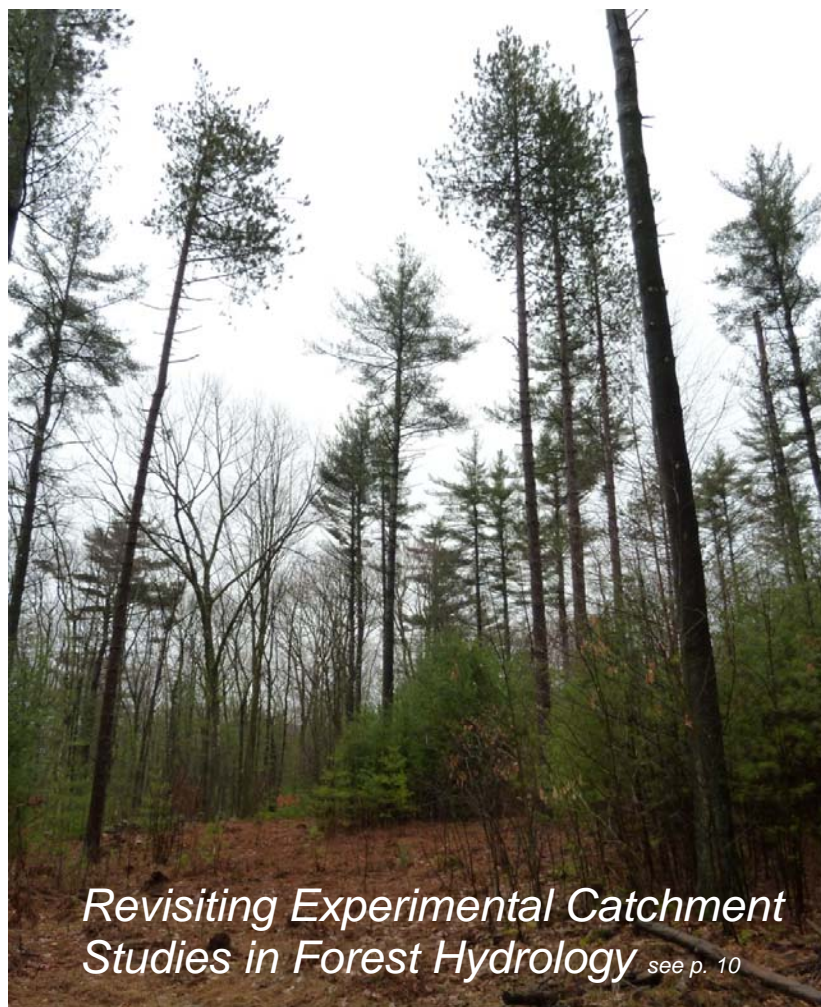




IAHS Newsletter

NL102 April 2012

Completion of the IAHS decade on Prediction in Ungauged Basins
and the way ahead *Call for abstracts – see p.7* (Delft, 23–24 October 2012)



*Revisiting Experimental Catchment
Studies in Forest Hydrology* see p. 10

40 years of publishing hydrology: IAHS Press and IAHS Ltd

IAHS Press is a central and key part of the Association. It provides the means by which IAHS meets its commitment to worldwide dissemination of research results and practice within the field of hydrology, and it is an important source of funds to support these activities. It is also the “friendly face” of IAHS that deals with much of the ongoing contact with members and the wider community.

IAHS Press is probably best known for the publication of the numerous “Red Books”, which are an important and internationally respected product of the Association. At the end of last year the number of these volumes reached an impressive total of 350. In addition, IAHS Press publishes the “Blue Books” or Special Publications and the

Continued on page 4.

CONTENTS

Message from the President	2
IAHS New Science Initiative	3
IAHS Press and IAHS Ltd	4
<i>Hydrological Sciences Journal</i>	6
Completion of PUB Decade	8
Water Quality Commission report	9
Experimental Catchment Studies	9
SE List – Soil erosion discussion	10
Isotope Hydrology	12
WaterNet / Sediment / Hydrology and Society / HydroEco'2013	13
Meetings calendar	16

IAHS at the EGU General Assembly in Vienna

As in recent years, IAHS will have a stand at EGU close to the main hydrology meeting room. Jill Gash, from IAHS Press, will be there with samples copies of recent publications.

EGU session HS1.1: *Visionary Session on the Next Hydrological Decade*, will consider proposals for themes for the next (post-PUB) IAHS science initiative and hydrological decade.

See page 3.

FLOOD RISK IN EUROPE



The volume edited by Z.W. Kundzewicz on *Changes in Flood Risk in Europe* is now available *See page 11.*

Message from the President

gordonyoung_wwap@yahoo.com

Task Force on the future scientific initiative for IAHS

As reported in the last newsletter, a Task Force under the leadership of Alberto Montanari has been set up to oversee the discussions that will lead to the creation of a new IAHS scientific decade that is scheduled to begin in mid 2013. Alberto has created a Core Group of eight individuals within the Task Force, supplemented by an Extended Group of 26 individuals. Task Force members are leading the discussions on the most relevant topics to be addressed during the new decade. Their inputs are to be found through the blog at: <http://distart119.ing.unibo.it/iahs/>.

Since mid December 2012 when the blog was initiated, there have been more than 4000 visits to the blog and there has been lively and provocative discussion. All members of IAHS are invited to give inputs and comments – this should be an all-inclusive effort, so please visit the site and make your comments.

There will be meetings of the Task Force at the EGU General Assembly in Vienna in late April and at Nanjing, China, in mid May to consolidate the discussions thus far. An interim report will be produced in June 2012 prior to more detailed deliberations to be held in Delft in October 2012 during the celebrations of the 90th birthday of IAHS. Preparations for the implementation of the new initiative will then take place before the launch of the new Decade in July 2013 at the IAHS Scientific Assembly in Gothenburg, Sweden.

Celebrations

2012 is a special year for IAHS as it celebrates its 90th birthday with a major symposium in Delft in October. This year we also celebrate 40 years of our Secretariat being housed in the Centre for Ecology and Hydrology in Wallingford, UK. We gratefully acknowledge the vital support given to IAHS by CEH – more on this later in the Newsletter.

Proposed International Year of Deltas, 2013

In October 2011, a team led by Efi Foufoula-Georgiou in an article published in EOS – <http://iyds-2013.org/sites/default/files/EOS%20ARTICLE.pdf> – proposed that 2013 be designated as the International Year of Deltas. The purpose of the Year would be to: (1) increase awareness of and attention to the value and vulnerability of deltas worldwide, (2) promote and enhance international and regional cooperation at the scientific, policy and stakeholder levels, and (3) focus and accelerate a comprehensive research agenda toward understanding and modelling these complex socio-ecological systems as the cornerstone of ensuring preparedness in protecting or restoring them in a rapidly changing environment.

Clearly deltas are of particular interest to IAHS. In a very real sense they are the “end product” of hydrological activity. Their typically vibrant ecosystems are influenced by the flow regimes of contributing river systems, and by sediment and pollutant

inputs that are, in turn, influenced by upstream human activities. Situated at the land/ocean interface, the evolution of deltas is influenced by tides, sea level changes, ocean currents, storm surges and tsunamis. There are also, of course, deltas that are situated within inland lakes in, generally, more simple environments. There is often intense human activity in delta environments – many are heavily populated with port and industrial cities, and they are often regions of significant food production.

Recognizing the importance of deltas as special hydrological environments, the Bureau of IAHS has endorsed the initiative to have 2013 declared the International Year of Deltas. All Associations within IUGG have also endorsed the initiative and IUGG is now taking the proposal to the Geo-science group within ICSU before putting it forward for ICSU endorsement. A symposium on deltas is proposed for the Gothenburg Scientific Assembly.

Kovacs Colloquium

Unfortunately, as a result of severe financial cutbacks at UNESCO, the Kovacs Colloquium, originally scheduled for early June, has had to be cancelled. The session on PUB, scheduled for Kovacs has now been incorporated into the agenda for the Delft Symposium.

Delft and Gothenburg symposia and workshops

Preparations are on-going to plan symposium and workshop activities at

IAHS Newsletter © IAHS Press 2012

Published by IAHS Press, Centre for Ecology and Hydrology, Wallingford, OX10 8BB, UK

Edited by Cate Gardner

The Newsletter is provided free of charge to members of IAHS. This Newsletter and previous issues may be downloaded from: www.iahs.info

Articles from IAHS members on all aspects of hydrology and related topics are welcomed for publication in the Newsletter. They should be sent to the IAHS Secretary General, Christophe Cudennec: cudennec@agrocampus-ouest.fr, or to:

IAHS, UMR SAS, Agrocampus Ouest,
CS 84215, 35042 Rennes Cedex, France

Advertisements may be placed in the Newsletter, at the discretion of the IAHS Secretary General. Contact: cate@iahs.demon.co.uk

The next Newsletter will be published in August 2012; copy deadline: 15 July 2012.

The information provided in this Newsletter is reproduced by IAHS in good faith. Publication of articles does not constitute official endorsement or approval by IAHS of any views or methods expressed. IAHS does not accept responsibility for the reader's use of the content of this Newsletter. To the fullest extent permitted by the law, IAHS shall not be liable for any damages arising out of the use of, or inability to use, the content.

The designations employed and the presentation of material throughout the Newsletter do not imply the expression of any opinion whatsoever on the part of IAHS concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The use of trade, firm, or corporate names in the publication is for the information and convenience of the reader. Such use does not constitute an official endorsement or approval by IAHS of any product or service to the exclusion of others that may be suitable.



IAHS online [bookshop](http://www.iahs.info) at www.iahs.info

It is simple to order and pay online by credit card. Membership discounts apply.

Books are dispatched from IAHS Press at Wallingford, UK, as before.

IAHS publications can still be ordered from Jill Gash: jilly@iahs.demon.co.uk and/or using the order form at: www.iahs.info.redbooks/orderform.pdf

the 90th Anniversary meeting of IAHS in Delft in October 2012 and the Gothenburg Scientific Assembly for July 2013. Your attention is drawn to more details found later in the Newsletter.

New special issue series of books by IUGG through CUP

Alik Ismail-Zadeh, Secretary-General of IUGG has just signed a Memorandum of Agreement with Cambridge University Press to publish a series of works

entitled “Special Publications of the International Union of Geodesy and Geophysics”. The Series will be composed of high-quality books, which will review the present state-of-the-art developments, discoveries and/or perspectives in Earth and space sciences around the world.

Volumes in the series shall present major scientific developments and achievements from programmes, assemblies and symposia initiated and managed under the auspices of IUGG.

They shall, in the main, be multi-contributor, edited volumes, although volumes with a more limited authorship may also be considered. Each volume shall present state-of-the-art research and results from the given research area, written at a level accessible to early-career scientists and graduate students.

This is an opportunity for IAHS to suggest suitable titles for prospective volumes in the series.

Gordon Young

IAHS is seeking visions for a new Science Initiative

At the IUGG General Assembly in Melbourne in July 2011, the International Association of Hydrological Sciences (IAHS) decided to initiate a visioning process to identify major challenges of vital importance for hydrology in the near future, with the aim to shape a new Science Initiative for the decade 2013–2022. Science initiatives, such as the International Decade 2003–2012 on Prediction in Ungauged Basins (PUB), are featured activities of IAHS, which are always attended with much interest by the hydrological community. With the end of the PUB decade approaching in 2012, IAHS aims to keep the above leading role by shaping a new Science Initiative and, in fact, the IUGG General Assembly hosted in Melbourne a very effective debate that involved a large cross-section of the IAHS officers and members. The idea is to start the new Initiative in 2013 during the IAHS General Assembly to be held in Gothenburg (July 2013).

To involve a large part of the scientific community in this debate, the IAHS Bureau decided to create a new Task Force, with the mandate to suggest a focus, title and the details for the new Initiative. The Task Force will operate for up to two years and is expected to report to the IAHS Bureau, which will take a final decision on the nature of the new Initiative.

The Task Force is chaired by Alberto Montanari (University of Bologna, Italy). For the full composition of the Task Force please see:

http://distart119.ing.unibo.it/iahs/?page_id=18

Alberto recently opened a blog to host the discussion on the new Science Initiative. The blog, which is reachable at <http://distart119.ing.unibo.it/iahs/> has already received more than 4000 single visits and many comments.

A first summary of the discussion has been recently posted, while the overall web-based forum will be summarised and closed in summer 2012. Meanwhile, physical meetings will take place to articulate the discussion on specific themes. In detail, the Task Force is organising a brainstorming meeting during the General Assembly 2012 of the European Geosciences Union that takes place in Vienna, 22–27 April 2012. In the framework of the Hydrological Sciences programme, a special session titled “Visionary session on the next Hydrological Decade” has been organised for invited speakers only, please see: meetingorganizer.copernicus.org/EGU2012/session/10165.

Furthermore, a meeting will take place in China in May 2012, which will be organised by IAHS Vice-President Prof. Liliang Ren in Nanjing, China.

The Task Force will present the results of the discussion during a one-day workshop that will take place in Delft on 25 October 2012, in the frame of the celebrations for the 90th Anniversary of IAHS.

Please join the discussion on the new IAHS Science Initiative 2013–2022 at <http://distart119.ing.unibo.it/iahs/>!

Alberto Montanari



What does a Brueghel painting have to do with hydrology?

Illustrating isotope hydrology is not easy, so the upper part of this 1565 painting by Pieter Bruegel the Elder was chosen by Pradeep Aggarwal and colleagues for the front cover of the newest volume in the IAHS Benchmark Papers in Hydrology Series, *Isotope Hydrology*, see page 12 for details.

The painting, titled “A gloomy day”, belongs to the Kunsthistorisches Museum in Vienna, Austria, and copyright permission was obtained to use the image for the book.

IAHS Press and IAHS Ltd – 40 years of publishing hydrology

by Des E. Walling

Continued from page 1

Benchmark Papers series. It is also responsible, along with our two Editors, for coordinating the production of the *Hydrological Sciences Journal* which is published in partnership with Taylor and Francis.

We rely on Dr Cate Gardner, the manager of IAHS Press, and her colleagues to provide professional advice and support to ensure that IAHS keeps abreast of the many recent advances and changes in the world of publishing and to promote the marketing of our publications, which are an important source of income. However, the contribution of the Press to the Association extends well beyond its publishing remit. It maintains the membership database, which now includes more than 5000 members, produces and circulates the newsletters, markets our publications, distributes publications to support the Task Force for Developing Countries and provides important support for the IAHS Bureau. Staff from the Press are also responsible for the IAHS stand at IAHS Assemblies and at other international meetings, such as the EGU Annual Meeting in Vienna.

With its important role within the Association, it is difficult to think of IAHS functioning without IAHS Press. It has now provided valuable support from its base at Wallingford for 40 years. Its annual turnover is now approaching £250,000 and it employs four staff, namely, Dr Cate Gardner, as Manager, Frances Watkins as *HSJ* Editorial Manager, Penny Perrins as part-time Senior Production Editor and Jill Gash as part-time staff member responsible for book sales and distribution, and the membership database. At the time of its creation, 40 years ago, it was very much smaller and only employed one part-time member of staff. Its beginnings can be traced back to the initiative of George Kovacs, the Secretary General of IAHS from 1971–1975, who appointed John Rodda as IAHS Editor at the Moscow General Assembly in 1971. This was not a recognised role at that time, but the position of Editor was formalized four years later at the Grenoble General Assembly. John Rodda's main role was to edit and promote the IAHS journal, which at that time was known as the *Hydrological Sciences Bulletin*. He was a member of staff of the UK Institute of Hydrology at Wallingford and the then Director, Dr Jim McCulloch, was a strong supporter of IAHS. To help John with his new role and to support IAHS in developing its publication activities, Jim McCulloch had the foresight to see the need for IAHS to establish a publications team and he arranged for the appointment of a part-time Assistant Editor, funded by IAHS but based in the Institute of Hydrology. Penny Kisby was appointed to this post and when she started work with the *Bulletin* 40 years ago in spring 1972, IAHS Press was born.

The initiative flourished and, as well as assisting with the *Bulletin*, Penny Kisby also quickly became involved with the publication of Red Books. She was responsible for overseeing the publication in 1974 of the three-volume Proceedings of the Warsaw Symposium on Mathematical Models in Hydrology held in 1971 (IAHS Publs 100–102) and she was responsible for coordinating the publication of



The IAHS Press staff, from left, Cate Gardner, Frances Watkins, Jill Gash and Penny Perrins.

the first pre-published proceedings volume for the Helsinki Symposium on the Hydrology of Lakes, held in 1973 (Publ. 109). Pre-published proceedings now account for the majority of the IAHS Red Books and, over the past 40 years, almost 250 Red Books have been published from Wallingford, representing an average of more than six volumes per year. Direct sales of Red Books from Wallingford commenced in 1973. As its publishing work grew, the Press also expanded and Penny Kisby moved to full-time employment in 1980 and her post was made permanent in 1981. To deal with periods of pressure, she made use of freelance typists and part-time casual publishing assistants and an arrangement was made with Blackwell Scientific Publications to assume responsibility for the final stages of the publication of the *Journal* in 1977. This move released Penny Kisby to spend more time on Red Books. The Exeter Scientific Assembly held in 1982 saw, for the first time, the prepublication of multiple Red Books, in this case six volumes, and multiple volumes are now published for all General and Scientific Assemblies. In 1987, Penny Kisby was designated Manager of IAHS Press. 1988 saw important developments in the Press with the appointment of a part-time Assistant Editor (Sarah Cage), who was primarily responsible for production of the *Journal*. This increased to six issues per year in 1988. The production of newsletters was also initiated by Secretary General Henny Colenbrander and these were published and circulated by the Press three times a year. The first Special Publication or Blue Book, Special Publ 1 *Hydrological Phenomena in Geosphere–Biosphere Interactions* by Malin Falkenmark, was published in 1989 and the first volume of the Benchmark Papers in Hydrology series, edited by Keith Beven and entitled *Streamflow Generation Processes*, appeared in 2006.

The closure of the IUGG Office in Paris in 1989 meant that Wallingford became the main distribution centre

IAHS Press & CEH

The Centre for Ecology & Hydrology (formerly the Institute of Hydrology) has, for many years, been a staunch advocate of IAHS and its work promoting the advancement of hydrological science internationally through exchange of knowledge and information and the innumerable collaborations it engenders. IAHS Press plays a central role in this, supporting the Association at its various conferences and symposia, publishing ground-breaking science in the Hydrological Sciences Journal, its Red Books and Benchmark series, and keeping us all abreast of developments internationally through its regular newsletter. CEH is proud to host the company at its headquarters in Wallingford and is delighted to be associated with such a world-class publisher of scientific literature.

Prof. Alan Jenkins

Director Water Programme
Centre for Ecology & Hydrology
Chair, UK Committee for National & International Hydrology



for IAHS publications and Jill Gash started to work for the Press on a casual basis in 1990 to deal with book sales and to initiate the distribution of Red Books and the Journal to “countries in need” on behalf of the IAHS Task Force for Developing Countries. She was appointed to a permanent part-time post in 1991. Other new staff were also appointed in the 1990s. Frances Watkins succeeded Sarah Cage as Assistant Editor (part-time) with primary responsibility for the Journal in 1993 and she became full-time in 1999. Dr Cate Gardner began working for the Press on a casual basis in 1998 to assist with the production of Red Books and was appointed part-time Production Editor in 1999. With the retirement of Penny Kisby in 2003, Cate Gardner succeeded her as Manager and Penny Perrins was appointed as part-time Production Editor.

One of the key features of IAHS Press is the loyalty and commitment of its staff. Of the current staff, Jill Gash has worked for the Press for 22 years, Frances Watkins for 19 years, Cate Gardner for 14 years and Penny Perrins for 9 years. The Association has been fortunate to recruit these dedicated and long-serving staff, who, along with Penny Kisby, have been largely responsible for the continuing success of IAHS Press. The support of the Centre for Ecology and Hydrology (CEH) and its predecessor, the Institute of Hydrology, has also been very important in providing both facilities and background support, as well as valuable stability, over a period of 40 years.

In the early days, the staff of IAHS Press were employed through the Institute of Hydrology and its successor CEH, as NERC employees. However, as the Press expanded, some new staff were employed directly by IAHS and by 2003 all

staff were employed directly by IAHS. It also became a sizeable business venture. These developments brought the need for IAHS to formally recognise its responsibilities as an employer and to meet UK legal requirements in terms of employment law and taxation. As a result, IAHS Ltd was established as a limited company in January 1992 and registered with UK Companies House. The Board of Directors of the company comprises a chairman and five board members, all of whom are Officers or members of IAHS, and a Secretary.

In 1997 a decision was taken to seek charitable status for the company, in order to ensure that any profits would not be taxed. The application for charitable status was finally accepted by the Charity Commissioners on 16th December 1999 and IAHS Ltd is formally registered as a Charity with the Charity Commission for England and Wales, with the Board of Directors and the Secretary serving as the Trustees.

The President, Secretary General and Treasurer of IAHS are *ex officio* members of the Board of IAHS Ltd and the IAHS Editors and the Manager of IAHS Press serve as Advisors. The Board meets formally once a year, usually at Wallingford in February. The current membership comprises:

Des Walling (Chairman)	Gordon Young
Christophe Cudennec	Chuck Onstad
John Rodda	Gwyn Rees

Mike Acreman serves as Secretary to the Board

Cate Gardner, Zbyszek Kundzewicz and Demetris Koutsoyiannis serve as *ex-officio* advisors

Although the *ex-officio* members of the Board periodically change, the appointed members are all long-serving. Des Walling and John Rodda have served as Board Members since its formation in 1992. Penny Kisby was the first Secretary to the Board and she was followed by Frank Farquharson, who was recently succeeded by Mike Acreman. Terence O'Donnell was a founder member of the Board and he was succeeded by Alan Gustard and more recently by Gwyn Rees. The valuable contribution of past and present members of the Board is gratefully recognised.

Des Walling



The present IAHS Office at CEH Wallingford.

Hydrological Sciences Journal online and subscriptions

Hydrological Sciences Journal (HSJ) is now in its third year of publication with Taylor & Francis and 230 scientific papers and other articles, such as editorials, technical notes, discussions and replies, and book reviews, have been published in the first two 8-issue volumes (vol. 55: 2010 and vol. 56: 2011). Accepted papers are copy-edited and checked in-house at IAHS Press before being forwarded to the Production team at T&F for typesetting and publication, both online and in print.

In the last few months, a new development has started to take shape, in that finalized accepted articles appear in a "Forthcoming Articles" list on the *HSJ* webpage at [Taylor & Francis Online](#) (TFO). They are identical to the print edition in every way except that they lack page numbers. These Forthcoming Articles are later assigned to a particular issue of the journal, given page numbers, and published in final form. The first such paper to be published with *iFirst*:

Hirsch, R.M. and Ryberg, K.R., 2012. Has the magnitude of floods across the USA changed with global CO₂ levels? *Hydrological Sciences Journal*, 57 (1), 1–16. [\[online\]](#)

was online on 11 November 2011, prior to inclusion in issue 57(1); it was published online in paginated form on 20 January 2012. Because the authors opted for Open Access, this paper is free to view. The advantages of publication *iFirst* are clear:

- *iFirst* articles are in the public sphere earlier and longer and are therefore available to readers and researchers earlier and for longer.
- *iFirst* articles can be cited by their doi (digital object identifier), because all final publication information (year, volume number, page span) is tied to the doi.

Now, all papers ready for publication are published on *iFirst* prior to being assigned to an issue. To view a listing of all *iFirst* papers that are currently available for *HSJ*, see [forthcoming articles](#).

Featured articles

The co-editors of *HSJ* select a "featured article" to highlight in each issue. This featured article is made free-to-view until the subsequent issue is published online. The most recent featured articles are:

Davies, J. and Beven, K., 2012. Comparison of a multiple interacting pathways model with a classical kinematic wave subsurface flow solution. *Hydrological Sciences Journal*, 57 (2), 203–216. [\[online\]](#)

and

Abrahart, R.J., Mount, N.J. and Shamseldin, A.Y., 2012. Neuroemulation: definition and key benefits for water resources research. *Hydrological Sciences Journal*, 57 (3), 407–423. [\[online\]](#)

The most recent article will remain free to view until vol. 57 no. 4 (May 2012) has been published online.

Subscription to *HSJ*

Members of IAHS may subscribe to *Hydrological Sciences Journal (HSJ)* via the [membership area](#) at the IAHS web site. Once logged in, using your email as your username, you can click the *HSJ* Link button to get free access if you are in a financially disadvantaged country. If not, the link will enable you to purchase a full year's subscription at the online bookshop – the price for an online subscription is 27.00 GBP, and for online + print, 48.00 GBP, for non-EU members (32.40 and 53.40 GBP, respectively, including VAT for members in EU countries).

Frances Watkins

Other IAHS Press News

ISI Conference Proceedings Citation Index

The IAHS Red Book series is, once again, included in Web of Science indexing, and is also covered by the ISI Conference Proceedings Citation Index. Note that access to Web of Science is by subscription only, but if your institution does have access, there is much information to be found there.

Book sales in North America

IAHS has set up, with the assistance of Princeton Selling Group, facilities for individuals and libraries in N America to order IAHS books from Amazon.com, Barnes & Noble and Baker & Taylor, and get speedy delivery rather than wait for books to be shipped from the UK. However, IAHS members can only benefit from membership discounts by ordering through the IAHS Online Bookshop or direct from IAHS Press. We process your order as quickly as we are able, but delivery times will be a week to 10 days from UK.



IAHS 90th Anniversary and Symposium on: Completion of the IAHS Decade on Prediction in Ungauged Basins and the Way Ahead

Delft, The Netherlands, 23–24 October 2012

<http://pub.iahs.info/meeting2012/>

The symposium to mark the 90th anniversary of IAHS and the completion of the IAHS Decade on Prediction in Ungauged Basins (PUB) will be held in Delft in The Netherlands, 23–24 October this year. The Symposium will report on the scientific achievements that were made during the PUB decade and the insights that were gained. We will also look ahead to identify the major scientific challenges for the coming period.

The final shaping discussions of the new initiative for the 2013–2022 decade will be held on 25 October.

The 2012 International Hydrology Prize and the 2012 Tison Award will be bestowed during the symposium.

CALL FOR ABSTRACTS

We invite contributions from all scientists who have worked on the main themes of PUB to share their findings and views on the advances made during the PUB decade and regarding open research questions. The symposium includes a general part with invited talks providing a summary of the PUB decade, presentations on the Synthesis report and the PUB manual "Putting PUB into Practice", as well as a visionary session on the future challenges. There are also open thematic sessions organized around the six research themes of PUB and an open session on case studies (Theme 8).

ABSTRACT DEADLINE 1 September 2012

Please email your abstract of 300–400 words maximum **DIRECTLY** to the conveners of the session of your choice **AS WELL AS** to:

iahsdelftconference@gmail.com

Please also state your preference for oral or poster presentation. .

More information, including the email addresses of the conveners, is available at:

<http://pub.iahs.info/meeting2012/>

THEMATIC SESSIONS

Theme 1: Catchment Classification

Conveners: Peter Troch, Markus Hrachowitz, Ross Woods

Theme 2: Conceptualization of Process Heterogeneity

Conveners: Guenther Bloeschl, Stefan Uhlenbrook, Doerthe Tetzlaff, Erwin Zehe

Theme 3: Uncertainty Analysis and Model Diagnostics

Conveners: Hoshin Gupta, Thorsten Wagener, Saket Pande, Jim Freer

Theme 4: New Approaches to Data-Collection

Conveners: Erwin Zehe, Nick van de Giesen, Vincent Fortin

Theme 5: New Hydrological Theory

Conveners: Murugesu Sivapalan, Hessel Winsemius, Alexander Gelfan

Theme 6: New Approaches to Modelling

Conveners: Hubert Savenije, Fabrizio Fenicia, Martyn Clark

Theme 7: The PUB Manual "Putting PUB into Practice" (invited speakers only!)

Convener: John Pomeroy

Theme 8: Case Studies

Conveners: Berit Arheimer, Hubert Savenije

REGISTRATION

Please register on line at:

<http://pub.iahs.info/meeting2012/>

The symposium is subsidised by the Delft University of Technology, which makes it possible to have an extremely low online registration fee of 50 euros. The online registration is open until 1 September.

After that date, only on-site registration will be possible at 100 euro. So don't wait to register.

Please contact [Christophe Cudennec](mailto:Christophe.Cudennec@tue.nl) if you have any online payment problem.

The website for the next IAHS Scientific Assembly, is now live at:

<http://iahs-iapso-iaspei2013.com>



Joint Assembly
Gothenburg

IAHS - IAPSO - IASPEI
Sweden 22-26 July 2013



constituent
Associations of



International Union of Geodesy
and Geophysics (IUGG)

International Commission on Water Quality, ICWQ

New research project on "Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India"

The Saph Pani (Hindi word meaning potable water) project "Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India" aims to study and improve natural water treatment systems, such as river bank filtration (RBF), managed aquifer recharge (MAR) and wetlands in India, building local and European expertise in this field. The project aims to enhance water resources and water supply, particularly in water stressed urban and periurban areas in different parts of the Indian sub-continent.

This project is co-funded by the European Union under the Seventh Framework (FP7) scheme of small or medium-scale focused research projects for specific cooperation actions (SICA) dedicated to international cooperation partner countries. Professor Thomas Wintgens, University of Applied Sciences Northwestern Switzerland, is the coordinator of this project. Professor Elango Lakshmanan, Vice President, ICWQ is a task leader and Co-Chair of the Steering Committee of this collaborative project. The following are the collaborating institutes/enterprises:

- University of Applied Sciences Northwestern Switzerland, Switzerland
- Uttarakhand Jal Sansthan, India
- National Institute of Hydrology, India
- IIT Roorkee, India
- Veolia Water India, India
- Anna University, India
- SPT consultants (SME), India
- Raipur Municipal Cooperation, India
- Akshay Jaldhara (SME), India
- National Geophysical Research Institute, India
- IIT Bombay, India
- DHI (India) Water & Environment Pvt Ltd, India
- Competence Centre for Water Berlin, Germany
- BRGM Service Eau, France
- Centre of Environmental Management and Decision Support, Austria
- University of Applied Sciences HTW Dresden, Germany
- UNESCO IHE Delft, Netherlands
- International Water Management Institute, Sri Lanka
- Commonwealth Scientific and Industrial Research Land and Water, Australia
- Freie Universität Berlin, Germany

The objective of this project is to strengthen the scientific understanding of the performance-determining processes occurring in the root, soil and aquifer zones. The removal and fate of important water quality parameters, such as pathogenic microorganisms and faecal indicators, organic chemicals, nutrients and metals will be considered. The hydrological characteristics (infiltration and storage capacity) and the ecosystem functions will also be investigated since they influence the local or regional water resources management strategies (e.g. by providing buffering of seasonal variations in supply and demand).

METHODOLOGY

The project focuses on a set of specific case studies in India. These include a range of natural water systems and engineered treatment technologies investigated by different work-packages including RBF, MAR and constructed wetlands.

The field site investigations will include hydrogeological, hydrological and geochemical characterisation and depending on the degree of site development water quality monitoring or pre-feasibility studies for new treatment schemes. In addition to the natural treatment systems the investigation will recommend appropriate pre- and post-treatment steps to optimise production of potable water quality and to avoid operational issues such as clogging of aquifers. The experimental and conceptual studies will be supported by modelling to improve the conceptual understanding of the sites and enhance the transferability of results across India and to Europe.

A sustainability assessment will be performed for these sites, covering human health, environmental, economic, institutional and social aspects. Water management plans for natural treatment systems will be developed and suitable policy frameworks established and promoted. The Indian sites will be linked to an "end-user pool" of European RBF and MAR sites to facilitate the information exchange on operational experiences.

EXPECTED RESULTS

The expected results of Saph Pani are:

- Knowledge of optimal hydrological and hydro-geological settings and methodologies for extending RBF to other areas in India.
- A set of Indian MAR guidelines for aquifer recharge and storage schemes covering different hydro-geological settings to cope with changing supply and demand of groundwater.
- Strategies to make use of natural and constructed wetlands for conserving the eco-balance of sprawling urban areas and recycling of wastewater for periurban agricultural production.

These results will be complemented by optimised post-treatment for effective re-use of treated water, mathematical modelling and an integrated sustainability assessment. The knowledge base and technologies will be extended, shared and translated to the implementing agencies and the private sector, especially SME, through conferences, technical reports and training.

Further information on this is available at www.saphpani.eu

*Elango Lakshmanan, Vice President ICWQ
Anna University, Chennai, India*

Revisiting Experimental Catchment Studies in Forest Hydrology

Ashley Webb and co-editors have recently put together a Red Book of excellent papers generated from the Workshop on Revisiting Experimental Catchment Studies in Hydrology held at Melbourne in 2011. The book (IAHS Publ. 353) is in press and will soon be available from IAHS Press (and, if you are in North America, also through Amazon.com).

Much of what is known about the hydrological role of forests is based on paired catchment experiments whereby two neighbouring forested catchments are jointly monitored during a calibration period of several years, after which one of the catchments is kept untouched as a reference (control), while the other is submitted to a forest treatment (impact). There are many variations in the design of these experiments, which may include multiple control and treatment catchments or comparative studies in the absence of a calibration period. Experimental catchments have produced a considerable amount of knowledge since the first true experiment was initiated over a century ago in the mountains of Colorado, USA. Despite the difficulties of maintaining long-term experiments, many are still operational today (the recent IAHS Benchmark volume, *Forest Hydrology*, is an obvious complement to this book, see below).

The volume is divided into four sections; the list of contents is provided below. Briefly, the first section, **Addressing new questions using historical data sets**, is the largest. It combines papers that provide succinct overviews of past and ongoing work in specific catchments or catchment networks (e.g. the Brigalow catchment, Australia, by Thornton *et al.*; the US Forest Service's network of experimental forests and ranges by Neary *et al.*), with contributions using innovative modelling approaches and older data to investigate current questions (e.g. Wang *et al.*, Andréassian). New techniques for evaluating forest cover and catchment characteristics using LiDAR and satellite imagery are also presented, and highlight the importance of experimental catchment studies in furthering our understanding of hydrological processes at a range of scales. Other papers explore forestry policy, climate change and ecohydrology issues. Studies in this section incorporate data and modelling from several countries including Australia, New Zealand, South Africa, India, China, Malaysia, Spain, France and the USA.

Impacts of fires provides papers that describe the hydrological impacts of wildfires and prescribed burning, as measured in experimental catchment studies in Australia and the USA. Issues such as drought, fire frequency and fire intensity are discussed in the context of effects on forest hydrology, and their relevance in the context of climate change.

Water quality and sediment loads commences with a review of research in this field, by Dan Neary of the US Forest Service, that collates paired catchment results from around the world, e.g. the impact of forest harvesting on nitrate-N concentrations and sediment outputs, and provides context for the accompanying papers from the USA and Australia that outline the nature of sediment loads and water quality in forest catchments.

Ecosystem services presents two papers that showcase the value and importance of experimental catchment studies for the valuation of forest "ecosystem services", as well as the economic implications of afforestation and other changes in land use.



Revisiting Experimental Catchment Studies in Forest Hydrology

Edited by: Ashley A. Webb, Mike Bonell, Leon Bren, Patrick N. J. Lane, Don McGuire, Daniel G. Neary, Jami Nettles, David F. Scott, John D. Stednick & Yanhui Wang

IAHS Publication 353 (April 2012) ISBN 978-1-907161-31-5
240 + viii pp. Price £56.00 IAHS members price £42.00

Production of this volume was generously sponsored by: Forests NSW, the USDA Forest Service, the Chinese Academy of Forestry, the Colorado Water Institute and Weyerhaeuser.



Book contents

1 Addressing new questions using historical data sets

Comparison between a statistical approach and paired catchment study in estimating water yield response to afforestation Y. Wang, M. Bredemeier, M. Bonell, P. Yu, K.-H. Feger, W. Xiong & L. Xu

Can forest watershed management mitigate climate change effects on water resources? J. M. Vose, C. R. Ford, S. Laseter, S. Dymond, G. Sun, M. B. Adams, S. Sebestyen, J. Campbell, C. Luce, D. Amatya, K. Elder & T. Heartsill-Scalley

The Brigalow catchment study: forty-five years of paired catchment monitoring in the Brigalow Belt of Australia C. Thornton, B. Cowie & M. Silburn

The use of LiDAR elevation data to map channel continuity in southeast Australia X. Sun, C. Thompson & B. Croke

The hidden treasures of long-term paired watershed monitoring in the forests and grasslands of Arizona, USA

B. Poff, D. G. Neary, V. Henderson & A. Tecle

US Forest Service Experimental Forests and Ranges Network: a continental research platform for catchment-scale research *D. Neary, D. Hayes, L. Rustad, J. Vose, G. Gottfried, S. Sebestyen, S. Johnson, F. Swanson & M. Adams*

Seasonal differences in runoff between forested and non-forested catchments: a case study in the Spanish Pyrenees

N. Lana-Renault, J. Latron, D. Karssenber, P. Serrano, D. Regüés & M. F. P. Bierkens

Native forest C factor determination using satellite imagery in four sub-catchments *R. Jamshidi, D. Dragovich & A. A. Webb*

Process-based modelling of vegetation to investigate effects of climate and tree cover change on catchment hydrology *P. Feikema, C. Beverly, J. Morris, P. Lane & T. Baker*

Tropical cyclone effects on rapid runoff responses: quantifying with new continuous-time transfer function models

N. A. Chappell, M. Bonell, C. J. Barnes & W. Tych

The limits of data: application of a lumped catchment model to a small humid tropical basin *Chris Barnes & Mike Bonell*

Paired catchment experiments and forestry politics in Australia *L. Bren & D. McGuire*

Merging modelling and experimental approaches to advance ecohydrological system understanding *S. Arnold, A. Lechner & T. Baumgartl*

Visualising the hydrological signature of an unsteady land cover – an application to deforested and afforested catchments in Australia, the USA and France *V. Andréassian*

2 Impacts of fires

Fire effects on forest hydrology: lessons from a multi-scale catchment experiment in SE Australia

P. N. J. Lane, G. J. Sheridan, P. J. Noske, C. B. Sherwin, J. L. Costenaro, P. Nyman & H. G. Smith

Cascabel prescribed fire long-term watershed study: an opportunity to monitor climate change

G. Gottfried, D. Neary, P. Ffolliott & K. Koestner

Hydrologic impact of fire on the Croppers Creek paired catchment experiment *L. Bren*

3 Water quality and sediment loads

Forest paired catchment studies of water quality: past, present, and future

D. G. Neary

Sediment storage, yield and wood accumulation in ephemeral headwater channels, southeastern Australia *P. Walsh, A. Webb & C. Thompson*

Sediment loads and erosion in forest headwater streams of the Sierra Nevada, California

C. T. Hunsaker & D. G. Neary

4 Ecosystem services

Payments for watershed services and the role of experimental catchment studies *A. A. Webb*

Demand for water use by new tree plantations and downstream economic, social and environmental interests *T. Nordblom, I. Hume & J. Finlayson*

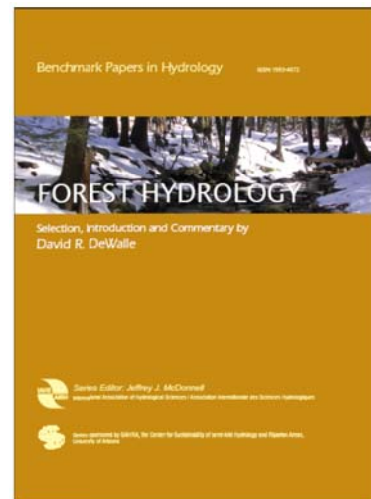
BENCHMARK PAPERS IN HYDROLOGY, vol. 7

FOREST HYDROLOGY

Selection, Introduction and Commentary by
David R. DeWalle

David DeWalle marks the important milestones in forest hydrology research with 29 benchmark papers, and provides the context in his commentaries.

Foundations of Forest Hydrology includes the early review by Zon (1927) and the Wagon Wheel Gap paired watershed study (Bates & Henry, 1928). *Forest Practices and Water Yields and Timing* looks at the impacts of management on flows, with contributions by Hoover (1944) and Hewlett & Helvey (1970). Understanding and quantifying forest snow cover processes is represented by three papers in *Forest Practices and Snow*, including the early study by Wilm & Dunford (1948), while *Forest Evapotranspiration* considers the seminal developments in the direct measurement and estimation of losses from trees. Kittredge's (1948) review is included in *Hydrological Processes and Forests*, which covers interception losses, soil moisture, hydraulic lift and precipitation from fog. The shift in focus from water quantity to quality is reflected in *Forests and Water Quality*. Finally, *Forest Practices and Erosion* considers the processes of sediment generation and consequent stream sediment loads associated with logging roads and forest harvesting.



IAHS BM7 ISBN 978-1-907161-17-9
(2011) 474 + x pp.
A4 format, hardback £65.00
IAHS member price £48.75 incl. postage.

SE-LIST, the Soil Erosion Discussion List, has been re-launched

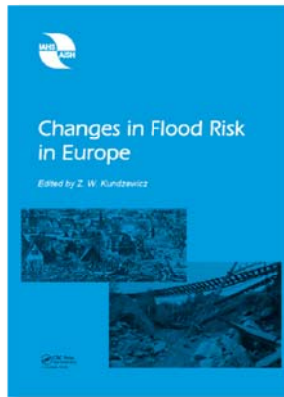
from Dave Favis-Mortlock

SE-List was started in 1993 as a forum for discussion on any topic related to soil erosion (see Bernsdorf & Favis-Mortlock, 1995). The list was originally hosted by the University of Trier, Germany, then went through several changes before Mark Nearing (USDA-ARS) agreed to run it. During Mark's term of office, the list was hosted at Purdue University in the USA. It grew to be quite a useful resource.

In 2011, Mark decided to give up running the list, and pass it to someone else; I agreed to take it on. It has taken a while to get the list set up here in Oxford, but it is now operational. However, it has not been possible to copy the list of subscribers from the Purdue hosting. Thus members of the old SE-LIST will usually need to re-subscribe.

Continued p.11

Changes in Flood Risk in Europe



Edited by

Zbigniew W. Kundzewicz

*Institute for Agricultural and Forest Environment, Polish Academy of Sciences, Poznań, Poland, and
Potsdam Institute for Climate Impact Research (PIK), Potsdam, Germany*

Floods are the most prevalent natural hazard in Europe. But, has flood risk increased in the continent? How, where, and why? Are climate change impacts apparent? How do socio-economic trends and associated land-use change impact on flood risk?

This interdisciplinary book, authored by an international team, offers:

- A comprehensive overview of flood risk in Europe, past and present, and future
- National/regional chapters covering Central Europe, Western Europe, Southern Europe and Northern Europe, the Alpine region and the Iberian Peninsula
- A focus on detection and attribution of change with respect to climate change and its impacts, water resources and flood risk, the re-insurer's view point, and future projections of flood risk
- Rectification of common-place judgements, e.g.: "climate is warming so floods should become more frequent and intense"; observations do not always confirm this expectation

Of interest to research scientists and educators, students, engineers, planners, risk reduction specialists, staff of specialized national and international agencies, and the media



IAHS Special Publication 10

(April 2012) ISBN 978-1-907161-28-5 (Paperback); 516 + xvi pages
Price £85.00. IAHS members price £63.75, incl. postage.

Order from the IAHS online bookshop at www.iahsmembers.info/shop.php or contact:
Mrs Jill Gash, IAHS Press, CEH Wallingford, Oxfordshire OX10 8BB, UK jilly@iahs.demon.co.uk, fax: +44 1491 692448/692424

Co-published with CRC Press/Balkema, a Taylor & Francis imprint. This volume will soon also be available from CRC Press.

SE-LIST *continued from p. 10*

HOW TO USE THE LIST

As before, SE-LIST is intended to be a low-volume list. Based on past experience, I envisage just a few emails per week. SE-LIST will not clog your inbox!

The formal name of SE-LIST is now: ouce-soil-erosion@maillist.ox.ac.uk (sorry about the rather long name: it was not my choice!) To post to the list, send an email to ouce-soil-erosion@maillist.ox.ac.uk. Your email will then be sent to all list members. You can only do this if you are subscribed to the list, of course.

To unsubscribe or subscribe, or check who is subscribed, send an email to ouce-soil-erosion-help@maillist.ox.ac.uk. You will get an email back with a list of instructions.

If you have any problems posting to the list, email me at ouce-soil-erosion-owner@maillist.ox.ac.uk. And please pass on this information to any colleagues who might wish to join SE-LIST.

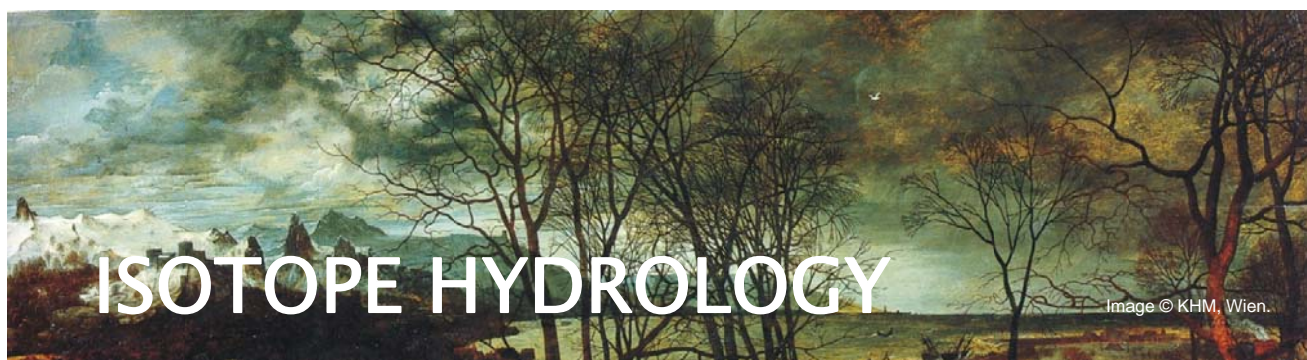
I hope that SE-LIST will again be useful!

Dave Favis-Mortlock

Acknowledgements Sincere thanks to Mark Nearing for running the previous version of SE-LIST so well! And thanks to Oxford University for hosting the current version of the list.

Reference

Bernsdorf, B. and Favis-Mortlock, D.T. (1995). SE-LIST (the Internet Soil Erosion Discussion List): growth and activity in the first year. *ESSC Newsletter* 4/1995, 6–10.



Selection, Introduction and Commentary by P. K. Aggarwal, K. O. Fröhlich, J. R. Gat & R. Gonfiantini

Isotope Hydrology uses stable and radioactive isotopes of water and its dissolved constituents to trace hydrological processes, including the pathways of rainfall and snowmelt to, and interactions between, aquifers, lakes and rivers. The potential of using stable isotopes of water was recognized in the 1930s, but not fully explored until the 1950s, since when the scope and nature of isotope applications in hydrology have blossomed. Improvements in measurement techniques have facilitated use of isotopes in many contexts, and isotope hydrology has become mainstream, as documented in this volume of reprinted papers and accompanying commentaries.

Section **A. Fundamentals** includes the first papers on deuterium, ^{18}O and tritium contents in natural waters (Friedman, 1953; Epstein & Mayeda, 1953; Libby, 1953), and Craig's (1961) seminal paper which defined the global meteoric water line used to understand the source of natural waters. The papers that shaped our understanding of isotopes in precipitation and global circulation, e.g. Dansgaard (1964) and Craig & Gordon (1965), come in **B. Atmospheric Water Cycle**. The early interpretation of isotope sequences in rock and ice, including the iconic Greenland ice sheet core (Dansgaard *et al.*, 1969), are included in **C. Palaeoclimates**.

D. River and Lake Hydrology contains influential papers on the use of isotopes to determine the origin of stream and lake waters. **E. Groundwater** deals with the origin of groundwaters, the earliest use of tritium, ^{14}C , ^{81}Kr and ^{36}Cl to date them, and isotope applications in pollution and groundwater remediation.

An excellent resource for graduate and post-graduate level courses in hydrology, reproducing many important papers which are otherwise difficult to access.

The co-authors have been involved with isotope hydrology for most of their professional lives while working with or for the International Atomic Energy Authority, IAEA. Pradeep Aggarwal, Head of the Isotope Hydrology Section since 1999, came to the IAEA from Argonne National Laboratory, USA. Klaus Fröhlich came to the IAEA in 1988 from the Institute of Physics, Freiberg University, Germany, and was Section Head from 1994 to 1999. He was preceded Roberto Gonfiantini (1988–1993) who moved to the IAEA in 1970 from the University of Pisa, Italy. Joel Gat began his work with isotope applications in hydrology in the late 1950s while at the Weizmann Institute of Science in Israel, and has been associated with the IAEA ever since.

The Series Editor of the IAHS Benchmark Papers in Hydrology Series is Jeff McDonnell, Professor and Chair in Watershed Science at Oregon State University, USA, a Fellow of the American Geophysical Union, and recipient of several awards.

IAHS BM8 (April 2012) ISBN 978-1-907161-29-2 A4 format, hardback
Price £70.00. IAHS members price £52.50, incl. postage

ORDER ONLINE at www.iahsmembers.info/shop.php

Or send orders and enquiries to:

Mrs Jill Gash

IAHS Press, Centre for Ecology and Hydrology,
Wallingford, Oxfordshire OX10 8BB, UK

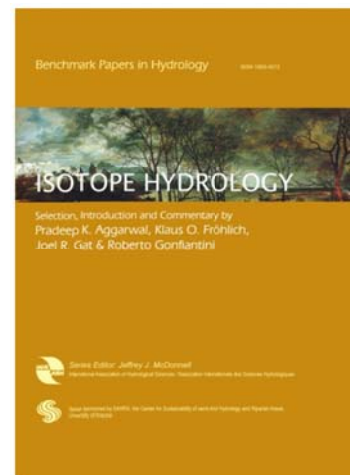
jilly@iahs.demon.co.uk

tel: +44 1491 692442

fax: +44 1491 692448



Series sponsored by SAHRA, the Center for Sustainability of semi-Arid Hydrology and Riparian Areas, University of Arizona, USA.





On behalf of the 13th WaterNet/WARFSA/GWP-SA Local Organising Committee, we would like to extend an invitation to you to attend the upcoming Symposium to be held from 30 October to 2 November 2012 in Johannesburg, South Africa.

The Symposium is a platform for water professionals to share advances in research and education related to Integrated Water Resources Management. It is the place to discuss new opportunities and developments towards the integrated management of our scarce freshwater resources. It is also the place where we should attempt to cross boundaries: look over disciplinary fences and think across national borders.

We plan to have an exciting programme of social events and educational excursions and hope that you can join us in Johannesburg, South Africa.

More information and abstract submission at: www.waternetonline.org

Call for Abstracts for WaterNet

Oral and poster abstracts are invited on the sub-themes below and should be submitted using the online abstract submission system by **30 April 2012**.

- Hydrology
- Water and Environment
- Water and Land
- Water and Society
- Water Resources Management
- Water Supply and Sanitation

Successfully submitted abstracts will be acknowledged with an electronic receipt including an abstract reference number.

All abstracts submitted will go through a peer-review process carried out by the Regional Scientific Committee, and the final selection of abstracts will be done by the International Scientific Committee. All accepted abstracts will appear in their full form in the book of abstracts, which will be on the abstract CD-ROM and availed to all registered delegates.

Contact Us

Any queries regarding the 13th WaterNet/WARFSA/GWP-SA Symposium programme can be made to the WaterNet Programme Officer:

Rennie Chioreso Munyayi

Email: symposium13@waternetonline.org

Tel: +263-4-333248

TÜBİTAK  **IAHS AISH**

International Conference / Conférence Internationale

Sediment transport modeling in hydrological watersheds and rivers

Modélisation du transport de sédiments dans les bassins-versants et dans les rivières

14-16 November / Novembre 2012
Istanbul, Turkey / Turquie

Last Call for Abstracts: 15 May 2012
medfriend@itu.edu.tr
<http://www.medfriend.itu.edu.tr>

IRD **HSM** **IC SW** **med friend water**



EGU Topical Conference Series on the Hydrological Cycle Leonardo Conference 2012



Hydrology and Society



Connections between Hydrology and Population dynamics, Policy making and Power generation

Torino (Italy) 14–16 November 2012

Organization: Politecnico di Torino (DIATI) and Consortium of Italian Universities for Hydrology (CINID). Scientific Patronage: IAHS

SCOPE AND OBJECTIVES

At the start of the third millennium, population pressure and changes in climate patterns are intensifying the water crisis in several regions of the world, where freshwater shortages and pollution are causing major problems for ecosystems and societies. Meanwhile, the increasing occurrence of flood disasters is also challenging the resilience of our societies to extreme hydrological events. Additionally, demographic pressure, and the consequent increase in energy demand from new growing economies, pose new challenges and open new perspectives on the management of water resources. Hydrologists will be increasingly called upon to propose solutions and interact with policy makers, particularly in the face of climate variability. In the meantime, scientists around the world are becoming aware that the interaction between hydrology and societies is not sufficiently understood.

While improved hydrological understanding and modelling are needed, a pragmatic two-way interaction with policy makers, land and water-use authorities, and other stakeholders is also urgent. From this interaction, improved scientific pathways are expected, that can combine the development of new knowledge with methods which can enhance the ecological and societal resilience to water-related potential disasters. These research pathways can involve water–human–ecosystem interactions and the economic implications of water-related procedures, particularly those aiming at developing and sustaining food demand from areas with strong demographic pressure.

To enable societies to face these challenges and develop appropriate policies and management plans, reliable predictions of the response of the water cycle to major natural and human-induced changes are required.

To address these goals, scientific international initiatives would gain greater impact if they are well connected to UN objectives, as those identified in the Hyogo Framework for Action (HFA) for the reduction of disaster losses.

The conference aims to bring together scientists, members of governmental institutions and professionals dealing with the impact of hydrological processes on different aspects and domains experiencing societal pressure. Participation of representatives of natural, social, economic and engineering sciences is solicited, to encourage exchange of experiences and presentation of views on how the research in hydrology can better meet current and future societal needs.

INTERNATIONAL SCIENTIFIC COMMITTEE

J. Andreu (Univ. Politecnica de Valencia), P. D'Odorico (Univ. Virginia, USA), G. Galeati, (ENEL, Italy), M. L. Gullino (President ISPP, U. Torino), A. Gurnell (Queen Mary Univ. London), J. Hall (Univ. Oxford, UK), D. Koutsoyiannis (NTUA, Greece), G. Michel (Willis Re, UK), A. Montanari (Univ. Bologna, Italy), J. Mysiak (Fondazione Eni Enrico Mattei, Italy), P. Quevauviller (European Commission), R. Rosso (Politecnico di Milano, Italy), H. Savenije (TU Delft), P. van der Zaag (Unesco IHE, Delft)

Conference Themes:

Contributions are sought for presentations on state-of-the-art research and real-world case studies in water research, in particular related to the global change in climate, population dynamics, and water and energy availability. In particular, the following themes are proposed:

Hydrology and Demographic Pressure under Global Change

- Urbanization and anthropic impacts on catchment hydrology
- Water relevance in trade and agriculture in emerging countries
- Virtual water trade and food security
- Desertification and primary water requirements
- Open science (data and tools) for sustainable development

Hydrology and Water Policies

- Opportunities and problems in the implementation of the international protocols and EU environmental legislation
- Water policies supporting agriculture and trade
- EU and international programmes' impact on research in hydrology
- Interplay between the EU and Member States' water regulations
- Economic policy instruments and regulations measures for water management

Hydrology and Power Availability for Sustainable

Development

- Environmental sustainability and water conflicts related to hydropower
- Hydrological tools for assessing policies of hydropower efficiency
- Climatological implications in energy production from the sea
- Water-related energy issues in developed and emerging countries
- Water as an integrating element for renewable energies

MAIN DEADLINES

Abstract Submission for those requiring support

15 May 2012

Final Abstract deadline 15 June 2012

Notification of acceptance and preliminary programme

15 July 2012

VENUE Circolo dei Lettori, Palazzo Graneri della Roccia, Via Bogino 9, 10123 Torino (Italy) [<http://www.circololettori.it>]

MORE INFORMATION <http://eguleonardo2012.polito.it>

CONTACT Prof. Pierluigi Claps, Politecnico di Torino
pierluigi.claps@polito.it

HydroEco'2013

4th International Multidisciplinary Conference on Hydrology and Ecology: *Emerging Patterns, Breakthroughs and Challenges*

Rennes, France, 13–16 May 2013

More information at: <http://osur.univ-rennes1.fr/HydroEco2013/>

A considerable number of interdisciplinary research projects have been developed at the interface between hydrology and ecology during the last decade. The increasing number of peer-reviewed papers on the topic demonstrates the vitality of this theme. This interest in coupling hydrological and ecological studies has been triggered by purely scientific questions related to the quantification of the role of interactions between hydrological and biological processes on surface and groundwater resources and quality, but also by the importance of these physical and biological interactions at small, local and regional scales. These scales are of paramount importance for applied environmental issues related to air and water quality or biodiversity dynamics for instance.

The aim of HydroEco2013, the fourth HydroEco conference – the previous three were in Karlovy Vary (Carlsbad), Czech Republic in 2006, and in Vienna, Austria in 2009 and again in 2011 – is fourfold:

- i) to present new findings and approaches on interactions between hydrology and ecology,
- ii) to promote interdisciplinary interactions on water-related issues between hydrology, hydrogeology, biogeochemistry, microbial ecology and ecology,
- iii) to explore emerging patterns, breakthroughs and challenges, and
- iv) to provide management applications and guidelines to tackle environmental issues.

To address the relevant issues, the conference aims to bring together experts from different disciplines, such as hydrologists (groundwater, surface water), ecologists, biologists, subsurface microbiologists, environmental biogeochemists, eco-technologists, geomorphologists, hydraulic engineers, forest managers, nature reserve managers, regional and landscape planners, as well as experts from governmental institutions.

THE FOLLOWING SESSIONS ARE PROPOSED:

- S1: Interactions between surface water, hyporheic zone, saturated and unsaturated groundwater
- S2: Plant-, surface- and/or groundwater interactions
- S3: Hydroecology in the wetland context

- S4: River temperature: understanding physical processes and ecological impacts
- S5: Pollutant buffering capacities from riparian zones to landscape
- S6: Impact and role of extreme hydro-meteorological events on interactions between hydrological and biological processes
- S7: Modelling interactions between hydrological and biological processes
- S8: Scaling spatio temporal laws in water, life, and landscapes
- S9: Relevance and limitation of existing legal and regulatory legislation to maintain and enhance hydrological and biological interactions
- S10: Restoration of hydrosystems services
- S11: Hydroecological tools for assessment of aquatic ecosystems functions

SCIENTIFIC ADVISORY COMMITTEE – please refer to http://osur.univ-rennes1.fr/HydroEco2013/scientific_advisory.php.

ABSTRACT SUBMISSION – will be possible later in 2012.

FURTHER INFORMATION: please feel free to contact the Organizing Committee:

- Gilles Pinay, gilles.pinay@univ-rennes1.fr
- Karel Kovar, karel.kovar@pbl.nl

Please mark your calendar –
*HydroEco2013, 13–16 May 2013,
Rennes, France – and plan to submit
an abstract to the conference*

Calendar of Meetings Organized/Sponsored by IAHS and its Commissions

2012	Conference	Contact details
Nanjing, China 10–12 May	International Strategic Workshop on Future IAHS Science Initiative	Prof. Liliang Ren, IAHS Vice-President, Hohai University, No.1 Xikang Road, Nanjing 210098, China. njrl9999@126.com
Prague, Czech Republic 21–24 May	GFR2012 International Conference on Groundwater in Fractured Rocks Jointly convened by IAH Czech National Chapter, IAH Commission on Hydrogeology of Hard Rocks, and International Commission on Groundwater (ICGW) of IAHS	Dr Zbynek Hrkal, Charles University, Prague, and T.G. Masaryk Water Research Institute (VUV), Prague, Czech Republic. Also Secretary of Czech National Chapter of IAH: tel: +420 220 197 463; zbynek_hrkal@vuv.cz Karel Kovar, VP IAHS/ICGW: karel.kovar@pbl.nl http://web.natur.cuni.cz/gwfr2012/
Ohrid, Macedonia 28 May–2 June	BALWOIS 2012 Conference on Water, Climate and Environment	http://www.balwois.com/2012
Banff, Canada 11–15 June	IAHS-ICCE International Conference. Wildfire and Water Quality : Process, Impacts and Challenges	Michael Stone mstone@uwaterloo.ca
Edinburgh, UK 18–22 June	IUGG Conference on Mathematical Geophysics	http://www.cmgedinburgh2012.org.uk
Hamburg, Germany 14–18 July	10th International Conference on Hydroinformatics HIC2	loebkens@tutech.de
Oulu, Finland 13–15 August	NORDIC WATER 2012, XXXVII Nordic Hydrological Conference, Catchment Restoration and Water Protection	Prof. Bjørn Kløve, University of Oulu bjorn.klove@oulu.fi
Niagara Falls, Canada 16–23 September	IAH Congress. Confronting Global Change including a joint IAHS–IAH session on Artificial Tracers and Environmental Isotopes to Understand and Quantify Water Flow-paths and Pollutant Transport in Karst Aquifers	conference@iah2012.org
Vienna, Austria 24–27 September	HydroPredict2012, International Interdisciplinary Conference on Predictions for Hydrology, Ecology and Water Resources Management	Universität für Bodenkultur Wien (BOKU) University of Natural Resources and Applied Life Sciences Institute of Water Management, Hydrology and Hydraulic Engineering, Vienna, Austria Prof. Hans-Peter Nachtnebel or Mr Karel Kovar hans_peter.nachtnebel@boku.ac.at or karel.kovar@pbl.nl
Tunis, Tunisia 1–2 October	Statistical Methods for Hydrological Application, 3rd official STAHY workshop (postponed from October 2011)	info@stahytunis.org
Chengdu, China 11–15 October	International Symposium of IAHS-ICCE	Prof. Xiubin He, Prof. Xinbao Zhang, Dr Yuhai Bao http://iahs.info/conferences/2012_Chendu_ICCE.pdf
Baghdad, Iraq 17–18 October	Water Resources Engineering Technology in Iraq and its Obligation for Technical Potential to Satisfy the Future Demand	Prof. Dr Aqeel Al-Adili, University of Technology, Baghdad, Iraq tel: 009647901766126 aqeeladili@yahoo.com
Delft, Netherlands 22–26 October	Completion of the IAHS Decade on Prediction in Ungauged Basins, and the Way Ahead. IAHS 90th Anniversary meeting	Hubert Savenijie, h.h.g.savenijie@tudelft.nl
Johannesburg, South Africa 2–4 November	13th WaterNet/WARFSA/GWP-SA. International Symposium on Integrated Water Resource Management (IWRM)	WaterNet Programme Officer, Rennie Chioreso Munyayi tel: +263-4-333248 symposium13@waternetonline.org
Istanbul, Turkey 14–16 November	International Conference on Sediment Transport in Hydrological Watersheds and Rivers	Prof. Dr. Hafzullah Aksoy, Istanbul Technical University, Dept Civil Engineering. tel: +90 212 2856577; fax: +90 212 2856587 haksoy@itu.edu.tr or medfriend@itu.edu.tr
Saint Moritz, Switzerland 6–9 December	9th International Workshops on Precipitation in Urban Areas	
Orange, CA, USA 15–18 December	First IUGG GRC Conference on Extreme Natural Hazard and their Impacts	Chair of the LOC: D. Ramesh P. Singh, School of Earth and Environmental Sciences, Schmid College of Science and Technology, Chapman University, Orange, CA 92866, USA. tel: +1 714-289-2057; fax: +1 714-516-4542 rsingh@chapman.edu
2013	Conference	Contact details
Algiers, Algeria 24–25 February	5th International Conference on Water Resources and Sustainable Development (CIREDD 2013)	Prof. Mohamed Meddi, Ecole Nationale Supérieure d'Hydraulique, Blida, Algérie mmeddi@yahoo.fr or m.meddi@ensh.dz
Rennes, France 13–16 May	HydroEco2013, 4th International Multidisciplinary Conference on Hydrology and Ecology: Emerging Patterns, Breakthroughs and Challenges	Dr Gilles Pinay, Observatoire des Sciences de l'Univers de Rennes Université de Rennes 1, Rennes, France, tel: +33 2 23 23 68 69; gilles.pinay@univ-rennes1.fr Mr Karel Kovar, PBL Netherlands Environmental Assessment Agency Bilthoven, The Netherlands, tel: +31 30 274 3360; karel.kovar@pbl.nl
Koblenz, Germany 3–7 June 2013	Water and Sediment – VI International Conference on Water and Environmental Research	Johannes Cullmann, IHP/HWRP Sekretariat, Bundesanstalt fuer Gewaesserkunde, Am Mainzer Tor 1, 56068 Koblenz, Germany tel: +49 261 1306 5313; Cullmann@bafg.de
Göteborg, Sweden 22–26 July	Knowledge for the Future. Joint IAHS-IAPSO-IASPEI Scientific Assembly	Joint Assembly Secretariat, Congrex Sweden AB, IAHS/IAPSO/IASPEI 2013 PO Box 5078, SE-402 22 Göteborg, Sweden. tel: +46 31 708 60 00; fax: +46 31 708 60 25. iahs.iapso.iaspei2013@congrex.com
Perth, Western Australia 16–20 September	IAH International 40th Congress – Solving the Groundwater Challenges of the 21st Century	
Kathmandu, Nepal 27–29 November	International Conference on Climate Change, Water and Disaster in Mountainous Areas	Mr Deepak Paudel, General Secretary, info@soham.org.np Mr Jagat K. Bhusal, Chairman, bhusaljagat@yahoo.com
2014	FRIEND Conference: Hanoi, Vietnam, February/March	
2015	XXVth IUGG General Assembly, including the IAHS Assembly: Prague, Czech Republic, 22 June–2 July	



International Association of Hydrological Sciences Association Internationale des Sciences Hydrologiques

Officers of IAHS, 2011–2015 (unless indicated otherwise)

President: G. YOUNG, Canada (2009–2013)
President-Elect H. SAVENIJE The Netherlands (2011–2013)
Secretary General: C. CUDENNEC, France
Vice-Presidents: D. HUGHES, South Africa
L. REN, China
T. WAGENER, USA
Co-Editors Z. W. KUNDZEWICZ, Poland
D. KOUTSOYIANNIS, Greece
Treasurer: C. A. ONSTAD, USA

Contacting IAHS and the Commissions

Information about all aspects of IAHS is available from the IAHS web site: www.iahs.info or:

Prof. Christophe Cudennec, at cudennec@agrocampus-ouest.fr or
IAHS, UMR SAS, Agrocampus Ouest,
CS 84215, F-35042 Rennes Cedex, France

Registration is free, please register online at the web site or contact:

Mrs Jill Gash, Membership Secretary,
IAHS Press, Centre for Ecology and Hydrology, Wallingford,
Oxfordshire OX10 8BB, UK

jilly@iahs.demon.co.uk

For information about the Commissions and other groups visit their web sites via www.IAHS.info or contact:

ICCE, Continental Erosion

President: Valentin Golosov, golosov@rambler.ru
Secretary: Paolo Porto, paolo.porto@unirc.it

ICRS, Remote Sensing

President: Ian Cluckie, i.d.cluckie@swansea.ac.uk
Secretary: Yangbo Chen, eescyb@mail.sysu.edu.cn

ICSIH, Snow and Ice Hydrology

President: John Pomeroy, john.pomeroy@usask.ca
Secretary: Regine Hock, regine.hock@gi.alaska.edu

ICSH, Statistical Hydrology

President: S. Grimaldi, salvatore.grimaldi@unitus.it
Secretary: S. Vandenbergh, sander.vandenbergh@ugent.be

PUB, Predictions in Ungauged Basins

Chair: Hubert Savenije, h.h.g.savenije@tudelft.nl

ICCLAS, Coupled Land–Atmosphere Systems

President: Stewart Franks, stewart.franks@newcastle.edu.au
Secretary: Dawen Yang, yangdw@mail.tsinghua.edu.cn

ICWQ, Water Quality

President: Valentina Krysanova, valen@pik-potsdam.de
Secretary: Wouter Buytaert, wouter@paramo.be

ICT, Tracers

President: Piotr Maloszewski, maloszewski@helmholtz-muenchen.de
Secretary: Przemyslaw Wachniew, wachniew@novell.ftj.agh.edu.pl

Education Working Group

Chair: Thorsten Wagener, thorsten@engr.psu.edu

ICGW, Groundwater

President: Chunmiao Zheng, czheng@ua.edu
Secretary: Gunnar Nützmann, nuetzmann@iqb-berlin.de

ICSW, Surface Water

President: Eric Servat, eric.servat@univ-montp2.fr
Secretary: Yan Huang, y.huang.ctw@gmail.com

ICWRS, Water Resources Systems

President: Günter Blöschl, bloeschl@hydro.tuwien.ac.at
Secretary: Nick van de Giesen, n.c.vandegiesen@tudelft.nl

Precipitation Working Group

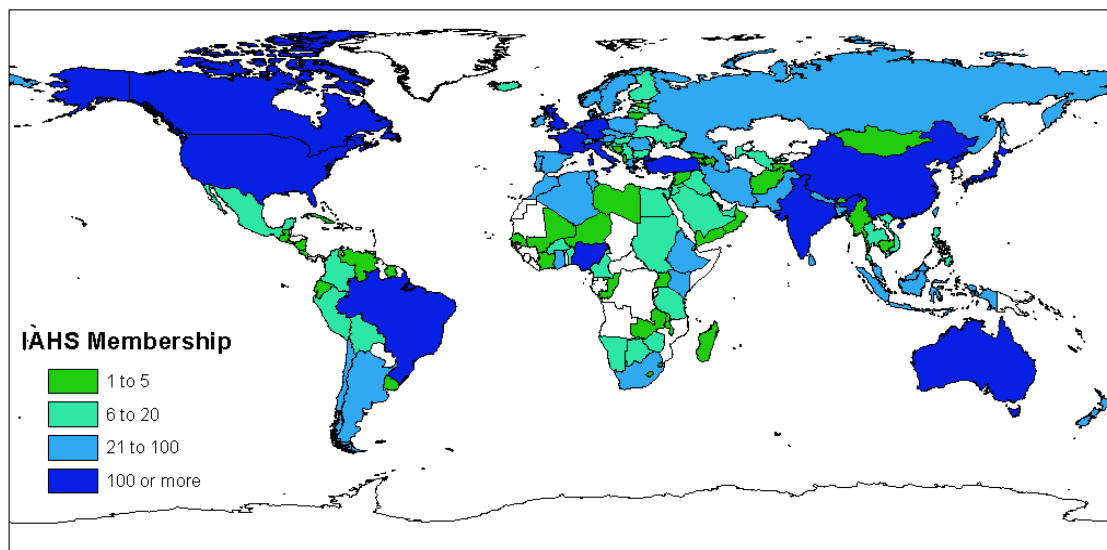
Chair: Daniel Schertzer, daniel.schertzer@cereve.enpc.fr

Distribution of IAHS Publications to “Countries in Need” is funded by the IAHS Task Force for Developing Countries (TFDC). *Hydrological Sciences Journal* and other IAHS publications are currently distributed free to 48 organizations worldwide, to help scientists there to acquire pioneering results of hydrological sciences and their application. All correspondence concerning the distribution of IAHS publications to “countries in need” should be sent to:

Denis Hughes
d.hughes@ru.ac.za

Institute for Water Research, Rhodes University, Grahamstown 6140, South Africa
Tel: +27 (0) 46 6224014 Fax: +27 (0) 46 6229427

IAHS National Representatives and Correspondents Contact details for all National Representatives and Correspondents are available at www.iahs.info



The map shows the present distribution of the IAHS membership worldwide. There are currently 5220 members of IAHS of whom 1649 are in financially-disadvantaged countries and have free access to *Hydrological Sciences Journal* online via the HSJ Link button in their personal membership area at the IAHS web site.
(Map prepared by Sonja Folwell)