



HELP



Hydrology for the Environment, Life and Policy



HELP is a joint UNESCO IHP-WMO initiative and is a cross-cutting programme of the Sixth Phase of the International Hydrological Programme of UNESCO



NEWSLETTER

Issue No2
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Message from Mike Bonell, Global Co-ordinator of HELP



Dear HELPers,

This second edition of the Newsletter provides an overview of some of the activities which have involved the global Secretariat with HELP basins and partners since March. These include activities ranging from dealing with transboundary basins issues using the Mesta-Nestos HELP basin as an example; co-operation with the FAO on mountain watersheds; and the planning of a special HELP session at the forthcoming 4th World Water Forum. Elsewhere we have encouraged the "twinning process" between selected HELP basins across the global network, and it is pleasing that we can include a short update in this edition of some progress that has been made between Australia-Asia.

The technical implementation of HELP in the field, needs as much improved communication across the technical disciplines within water, as well as dealing with the scientific research - water management and policy interface. In this connection, we include a short report on a recent workshop, hosted in the University of Oxford by the Environment Agency of England and Wales and the Centre of Ecology and Hydrology, Wallingford with the support of UNESCO.

At the end of August, we hosted at UNESCO HQ (Paris) the 1st planning meeting for an international HELP Symposium, scheduled for late 2007, with the provisional title " HELP in action: Lessons from the South". The scope of the Symposium is to give a strong emphasis on HELP basins in "the South". We will provide more details on this Symposium following further re-iteration of current drafts of the framework of the meeting by the planning group.

In the meantime the Secretariat has been very busy tracking the progress and approval of the pending IHP- HELP UNESCO Water Centre (International IHP-HELP Centre for Water Law, Policy and Science under the auspices of UNESCO) through the current 172nd Session of the UNESCO Executive Board. This will be a major item in the next Newsletter.

Finally I am pleased to include a short note on Guillaume Narnio who has joined the HELP secretariat and taken over several co-ordinating responsibilities.

Mike Bonell

HELP in ACTION:

Workshop in Guayaquil, Ecuador, by Robert Varady

A workshop on "Options for Use of a Climate Vulnerability Index (CVI)" took place in Guayaquil, Ecuador in March 2005 to consider the adaptation and application of a climate-and-water vulnerability index to identify, measure, and highlight areas where the availability of water resources is most vulnerable to climatic changes. (page 3)

Workshop in Xanthi, Greece, by Jacques Ganoulis

A joint HELP, ISARM, ROSTE workshop took place from May 30th to June 4th, 2005 in Xanthi, Greece, in the Mesta/Nestos River basin shared between Greece and Bulgaria. The workshop entitled "Bridging the Gap between Scientists and River Basin Authorities", aimed to promote cooperation on transboundary waters by following the UNESCO-HELP vision. (page 3)

Workshop in Williamsburg, USA, by Jonathan Triggs

North America HELP sponsored an evening session at the ASCE-EWRI Watershed Management 2005 Conference in July. The purpose of the session was to introduce HELP to watershed managers and practitioners. See article on (page 4).

Twinning Agreement in Australasia by Shahbaz Khan

A new twinning partnership was established within the HELP network between the Murrumbidgee HELP basin in Australia and the Davao HELP basin in the Philippines. (page 2)

LAC-HELP meeting, Foz de Iguacu, Brazil, August 10-12

The first LAC-HELP meeting gathered five (5) South American HELP basins and one (1) Northern American HELP basin in Foz de Iguacu, Brazil for a better integration of research results and agendas. (page 5)

EWRA-HELP-INBO meeting, Menton, by Jean Marie Monget

The EWRA 2005 Colloquium, held in Menton, France, 6-10 September 2005 was a success. It gathered participants from 34 countries for more than 160 presentations. Eight (8) HELP basins were represented by more than 14 scientists and managers on the theme of Integrated Management. (page 6)

Mountain Watersheds: platform of exchange and sub-network

A new platform of exchange was recently created for the mountain catchments. Literature and case studies on mountain catchments issues are already available on: www.echoalp.com/eau. A sub-network of mountain catchments has been created and led by the Pilot Site "Pays de Savoie-Mont Blanc-Lac Lemman-Lac d'Annecy". (page 6)

UNESCO-IHP workshop, Oxford, by Jonathan Smith

The meeting brought together during three days international scientists and river basin managers to discuss the latest research on groundwater - surface water interactions and the behaviour of nutrients in river corridors. (page 7)

HELP and the World Water Forum in Mexico

The 4th World Water Forum will take place in Mexico, March 16-22, 2006 on the theme Local Actions for a Global Challenge. HELP representatives will present the network. A field trip in a local HELP basin: Lerma Chapala is also proposed adjoining the HELP session. More news to come...

HELP in Action: Lessons from the South.

After the planning meeting in UNESCO HQ, France, a Symposium Steering Committee is preparing a major International Symposium on "HELP in action: Lessons from the South".



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The HELP Network

How to become a Candidate basin of the HELP Network ?

You want to become a member of the UNESCO HELP International Network and not wait for the next global call? The 5th session of the HELP International Steering Committee (University of Dundee, September 2004) approved the creation of the category "Candidate HELP basin". The set of documents and forms required to register is online on the HELP website: www.unesco.org/water/ihp/help under the section "You and HELP". New Candidate basins will be associated with the HELP projects and activities as soon as an application has been received. All Candidate basins will be categorized by the Global Evaluation Committee after the next global call.

The new HELP database online

A downloadable database is now online on the HELP Website: www.unesco.org/water/ihp/help in the section "multimedia". The software Microsoft Access is required in order to use it. A help file (text) is also available for download. The database provides a general background on physical and environmental characteristics of the 67 HELP basins as well as the main issues reported, in order to facilitate comparison and exchange between catchments. The information comes from the proposals submitted during the last Global Call and from later updates provided by the basins. Basins can be accessed through their names, their countries, their ecozones or by the presence of UNESCO labelled reserves like World Heritage sites or Man And the Biosphere reserves. It is also possible to configure a search through multiple issues to obtain the list of basins reporting a particular set of issues.

Selected Forthcoming Events

November 2005: The South Pacific HELP Symposium (NZ)

The South Pacific HELP Symposium is being co-organized by A Fenemor, Landcare Research NZ in collaboration with the UNESCO Apia Office, Western Samoa. The Symposium will be held in Nelson, New Zealand, 7-11 November 2005, in conjunction with a workshop for NZ regional councils, who act as focal points for stakeholder dialogue. The meeting will also include a field trip to the nearby Motueka HELP basin. Further it is expected that there will be a strong representation from the water resources sector of the South Pacific, and these participants will be sponsored by UNESCO.

March 2006: World Water Forum

UNESCO is already committed to the submission and sponsoring of at least nine topical sessions at the Forum, including one on the HELP Programme that is planned for Saturday March 18.

September 2006: Megève International Symposium

Selected members of the HELP network will be invited to participate in the Megève 2006 International Symposium to share knowledge and experience in the framework of the new Mountain Catchments sub-network.

Twinning Agreement

The Murrumbidgee River Basin is a World Demonstration HELP Basin (seen as demonstrating best practice in HELP and IWRM, with something to offer other basins) and the Davao River Basin is a Operational HELP Basin (an established basin which may become a World Demonstration Basin in due course) have agreed on entered into a twinning agreement for:

- Share knowledge and experience among the twinned basin stakeholders,
- Build capacity by providing formal and informal education opportunities through reciprocal hosting of decision makers and water experts
- Technology transfer through joint funding applications to regional and international bodies. The twinning agreement from here on shall be known as "HELP Murrumbidgee and Davao" and will follow the HELP philosophy and the twinning recommendations for HELP river basins.

The twinning agreement shall also follow the INBO (International Network of Basin Organizations) protocol and the Memorandum of Understanding for the TWINBASINXN Project.

Shahbaz Khan

Dundee Centre

HELP Centre on Water Science, Law and Policy in Dundee

The International HELP Centre for Water Law, Policy and Science will soon be established under the auspices of UNESCO in the University of Dundee in Scotland, UK (<http://www.dundee.ac.uk>). This HELP Centre will promote connections between hydrological research and the development of legal instruments (treaties, national laws and regulations) linked with water law and policy. The Centre also intends to be a Regional Coordinating Unit and will be responsible for the European HELP basins. It is hoped that the Centre will be fully operational by mid-2006.

HELP in Action: Lessons from the South planning meeting

Second row, from left to right: Andrew Fenemor (New Zealand), Guillaume Narnio (UNESCO Paris), Jonathan Triggs (USA), Hans Thulstrup (UNESCO Apia office), Dominique Rollin (IWMI South Africa office), Henrique Chaves (Brazil) and David Moody (USA).

First row, from left to right: Mike Bonell (UNESCO Paris), Maria Donoso (UNESCO Montevideo office), Pilar Cornejo (Ecuador), Patricia Wouters (UK), Mbangiseni Nephumbada (South Africa), Annukka Lipponen (UNESCO Paris), Arlette Jappe (Germany) and Nelton Friedrich (ITAIPO-Brazil).





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Scientists Discuss Climate-Water Index for Water Basins in the Americas

The Udall Center convened a group of international scientists in Guayaquil, Ecuador, to consider the adaptation and application of a climate- and-water vulnerability index to identify, measure, and highlight areas where the availability of water resources is most vulnerable to climatic changes. The index under discussion was developed by researchers Caroline Sullivan and Jeremy Meigh at the Centre for Ecology and Hydrology in Wallingford, U.K.

"In most parts of the world, and especially in developing countries, climate variability and resulting water-related problems limit economic growth and social well-being," said Robert Varady, deputy director of the Udall Center and organizer of the workshop on Options for Use of a Climate Vulnerability Index (CVI). Varady suggests that a technique to locate more precisely areas that are particularly vulnerable to water scarcity, flooding, and other climate-induced phenomena could provide policymakers and managers with a tool to intervene or forestall potential problems. With funding from UNESCO's International Hydrological Programme and its HELP (Hydrology for the Environment, Life and Policy) Initiative, the March 21-23, 2005, meeting was hosted by Dr. M. Pilar Cornejo de Grunauer of the Facultad de Ingeniería Marítima y Ciencias del Mar and Escuela Superior Politécnica del Litoral in Guayaquil.

The workshop's participants comprised researchers from Brazil, Chile, the Dominican Republic, Ecuador, the United Kingdom, and the United States, including Robert Varady, Anne Browning-Aiken, and Maria Carmen Lemos from the Udall Center. The researchers hope to develop and compare the CVI across the Americas, in such areas as the Yuna Basin (Dominican Republic), São Francisco Verdadeiro (Brazil), Limari River Basin (Chile), Chaguana River Basin (Ecuador), Upper San Pedro River Basin (Mexico/U.S.), and other watersheds.

For more information, contact Robert Varady at (520) 626-4393 or rvarady@email.arizona.edu.

Robert Varady

Xanthi Workshop HELPs to bridge a gap

The UNESCO Chair and Network/International Network for Water-Environment Centers in the Balkans (INWEB) organised a joint IHP-HELP, IHP-ISARM (Internationally Shared Aquifer Resources Management programme), ROSTE (UNESCO Regional Office for Science in Europe) workshop from May 30th to June 4th, 2005 in Xanthi, Greece, in the Mesta/Nestos River basin shared between Greece and Bulgaria. The workshop aimed to promote cooperation on transboundary waters in the Balkans by following the UNESCO-HELP vision and recommendations of INWEB's two previous (October 2004) international UNESCO ISARM and UNESCO-ROSTE workshops. The main conclusion of these workshops was that potential conflicts in water resources management at the basin scale are principally due to the lack of communication between scientists and experts on the one hand and stakeholders and water managers on the other.

To resolve this so-called "communication paradigm lock" effectively and to formulate in detail specific action programmes for UNESCO ISARM and UNESCO ROSTE, the Xanthi workshop, entitled "Bridging the Gap between Scientists and River Basin Authorities", incorporated the experience and expertise of the HELP initiative with that of the IHP ISARM and UNESCO ROSTE teams.

There were 47 participants from 14 different countries. Some were water scientists, ecologists, water engineers, economists and sociologists, while others were administrators, decision makers and members of river basin authorities. Participants were given the opportunity to discuss issues together, to learn from the experience of colleagues in other HELP basins, to be informed about the updated guidelines on groundwater monitoring by representatives from UNECE (United Nations Economic Commission for Europe), and to interact with experts with first hand experience of local problems and detailed knowledge of the local socio-economic environment on field trips in Greece and Bulgaria.

Actual problems and issues related to transboundary water resources in the area were identified directly in the field. Most of these problems also apply to other transboundary catchments in the region. From the different presentations during the workshop and the related discussions with stakeholders, it became clear that there is a strong willingness to work together in order to apply the new European Water Framework Directive (WFD). This is very important for developing future cooperative projects.

Two such cooperative projects were formulated, the first a regional project entitled "Regional Initiative for Transboundary Aquifer Resources Management in the Balkans (RITA -BALKANS)" and the second a local project entitled "Pooling Institutions for Common Monitoring and Sustainable Use of Water in the Mesta/Nestos Transboundary River" (PICOM-Mesta/Nestos)

Further information on the workshop may be found on the website www.inweb.gr.

Jacques Ganoulis



Guillaume Narnio

Guillaume Narnio's function is now "Assistant Programme Specialist", under the supervision of Mike Bonell, for the Global Secretariat of the HELP Programme. He has a Master degree in Environmental Resource Management from the Florida Institute of Technology (USA) and was a consultant for the HELP Programme for a year. He is now involved in different activities of the HELP Programme such as support to the Regional Coordinating Units, European networks within which HELP basins are involved, and the HELP website.



Xanthi Workshop

Participants at the Workshop on Options for Use of a Climate Vulnerability Index (CVI)

(left to right): Henrique Chaves, National Water Agency (Brazil); Maria Carmen Lemos, University of Michigan (USA); Jeremy Meigh, Centre for Ecology and Hydrology (UK); David Matamoros, Escuela Superior Politécnica del Litoral (Ecuador); Olga Luciano, State Secretariat for the Environment and Natural Resources (Dominican Republic); Robert Varady, University of Arizona (USA); the Deputy Mayor and Liliana Ugarte, Council Member, Pasaje de los Nieves (Ecuador); Caroline Sullivan, Centre for Ecology and Hydrology (UK); Anne Browning-Aiken, University of Arizona (USA); Maria Pilar Cornejo de Grunauer, Escuela Superior Politécnica del Litoral (Ecuador); and Alejandro León, Universidad de Chile (Chile).



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The HELP Experience in North America, Williamsburg meeting

North America HELP sponsored an evening session at the ASCE-EWRI Watershed Management 2005 Conference on July 20, 2005. The purpose of the session was to introduce HELP to watershed managers and practitioners. In addition, a panel of experts not previously affiliated with HELP was invited to critique HELP following the presentations and evaluate whether North America HELP is moving toward effective integrated watershed management.

The evening started with a social hour and poster session that was very well-attended. After the poster session, approximately 50 conference attendees made their way to the conference hall where the HELP session was held. To introduce the global HELP Programme, we were honored to have Mike Bonell speak first. North America HELP was introduced by David Goodrich, who presented some of the HELP work in the San Pedro River basin. The final speaker was a great new addition to HELP, Michaela Stickney, representing the Lake Champlain basin. Following the presentations, a panel of practitioners was given time to respond and critique the HELP program.

The panel discussion, introduced by Eugene Stakhiv, included many important issues for HELP to consider. The first panelist was Lisa Bourget, Secretary of the U.S. Section of the International Joint Commission (USA/Canada). Mrs. Bourget was concerned that "paradigm locks" amongst decision makers represent major challenges for HELP. Bourget also noted that inconsistency of funding could have a sizable impact on HELP results in basins such as the Lake Champlain.

Both Bourget and the second panelist, Erik Hagen of the Interstate Commission on the Potomac River questioned the relevance of HELP. They want to know whether it is possible that basins are already performing HELP functions without regard to the HELP program. Mr. Hagen believes that HELP needs a more clearly defined purpose, and that a formalized framework would be useful to the program. He also commented that the Lake Champlain and San Pedro River were excellent examples to highlight the benefits of HELP. Hagen, however, was concerned that HELP seems to be steered by policymakers and scientists, rather than from the bottom-up as intended.

The third and final expert to critique HELP was Ken Wright, an expert water engineer in the arid western USA, and founder of Wright Water Engineers, Inc. Mr. Wright was impressed with the idea of HELP, and thought that it could be useful for helping mankind ensure an adequate freshwater supply, thus enabling survival of a catastrophic drought like the one in the 10th century that destroyed many powerful empires. Another major point made by Wright was that in the western U.S., water issues are often more proprietary and confrontational, leading to major decision-making within the court system, which is another example of top-down control.

Following the panel discussion, several people stayed late to ask questions. Mike Bonell clarified that we are starting to see collaboration between basins through the "twinning" process. The grassroots nature of HELP allows many useful activities to be performed, despite government funding cycles that are too short to see relevant results. Also, the issue was raised from the floor that scientists spend too much time with the peer-review process, and are therefore not getting quick, useful results. If science is to serve society, they may have to stop focusing so much on peer review, and spend more energy producing results. Dr. Bonell responded that globally, we have many white papers and useful documents that are not formally getting circulated. Perhaps better communication amongst the HELP network globally can help with this endeavor.

The following morning, several members of HELP gathered for an informal discussion of the session over breakfast. A primary concern that was brought to the table was that HELP is still trapped by the scientists driving the decisions, rather than the stakeholders driving the science. One suggestion was that HELP focus on convincing academicians to do scientific research to the benefit of society, without counting on being published in a peer-reviewed journal. Another challenge is to engage the decision makers. So far, HELP has been able to involve stakeholders and scientists, but the Programme has not had great success in bringing decision makers to the table.

The final topic discussed at the breakfast meeting was the upcoming Fourth World Water Forum (WWF4) in Mexico City (March 16-22, 2006). As the Forum approaches, the global HELP Programme stands to benefit from the candid critiques posed by the independent panel at the Watershed Management 2005 HELP session. The session was a useful contribution towards introducing HELP to a broad audience of stakeholders, and in evaluating the successes of North America HELP.

Jonathan Triggs, North America Regional Coordinator, Washington D.C

The Williamsburg HELP breakfast meeting (21 July 2005)

From left to right: Michaela Stickney (Lake Champlain Presenter - Vermont Lake Champlain Coordinator) holding her baby, Aven; Dave Goodrich (San Pedro Basin Presenter - U.S. Department of Agriculture); Jonathan Triggs (NASA/North America Regional HELP Coordinator); Lisa Bourget (Secretary of the U.S. Section of the International Joint Commission (USA/Canada)); Mike Bonell; Gene Stakhiv (U.S. Army Corps of Engineers/Lake Ontario Basin)



Arlette Jappe is a PhD student at Fraunhofer Institute of Systems and Innovation Research at Karlsruhe, Germany. Her dissertation in sociology of science is entitled "Internationalization in water research". From Sept.-Nov. 2005 she is visiting the HELP Global secretariat in Paris to work with Mike Bonell on the topic of interaction between science, stakeholders and decision-makers in watershed partnerships.
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First LAC-HELP Meeting, Foz de Iguacu, Brazil, August 10-12

The First LAC-HELP meeting took place in Foz de Iguacu, Brazil, 10-12 August 2005, under the sponsorship of UNESCO and Itaipu Bi-national and Brazilian Water Authority (ANA). The meeting was held in conjunction with the FRIEND Programme, so that this joint session would better integrate research results and agendas. The following basins were represented in the meeting and updates on their progress were reviewed:

- Chaguana HELP basin (Ecuador) by David Matamoros,
- Jequetepeque HELP basin (Peru) by Doraliza Fernandez y Javier Bobadilla,
- Tacuarembó HELP basin (Uruguay) by Carlos Victora,
- Sao Francisco Verdadeiro HELP basin (Brazil) by Henrique Chaves and,
- Panama Canal HELP basin (Panama) by Miriam Mejia.

To foster South- North relationships, Jorge Ortiz-Zayas from the Luquillo (Puerto Rico) HELP basin was invited. He elaborated on the activities developed in his basin. The program included a field trip to the Sao Francisco Verdadeiro HELP Basin where we witnessed the signing of the agreement between the municipality of Patao Bragado (in a sub-basin), the community (comprised mainly of farmers) and ITAIPU Bi-national.

The results of the meeting also include the HELP activity plan for the 2006-2007 period, the expected participation format in the Fourth World Water Forum (4WWF), the HELP Symposium 2007 (see page 1) and a research agenda. Also, the HELP-LAC representatives plus the Luquillo basin, decided to adopt and apply the Watershed Sustainability Index developed by Henrique Chaves and Susana Alipaz (Sao Francisco Verdadeiro HELP basin) to asses the weaknesses and strengths of each of the four components of HELP: hydrology, environment, life and policy. Results of this comparison will be shown during 4WWF.

Pilar Cornejo



Participants to the First LAC-HELP Meeting, Foz de Iguacu, Brazil, August 12

FROM LEFT TO RIGHT:

*Henrique Chaves- Sao Francisco Verdadeiro, David Matamoros- Chaguana, Miriam Mejia- Panama Canal, Javier Bobadilla - Jequetepeque
Pilar Cornejo -LAC HELP RCU Coordinator, Carlos Victora -Tacuarembó, Doraliza Fernandez -Jequetepeque, Jorge Ortiz-Zayas - Luquillo
Maria Donoso - IHP LAC Regional Hydrologist, Nelton Friedrich - Sao Francisco Verdadeiro*



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EWRA-HELP-INBO meeting, Menton

The EWRA (European Water Resource Association) 2005 Colloquium, was held in Menton, France, 6-10 September 2005. It gathered representatives from 34 countries which produced more than 160 presentations. Eight (8) HELP basins were represented by more than 14 scientists and managers on the theme of Integrated Water Management.

Mr Henrique Chaves from the Sao Francisco Verdadeiro HELP basin (Brazil), Mrs Hanta Rabetaliana from the Mandaratsy HELP basin (Madagascar), Mr Hilmy Sally from the Olifants HELP basin (South Africa) and Mr Bill Gaffi from the Willamette HELP basin (USA) were invited to participate in the discussions on Integrated Water Management in the UNESCO-HELP framework.

The HELP basins of Mesta-Nestos (Bulgaria-Greece), Rhône (France), Kaluvelly (India) and Welland (United Kingdom) were also presented for their experience and knowledge in Integrated Water Management in both national and transboundary catchments.

Jean Marie Monget

(Vice-President EWRA, Ecole des Mines de Paris)

Pays de Savoie-Mont Blanc-Lac d'Annecy-Lac Lemman HELP basin workshop and Megève 2006: International Symposium planning meeting

Guillaume Narnio, from the Global HELP Secretariat, attended both the *Pays de Savoie-Mont Blanc-Lac d'Annecy-Lac Lemman HELP basin workshop* and the adjoining *Megève 2006: International Symposium planning meeting* in Megève, September 9th 2005.

The decision of the representatives from Lac d'Annecy to become more involved in the HELP Pilote Site Pays de Savoie-Mont Blanc-Lac d'Annecy-Lac Lemman was welcomed. Mr Lachenal, organizer of the meeting, also presented his project to develop a network of excellence for mountain catchments using the experience and work of the pilot site. This network, under his direct responsibility, would exchange through the new website: www.echoalp.com/eau on issues in mountain catchments such as water scarcity in the winter season linked with tourism, natural pollution and the implementation of the European Water Framework Directive.

Mr G. Pacquetet, Mayor of Saint Jorioz, President of the Syndicat du lac d'Annecy and President of the Parc Naturel Regional des Bauges also strongly supported the development of a twinning proposal to promote experiences with another HELP basin either in Africa or Eastern Europe. A more detailed study will later be elaborated to determine which HELP basin would be the most appropriate to benefit from this offer.

The International Symposium Megève 2006 planning committee was officially welcomed by Mr Morand, Mayor of Megève. The Symposium is planned for 20-22 September 2006 in the "Palais des Congres" of Megève. The IHP-HELP Secretariat will financially support three (3) or four (4) participants who would be later selected to share experiences and lessons on issues specifically related to mountain catchments and to the themes developed in the Symposium. The themes and program of the Symposium will be later released on the website <http://www.echoalp.com/eau>.

Guillaume Narnio



View of Megève and the Pays de Savoie-Mont Blanc-Lac d'Annecy-Lac Lemman HELP basin



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UNESCO IHP Integrated Science-HELP workshop on 'Groundwater - surface water interactions and nutrient behaviour in river corridors'

In July 2002 at Warsaw, Poland, the UNESCO International Hydrological Programme (IHP) in collaboration with the International Atomic Energy Agency (IAEA) took steps towards taking a more integrated perspective across the existing IHP-VI scientific themes. This involved bringing together experts from the surface water hydrology (notably FRIEND: Flow Regimes from International Experimental and Network Data), groundwater, ecohydrology and isotope hydrology http://www.gsf.de/unesco/Warsaw_report_final.pdf. A catalyst was the IHP-HELP (Hydrology for the Environment, Life and Policy) programme which has now established a global network of 67 basins for interfacing scientific research more closely with water management and water policy needs. One of the fulcrum points of HELP is to encourage scientific research to be undertaken in the field up to larger scales using an interdisciplinary approach, both of which are of more practical use to the water manager. One of two priorities identified by the Warsaw meeting was a better understanding of water quality processes. To address this issue, a series of workshops were subsequently framed in a second planning meeting (University of Freiburg, Germany, June 2003), with the first workshop taking place in December 2004 (Turner et al, in press¹) which focused on the fate and transport of diffuse organic pollutants in catchments. (Mike Bonell)

The second in this series of UNESCO IHP workshops was held at the University of Oxford, UK, between 11 and 14 September 2005. The meeting, which was hosted by the Environment Agency of England and Wales and the Centre for Ecology and Hydrology, Wallingford, CEH (UK), brought together eminent international scientists and river basin managers to discuss the latest research on groundwater - surface water interactions and the behaviour of nutrients in river corridors. The workshop sought to identify the latest cross-disciplinary research, and approaches for transferring this into catchment management practice.

Leading researchers and river managers from Europe, north America and Australia met at the workshop, which was based around four (4) related topics:

- biogeochemical processes controlling nutrient at the groundwater - surface water interface;
- modelling groundwater - surface water interactions;
- the ecology of the hyporheic zone;
- management of pollutants in the groundwater - surface water interface.

Key outcomes from the lively discussions included:

- Recognition of the need to better integrate hydrologic, geochemical and ecological research on hyporheic zone processes;
- Hyporheic ecosystems have been largely ignored by regulators, and by researchers other than the ecologists, but new legislation, such as the EU Water Framework Directive, places ecological health as the central objective for environmental restoration measures. The ecosystem health should be the central focus for future multi-disciplinary research in this area;
- Scale, timescale (to achieve measurable environmental improvement) and dealing with uncertainties in analysis and modelling remain a challenge;
- A series of 'type catchment' (or better use of existing observatory catchments) could be used to focus research more effectively;
- There remain problems transferring research into decision-making tools for river basin managers;
- Similarly end-user communication of their needs to the research community could be improved.

The findings of the workshop will be submitted to an international journal in order to disseminate the findings and recommendations widely in the research community.

Jonathan Smith
Environment Agency of England and Wales



Participants to the UNESCO IHP Integrated Science-HELP workshop on 'Groundwater - surface water interactions and nutrient behaviour in river corridors', Lady Margaret Hall, University of Oxford, 12 September 2005.

¹ Turner J, Albrechtsen HJ, Bonell M, Duguet JP, Harris B, Meckenstock R, McGuire K, Moussa R, Peters N, Richnow HH, Sherwood-Lollar B, Uhlenbrook S, Van Lanen H. In Press. Future trends in transport and fate of diffuse contaminants in catchments with special emphasis on stable isotope applications. *Technical Report of a UNESCO Integrated Science Initiative Workshop GSF, Neuherberg, Germany, 30 November-2 December 2004*. Hyd. Proc. (HP Today)