Presidents, the Secretary General and the Treasurer) and of all the IAHS Commissions will be elected at the Plenary Administrative Session at the IAHS General Assembly which will take place at Sapporo in July next year. To follow the IAHS Statutes and Bye-laws, a precise and rather complex procedure must be followed. Full details are given in the *IAHS Handbook*, and also can be seen at the IAHS web site.

Nominations and Voting are by Country

Only IAHS National Committees, the IAHS Bureau and the IAHS Scientific Commissions can actually nominate members for election as officers of the Bureau, or of the Scientific Commissions, and only National Committee Representatives can vote at the meeting. IAHS members who wish to propose members for election, or to have a say in the voting must do so through the IAHS National Committee in their

own country. Now is the time to act if you wish to propose someone for office.

Important Deadlines

1 January 2003: deadline for receipt of nominations from National Committees by the Nomination Panel and Nomination Groups, for officers of the IAHS Bureau and Scientific Commissions, respectively.

1 April 2003: Publication of the lists of candidates screened by the Nomination Panel and Nomination Groups.

Nominations

Each nomination for office must include a résumé of the candidate's qualifications relevant to the office for which the candidate is nominated. A signed statement of the candidate's willingness to stand for office must also be provided. The nomination shall not be considered without submission of the résumé and consent form.

The Nomination Panel

The membership of the Nomination Panel for the Bureau was approved by the Bureau (Paris, 18 June 2002). The Bureau requested that "On the basis of available nominations from the National Committees, the IAHS Bureau and from the Scientific Commissions, the Panel prepare a list of candidates, seeking to achieve a reasonable balance in their geographical, scientific discipline, professional experience and gender distribution".

Nomination Groups

Each Scientific Commission has established a Nomination Group to which National Committees must send nominations for officers of the corresponding commission. Each Nomination Group will prepare a list of candidates for election, as above, then forward its list to the Nomination Panel which will publish it.

Election Process

National Committees will decide how their representative should vote on the lists of candidates prepared and circulated by the Nomination Panel, provided that the subscription of their country to IUGG has been paid up to the end of the calendar year preceding the voting. Voting will take place at the Plenary Administrative Session at Sapporo, or if no National Representative can attend in person, postal votes will be accepted.

Composition of the Nomination Panel

Chairperson: Dr Norman (Jake) Peters (USA)

US Geological Survey
Suite 130, 3039 Amwiler Road
Atlanta, Georgia 30360-2824, USA

[tel.: +1 770 9039100 or 9039145;
fax: +1 770 9039199;
nepeters@usgs.gov

Nomination Panel Members:

Wolfgang Grabs (WMO)
Ashim Das Gupta (Thailand)
Monica Porto (Brazil)
Gert Schultz (Germany)
Arni Snorrason (Iceland)

Nomination Group Membership

The following Commissions decided to use the Association Nomination Panel as their own Commission Nomination Group:

ICSW (Surface Water)
ICGW (Groundwater)
ICWQ (Water Quality)
ICWRS (Water Resources Systems)
ICASVR (Atmosphere–Soil–Vegetation Relations)
ICT (Tracers)

ICCE Nomination Group Membership

(International Commission on Continental Erosion)

Chairperson: Prof. Des E. Walling (UK)

Department of Geography
University of Exeter, Amory Building,
Rennes Drive, Exeter, Devon EX4 4RJ, UK
[tel.: +44 1392 263345; fax: +44 1392 263342;
geography@exeter.ac.uk]

ICCE Nomination Group Members:

Prof. Bent Hasholt (Denmark)
Dr Laurie J. Olive (Australia)

ICSI Nomination Group Membership

(International Commission on Snow and Ice)

Chairperson: Dr Elizabeth Morris (UK)

British Antarctic Survey
High Cross, Madingley Road
Cambridge CB3 0ET, UK
[tel.: +44 1223 251492; fax: +44 1223 362616;
emmo@pcmail.nerc-bas.ac.uk]

ICSI Nomination Group Members:

Prof. Michael Kuhn (Austria)
Prof. H. Gerald Jones (Canada)

ICRS Nomination Group Membership

(International Commission on Remote Sensing)

Chairperson: Prof. Gert Schultz (Germany)

Institute of Hydrology and Water Resources
Ruhr University, PO Box 102148,
D-44780 Bochum, Germany
[tel.: +49 234 3224693; fax: +49 234 3214153;
gert.a.schultz@ruhr-uni-bochum.de]

ICRS Nomination Group Members:

Dr Manfred Owe (USA)
Dr Al Rango (USA)

IAHS Press Red and Blue Books

The 2003 Catalogue of Publications

A new IAHS catalogue has just been published. It provides information about all IAHS publications since 1924 and, to help you find what you want, an index by subject. The Catalogue is available free from IAHS Press, or at the IAHS web site.

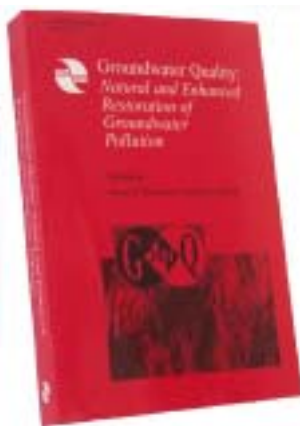
Price cuts on all 1990–1992 publications

From 1 January 2003 the prices of all books published between 1990 and 1992 (see opposite) will be reduced to £10 per volume (the minimum price). There are no discounts on this price.

Minimum price

To cover the cost of processing and mailing orders, the minimum price of any volume (including the cost of postage by surface mail) will be £10 from 1 January 2003.

Two new publications



GROUNDWATER QUALITY: Natural and Enhanced Restoration of Groundwater Pollution

edited by
Steven F. Thornton &
Sascha E. Oswald

Selected papers from the international GQ2001 conference (Sheffield, UK), which discussed the newest advances in research

on natural and enhanced restoration of pollutants in soils and groundwater. Site characterization and remediation strategies using state-of-the-art techniques, field-scale demonstration of treatment technologies, fundamental understanding of natural attenuation processes in the subsurface and their application in remediation design, reactive barrier design and performance, and reactive transport modelling of natural attenuation processes were particular themes.

Important reading for all concerned with groundwater quality, with a great deal for surface water and contaminated land specialists too.

For the non-specialist, it includes useful overviews relating to techniques and CFC, MTBE, heavy metal and microbiological contaminants.

Publ. no. 275 (August 2002) ISBN 1-901502-86-4; 604 + xii pages
Full price £82.50; IAHS members price £61.87

Erratum, page 579 of Publ. no. 275

Containment of groundwater contaminated with chlorinated hydrocarbons, Umbogintwini Industrial Complex, South Africa. J. A. Palmer, A. J. Oliver & I. S. Cameron-Clarke

The address of the authors who contributed this paper should have been given as:

SRK Consulting, PO Box 55291, Northlands 2116, South Africa
with the contact e-mail address: came@srk.co.za

J. A. Palmer is now at Groundwater Consulting Services.



The Structure, Function and Management Implications of Fluvial Sedimentary Systems

edited by
Fiona J. Dyer,
Martin C. Thoms &
Jon M. Olley

The proceedings of a symposium held in September 2002 at Alice Springs, Australia, as a contribution to the

UNESCO IHP-V Project 2.1: Vegetation, Land Use and Erosion. The papers cover a wide range of topics pertaining to fluvial sedimentary systems, recognizing their role and the way in which they are managed for the health of riverine systems. There are four sections:

Eco-geomorphology: linking the physical form of fluvial sedimentary systems with ecological response

Flood plains: the role of temporary storage in the exchange of sediment and nutrients

Variability: magnitude and frequency controlling sedimentary systems.

Techniques: new approaches in the study of fluvial sedimentary systems

Each section concludes with a keynote paper summarizing the main issues and identifying the challenges which face that research field into the future.

Publ. no. 276 (Sept. 2002) ISBN 1-901502-96-1; 484 + xii pages
Full price £72.00; IAHS members price £54.00

Further details of these volumes, with the contents and abstracts of all the papers included can be seen at the IAHS web site: <http://www.cig.enscm.fr/~iahs>

Forthcoming Publications

The Ecohydrology of South American Rivers and Wetlands. Eleven chapters based on papers from the International Symposium on Hydrological and Geochemical Processes in Large-scale River Basins (with special emphasis on the Amazon and other tropical basins), held at Manaus, Brazil, November 1999, as part of the UNESCO Ecohydrology Programme

The UNESCO Regional Bureau for Science in Europe (ROSTE) provided financial sponsorship for this publication

edited by Michael McClain

Special Publ. no. 6 (December 2002), ISBN 1-901502-02-3

Calibration and Reliability in Groundwater Modelling: A Few Steps Closer to Reality

Proceedings of the ModelCARE 2002 Conference held at Prague, June 2002

edited by K. Kovar & Z. Hrkal

Publ. no. 277 (early 2003)

The publishing schedule for the first six months of 2003 includes a pre-publication for the *Hydrology in the Mediterranean and Semiarid Regions* symposium at Montpellier, April 2003, and four pre-published proceedings for IAHS symposia at Sapporo, July 2003.

These Red Books priced at £10 each from 1 January 2003

**Savings of at least £15,
and up to £38**

Groundwater Monitoring and Management. Proceedings of a symposium held at Dresden, March 1987
edited by G. P. Jones
Publ. no. 173 (May 1990) 484 + xii pages. ISBN 0-947571-51-5

Erosion, Transport and Deposition Processes. Proceedings of a workshop held at Jerusalem, March–April 1987
edited by D. E. Walling, A. Yair & S. Berkowicz
Publ. no. 189 (May 1990) 206 + vi pages. ISBN 0-947571-37-X

Hydrology of Mountainous Areas. Proceedings of a workshop held at Štrbské Pleso (Czechoslovakia), June 1988
edited by Ľ. Molnár
Publ. no. 190 (May 1990) 452 + xii pages. ISBN 0-947571-42-6

Regionalization in Hydrology. Proceedings of a symposium held at Ljubljana, April 1990
edited by M. A. Beran, M. Brilly, A. Becker & O. Bonacci
Publ. no. 191 (April 1990) 260 + xii pages. ISBN 0-947571-47-7

Research Needs and Applications to Reduce Erosion and Sedimentation in Tropical Steeplands. Proceedings of a symposium held at Suva, Fiji, June 1990
edited by R. R. Ziemer, C. L. O'Loughlin & L. S. Hamilton
Publ. no. 192 (June 1990) 396 + viii pages. ISBN 0-947571-52-3

ModelCARE 90: Calibration and Reliability in Groundwater Modelling. Proceedings of a conference held at The Hague, September 1990
edited by Karel Kovar
Publ. no. 195 (Sept. 1990) 540 + xii pages. ISBN 0-947571-67-1

Groundwater Contamination Risk Assessment: A Guide to Understanding and Managing Uncertainties. A report by the Working Group on Groundwater Contamination Risk Assessment of the IAHS International Commission on Groundwater
by Eric Reichard, Carl Cranor, Robert Raucher & Giovanni Zapponi
Publ. no. 196 (Dec. 1990) 204 + xvi pages. ISBN 0-947571-72-8

The Hydrological Basis for Water Resources Management. Proceedings of a symposium held at Beijing, October 1990
edited by Uri Shamir & Chen Jiaqi
Publ. no. 197 (Oct. 1990) 502 + xii pages. ISBN 0-947571-77-9

Hydrological Processes and Water Management in Urban Areas. Invited papers and selected papers from the Urban Water'88 Symposium held at Duisberg (Germany), April 1988
edited by Herbert Massing, John Packman & Floris Zuidema
Publ. no. 198 (Feb. 1990) 362 + xii pages. ISBN 0-947571-82-5

Soil Water Balance in the Sudano-Sahelian Zone. Proceedings of a workshop held at Niamey (Niger), February 1991
edited by M. V. K. Sivakumar, J. S. Wallace, C. Renard & C. Giroux
Publ. no. 199 (Feb. 1991) 628 + xiv pages. ISBN 0-947571-87-6

Land Subsidence. Proceedings of the Fourth International Symposium on Land Subsidence held at Houston, May 1991
edited by A. I. Johnson
Publ. no. 200 (May 1991) 690 + xiv pages. ISBN 0-947571-92-2

Hydrology for the Water Management of Large River Basins. Proceedings of a symposium held during the XX General Assembly of IUGG at Vienna, August 1991
edited by F. H. M. van de Ven, D. Gutknecht, D. P. Loucks & K. A. Salewicz
Publ. no. 201 (Aug. 1991) 400 + viii pages. ISBN 0-947571-97-3

Hydrological Basis of Ecologically Sound Management of Soil and Groundwater. Proceedings of a symposium held during the XX General Assembly of IUGG at Vienna, August 1991
edited by H. P. Nachtnebel & K. Kovar
Publ. no. 202 (Aug. 1991) 386 + x pages. ISBN 0-947571-03-5

Sediment and Stream Water Quality in a Changing Environment: Trends and Explanation. Proceedings of a symposium held during the XX General Assembly of IUGG at Vienna, August 1991
edited by N. E. Peters & D. E. Walling
Publ. no. 203 (Aug. 1991) 374 + x pages. ISBN 0-947571-08-6

Hydrological Interactions Between Atmosphere, Soil and Vegetation. Proceedings of a symposium held during the XX General Assembly of IUGG at Vienna, August 1991
edited by G. Kienitz, P. C. D. Milly, M. Th. van Genuchten, D. Rosbjerg & W. J. Shuttleworth
Publ. no. 204 (Aug. 1991) 494 + x pages. ISBN 0-947571-13-2

Snow, Hydrology and Forests in High Alpine Areas. Proceedings of a symposium held during the XX General Assembly of IUGG at Vienna, August 1991
edited by H. Bergmann, H. Lang, W. Frey, D. Issler & B. Salm
Publ. no. 205 (Aug. 1991) 250 + viii pages. ISBN 0-947571-18-3

Hydrology of Natural and Manmade Lakes. Proceedings of a symposium held during the XX General Assembly of IUGG at Vienna, August 1991
edited by G. Schiller, R. Lemmelä & M. Spreafico
Publ. no. 206 (Aug. 1991) 286 + viii pages. ISBN 0-947571-23-X

Hydrogeological Processes in Karst Terranes. Proceedings of a symposium and field seminar held at Antalya, Turkey, October 1990
edited by Gültekin Günay, A. Ivan Johnson & William Back
Publ. no. 207 (Feb. 1993) 412 + xii pages. ISBN 0-947571-28-0

Glaciers–Ocean–Atmosphere Interactions. Proceedings of a symposium held at St Petersburg, September 1990
edited by V. M. Kotlyakov, A. Ushakov & A. Glazovsky
Publ. no. 208 (Dec. 1991) 550 + x pages. ISBN 0-947571-33-7

Erosion, Debris Flows and Environment in Mountain Regions. Proceedings of a symposium held at Chengdu, July 1992
edited by D. E. Walling, T. R. Davies & B. Hasholt
Publ. no. 209 (July 1992) 486 + x pages. ISBN 0-947571-38-8

Erosion and Sediment Transport Monitoring Programmes in River Basins. Proceedings of a symposium held at Oslo, August 1992
edited by J. Bogen, D. E. Walling & T. J. Day
Publ. no. 210 (Aug. 1992) 538 + x pages. ISBN 0-947571-43-4

Hydrological Sciences Journal (HSJ)

The table opposite lists the papers published in HSJ vol. 47 issue nos 5 and 6, as well as those that have been accepted for publication and will appear in subsequent issues in 2003.

HSJ 47(5) Special Section on Ecohydrology

The terms ecohydrology and hydro-ecology are now in common usage. Yet, despite much recent

activity in the area of ecohydrology, it does not necessarily mean the same thing to everyone. This Section includes a background paper, two discussions, plus two independent papers: *Ecohydrology: a challenging multidisciplinary research perspective* (Porporato & Rodriguez-Iturbe) and *Ecohydrology—the use of ecological and hydrological processes for sustainable management of water resources* (Zalewski) (see table opposite).

Hydrological Sciences Journal 2002/2003

Papers in vol. 47, no. 5 (October, 2002)

- A. J. ADELOYE & M. MONTASERI: Preliminary streamflow data analyses prior to water resources planning study
 UMESH C. KOTHYARI, MANOJ K. JAIN & KITTUR G. RANGA RAJU: Estimation of temporal variation of sediment yield using GIS
 M. BAYAZIT & B. ÖNÖZ: LL-moments for estimating low flow quantiles
 CHIEN-MING CHOU & RU-YIH WANG: On-line estimation of unit hydrographs using the wavelet-based LMS algorithm
 A. KIEFFER WEISSE & PH. BOIS: A comparison of methods for mapping statistical characteristics of heavy rainfall in the French Alps: the use of daily information
 MICHAEL EISELE & CHRIS LEIBUNDGUT: Modelling nitrogen dynamics for a mesoscale catchment using a minimum information requirement (MIR) concept
 K. V. HEAL, P. E. KNEALE & A. T. McDONALD: Manganese in runoff from upland catchments: temporal patterns and controls on mobilization
 LAURENT BERGONZINI, YVES RICHARD & PIERRE CAMBERLIN: Variation interannuelle du bilan hydrique du lac Tanganyika (1932–1995): changement dans la relation précipitation–excédent lacustre
Special Section on Ecohydrology—Editorial by Zbigniew W. Kundzewicz
 ZBIGNIEW W. KUNDZEWCZ: Ecohydrology—seeking consensus on interpretation of the notion
 Is ecohydrology one idea or many? *Discussion of above paper* by WILLIAM K. NUTTLE
 Ecohydrology—a completely new idea? *Discussion of above paper* by MIKE BONELL
 AMILCARE PORPORATO & IGNACIO RODRIGUEZ-ITURBE: Ecohydrology—a challenging multidisciplinary research perspective
 MACIEJ ZALEWSKI: Ecohydrology—the use of ecological and hydrological processes for sustainable management of water resources

Papers in vol. 47, no. 6 (December, 2002)

- M. P. RAJURKAR, U. C. KOTHYARI & U. C. CHAUBE: Artificial neural networks for daily rainfall–runoff modelling
 GOKMEN TAYFUR: Artificial neural networks for sheet sediment transport
 PAWEŁ M. ROWIŃSKI & JANUSZ KUBRAK: A mixing-length model for predicting vertical velocity distribution in flows through emergent vegetation
 G. DROGUE, T. LEVIANDIER, L. PFISTER, A. EL IDRISSI, J.-F. IFFLY, L. HOFFMANN, F. GUEX, B. HINGRAY & J. HUMBERT: The applicability of a parsimonious model for local and regional prediction of runoff
 HOCINE BENDJOUDI & PIERRE HUBERT: Le coefficient de compacité de Gravelius: analyse critique d'un indice de forme des bassins versants
 ANDRÁS BARDOSSY & FRIDJOF SCHMIDT: GIS approach to scale issues of perimeter-based shape indices for drainage basins
 THOMAS SKAUGEN: A spatial disaggregation procedure for precipitation
 E. A. AMPOFO, R. K. MUNI & M. BONSU: Estimation of soil losses within plots as affected by different agricultural land management
 LAHCEN ZOUHRI: Hétérogénéité des cotes piézométriques et structuration en blocs dans les aquifères côtiers marocains
 SHENG YUE & CHUNYUAN WANG: Discussion of “A study of variability of annual river flow of the southern African region” and reply by BERHANU FANTA ALEMAW

Forthcoming papers (in no particular order)

- SHENG YUE, PAUL PILON & BOB PHINNEY: Canadian streamflow trend detection: impacts of serial and cross-correlation
 RITA PONGRÁCZ, ISTVAN BOGARDI & LUCIEN DUCKSTEIN: Climatic forcing of droughts: a Central European example
 DEMETRIS KOUTSOYIANNIS: Climate change, Hurst phenomenon and hydrological statistics
 DONALD H. BURN: The use of resampling for estimating confidence intervals for single site and pooled frequency analysis
 PAUL CHRISTEN RØHR & ÅNUND KILLINGTVEIT: Rainfall distribution on the slopes of Mt Kilimanjaro
 YEO-HOWE LIM & LENONARD MELVIN LYE: Regional flood estimation for ungauged basins in Sarawak, Malaysia
 M. YERMANI, K. ZOUARI, J. L. MICHELOT, A. MAMOU & L. MOUMNI: Approche géochimique du fonctionnement de la nappe profonde de Gafsa Nord (Tunisie centrale)

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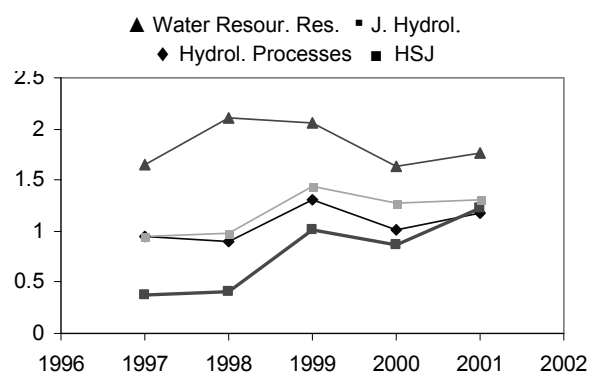
It is time for current subscribers to renew their subscriptions for next year. The price remains the same in 2003 for sterling payments, but there is a slight increase in the dollar price to allow for the currency exchange rate. The full price of vol. 48 (2003) is £172 or US\$270. The price for IAHS members (50% discount) is £86 or US\$135 and for members in financially disadvantaged countries, receiving 80% discount, the price is £34.40.

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The graph below shows the fortunes of *HSJ* and other journals' impact factors over the last four years. *HSJ* shows most improvement!



Reports on Meetings

ModelCARE'2002, 4th International Conference on Calibration and Reliability in Groundwater Modelling: A Few Steps Closer To Reality

Prague, Czech Republic, 17–20 June 2002

ModelCARE'2002 was jointly convened by the Institute of Hydrogeology, Engineering Geology and Applied Geophysics, Faculty of Science, of Charles University (Universita Karlova) in Prague, and the International Commission on Groundwater (ICGW), of IAHS. It was supported by IAHR, NGWA, IGWMC and UNESCO. ModelCARE'2002 was also a contribution to UNESCO's International Hydrological Programme (IHP-VI, 2002–2007), "Water Interactions: Systems at Risk and Social Challenges". The organizers were Zbynek Hrkal of Charles University (Prague) and Karel Kovar of RIVM (The Netherlands).

About 215 scientists and engineers met in Prague to demonstrate new ideas and solutions and face the continuing difficulties in developing models that represent groundwater systems, arguably the most difficult of the earth system models because the systems are inaccessible and, being a source of drinking water, very detailed knowledge is demanded.

Model calibration and reliability conference demonstrates progress and needs (a participant's impression)

A major feature of the conference was the consideration of both deterministic and stochastic methods of investigation. For any given groundwater system, some things about the system are known relatively well and it is most advantageous to represent them in a model definitively, or deterministically. Other things are less clearly known or known very little, and it is important to represent them using stochastic methods to obtain an honest evaluation of what can be said about the system. Thus, both deterministic and stochastic methods are important. Yet progress in the two areas most often proceeds independently, and sometimes antagonistically. An exciting aspect of ModelCARE'2002 conference was the presence of many of the very best modellers from all degrees of the deterministic–stochastic spectrum.

The conference started with 1¼ days of talks about stochastic methods presented by the leaders of the field, including Gedeon Dagan of Tel Aviv University, Israel, Yoram Rubin of the University of California at Berkeley, USA, Peter Indelman of Technion, Israel, David Tartakovsky of Los Alamos National Laboratory, USA, and Aldo Fiori of the University of Rome, Italy. The single plenary session meant that these talks received

substantial attention, and the presentations and questions revealed both the mathematical difficulty of stochastic hydrology, and the difficulty of conveying its results, which are so crucial to coping with the uncertainty inherent in groundwater modelling. Two clear conclusions presented were:

- the importance of dimensionality and accounting for the inherent three-dimensional nature of natural systems, and
- the importance of the contrasts in material properties observed in the subsurface.

The remainder of the conference was dominated by deterministic methods with some use of regression and sensitivity approaches to address model development, calibration, and uncertainty issues. New challenges in deterministic modelling include models that integrate groundwater and surface processes (Ed Sudicky, University of Waterloo, Canada) and address scale issues through local grid refinement (Steffen Mehl, US Geological Survey, USA). The dynamics and errors of systems with complex processes were investigated by Eileen Poeter (multiphase flow), Christine Shoemaker (anaerobic bioremediation of hydrocarbons) and Linda Abriola (DNAPLs), of respectively the Colorado School of Mines, USA, Cornell University, USA and the University of Michigan, USA. Model calibration by trial and error alone was evaluated using sensitivity analysis and regression by Theo Olsthoorn (Amsterdam Water Supply, The Netherlands), and the estimation of distribution as well as values of recharge was considered by Yung-Fu Lin (University of Wisconsin, USA). Confusion about weighting observations in sensitivity analysis and regression was addressed by Mary Hill (US Geological Survey, USA). An exciting new method for calculating confidence intervals for our pervasively nonlinear models (nonlinear with respect to the parameters) was discussed by Steen Christensen (Aarhus University, Denmark) and Elizabeth Keating (Los Alamos National Laboratory, USA).

These are just a few of the many interesting talks, posters, and people that made for a fun and very interesting four days in Prague. Selected papers from oral and poster presentations at ModelCARE'2002 will be published in an IAHS Red Book (Publ. no. 277) in spring 2003.

Next meeting

The next ModelCARE conference will be in Utrecht, The Netherlands, in summer 2005. Please mark your calendars!

Mary C. Hill
US Geological Survey, 3215 Marine St., Boulder,
Colorado 80303, USA

Karel Kovar
National Institute of Public Health and the
Environment (RIVM), Bilthoven, The Netherlands

Third Inter-Celtic Hydrology Colloquium: Celtic Water in a European Framework— Pointing the Way to Quality

Galway, Ireland, 8–10 July 2002



John Rodda, Pierre Hubert, Dr Iognaid O'Muircheartaigh
(President of NUI, Galway), Tony Smyth (Chairman Irish National

The programme and list of papers presented may be viewed at:

<http://www.nuigalway.ie/hydrology/celtic.htm>

The papers were pre-printed and available for distribution at the start of the Colloquium. These proceedings are available through the University libraries in Ireland and a limited number are still available for purchase.

Next meeting

It was decided at the closing session that the next Inter-Celtic Colloquium will be held in Minho, Portugal in 2005. The contact person is Prof. J. P. Lobo-Ferreira, lferreira@lnec.pt.

Con Cunnane,
National University of Ireland, Galway

Cunnane, C. & Barrins, J. (eds) *Celtic Water in a European Framework—Pointing the Way to Quality* (Proc. 3rd Inter-Celtic Colloquium on Hydrology and Management of Water Resources. Galway, Ireland, 2002), 336 pages, (A4 format, close bound, ISBN not applied for).

This meeting was attended by about 60 hydrologists from the Celtic regions of Brittany, Cornwall, Ireland, Portugal, Scotland and Wales, and others from other parts of France and England, as well as Poland and South Africa. It was organized by the National University of Ireland's Department of Engineering Hydrology under the aegis of IAHS, with the support of the Irish National Committees for IHP, IAHS and ICID, the National IAHS Committees of the UK and France, and the British Hydrological Society.

During the past year, publication and enactment of the European Union Water Framework Directive, has set challenging targets for member states with regard to the long-term management of European water resources. By the year 2016 the quality of all surface and ground waters in member states must, through a combination of planning, treatment and remediation, be returned to their original pristine state. One of the most important principles of the EU Directive is the emphasis on a holistic and integrated approach towards maintaining water quality. A cooperative strategy in the management of this valuable natural resource is called for, which includes the extraction, purification and distribution of water, as well as the efficient treatment of waste water.

This theme was addressed under the headings:

- Water quality: pressures and responses
- Integrated river basin management
- The scientific support for management
- Risk assessment, perception and management.

The three day meeting was followed by a field trip to the karst limestone area of south County Galway where interaction between surface water and groundwater is complex. The trip was very ably led by Paul Johnston of Trinity College, Dublin.

GEWEX – IAHS Workshop: The Application of GEWEX Scientific Research to Water Resources Management

Dresden, Germany, 24 July 2002

This Workshop was held in conjunction with the 3rd International Conference on Water Resources and Environment Research (ICWRER) at the Dresden University of Technology (Dresden, Germany, 22–26 July 2002). It was organized by the GEWEX Water Resources Applications Project (WRAP) Committee and the IAHS/WMO Working Group on GEWEX. The broad objective of the Workshop was to initiate a dialogue with water managers on their needs and the GEWEX data/model products that are available to address those needs. This is intended to:

- identify useful forecast/modelling products for water managers;
- understand how these are used in decision-making;
- determine preferred product delivery mechanisms.

The programme consisted of three keynote presentations, six presentations on water resource applications in GEWEX Continental Scale Experiments (CSE) and a panel discussion with the keynote speakers from the Workshop and the ICWRER Conference. The keynote presentations were:

- *GEWEX and water resources applications project overview*, Lawrence Martz, Chair WRAP
- *Relevance of predictions (short-, medium-, long-term) of water availability for water resources management*, Martin Kaupe and

Mathias Schmitt, Wassergewinnung, GEW RheinEnergie AG, Germany

- *Current research on the application of meteorological forecasts to water resources management*, John Schaake Jr, NOAA National Weather Service, USA.

The CSE presentations were:

- *Toward water resources assessment and management in Thailand with GAME-T datasets*, Shinjiro Kanae (GAME)
- *GEWEX related water resources applications in the Baltic Sea drainage basin: contribution from BALTEX*, Sten Bergström (BALTEX)
- *The value of seasonal climate forecasts for reservoir management*, Aris Georgakakos
- *Application of seasonal climate forecasts to water management in the Tennessee River*, Ruby Leung (GAPP)
- *Hydro-meteorological data availability issues in west Africa: a challenge to understand the African Monsoon*; Christian Depaetere (CATCH)
- *Restoring ice-jam floodwater to a drying delta ecosystem*, Terry Prowse, presented by Lawrence Martz (MAGS).

The panel discussion involved the Workshop keynote speakers (with Gert Schultz substituting for Kaupe & Schmitt) and keynote speakers from the ICWRER Conference: Uri Shamir (Israel), Pete Loucks (USA) and Keith Hipel (Canada). Discussion touched on the following:

- the uncertainty of forecasts and the need for measures to describe this uncertainty;
- the relative value of characterizing and of reducing uncertainty in forecasts;
- integration of hydrological and climate models to reduce complexity and model parameterization requirements;
- water managers find it difficult to respond to high levels of uncertainty;
- as water becomes more scarce, reliable water supply together with the opposite problem of flood protection are seen as key issues;
- ecological issues and water quality are becoming important drivers of water management decisions and are equally affected by climate;
- climate data are more plentiful than hydrological data, and should be used more;
- more robust water management systems may be a better response to climate change and variability than more accurate global/regional forecasts;
- hydropower was seen as the most tradeable commodity and even a 1% improvement in operations can yield huge economic benefits;
- the potential value of the Global Soil Wetness products and the Prediction of Ungauged Basins (PUBs) initiative;
- the value of hydrological observations to CEOP;
- a demonstration project to show the use of water resource forecasts from climate

- information in larger basins;
- the use of RCM using land data assimilation systems to establish initial water and temperature conditions for water management decisions;
- one-day workshops with water managers and water scientists at regional/local/basin scale by the CSEs as a way of developing greater use of GEWEX products.

The Dresden Workshop presentations and discussions will be reviewed at the WRAP meeting in New York on 9 September 2002. They will also serve as useful base for the second WRAP Workshop planned for the IUGG General Assembly in Sapporo in July 2003 (JWH02: The Role of GEWEX Hydrological Science in Improved Water Resources Management). Contributions to this Workshop are invited and are due by the end of January 2003. Details can be accessed through the IAHS website or IUGG2003 at:

<http://www.jamstec.go.jp/jamstec-e/iugg/index/html>

Alan Hall, Chairman IAHS/WMO
Working Group on GEWEX

Lawrence Martz, Chairman GEWEX-WRAP

HELP Symposium: Towards Integrated Catchment Management: Increasing the dialogue between scientists, policy makers and stakeholders

City of Kalmar, Sweden, 18–22 August 2002

A unique mixture of 120 water-related scientists, policy makers, managers and stakeholders from 34 countries met at this Symposium to discuss and exchange experiences on how to increase and strengthen the dialogue between these groups in order to facilitate a more integrated approach to land and water management.

The Symposium was held within the framework of UNESCO and WMO's joint HELP (Hydrology for the Environment, Life and Policy) Programme, specifically designed to contribute social, legal, economic and environmental benefits to communities through sustainable and appropriate use of water by deploying hydrological and other water-related sciences in support of improved integrated catchment management. Central to HELP is a grassroots, needs-driven, science agenda with tangible social and ecological benefits.

The primary goal of the United Nations Millennium Declaration of halving world poverty, ill health, and hunger by the year 2015, were acknowledged. Participants re-iterated that water is the key to sustaining welfare, ensuring food security, improving health, and reducing poverty.

As water flows through catchments it connects human activities with natural ecosystems, which often generates conflict over water uses. In order



to meet the Millennium Declaration goals, it will be necessary to evaluate future development alternatives through integrated land and water resources management. In this way, an acceptable balance between society and nature can be found. Four major actors have to be involved: stakeholders, policy makers, managers and scientists.

Through discussions of HELP basin case studies from Africa, South Asia, North America and Australasia, the Symposium identified several successful approaches with generic value in promoting sustainable land and water management. These are:

- Creation, expansion and use of frameworks that enable water law and policy experts, water resources managers, stakeholders and scientists to work more closely together on water-related issues.
- Stimulation of the scientific community to develop methods that are appropriate for dealing with stakeholder-defined issues.
- Communication of scientific information, both physical and non-physical, that identifies risks and uncertainties, evaluates options, and anticipates potential impacts of future management strategies in a way that can be easily understood by stakeholders and decision makers.
- Encouraging actions that are based on well-informed and balanced decisions in the multiple uses of water.

Efforts must be made to build upon the successful experiences of the HELP basins in catchment management worldwide. Participants

encouraged partnerships and donors to strengthen their commitment to HELP and other programmes advocating integrated approaches to land and water management and research.

Finally, the Symposium strongly encouraged the inclusion of these messages at deliberations at the World Summit on Sustainable Development in Johannesburg, South Africa, August 2002; the Third World Water Forum in Kyoto, Japan, March 2003, and other relevant international water and sustainable development fora.

Lotta Andersson, Swedish IHP-Committee,
The Swedish Research Council, Sweden

IAHS/ICCE Symposium: The Structure, Function and Management Implications of Fluvial Sedimentary Systems

Alice Springs, Australia 2–6 September 2002

Located in a region characterized by great temporal and spatial variability of stream flow and sediment movement, very complex river channels, and high biodiversity, Alice Springs provided the perfect backdrop for this Symposium. Seventy participants from six continents attended the symposium in the brand new Alice Springs Convention Center which, nestled at the foot of the MacDonnell Ranges and looking out over the Todd River (mostly dry), provided ample evidence both of the extreme variability in Australian hydrology and the age of the continent.

The symposium was opened by ICCE President Wojciech Froehlich and the 52 oral and 20 poster papers presented addressed four themes:

- Ecogeomorphology: linking the physical form of fluvial sedimentary systems with ecological response;
- Flood plains: the role of temporary storage in the exchange of sediment and nutrients;
- Variability: magnitude and frequency: controlling sedimentary systems; and
- Techniques: new approaches in the study of fluvial sedimentary systems.

While the papers presented in each theme covered a wide range of topics pertaining to the fluvial sedimentary system, all recognized the importance of these systems and the way in which they were managed to the health of riverine systems. Each theme was concluded with a keynote address in which the day's presentations were synthesized and some directions for future research proposed. The four keynote speakers, Henry Hudson (New Zealand: Ecogeomorphology), Gerald Nanson (Australia: Flood plains), Evan Dollar (South Africa: Variability) and Robert Wasson (Australia: New techniques) then presided over lively discussions which were often revisited and continued well after the formalities of the day had concluded.

A central tenet to many of the keynote discussions was the need to take an ecosystem approach to both research and management and it was generally agreed that such a tactic requires the use of both disciplinary and interdisciplinary science for studying our fluvial sedimentary systems. The difficulties of interdisciplinary research were highlighted throughout all themes. In particular, the lack of biotic data for specific systems, the problems of matching scales of research, and the need for techniques to allow us to merge and integrate disciplines were seen as aspects of our research which need to be resolved in order to move forward. While discussions often revolved around the merging of science disciplines—the integration of management, economic and political disciplines with our science also received a fair work-out! It was suggested that perhaps at the next meeting, a session on economic-ecogeomorphology might be appropriate.

Twenty of the symposium attendees were students or recent graduates and they provided a vibrant and positive contribution. Some very exciting work is being undertaken by these young researchers. Awards were presented for the best student/recent graduate oral and poster presentations by Brendan Edgar (of Land and Water Australia, the main sponsor of the symposium). The difficult task of judging these awards was performed by the keynote speakers who, ultimately, were unable to differentiate between the top two students in each category. The prizes for best oral presentations were awarded to Neil Sims (University of Canberra, *What happens when flood plains wet themselves: vegetation response to inundation on the lower Balonne*

flood plain) and Ivo Thonon (Utrecht University, *Effective discharge for heavy metal deposition on the lower river Rhine flood plains*, research undertaken with Hans Middelkoop and Marcel van der Perk).

The awards for best posters were presented to Sarah Yarnell-Hayes (University of California, Davis, *Using process-based fluvial geomorphic techniques to assess Foothill Yellow-legged frog (*Rana boylei*) habitat preferences*) and Heather McGinness (University of Canberra, *Connectivity, fragmentation and carbon dynamics in a semi-arid flood plain river ecosystem*).

The Symposium was intersected by a field trip to the West MacDonnell Ranges led by a team from the Northern Territory Geological Survey and the Northern Territory Department of Land Planning and Environments Arid Zone Research Institute. This adventure introduced many of our Australian and international colleagues to the local "hills" and water holes, visiting the Finke River (considered by some to be the oldest river system in the world) at Glen Helen, and Ormiston Gorge, Ellery Creek (where some intrepid delegates braved the cold water for a swim to the other side to view some early orchids) and Standley Chasm.

The social activities of the conference were well received—the poster session featured local produce (camel, emu, buffalo dates, other fruits and jams) in various forms as well as the compulsory tasting of fine Australian beverages. The conference dinner also showcased some local foods and entertainment for the evening was provided by dinner jacketed organizers (and you thought Australians were all yobboes!) in the form of a quiz. The quiz called into question the deservedness of many a professorial position with delegates being asked to identify some classic fluvial geomorphological features, processes and places along with a little trivia from the entertainment industry.

A picture of many of the delegates of the 2002 Alice Springs Symposium at the base of the MacDonnell Ranges has been posted on the ICCE web site: <http://duke.usask.ca/~deboer/ICCE/>.

Fiona Dyer, University of Canberra, Australia
Dirk de Boer, Secretary ICCE,

XXIst Conference of the Danubian Countries on the Hydrological Forecasting and Hydrological Bases of Water Management

Bucharest, Romania, 2–6 September 2002

As an important cross-cutting International Hydrological Program (IHP) regional activity in Europe the conference series for Danube Countries on the theme of hydrology and water resources, which commenced in 1961, have been useful events both for scientists and other water-related people.

Under the auspices of the Romanian Ministries of Water and Environment Protection, and of Foreign Affairs, the XXIst Conference was organized by the Romanian National Committee for IHP and the National Institute for Meteorology and Hydrology jointly with the UNESCO Venice Regional Office for Science and Technology for Europe, WMO and IAHS. The Secretary General of IAHS, Dr Pierre Hubert honoured us by his attendance.

To promote the integrated river basin concept the Conference set a wide range of themes, thus, the topics discussed embraced very diverse areas of hydrology and water management: quantitative and qualitative hydrological forecasting, eco-hydrological processes, erosion, sediment transport, water quality issues, water resources management and meteorological inputs to hydrological forecast models.

One hundred and seventy-six participants from 18 countries attended and 70 papers and 52 posters were presented.

Newly emerged and scientifically proven methodologies and models for hydrological forecasting, the coupling with quantitative forecasts of precipitation, ecohydrology, and improved procedures using remote sensing imagery are only some examples of the Conference achievements.

The XXIst Conference of the Danubian Countries provided for a very fruitful transfer of hydrological and water management knowledge among the participants.

Valentina Ungureanu
National Institute of Meteorology and Hydrology
Romania

International Symposium: Low-lying Coastal Areas: Hydrology and integrated coastal zone management

Bremerhaven, Germany 9–12 September 2002

Low-lying coastal areas including small islands are among the most intensively used regions in all countries. More than 60% of today's world population of approximately six billion people live there. Coastal areas are not only among the most densely populated regions of the earth, they are also subject to extraordinarily intensive use through industrial and commercial sites, agriculture, aquaculture and tourism. This intensive exploitation has considerable impact on hydrological conditions in coastal regions. Problems arise from conflicts between different uses of coastal land and waters, overexploitation of coastal resources, discharge of wastes and effluents into coastal waters, the elevated risk of storm damage, increasing stress due to sea level change and growth of coastal populations.

The IHP/OHP National Committees of Germany and The Netherlands, in cooperation with UNESCO and WMO, arranged this

symposium to address emerging coastal zone issues. The aim was to increase public and political awareness of the vulnerability of coastal zones and to discuss tools and measures for sustainable water management in coastal areas at the expert level. The main topics were: tools for coastal zone management, groundwater, and measures for integrated coastal zone management. Keynote lectures introduced the focus of the conference.

The participants came from 20 countries and organizations including UNESCO, WMO, UN-ESCWA and the global change science community. The conference supported IHP-VI Focal area 3.4: Small Islands and Coastal Zones. At the end of the symposium the participants summarized their conclusions and made recommendations as follows:

The Conference recognises that:

Low-lying coastal areas are crucial to the development of nature and of society. They:

- are heterogeneous domains, dynamic in space and time
- comprise less than 20% of the earth's surface
- contain more than 60% of the human population
- are the location of 70% of cities with more than 1.6 million inhabitants
- yield 90% of the global fisheries
- produce about 25% of global biological productivity
- host previous and fragile natural biotopes
- are the major sink for sediments
- are very vulnerable to natural hazards and the effects of climate change
- are areas where seawater intrusion threatens freshwater resources and where submarine groundwater discharge is an important pathway for both freshwater and nutrients
- are a zone where integrated management is complex but achievable
- are areas where there should be strong commitment and support from national governments and international organizations
- are a zone in which both freshwater and salt water play a paramount role
- considerable problems such as population growth, pollution, degradation of natural resources and exposure to natural hazards exist in low-lying coastal zones around the world and that global climate change and sea level rise are likely to exacerbate many of these problems
- human efforts to adapt to the changing environmental conditions will affect the coastal zone.

The Conference agrees that

- a number of valuable scientific and

- operational tools, methodologies and models are available to address water-related issues in low-lying coastal areas
- there is a strong need to integrate the available tools to solve the complex multidisciplinary problems in integrated coastal zone management
 - there is a lack of easily available and easily accessible data on the hydrological cycle in low-lying coastal areas
 - submarine groundwater discharge is the expression at the sea floor of the processes that drive both salt water in, and freshwater out, under the shoreline. Although inseparable in nature, these two processes are currently being investigated by separate groups using different methodologies
 - submarine groundwater discharge should be consistently and explicitly integrated into coastal water budgets
 - there exist possibilities to conduct multinational, multidisciplinary, multispatial and multi-temporal research to solve complex coastal problems using expertise, equipment, data and methodologies from various nations
 - great threats and water problems will be posed for low-lying coastal areas in the near future
 - human adaptation to the consequences of global environmental change needs to be integrated more strongly into existing frameworks of coastal planning in order to build adaptive capacity and to avoid mal-adaptation
 - the conference has highlighted the need for a stronger integration of aspects of social vulnerability into integrated coastal zone management (ICZM)
 - knowledge management is important for the diverse and vast knowledge already available.

The Conference recommends that:

- UNESCO enhance its efforts, e.g. in education and training, to contribute to a better understanding of all water-related processes which play an important role for a sustainable development of low-lying coastal areas.
- UNESCO further enhance the coordinated implementation of cross-cutting projects, and education and training activities between IHP, MAB, IOC, IGCP, CSI and MOST under the leadership of IHP.
- UNESCO invite other GOs and NGOs to contribute to its water-related projects in low-lying coastal areas.
- UNESCO take the initiative to establish regional sub-centres and make use of the expertise in the universities and advanced research centres of the numerous (developing) countries for its various projects and activities.
- WMO encourage the strengthening and improvement of hydrological monitoring in

low-lying coastal areas.

- UNESCO/WMO explore methods to promote integrated approaches to coastal zone management.
- UNESCO, in recognition of local, regional and global efforts towards the advancement of coastal change sciences, establish and/or strengthen its links with the scientific community, e.g. the relevant programmes under the Earth System Science Partnership of IGBP, IHDP, WCRP and DIVERSITAS.
- UNESCO/WMO promote awareness of the key issues and approaches to coastal zone management and uses knowledge management to develop efficient communication strategies.

The Conference suggests the following activities and projects:

The initiation of a project on submarine groundwater discharge that will investigate the pathways for freshwater and nutrients to the coastal zone in an integrated fashion. This can best be done by development of type or “flagship” sites for extrapolation to larger areas. These sites would be characterized by joint studies using hydrological modelling, geophysics, geochemical tracers and other approaches.

The initiation of a submarine groundwater recharge project to investigate the process, potential and possibilities for sustainable use of the coastal areas of the world. Studies could make use of remote and *in situ* data and the results could be published as a handbook of detailed investigations and later as an atlas.

Specialized thematic workshops such as submarine groundwater discharge, salt water intrusion, remote sensing and GIS for ICZM, so that national level specialists could interact with international experts for further detailed research.

The initiation of projects and meetings which explore efficient mechanisms for integrating scientific, engineering, social and institutional analyses of the coastal zone to reduce conflicts and promote better management.

The initiation of a project that will investigate sediment transport starting from the catchment areas through the rivers to and along the coast, including the problem of coastal erosion.

The development of “knowledge portals” whereby a team is assigned to build such portals. Possible topics are hydrogeomorphology, land use, socio-economic aspects, and groundwater.

IHP/OHP-Sekretariat
Bundesanstalt für Gewässerkunde
Kaiserin-Augusta-Anlagen 15–17
D-56068 Koblenz, Germany

**Second International Symposium on
Flood Defence**

Beijing China, 10–13 September 2002

The Symposium, held in the China Hall of Science and Technology in Beijing, was organized by: the Tsinghua University, the Research Center on Flood and Drought Disaster Reduction of the Ministry of Water Resources of China, the China Institute of Water Resources and Hydropower Research, and the International Research and Training Center on Erosion and Sedimentation. It attracted more than 200 researchers, practitioners, educators and public officials working or interested in flood control from about 35 countries and regions. At the opening ceremony, Madame Zhengying Qian, Vice-President of the Chinese People's Political Consultative Conference, Mr Jingping E, Secretary General of Chinese State Flood Control and Drought Relief, and Vice-Minister of the Water Resources of China, Dr Erich Plate, ex-president of the International Association for Hydraulic Engineering Research, Prof. Kuniyoshi Takeuchi, president of IAHS, Prof. van Stokkom, Director of the East Netherlands Department of the Ministry of Transport, Public Works and Water Management, Mr Richard Reidinger, World Bank Water Resources Economist, and Prof. Zhangzhi Cen, Vice-President of Tsinghua University, made opening addresses. Qian Zhengying said that China's flood protection strategies are moving from fighting floods to living with floods in a sustainable manner. Only by finding outlets for massive seasonal floodwaters can China develop its estimated 1 million km² of populous and fertile alluvial river plains and be in harmony with floods.



Jingping E,
with Hein van
Stokkom
in the
background,
at the
opening
ceremony

The Symposium provided a forum for reviewing the state-of-the-art of the studies on flooding and engineering, and non-engineering strategies. It focused on: a better understanding of flooding and environmental problems; the different perspectives involved; climate change and its impact on extreme hydrological events; and new approaches to the study of, and strategies for, flood control. Eleven keynote and ten invited papers by distinguished

international scientists provided initial stimuli to the discussion of roughly three hundred papers. Participants also had the opportunity to see the development of hydraulic engineering in China.

During the conference, a standing committee on International Symposia on Flood Defence was established to review the state-of-art of studies on flooding and engineering and non-engineering strategies and select the theme, venue and organizers of the next symposia. Dr Erich Plate was elected chairperson and it was decided to establish and maintain an office for the secretariat at the Research Center on Flood and Drought Disaster Reduction of the Ministry of Water Resources of China, and it was agreed to hold the next symposium in Nijmegen, The Netherlands in the spring of 2005.

The keynote and invited lectures were outstanding; the keynote lectures were:

Early warning system of the Mekong Erich Plate, (University of Karlsruhe, Germany)

Floods and society, a never-ending evolutionary relation Kuniyoshi Takeuchi, (Yamanashi University, Japan)

Flood defence in the Netherlands; a new era, a new approach Ir. Hein van Stokkom (the East Netherlands Department of the Ministry of Transport, Public Works and Water Management, The Netherlands)

Catchment flood management: a UK perspective and experience Roger A. Falconer, Cardiff University, UK

Flash flood and sediment transport modelling of small watersheds Pierre Julien (Colorado State University, USA)

Flood defence issues and strategies—the complementary character of structural and non-structural measures to cope with floods Bella Petry (International Institute for Infrastructural, Hydraulic and Environmental Engineering, The Netherlands)

Risk-based design and analysis of flood defence systems Yeou-koung Tung (Hong Kong University of Science and Technology, Hong Kong, China)

Flood Management from the Perspective of Integrated Water Resource Management Colin Green (representative of the World Bank)

Flood disasters and insurance: flood risk = hazard × exposure × vulnerability Wolfgang Kron (Munich Reinsurance Company, Germany)

Urban flood control in Hong Kong Joseph H.W. Lee (University of Hong Kong, Hong Kong, China)

Changes of flood control situations in the coastal region of China and adjustments of flood management strategies Xiaotao Cheng (Research Center on Flood and Drought Disaster Reduction of the Ministry of Water Resources of China, China)

The two volumes of the proceedings published by the Science Press New York Ltd contain the keynote and invited lectures and 224 papers. The symposium books (US\$100.00) and the CD ROM (US\$10.00) of the proceedings can be obtained by contacting:

Dr Cheng Liu,
International Research and Training Center on
Erosion and Sedimentation, PO Box 366,
20 Chegongzhuang West Rd, 100044 Beijing, China
Tel: +8610 68415522 ext. 6577; Fax: +8610
68411174, e-mail: chliu@iwhr.com .

Cheng Liu, Symposium Secretary

IAHS at Sapporo—July 2003

IAHS Symposia—Update

The convenors of the four IAHS symposia, HS01–HS04 are reviewing papers ready for publication. Because there has been a very large response to HS02, two volumes of proceedings will be pre-published for this symposium, with a volume for each of HS01 and HS03. The proceedings of HS04 will be post-published.

IAHS Workshops and Joint Association Symposia/Workshops

Deadline for abstracts: 31 January 2003

This deadline for submission of abstracts applies for the IAHS workshops HW01–HW08 and all the joint association symposia and workshops.

Please note that all abstracts should be submitted to the Local Organizing Committee:

IUGG2003 Secretariat
Japan Marine Science and Technology Center
(JAMSTEC), 2-15 Natushima-cho,
Yokosuka 237-0061, Japan
 [fax: +81 468 679315;
iugg_service@jamstec.go.jp]

Brief details of the IAHS Workshops are given below.

The titles, contact details and dates for all other symposia and workshops organized/supported by IAHS are given in the Calendar of Meetings (p. 24). Full details can be seen at the IAHS web site.

HW01: Effects of Human Activities on Hydrological and Biogeochemical Cycles

9–10 July 2003 ICWQ (ICGW)

Many factors affect hydrological and biogeochemical cycles including geology, vegetation, soil type, atmospheric deposition, erosion intensity, and climate. Deciphering and quantifying the primary processes controlling the cycles has been the focus of many studies for several decades. The objective of this workshop is to assess the status of these relations and to explore new technologies, such as tracers, in elucidating these processes and testing hydrological transport and hydrochemical models. Presenters are encouraged to take a holistic approach in comparing and contrasting processes among basins at a range of temporal and spatial scales and with respect to human activities.

Main convenor: Dr Nobuhito Ohte
Laboratory of Forest Hydrology, Division of
Environmental Science and Technology, Graduate
School of Agriculture, Kyoto University, Kyoto 606-
8502, Japan
 [tel.: +81 75 7536093; fax: +81 75 7536088;
nobu@bluemoon.kais.kyoto-u.ac.jp]

Co-convenor: Dr Norman (Jake) Peters

HW02: Stream Temperature Changes and Effects

11 July 2003 ICWQ

This workshop will deal with different aspects of stream and river temperatures ranging across subjects such as impacts of future warming, ecological implications, human effects, fundamental physical and hydrological processes involved, and managing and controlling temperatures in rivers.

Convenor: Prof. Bruce Webb

University of Exeter, School of Geography and
Archaeology, Amory Building, Rennes Drive, Exeter
EX4 4RJ, UK

[tel.: +44 1392 263334; fax: +44 1392 263342;
b.w.webb@exeter.ac.uk]

HW03: Quality Assurance in Hydrological Research

11 July 2003 ICWQ, ICSW, ICGW, ICWRS, ICASVR and ICCE

The workshop aims to exchange information on how quality assurance in hydrological research can be improved and communicated to society by addressing the following issues: statistical methods for evaluation of hydrological data; level of model complexity for different problems/scales; new approaches to sensitivity and uncertainty analyses and parameter calibration; steps necessary for regionalization and modelling of ungauged catchments; how model validation can assure exploration of future trends.

Convenor: Dr Valentina Krysanova
Potsdam Institute for Climate Impact Research,
PO Box 601203, Telegrafenberg, D-14412 Potsdam,
Germany
 [tel.: +49 331 2882515; fax: +49 331 2882600;
valen@pik-potsdam.de]

HW04: Systems Modelling of Global Water Dynamics

9 July 2003 ICWRS

Modelling global water resources requires an understanding of the complex structure of water systems and their interactions with population, economy, industrial development, food production and persistent pollution. The workshop will address: (a) the most important issues in describing the complex structure of global water resources systems; (b) the power of system dynamics simulation modelling tools; and (c) the interdisciplinary nature of global water dynamics. The proposed format of the workshop is for participation of experts from different disciplines.

Main convenor: Dr Tomoharu Hori
Department of Civil Engineering, Kyoto University,
Kyoto, Japan
 [tel.: +81 75 7535095; fax: +81 75 7534907;
hori@wr.kuciv.kyoto-u.ac.jp]

Co-convenors: Dr Toshiharu Kojiri,
 Prof. Slobodan P. Simonovic

HW05: Groundwater Resources for Emergency Situations

10 July 2003 ICGW

Focus: identification and management of groundwater resources for emergency situations as a result of extreme hydrological events like earthquakes, droughts and floods, which may result in a breakdown of the water supply system for long periods. Emergency drinking water supplies may then be required. How should groundwater resources and water supply be managed to secure water availability after such events? What measures could be taken to prevent exploitation of all available groundwater resources and what methods are available to support decision making?

Convenor: Dr Norio Tase
Institute of Geoscience, University of Tsukuba,
Ibaraki 305-8571, Japan
 [tel.: +81 298 534750; fax: +81 298 519764;
tase@atm.geo.tsukuba.ac.jp]

IAHS at Sapporo—continued

HW06: Isotope Tracers in Water Cycle Models

7–9 July 2003 ICT, ICGW and IAEA

Aim: to explore how isotopic information can be used to formulate, calibrate and test models of water flow pathways, water sources, water age and transit time at catchment, regional and global scales. Contributions are encouraged on conceptual, analytical and numerical modelling of the water cycle and isotope processes at the local to global scale, including application of isotopes in general circulation models (GCMs), regional climate models (RCMs), land surface schemes, watershed hydrological models, lake basin models, and hillslope/catchment models.

Main convenor: Prof. Jeffrey J. McDonnell
Department of Forest Engineering, Oregon State
University, Corvallis, Oregon 97331-5706, USA
 [tel.: +1 541 7378720; fax: +1 541 7374316;
jeff.mcdonnell@orst.edu]

Co-convenors: Pradeep K. Aggarwal,
 Dr John J. Gibson

HW07: Towards a Science Programme for Prediction in Ungauged Basins (PUBs)

10–11 July 2003 All IAHS Commissions

In river basins everywhere, man's activities have disrupted the natural hydrological and ecological regimes. This is particularly true for those basins in developing country regions where climatic variability and basin development undertaken with little or no data have frequently led to the depletion of water resources, ecosystem degradation, and poor quality of life. New advances in understanding and predictive capacity are needed to support the sustainable management of ungauged or poorly gauged basins. The workshop will focus on the formulation of a PUBs science programme which can mobilize the scientific community in a coordinated and effective way to address this major challenge over the next 10 years.

Main convenor: Prof. P. E. O'Connell
Department of Civil Engineering, University of
Newcastle upon Tyne, Cassie Building,
Claremont Road, Newcastle upon Tyne NE1 7RU,
UK
 [tel.: +44 191 2226405; fax: +44 191 2226669;
p.e.o'connell@ncl.ac.uk]

Co-convenors: Prof. Levent Kavvas,
 Prof. Murugesu Sivapalan, Prof. Jeffrey J. McDonnell

HW08: Parameter Estimation Techniques

7–9 July 2003 IAHS/WMO Working Group on GEWEX, ICSW and ICASVR

Aims: to report on the experience of a preliminary workshop on this topic held at the University of Arizona in April 2002; to review the current techniques being actively used by different groups to estimate the parameters of hydrological models; to test the ability of some of these techniques to make *a priori* parameter estimates and to simulate streamflow for several common basins encompassing different climatic regions; to determine future activities to address parameter estimation.

Main convenor: Dr John Schaake
National Weather Service, 1325 East-West Highway,
Silver Spring, Maryland 20910, USA
 [tel.: +1 301 7130640 ext. 144; fax: +1 301 7130963;
john.schaake@noaa.gov]

Co-convenors: Dr Alan Hall, Prof. Qingyun Duan,
 Prof. Hoshin V. Gupta, Dr George H. Leavesley

Hydrology 2020 at Sapporo

In addition to the previously advertised IAHS programme: there will be a special session on 10 July by the Hydrology 2020 group, coordinated by Taikan Oki. What should be the hydrology of 2020, and what can we do in order to achieve the target? Let's exchange future perspectives on hydrology, examine the relationship between science and society, and draw a road map towards future excellence in hydrology.

Co-ordinator: Assoc. Prof. Taikan Oki, Institute of
Industrial Science, University of Tokyo, 4-6-1
Komaba, Meguro-ku, Tokyo 153-8505, Japan
 [tel.: +81 3 54526382; fax: +81 3 54526383;
taikan@iis.u-tokyo.ac.jp]

Third Circular and Registration for Sapporo

The Third Circular will be published soon, and you can find out much from the LOC's web site:

<http://www.jamstec.go.jp/jamstec-e/iugg/htm/third.htm>

Registration details and a registration form are available at the web site too. Note that early booking means discounts can be obtained on registration fees. Early is before 1 April 2003.

Other Forthcoming Events

(all meetings are organized or sponsored by IAHS and/or its Commissions)

International Conference on Advances in Flood Forecasting in Europe

Rotterdam, The Netherlands, 3–5 March 2003



Call for abstracts

The European Flood Forecasting System (EFFS) Project is an EU-funded initiative, supporting

meteorological offices, weather forecast centres, universities and institutes in the integration of numerical weather predictions, hydrological simulation and river routing models, with the goal to build a prototype version of a pan-European semi-operational flood forecasting system. The desired warning lead-time lies between 4 and 10 days. This conference marks the final phase of the project, and will include presentation of the EFFS research results. The meeting should stimulate discussion and exchange of ideas among renowned experts and lead to a blueprint for future research in flood forecasting. It will be of interest to scientists, forecasters, water management authorities and end-users.

Conference objectives and themes

- To exchange innovative methods on flood forecasting amongst scientists and operational forecasters and to discuss how to disseminate the results to stakeholders, end-users and decision makers.
- To contribute to reduction of flood risk through early warning and prolongation of the flood lead time.

The focus will be on the results of the EFFS project, which will be presented together with outcomes of other current and past EC research projects on flood forecasting and warning.

The conference themes are as follows:

- Weather forecasting, ensemble prediction, and use of radar
- Continental scale and large river flood forecasting
- Flash flood forecasting
- Flood inundation forecasting and modelling
- Dissemination of medium-range flood forecasts, model uncertainties and ensembles
- The future of flood forecasting, data exchange and institutional issues

The conference is organized jointly by WL Delft Hydraulics, and the Joint Research Centre of the European Commission—Institute for Environment and Sustainability, and convened jointly by The Netherlands National Committee for the International Hydrological Programme (IHP) of UNESCO, the Hydrology and Water Resources Programme of WMO and the Directorate-General of Public Works and Water Management—Institute for Inland Water Management and Waste Water Treatment (RIZA), The Netherlands.

The working language of the conference will be English. Keynote presentations and short oral presentations associated with poster exhibitions will be made. The final day of the conference will be dedicated to discussing the needs of operational forecasting centres. A book of abstracts will be available at the conference. The proceedings will be published in *Hydrology and Earth Systems Science*.

Deadline for abstracts

Abstracts should be forwarded to Bob van Kappel by 15 December 2002

For further information, please contact:

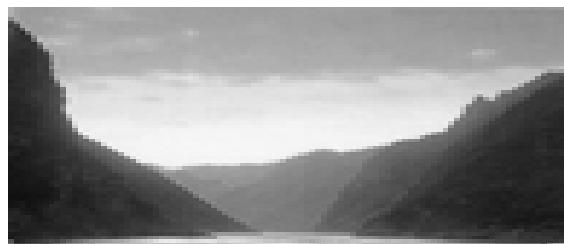
Bob van Kappel
WL | Delft Hydraulics
PO Box 177, 2600 MH Delft
The Netherlands
 [tel.: +31 15 2858585; fax: +31 15 2858582;
info.effs@wldelft.nl]

The conference web site is:

<http://wldelft.nl/gen/news/effs-conf/index.html>

International Conference of GIS and Remote Sensing in Hydrology, Water Resources and Environment

Call for abstracts



Three Gorges Dam, China, 16–19 September 2003

This conference, organized by the Sun Yat-Sen University of China (ZSU) and the Free University Brussels, of Belgium (VBU), will be held at Yichang City, only half an hour's drive from the Three Gorges Dam construction site.

The conference objectives include:

- review and reporting of advances in GIS and remote sensing applications in hydrology, water resources and the environment
- sharing of the experience of scientists, engineers, NGOs and policy makers worldwide in these subjects
- discussion of the technical, societal and economic aspects of the development of the Three Gorges Project and Yangtze River and investigations after the reservoir has filled.

There are five conference themes:

A: Hydrology

- Hydrological forecasting
- Flood modelling
- Global hydrologic cycle
- Urban hydrology
- Eco-hydrology

B: Water Resources

- Water resources modelling
- Integrated water resources management and planning
- Water security
- Reservoir management
- Water resources management system
- Dam development

C: Environment

- Water quality and pollution
- Matter and particle transport in rivers and lakes

D: GIS and Remote Sensing

- Data mining and assimilation
- Precipitation estimation and prediction
- Remote sensing technology
- Remote sensing products.
- Software and tools

E: Development of the Three Gorges Project and Yangtze River

- Strategy for the Development of Yangtze River
- Role of the Three Gorges Project in flood mitigation of the Yangtze River

- Multi-purpose development of the Three Gorges Project
- Optimal control scenarios of the Three Gorges Reservoir
- Environmental and ecologic impact of the Three Gorges Project
- Social and economic impact of the Three Gorges Project
- The Three Gorges Project and long distance water transfer

Tours Several post-conference tours will be available for participants.

Abstracts Participants intending to present papers or posters are asked to submit abstracts of about 300 words to the LOC before 31 January 2003 by e-mail or fax. Authors will be notified of the abstract acceptance by 15 February 2003 and be required to submit full papers by 31 May 2003, for pre-conference publication.

All correspondence about this conference should be sent directly to the LOC; e-mail and fax contacts are preferred. The contact information is:

Chairman, LOC of ICGRHWE
c/o Prof. Yangbo Chen
Institute of Water Resources and Environmental Engineering
College of Earth and Environmental Sciences
Sun Yat-Sen University
135 Xingangxi Road, Guangzhou,
China 510275
 [fax: +86 20 3402 2397; eescyb@zsu.edu.cn]

Conference website:

<http://www.hydroinfor.zsu.edu.cn>

**Ninth International Symposium on River Sedimentation (9th ISRS):
 Interactions between Fluvial Systems and Hydroprojects and Their Impact**

October 18–21, 2004, Yichang, China

Call for abstracts

Since 1980 eight ISRS symposia have been organized successfully in Asia, Europe, North America and Africa. This will be the ninth in the triennial conference series. The central theme: *Interactions between Fluvial Systems and Hydroprojects and Their Impact*, will provide an opportunity for research exchange and discussion of topics of great importance to China, with its many sediment-laden rivers and long experience of sediment management, as well as other regions.

The venue, Yichang city, will enable participants to visit the well-known Three Gorges Project, 40 km away. The conference is organized by the Ministry of Water Resources, People's Republic of China

The following themes will be addressed:

- Large-scale hydro projects and their impact

- River sedimentation
- Estuarine and coastal engineering
- Soil erosion
- Environmental sedimentation

Tours Two technical tours will be available for participants during the symposium

- Three Gorges Project, Gezhouba Hydroproject and migrants new villages
- Jingjiang River (middle reaches of the Yangtze River), dikes and a flood diversion area

In addition post symposium study tours of 3 to 7 days duration will be offered.

Abstracts in English, of 300–500 words, should be submitted by 30 September 2003 to the address below. Abstracts will be accepted by 30 November 2003, and full papers required by February 29 2004

For further information, please contact:

Dr Hu Chunhong
Secretary General of Secretariat of ISRS
IRTCS
20 Chegongzhuang Xilu
Beijing 100044, China
 [tel: +86 10 68413372; fax: +86 10 68411174;
irtces@public.bta.net.cn or irtces@95777.com]

Other News

New President of ICID (International Commission on Irrigation and Drainage)

In July, ICID's International Executive Council elected a new President (and other officers) at the ICID Congress in Montreal, Canada. The new President (2002–2005) is:

Dato' Ir. Hj. Keizrul bin Abdullah,
 Director General of the Department of Irrigation and Drainage, Kuala Lumpur, Malaysia
 [e-mail: keizrul@did.moa.my]

For details see the ICID web site:

<http://www.icid.org>

Water for Peace

The Water For Peace Foundation is a nonprofit-making organization based in the USA. Its mission is to:

- provide clean drinking water to victims of natural disasters, long-term water supplies for human use (domestic, agricultural, power, recreation, manufacturing, etc.), and water for the world's flora and fauna including environments such as wetlands;
- protect this renewable resource;
- develop new methodologies for evaluation and measurement of the quantities and quality of water, and the allocation and administration of the Earth's water resources;
- educate the peoples of the earth about the

- possibilities and responsibilities of man for the use and protection of this renewable resource;
- train physical, political, social, and economic scientists and technicians in the field of water resources;
 - establish central and regional centres of expertise;
 - promote the exchange of knowledge and information freely between all peoples; and,
 - foster love, tolerance, acceptance, understanding and forgiveness.

On 1 September 2002, Water for Peace began its free educational programme on the internet with an eight-week course: *A General Introduction to Small Hydropower Development* taught by Dr John S. Gladwell; text and assignments are posted on the internet and the dialogue between student and tutor for the eight week course is by e-mail. Visit the web site to register.

In September, Water for Peace also introduced a series of papers titled: *The Subject is Water*, an ongoing series presented by Dr John S. Gladwell.

There is much more going on; details can be seen at the multi-lingual (Chinese, French, German, Italian, Japanese, Korean, Portuguese, Spanish) web site:

<http://www.waterforpeace.org>

We hope you will become a part of this effort.

Dr Della Laura
Founder and President, Water for Peace
dellalaura@waterforpeace.org

Participation of Women in the Fields of Meteorology, Operational Hydrology and Related Sciences

Participants (105) from Bulgaria, Croatia, The Czech Republic, Hungary, Italy, Lithuania, Poland, Romania, The Slovak Republic and Ukraine, discussed both gender issues and a research agenda covering meteorological and hydrological themes at a two-day meeting in May in Bratislava, The Slovak Republic.

The conference came to several conclusions including:

- Prior to the conference the belief was that gender equality is a global problem. However, generally the situation of women in the participants' institutes was felt to be quite good. Gender equality is not a problem but improving their opportunities in science is. Participation of women in solving practical and theoretical problems in meteorology hydrology and related sciences is high and helps the development of these sciences. It is important to include women in higher level management and research coordination.
- The primary presumption for practical and

theoretical tasks connected with air and water is of reliable and good-quality monitoring. In the future the quality of data and information must be maintained, and the historical data and homogeneity of databases must be preserved. Continuing attention to the technical condition of monitoring networks, the technology of data processing, and needs for the future is required.

- Operational meteorological and hydrological monitoring should be directed in a way to protect the lives and property of humans and society to the maximum possible extent.
- To continue holding these meetings on a regular basis so creating conditions for information exchange

The Organizing Committee and participants of the conference would like to thank the Global Water Partnership for their comprehensive and direct financial support.

IAHS and Hydrological Sciences in Nigeria

The atmosphere is increasingly more favourable for IAHS in Nigeria. Interest in the Association is growing even if it is not yet reflected in membership statistics.

In 1986, when the writer was Provost of the College of Science and Technology, University of Lagos at Abeokuta (now University of Agriculture, Abeokuta) he initiated the establishment of a full Department of Hydrology and Water Resources. The Department now awards degrees and by 2001 had produced 189 graduates. Many graduates now work in the Federal and State Ministries of Water Resources, some are university and college lecturers, and others are undertaking research studies. The WMO Hydrology and Water Resources Department under the leadership of John Rodda (and later Arthur Askew) supported these developments. These graduates are among those who now appreciate the importance of IAHS. Note that many other Nigerian universities also run hydrological sciences related programmes in civil engineering, geography, geology and environmental departments, etc.

In 1986, the writer also established a focal point for IAHS, named the Hydrological Sciences Association of Nigeria (HySAN). This event obviously came too soon for Nigeria as efforts to make HySAN function did not last, but the impact was helpful. The current development is one of increasing interest in IAHS. People contact him as the National Representative of IAHS wanting to know about IAHS and related matters. The plan is to re-establish an IAHS focal point in Nigeria by March 2003 by two means:

- a functional National Committee for IAHS;

We now have interested members representing the main commissions and covering most of the geographical zones of Nigeria.

- resuscitation of HySAN with a new name, Nigerian Association of Hydrological Sciences (NAHS). A web site:

<http://www.nahsonline.org>

has been set up with the assistance of the IAHS Secretary General, Pierre Hubert.

Two other factors have also influenced the increasing interest in IAHS and hydrological sciences as a whole. First, the increasing circulation of the IAHS Newsletter both as hard copy and electronic formats, especially the former. And secondly, recent improvements of income levels in Nigerian universities, which also make reasonable provisions for academics to pay professional society/association membership fees and journal subscriptions. This is an encouraging trend as there is a need for younger and bright hydrologists who can take up important leadership responsibilities. In the meantime, the writer has compiled a list of some 50 members and potential members of NAHS and IAHS as part of the re-activation process.

Lekan Oyebande
IAHS Vice-President, Nigeria.

New e-journal on Data Science

CODATA, the Committee on Data for Science and Technology of the International Council for Science, ICSU, has launched the first issue of its new free electronic journal *Data Science Journal*. It can be viewed now at:

<http://www.datasciencejournal.org>

The editorial board welcomes papers that fit within the scope of the journal for publishing consideration. More detailed information on the scope and prospectus of the journal can be found at the web site. The contact e-mail address is:

codata@qub.ac.uk

Ramsar Wetland Conservation Awards for 2002

The NGO Trinationl Initiative for the Morava-Dyje flood plain has been selected for the Ramsar Award for 2002 in recognition of the work carried out for many years in three countries—Austria, the Czech Republic, and the Slovak Republic—to ensure the sustainable use and conservation of the natural and cultural heritage of the flood plains of the Morava (March) and Dyje (Thaya) rivers. The Morava-Dyje riverine landscape is one of the last regions in Europe where traditional land use has secured a rich biodiversity, and

NEW National
Representative

a model area for the reconciliation of nature and humankind. The NGOs involved are Daphne in the Slovak Republic, Distelverein in Austria, and Veronica in the Czech Republic, with the support of the WWF International's Danube Carpathian Programme. Through their efforts, the Ministries for the Environment of the three countries have established a transboundary "Trilateral Ramsar Platform" for the area, whereby a body of 15 experts from the ministries, water management institutions, national Ramsar committees, and NGOs meets regularly to ensure collaborative management.

Full press release at:

http://www.ramsar.org/key_awards2002_report.htm

Sustainable Water Use in Europe—Part 3: Extreme hydrological events: floods and droughts

Published by OPOCE (Office for official publications of the European Communities) © EEA, Copenhagen 2001. 84 pages.

This report gives an overview of the main natural and artificial causes and impacts of floods and droughts in western and central European countries, as well as policy responses. It aims to help policy- and decision-makers in their work on preventing and managing such extreme events, as well as the European Commission's work in the field of civil protection. Prepared by: Teodoro Estrela, Manuel Menéndez, Mirta Dimas and Concepción Marcuello, CEDEX; Gwyn Rees and Gwyneth Cole, CEH; Karin Weber and Johannes Grath, AWW; Jennifer Leonard, IOW; Niels Bering Ovesen, NERI; János Fehér, Vituki Consult, PTL/IW ETC/IW. Leader: Timothy J. Lack, EEA; Project Manager: Niels Thyssen

The report can be downloaded at:

http://reports.eea.eu.int/environmental_issues_no_21/en/enviissue21.pdf

Changes to National Representatives

Please note the following changes to the list of IAHS National Representatives published in the *IAHS Handbook* (pp. 87–94) in 2000:

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NEW e-mail

The full and revised list of IAHS National Representatives can be found at:

<http://www.cig.ensmp.fr/~iahs>

addresses. It may be that the accounts are overfull, or have died, or that Yahoo or Hotmail think we are sending SPAM. Unfortunately there is not much we can do about this.

If you have received no e-mail from cate@iahs.demon.co.uk since the beginning of July (the last batch e-mails were 22 July to all members, and 4 October to all except those with interest only in ICSI), and have not received a letter querying your e-mail details, do contact Jill so that we know you are still active, and provide any new e-mail information.

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Contacting you!

Important for all IAHS members

To ensure you keep receiving the Newsletter we need accurate contact information for all members. Do let us know about changes to your address, tel. no., fax no. and e-mail (also any change in the subjects that interest you—based on the titles of the IAHS International Commissions given on the back cover of this Newsletter). Please send any changes to:

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Yahoo and Hotmail e-mail addresses (plus various others)

IAHS does not regularly contact members by e-mail, but we have noticed that our batch e-mails (sent as batches of 500 plus) often result in e-mails being returned from Yahoo and Hotmail

Impacts of Urban Growth on Surface Water and Groundwater Quality

Edited by J. Bryan Ellis

An interdisciplinary perspective on the management and control of water quality within large urban catchments illustrating that recourse to fundamental principles, common sense, and ecological awareness, as well as changes in attitudes to water resource exploitation and pollution, are necessary if sustainable urban development is to be achieved. The objectives must be to avoid accumulation of non-degradable hazardous substances and to adapt the waste output to what natural processes can effectively and efficiently assimilate, with water management integrated with management of the related urban system such as solid waste disposal, transportation systems etc.

IAHS Publ. no. 259 (July 1999)

ISBN 1-901502-06-6; 438 + x pp.; price £59.00

A useful volume for engineers, ecologists and planners involved in the management and control of surface and ground water quality within large urban catchments

Calendar of Meetings Organized/Sponsored by IAHS

2002		
Timisoara, Romania 21–22 November	Prof. Gheorghe Cretu, Conference Secretariat, "Politehnica" University Timisoara, Facultatea de Hidrotehnica, Str. George Enescu nr 1A, 1900 Timisoara, Romania tel./fax: +40 56 221481; gcr@mail.dnttm.ro ; http://www.utt.ro/pfhd	International Conference on Preventing and Fighting Hydrological Disasters
Dunedin, New Zealand 2–6 December	Pat Langhorne, IAHR 16th International Symposium on Ice, Department of Physics, University of Otago, PO Box 56, Dunedin, New Zealand tel.: +64 3 4797749; fax: +64 3 4790964; nzice@physics.otago.ac.nz ; http://www.physics.otago.ac.nz/~nzice/	16th IAHR International Symposium on Ice
2003		
Stellenbosch, South Africa 22–24 January	Prof. André Gorgens, Department of Civil Engineering, University of Stellenbosch, Private Bag X1 Matieland, Stellenbosch 7602, South Africa tel.: +27 21 4245544; fax: +27 21 4245588; andre.gorgens@shands.co.za ; http://www.civeng.sun.ac.za/	Second International Symposium on Integrated Water Resources Management (IWRM): Towards Sustainable Water Utilization in the 21st Century
Rotterdam, The Netherlands 3–6 March	Bob van Kappel, WL Delft Hydraulics, PO Box 177, 2600 MH Delft, The Netherlands tel.: +31 15 2858585; fax: +31 15 2858582; info.efs@wldelft.nl	International Conference on Advances in Flood Forecasting in Europe
Valdivia, Chile 12–13 March	Gino Casassa, Centro de Estudios Científicos (CECS), Valdivia, Chile tel.: +56 63 234540; fax: +56 63 234517; gcasassa@cecs.cl	Symposium on Mass Balance of Andean Glaciers
Montpellier, France 1–4 April	Muriel Tapiou, Conference 2003, Laboratoire HydroSciences Montpellier, UMR 5569, BP 5045, F-34032 Montpellier Cedex, France tel.: +33 4 67149020; fax: +33 4 67149010; montpellier2003@msem.univ-montp2.fr ; http://mpl.ird.fr/montpellier2003	International Conference on the Hydrology in the Mediterranean and Semiarid Regions
Einsiedeln, Switzerland 2–4 April	Dr C. Hegg or Dr M. Stähli, Swiss Federal Research Institute WSL, Water, Soil and Rock Movements, Zürcherstrasse 111, CH-8903 Birmensdorf, Switzerland tel.: +41 1 7392111; mountainhydrology2003@wsl.ch ; http://www.wsl.ch/mountainhydrology2003	International Workshop on Mountain Hydrology
Vienna, Austria 19–23 May	Dr P. K. Aggarwal, Isotope Hydrology Section, International Atomic Energy Agency, Wagramer Strasse 5, PO Box 100, A-1400 Vienna, Austria tel.: +43 1 260021736; fax: +43 1 26007; confisohis@iaea.org ; http://www.iaea.or.at/programmes/ripc/ih/	Isotope Hydrology and Integrated Water Resources Management: 40th Anniversary International Symposium;
Tallinn, Estonia June	Dr Elve Lode, Conference Secretary, Ecohydrological Processes in Northern Wetlands, Department of Landscape Ecology, Institute of Ecology, TPU, Kevade 2, EE-10137 Tallinn, Estonia fax: +372 66 22283; icewetland@eco.edu.ee	International Conference and Educational Workshop on Ecohydrological Processes in Northern Wetlands
Sapporo, Japan 30 June–11 July	Secretariat of IUGG2003, IUGG2003 Secretariat, Japan Marine Science and Technology Center (JAMSTEC), 2-15 Natsushima-cho, Yokosuka 237-0061, Japan fax: +81 468 679315; iugg_service@jamstec.go.jp ; http://www.jamstec.go.jp/jamstec-e/iugg/htm/third.htm	IUGG2003: XXIII General Assembly of the International Union of Geodesy and Geophysics
8–9 July	Dr Dirk H. de Boer, Department of Geography, University of Saskatchewan, 9 Campus Drive, Saskatoon, Saskatchewan S7N 5A5, Canada tel.: +1 306 9665671; fax: +1 306 9665680; deboer@duke.usask.ca	HS01: International Symposium on Erosion Prediction in Ungauged Basins (PUBs): Integrating Methods and Techniques
10–11 July	Dr Günter Blöschl, Technische Universität Wien, Institut für Hydraulik, Gewässerkunde und Wasserwirtschaft, Karlsplatz 13/223, A-1040 Vienna, Austria tel.: +43 1 5880122315; fax: +43 1 5880122399; bloeschl@hydro.tuwien.ac.at	HS02: International Symposium on Water Resources Systems—Global Change, Risk Assessment and Water Management
7–8 July	Prof. Y. Tachikawa, Disaster Prevention Research Institute, Kyoto University, Gokasho Uji, Kyoto 611-0011, Japan tel.: +81 774 384126; fax: +81 774 384130; tatikawa@rdp.dpri.kyoto-u.ac.jp	HS03: International Symposium on Information from Weather Radar and Distributed Hydrological Modelling
7–8 July	Ir Joop Steenvoorden, Alterra, Wageningen University and Research Centre, Postbox 47, 6700 AA Wageningen, The Netherlands tel.: +31 317 474311; fax: +31 317 419000; j.h.a.m.steenvoorden@alterra.wag-ur.nl	HS04: International Symposium on Methodologies for Risk Assessment of Waste Water Re-use on Groundwater Quality
9–10 July	Dr Nobuhito Ohte, Laboratory of Forest Hydrology, Division of Environmental Science and Technology, Graduate School of Agriculture, Kyoto University, Kyoto 606-8502, Japan tel.: +81 75 7536093; fax: +81 75 7536088; nobu@bluemoon.kais.kyoto-u.ac.jp	HW01: International Workshop on Effects of Human Activities on Hydrological and Biogeochemical Cycles
11 July	Prof. Bruce Webb, University of Exeter, School of Geography and Archaeology, Amory Building, Rennes Drive, Exeter EX4 4RJ, UK tel.: +44 1392 263334; fax: +44 1392 263342; b.w.webb@exeter.ac.uk	HW02: International Workshop on Stream Temperature Changes and Effects
11 July	Dr Valentina Krysanova, Potsdam Institute for Climate Impact Research, PO Box 601203, Telegrafenberg, D-14412 Potsdam, Germany tel.: +49 331 2882515; fax: +49 331 2882600; valen@pik-potsdam.de	HW03: International Workshop on Quality Assurance in Hydrological Research

9 July	Dr Tomoharu Hori, Department of Civil Engineering, Kyoto University, Kyoto, Japan tel.: +81 75 7535095; fax: +81 75 7534907; hor@wr.kuciv.kyoto-u.ac.jp	HW04: International Workshop on Systems Modelling of Global Water Dynamics
10 July	Dr Norio Tase, Institute of Geoscience, University of Tsukuba, Ibaraki 305-8571, Japan tel.: +81 298 534750; fax: +81 298 519764; tase@atm.geo.tsukuba.ac.jp	HW05: International Workshop on Groundwater Resources for Emergency Situations
7–9 July	Prof. Jeffrey J. McDonnell, Richardson Chair in Watershed Science, Department of Forest Engineering, Oregon State University, Corvallis, Oregon 97331-5706, USA tel.: +1 541 7378720; fax: +1 541 7374316; jeff.mcdonnell@orst.edu	HW06: International Workshop on Isotope Tracers in Water Cycle Models
10–11 July	Prof. P. E. O'Connell, Department of Civil Engineering, University of Newcastle upon Tyne, Cassie Building, Claremont Road, Newcastle upon Tyne NE1 7RU, UK tel.: +44 191 2226405; fax: +44 191 2226669; p.e.o'connell@ncl.ac.uk	HW07: International Workshop: Towards a Science Programme for Prediction in Ungauged Basins
7–9 July	Dr John Schaake, National Weather Service, 1325 East-West Highway, Silver Spring, Maryland 20910, USA tel.: +1 301 7130640 ext. 144; fax +1 301 7130963; john.schaake@noaa.gov	HW08: International Workshop on Parameter Estimation Techniques
9 July	Dr Georges Balmino, CNES/GRGS, 18 Avenue Edouard Belin, F-31401 Toulouse, France tel.: +33 5 61332980/2889; fax +33 5 61253098; georges.balmino@cnes.fr	JSG02: International Symposium on Interdisciplinary Earth Science from Improved Gravity Field Modelling
10 July	Assoc. Prof. Taikan Oki, Institute of Industrial Science, University of Tokyo, 4-6-1 Komaba, Meguro-ku, Tokyo 153-8505, Japan tel.: +81 3 54526382; fax: +81 3 54526383; taikan@iis.u-tokyo.ac.jp	Hydrology 2020
9 July	P. Knudsen, Kort & Matrikelstyrelsen, Rentemestervej 8, DK-2400 Copenhagen NV, Denmark pk@kms.dk	JSG03: International Symposium on Interdisciplinary Science from Remote Sensing—Radar Altimetry, ATSR, SAR, Ocean Colour and Other Sensors
7–8 July	Dr Richard Armstrong, National Snow and Ice Data Center, 449 UCB, University of Colorado, Boulder, Colorado 80309-0449, USA tel.: +1 303 4921828; fax: +1 303 4922468; rlax@kryos.colorado.edu	JSH01: International Symposium on Remote Sensing of the Cryosphere
4 July	Dr Masaya Yasuhara, Geological Survey of Japan, Higashi, Tsukuba, Ibaraki 305-8567, Japan tel.: +81 298 612409; fax: +81 298 613749; masaya-yasuhara@aist.go.jp	JSH02: International Symposium on Groundwater and Volcanoes
3 July	Dr Richard Davis, Environment Department, World Bank, Mailstop MC5-512, World Bank, 1818 H St NW, Washington, DC 20433, USA tel.: +1 202 4736267; fax: +1 202 5220367; jdavis@worldbank.org	JSH03: International Symposium on Quantitative Approaches to Hyporheic Flows and their Biogeochemical Consequences in Marine, Estuarine and Freshwater Systems
7–8 July	Gerald L. Geernaert, Frederiksborgvej 399, Postboks 358, DK-4000 Roskilde, Denmark tel.: +45 46301101; fax: +45 46301214; glg@dmu.dk	JSM03: International Symposium on Land–Ocean–Atmosphere Interactions in the Coastal Zone
9–10 July	Paulo Artaxo, Instituto de Física, Universidade de São Paulo, Rua do Matao, Travessa R 187, CEP 05508-900, São Paulo, Brazil tel.: +55 11 38187016; fax: +55 11 38186749; artaxo@if.usp.br	JSM04: International Symposium on Terrestrial ecosystems, Atmospheric Composition, Climate
7–8 July	S. O'Farrell, CSIRO Atmospheric Research, Private Bag no. 1, Aspendale, Victoria 3195, Australia tel.: +61 3 92394573; siobhan.ofarrell@dar.csiro.au	JSM10: International Symposium on Cryosphere–Climate Interactions
10–11 July	Anny Cazenave, GRGS, Centre National d'Etudes Spatiales, Avenue Edouard Belin 18, F-31401 Toulouse Cedex 4, France tel.: +33 5 61332922; fax: +33 5 61253205; anny.cazenave@cnes.fr	JSM11: International Symposium on Global Sea Level Rise, Global Climate Change and Polar Ice Sheet Stability
7–8 July	David Hudak, Cloud Physics Research Division, Meteorological Service of Canada, 4905 Dufferin Street, Toronto, Ontario M3H 5T4, Canada david.hudak@ec.gc.ca	JSM14: International Symposium on Dynamics and Predictability of Severe Weather Events
5 July	Roland List, Department of Physics, University of Toronto, Toronto M5S 1A7, Canada tel.: +1 416 9782982; fax: +1 416 9788905; list@atmosp.physics.utoronto.ca	JSM15: Special Nakaya—Magono Celebration on the Growth of Ice Crystals and Snow
4 July	Richard Bintanja, Institute for Marine and Atmospheric research Utrecht (IMAU), Utrecht University, PO Box 80005, 3508 TA Utrecht, The Netherlands tel.: +31 30 2533259; fax: +31 30 2543163; r.bintanja@phys.uu.nl	JSM16: International Symposium on the Role of Atmospheric Processes in Mass Balance Exchange in the Polar Regions
30 June–1 July	Chris Kummerow, Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado 80523, USA tel.: +1 970 4917473; fax: +1 970 4918449; kummerow@atmos.colostate.edu	JSM18: International Symposium on the Measurement and Distribution of Precipitation
4 July	Evgeni A. Kontar, P. P. Shirshov Institute of Oceanology, Russian Academy of Sciences, Moscow 117218, Russia tel.: +7 095 1292181; fax: +7 095 1245983; kontar@cityline.ru or e_kontar@hotmail.com	JSP03: International Symposium on Groundwater Inputs to the Ocean

9–10 July	Prof. Motoyoshi Ikeda, Graduate School of Environmental Earth Science, Hokkaido University, Japan tel.: +81 11 7062360; fax: +81 11 7064865; mikeda@ees.hokudai.ac.jp	JSP04: International Symposium on Arctic Environmental Change
3 July	Dr Ilmo T. Kukkonen, Geological Survey of Finland, PO Box 96, Betonimiehenkuja 4, FIN-02151 Espoo, Finland tel.: +358 205 502270; fax: +358 205 5012; ilmo.kukkonen@gsf.fi	JSS04: International Symposium on Thermally Controlled Processes within the Earth
9–10 July	Dr John Pomeroy, Institute of Geography and Earth Sciences, University of Wales, Aberystwyth, Ceredigion SY23 3DB, UK tel.: +44 1970 622781; fax: +44 1970 622659; john.pomeroy@aber.ac.uk	JWH01: International Workshop on Snow Processes: Representation in Atmospheric and Hydrological Models
3–4 July	Dr Alan Hall, 17 Crisp Street, Cooma, New South Wales 2630, Australia tel./fax: +61 2 64521920; hallalan@acr.net.au	JWH02: International Workshop on the Role of GEWEX Hydrometeorological Science in Improved Water Resources Management
30 June–1 July	John Roads, Scripps Institution of Oceanography, University of California at San Diego, 0224 La Jolla, California 92093-0224, USA tel.: +1 858 5342099; fax: +1 858 5348561; jroads@ucsd.edu	JWM01: International Workshop on Water and Energy Budgets
4 July	Prof. Makoto Taniguchi, Department of Earth Sciences, Nara University of Education, Takabatake, Nara 630-8528, Japan tel.: +81 742 279202; fax: +81 742 279291; makoto@nara-edu.ac.jp	JWS04: International Workshop on Subsurface Thermal Signatures of Tectonics, Hydrogeology and Palaeoclimate
Davos, Switzerland 10–12 September	Dr Dieter Rickenmann, Swiss Federal Institute WSL, Zürcherstrasse 111, CH-8903 Birmensdorf, Switzerland tel.: +41 1 7392442; fax: +41 1 7392488; rickenmann@wsl.ch ; http://www.wsl.ch/3rdDFHM	Third International Conference on Debris-Flow Hazards Mitigation: Mechanics, Prediction and Assessment
Three Gorges Dam, China 16–19 September	Prof. Yangbo Chen, Institute of Water Resources and Environmental Engineering, College of Earth and Environmental Sciences, Sun Yat-Sen University, 135 Xingangxi Road, Guangzhou 510275, China fax: +86 20 34022397; eescyb@zsu.edu.cn ; http://www.hydroinfor.zsu.edu.cn	International Conference of GIS and Remote Sensing in Hydrology, Water Resources and Environment (ICGRHWE)
St Petersburg, Russia October	Dr Vadim Kuzmin, Department of Hydrology, Russian State Hydrometeorological University, Malookhtinski 98, St Petersburg 195196, Russia tel.: +7 812 4445636 or 5853608; fax: +7 812 4446090; kuzmin@rw.ru , saint_petersburg300@hotmail.com or ds@inbox.net	International Symposium on Hydrological Extremes: Theoretical and Applied Aspects of Forecasting and Computations
Visakhapatnam, India 16–18 October	Prof. C. Subbarao, AHI International Seminar, Department of Geophysics, Andhra University, Visakhapatnam 530003, India tel.: +91 891 702239/40/41/42; fax: +91 891 755547; chalamks@hotmail.com	International Seminar on Watershed Development Special Colloquium on Drinking Water Supply in SAARC Countries
Rome, Italy 5–7 December	John Rodda tel.: +44 1491 837539; fax: +44 1491 692430; 106201.1774@compuserve.com	International Symposium on the Basis of Civilization—Water
Warangal, India December 2003/ January 2004	Dr N. V. Umamahesh, Water and Environment Division, Department of Civil Engineering, Regional Engineering College, Warangal 506004, Andhra Pradesh, India tel.: +91 8712 459191; fax: +91 8712 459547/459119; mahesh@recw.ernet.in or mahesh_n@netlinx.com	International Conference on Advanced Modelling Techniques for Sustainable Management of Water Resources
Berchtesgaden, Germany 27 September– 1 October 2004	Mr Ulrich Schröder, IHP/OHP Secretariat, Federal Institute of Hydrology, PO Box 200253, D-56002 Koblenz, Germany tel.: +49 261 130654402; fax: +49 261 13065422; schroeder@bafg.de or Prof. Andreas Herrmann, Institute of Geoecology, Technical University of Braunschweig, Langer Kamp 19c, D-38106 Braunschweig, Germany tel.: +49 531 3915607/5604; fax: +49 531 3915617/8170; a.herrmann@tu-bs.de	International Conference on Hydrology of Mountain Environments
Yichang, China 18–21 October	Dr Hu Chunhong, Secretary General ISRS, IRTCES 20 Chegongzhuang Xilu, Beijing 100044, China tel.: +86 10 68415522 6576; fax: +86 10 68411174; irctes@public.bta.net.cn or irctes@95777.com http://www.iahr.org/newsweb/bdy_conference2004.htm	Ninth International Symposium on River Sedimentation

New CATALOGUE OF IAHS PUBLICATIONS

A new edition of the Catalogue of Publications has been published and distributed to IAHS Members with this Newsletter; the Catalogue will also be available at the IAHS web site. Do keep you copy of the Catalogue safely; it will be at least two years before the next edition is produced. For extra copies, please contact Jill Gash at IAHS Press.

PRICE REDUCTIONS: From 1 January 2003, the price of all IAHS titles produced more than 10 years earlier is **£10.00** each. See Newsletter page 7 for details of 1990, 1991 and 1992 books

International Association of Hydrological Sciences

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Individual membership of the Association is *free* and open to anyone who endeavours to participate in IAHS activities, such as IAHS symposia and workshops. *Members in financially disadvantaged countries may obtain 80% discount on most IAHS publications.* Members in other countries may obtain 50% discount on *Hydrological Sciences Journal* and 25% on other IAHS publications. For further information on membership contact:

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<http://www.cig.enscm.fr/~iahs>

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Scientific Commissions

Some Commissions have their own web site which can be accessed through that of IAHS (see above). Information about the activities of the Scientific Commissions of the Association may be obtained from their Secretaries:

International Commission on Surface Water (ICSW)

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International Commission on Groundwater (ICGW)

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International Commission on Continental Erosion (ICCE)

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International Commission on Snow and Ice (ICSI)

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[tel.: +43 512 5075407; fax: +43 512 5072895;
georg.kaser@uibk.ac.at; <http://geowww.uibk.ac.at/research/icsi/>]

International Commission on Water Quality (ICWQ)

Contact: Prof. BRUCE WEBB, School of Geography and Archaeology, University of Exeter, Amory Building, Rennes Drive, Exeter EX4 4RJ, UK
[tel.: +44 1392 263334; fax: +44 1392 263342;
b.w.webb@exeter.ac.uk; <http://www.ex.ac.uk/~BWWebb/icwq/>]

International Commission on Water Resources Systems (ICWRS)

Contact: Dr ANDREAS SCHUMANN, Ruhr University Bochum, Institute for Hydrology and Water Resources Management, D-44780 Bochum, Germany
[tel.: +49 234 7002688; fax: +49 234 3214153;
andreas.schumann@ruhr-uni-bochum.de;
<http://www.ruhr-uni-bochum.de/iahs-icwrs>]

International Commission on Remote Sensing (ICRS)

Contact: Dr ALAIN PIETRONIRO, National Water Research Institute, 11 Innovation Blvd, Saskatoon, Saskatchewan S7N 3H5, Canada
[tel.: +1 306 9754394; fax: +1 306 9755143; al.pietroniro@ec.gc.ca;
<http://hydrolab.arsusda.gov/~jritchie/>]

International Commission on Atmosphere–Soil–Vegetation Relations (ICASVR)

Contact: Dr JIRKA SIMUNEK, US Salinity Laboratory, USDA, ARS, 450 W. Big Springs Road, Riverside, California 92507, USA
[tel.: +1 909 3694865; fax: +1 909 3424964;
jsimunek@ussl.ars.usda.gov]

International Commission on Tracers (ICT)

Contact: Prof. CHRIS LEIBUNDGUT, Institute of Hydrology, University of Freiburg, Fahnbergplatz, D-79098 Freiburg, Germany
[tel.: +49 761 2033531; fax: +49 761 2033594;
chris.leibundgut@hydrology.uni-freiburg.de;
<http://www.lgih.ulg.ac.be/ict/>]

Hydrological Sciences Journal

The Association has produced a scientific journal since 1956—now called *Hydrological Sciences Journal*. As well as scientific papers on all aspects of hydrology, the Journal contains announcements on worldwide hydrological activities organized or sponsored by IAHS, book reviews, and a diary of forthcoming events. August issues sometimes comprise a collection of papers on a single topic. These Special Issues are available as separate publications.

Subscriptions: The full annual subscription rate for 2003 (six issues) is £172/US\$270 (the price for members in financially disadvantaged countries is £34.40 and the price for other members is £86/US\$135). Please send orders for both current subscriptions, Special Issues and back issues to Frances at the address given below.

Contributions: The Editor welcomes original papers, scientific notes, and discussions in either English or French. There is no page charge for papers less than 15 printed pages in length. Please send material for publication to:

Mrs Frances Watkins, IAHS Press, Centre for Ecology and Hydrology, Wallingford, Oxfordshire OX10 8BB, UK
[tel.: +44 1491 692405; fax: +44 1491 692448;
frances@iahs.demon.co.uk]

Original papers will be screened by two referees, one of whom is usually an Associate Editor. Instructions to Authors are available from Frances.

Proceedings and Reports/Special Publications

Since 1924 the Association has published proceedings of symposia and workshops, and reports from working groups. These publications comprise the well established “Red Book” *Series of Proceedings and Reports*. In 1989 the first of a series of Special Publications was published; they have blue covers, and do not generally exceed 100 pp. Please send orders for these publications to:

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Standing orders: By placing a standing order, customers wishing to receive every new title in the Red Book and/or Blue Book series benefit from a 15% discount, and receive each publication at the earliest opportunity.

International Hydrology Prize

An International Hydrology Prize is awarded annually to an individual in recognition of an outstanding contribution to the science. Nominations for the prize are made by National Committees and forwarded to the Secretary General for consideration by the Nominations Committee. Details of the criteria considered for the award are found on the IAHS web site.

Tison Award

The Tison Fund provides an annual prize of US\$1000 (plus a year's free subscription to *Hydrological Sciences Journal*). The Tison Award is granted for an outstanding paper published by IAHS in the two years before the deadline for nominations. The rules are found on the IAHS web site. Nominations should be received by the Secretary General not later than 31 December each year. Candidates must be under 41 years of age at the time their paper was published.

