



eFlowNews - Volume 7 Issue 1

January 2011

## eFlowNet Summary 2010



Dear eFlowNet members there has not been a newsletter for a while so we have put together a summary from 2010 including upcoming events.

Please send suggestions and inputs for the next newsletter to be tentatively released in May 2011. Please send these by March 31st, 2011.

Send to [info@eflownet.org](mailto:info@eflownet.org)

Katharine Cross and Stefano Barchiesi (on behalf of eFlowNet)

## eFlowNet at World Water Week



eFlowNet co-convened a seminar at World Water Week led by Wetlands International. The seminar was on *Maintaining ecosystems and related livelihoods through river basin management: challenges and solutions*.

Wetlands International convened a seminar on 5 September that aimed to **accelerate solutions to the challenges of maintaining ecosystems and related livelihoods in water management** (click to watch the presentation), in particular in river basin management.

The seminar titled '**Maintaining ecosystems and related livelihoods through river basin management: challenges and solutions**' took place on Sunday 5 September, 14.00 – 17.30, in Room K23 and was co-convened with **Soresma, Vituki, Centre for Ecology and Hydrology** and **E-flowNet**. **Download the Seminar flyer** or check the **programme** on the World Water Week website.

Karen Meijer from Deltares represented eFlowNet with a presentation on: **Operation: How to include wetland ecosystem water requirements in water resources planning and operation**.

## eFlowNet at International Water Association World Water Congress



eFlowNet represented by IUCN and Conservation International convened a seminar on *"Climate Change Impacts on Freshwater Ecosystem and River Basins: Challenges and Emerging Solutions"* at the IWA World Water Congress in Montreal held on September 19-24, 2010.

Investment in the development of large-scale water infrastructure is projected to grow rapidly, particularly across the developing world. Not only is this growth driven by the increasingly urgent need to augment renewable energy production, but also for food security and flood control. At the same time, impoundments and abstractions have significantly altered the flow regimes of most of the world's rivers, thus leading to widespread degradation of freshwater and estuarine ecosystems and the services they provide to people.

"In order to safeguard benefits such as the climate change adaptation potential of natural infrastructure, dams should be operated to allow for different flow releases. For this reasons among others, environmental flow is a vital tool in the sustainable development of water infrastructure" argued Stefano Barchiesi of IUCN Water Programme during the congress.

Consolidation of the findings from this **workshop on water, climate and energy (9:15-15:45, Room 7)** will serve as the basis for further collaboration between IUCN and other partners of the **Global Environmental Flows Network** and the **IWA Specialist Group on Watershed and River Basin Management**.

## Riversposium 2010



The 13th International Riversymposium took place from 11-14 October 2010 in Perth, Australia. The theme was *'Moving Waters – the changing state of rivers'*.

Managing our rivers has revolved around altering the movement of water – obviously through dams, extraction for irrigation, mining, water supplies, industry and water transfers and more cryptically when we consider groundwater use, virtual water, water sensitive urban design, water recycling and adjustments to environmental flows.

Proceedings from 2010 can be found [here](#).

Information on the 2011 RiverSymposium can be found at <http://www.riversymposium.com>.

## World Rivers Day 2010



*World Rivers Day 2010 took place on September 25th across more than 30 countries involving millions of people.*

The following is a note from World Rivers Day Chair, Mark Angelo

Congratulations to everyone who supported World River Day 2010 by attending or organizing an event. We're hearing very positive reports from dozens of countries around the world, and we'd like to hear how your event unfolded. Please e-mail us a photo or two of your activities, so that we can post them on our Web site and Facebook. In 2011, World Rivers Day will fall on September 25th - so mark your calendar.

Video Links that may be of interest:

\* Global TV News piece on the history and origins of World Rivers Day  
<http://www.youtube.com/watch?v=fvLRU-VoJBY>

\* This short film profiles a big Rivers Day event in Burnaby, British Columbia  
<http://www.youtube.com/user/RivInstitute?feature=mhum>

Thanks to our partners!

World Rivers Day is working closely with the United Nations' Water For Life Decade (2005-2015) and their support is greatly appreciated. Find out more at --- [www.un.org/waterforlifedecade/](http://www.un.org/waterforlifedecade/)

The organizers of World Rivers Day greatly appreciate the support of our sponsors:

- \* HSBC
- \* Rivers Institute at the British Columbia Institute of Technology (BCIT)
- \* North Growth Foundation
- \* UN water for Life Decade
- \* UN Water for Life, Canada Initiative.

For more information about World Rivers Day, visit our Web site --- [www.worldriversday.bcit.ca](http://www.worldriversday.bcit.ca)

## International Conference on the Status and Future of the World's Large Rivers - 2011



*The International Conference on the Status and Future of the World's Large Rivers will be held from April 11-14, 2011 in Vienna, Austria. Registration is available online.*

### Motivation and Aims of the Conference

The pressures and impacts on the World's Large Rivers have increased greatly in recent years, as a consequence of their exploitation to meet human needs. Large rivers are particularly exposed to problems of multiple uses, often with conflicting aims. At the global scale, there is no overview assessment of the current status of the World's Large Rivers, the conflicting demands on such rivers, and likely future anthropogenic impacts, as well as the potential for restoration and the associated problems.

The International Conference on "The Status and Future of the World's Large Rivers" aims to provide a global forum for a wide-

ranging discussion of key issues related to research on large rivers and to their effective and sustainable management, involving both scientists and decision makers. A statement, agreed by the participants, will be produced to assess the existing and future needs of large rivers in order to better integrate their use, protection and restoration and to devise an action plan.

For more information visit <http://worldlargerivers.boku.ac.at/wlr/>

## FLOW 2011 – Instream Flow Valuation in Public Decision-Making - 2011



*Back by popular demand, the Instream Flow Council, in partnership with Tennessee Wildlife Resources Agency, is holding FLOW 2011 for May 2-4, 2011, in Nashville, Tennessee. Mark your calendars, and plan to be a part of advancing the integration of water management science, policy, and public dialogue. Abstracts for poster submissions are due January 31st.*

The Instream Flow Council and the Tennessee Wildlife Resources Agency are hosting the FLOW 2011: Instream Flow Valuation in Public Decision-Making, May 2-4, 2011, in Nashville Tennessee. Similar to FLOW 2008 in San Antonio, this conference seeks to further advance the integration of state-of-the-art science, policy, and public dialogue regarding water management related to aquatic resources. The specific goal of the 2011 conference is to build participants' abilities to effectively participate in public decision-making to generate outcomes favorable to aquatic resources.

### Who should attend?

Scientists, agency staff, educators, legal experts, advocates, policy makers, economists, citizens, and researchers currently or potentially involved in water allocation or development decisions. We urge instream flow practitioners to bring their respective science, legal, and education/advocacy colleagues for integrated benefits for all. Invite your colleagues to attend by forwarding the flier posted below.

### Participants can expect to:

- Learn about and discuss socio-economic and other tools to help convey the values of needed instream/environmental flows and lake levels
- Explore six case studies in flow quantification and valuation from across the US and Canada
- Share your knowledge and experiences with professionals from a variety of disciplines
- Build your knowledge through conference workshops on hot topics in instream/environmental flow science, policy, and public dialogue
- Submit a poster featuring progress in instream flow science, policy, or public dialogue
- And more... a Tennessee Fish Fry, IFC awards, exhibitors, regional strategizing sessions, and "Music City" – Nashville!

Information on FLOW 2011 can be found at <http://www.instreamflowcouncil.org/flow2011>

The deadline for abstracts submissions for poster is January 31, 2011. A maximum of 30 abstracts will be selected for the program. Submitters will be notified of acceptance and poster submittal guidelines by March 3, 2011. All abstracts must be submitted online via the link below.

Go to [www.instreamflowcouncil.org/flow2011/submit-poster](http://www.instreamflowcouncil.org/flow2011/submit-poster) for more details and to access the online submittal system.

Questions? Contact Scott Smith at [Scott.Smith@dgif.virginia.gov](mailto:Scott.Smith@dgif.virginia.gov).

## American Water Resources Association Conference - 2011



*The AWRA is holding a conference on Integrated Water Resources Management: The Emperor's New Clothes or Indispensable Process? in Keystone, Colorado from June 20-22, 2011.*

In 2002, the World Summit on Sustainable Development in Johannesburg, established Integrated Water Resources Management as the "ideal" when they called for all countries to establish IWRM plans. And yet, it faces criticism for its lack of outcomes measurements, vague concept, and lack of guidance for implementation. AWRA will take a comprehensive look at IWRM at this important topic. Submit an abstract, or plan to join this summer in Keystone to delve into the complexities of Integrated Water Resources Management.

Submit Abstracts by February 14, 2011.

For more information visit <http://www.awra.org/meetings/Summer2011/>.

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## International Hydropower Association Congress - 2011



*The International Hydropower Association 2011 World Congress on Advancing Sustainable Hydropower will be held in Igassu Falls, Brazil from the 14-17 June 2011.*

The theme for the IHA 2011 World Congress will be "Advancing Sustainable Hydropower", reflecting the Association's mission. Presenting the Congress theme, Richard Taylor, IHA Executive Director said:

"The worsening trends associated with climate change, coupled with the lack of a legally binding treaty arising from the COP15 Climate Change Conference, ensures that water, energy and climate issues remain high on the global agenda." Taylor added: "As an advanced, renewable energy, Hydropower stands at the crossroads of these issues, providing proven solutions for water management and smarter power systems, as well as tackling climate change, which it is both affected by, and also serves to mitigate."

The World Congress will tackle critical issues in relation to hydropower development, such as water and energy security, climate change and financing development, whilst impacts on the role of hydropower and other water and energy services will be discussed with a view to specifying action.

Delegates will also be informed about the current status and accomplishments of IHA's sustainability work, including the Hydropower Sustainability Assessment Forum (HSAF), a high-level, cross-sector forum of representatives, reviewing the IHA Sustainability Guidelines (2004) and Sustainability Assessment Protocol (2006). The HSAF aims to achieve a broadly endorsed sustainability assessment tool to measure and guide performance in the hydropower sector.

For more information visit <http://www.ihacongress.org/>.

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## East African Environmental Flows Network



*The East Africa Environmental Flows Network has been launched to provide a platform for knowledge sharing and exchange of information on environmental flows/ environmental water allocations in East Africa.*

The **East Africa Environmental Flows Network** is being initiated by the Regional Environmental Flows Group (started by International Union of Conservation of Nature (IUCN), WWF, United Nations Environmental Programme (UNEP) and Lake Victoria Basin Commission (LVBC)).

To join the discussion forum please visit the [East Africa Eflow Network Google Group](#).

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## Ecological flows in North Carolina



*The North Carolina Division of Water Resources (DWR) has launched a new web page dealing with Ecological Flows. It covers some basic background, has numerous links to additional information, describes the NC Hydrologic Stream Classification System, and outlines plans to develop an approach for determining the ecological flows needed for river basin modeling and planning.*

The DWR has adopted a river basin approach for the long-range planning that is necessary to guide the use of North Carolina's water resources in a sustainable manner.

Put simply, this means that for planning purposes DWR will evaluate the current and projected uses of surface waters against the amount of water available in each of the 17 major river basins in North Carolina. The analysis of this information, and whether there is enough water to meet instream needs and support existing and projected offstream uses, will be presented in individual plans specifically prepared for each of the major river basins.

The North Carolina ecological flows webpage can be found [here](#).

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## New Eflows Assessment and Implementation Programme in Spain



*The recent implementation of the Water Framework Directive in Spain and changes of hydrological planning national decrees have led to publication of new amendments to the Spanish Water Law. These have modified previous methodologies for the assessment and implementation of environmental flows in the Spanish national and international basins.*

In the last two years, after the last amendments in the Spanish Water Law, water allocation has completely expanded as a core subject in hydrological planning.

There were different references to the subject from the Water Law of 1985, but the new Decrees have introduced a compulsory obligation to calculate specific environmental flows in water bodies, and to do it following a legal methodology which has been developed by an expert committee, with participation of different water agencies, NGOs, etc.

There have been a number of technical studies conducted to calculate the ecosystem requirements and to implement the regimes in the Water Management Plans to be approved (for 2010). The detailed technical studies have been developed on ca. 500 water bodies. This can be considered as one of the first nation-wide programmes of environmental flow assessment and implementation.

For more information see the [summary](#) or contact [fernando.magdaleno@cedex.es](mailto:fernando.magdaleno@cedex.es).

### Agriculture and environmental flows - we need your input!



*eFlowNet needs your help to identify an agriculture related event in 2011 to promote and exchange knowledge on environmental flows.*

More than 70% of freshwater is used in agriculture, consequently it makes sense to engage the agricultural sector on environmental flows to ensure there is sufficient provision for people, food and nature.

If you have any information or suggestions please email [info@eflownet.org](mailto:info@eflownet.org) or [StefanoBarchiesi@eflownet.org](mailto:StefanoBarchiesi@eflownet.org).

### Environmental Flows for non-perennial rivers - suggestions needed



*The University of the Free State, South Africa are involved in a Water Research Commission Project on EF for non-perennial rivers where they are trying to develop a method. Problems identified are that perennial methods do not work in non-perennial rivers due to highly variable flow and difficulty in predicting the presence of biota etc. Also no reference condition can be determined due to this unpredictability. Any suggestions or links to other projects of this sort will be appreciated.*

Please send information to Marie Waters, Senior Professional Officer, Centre For Environmental Management, University of the Free State,

Email: [WatsonM.SCI@ufs.ac.za](mailto:WatsonM.SCI@ufs.ac.za)

### Environmental flows for non-riverine inland wetlands - information needed



*The Scientific and Technical Review Panel (STRP) of the Ramsar Convention on Wetlands are looking for information on studies on the water needs of non-riverine wetlands.*

Mike Acreman (CEH) and Stefano Barchiesi (IUCN) are to produce the annotated bibliography of existing/recent work on water needs of non-riverine wetlands. Please send information to [StefanoBarchiesi@eflownet.org](mailto:StefanoBarchiesi@eflownet.org).

### Joint International Workshop: Spotlight on Bioenergy and Water



*The Joint International Workshop: Spotlight on Bioenergy and Water examined the implications for water use and water quality of increasing biofuels use, uncertainties in estimating water consumption, and looked forward to techniques and technologies that can reduce water use in biofuel production.*

The United Nations Environment Programme (UNEP) and the Oeko-Institut in cooperation with the United Nations Foundation (UNF) would like to draw your attention on the **Joint International Workshop: Spotlight on Bioenergy and Water** which took place on the 5th and 6th of July 2010 in Paris, France. The objective of the workshop was to raise awareness of the biofuels and water issue, provide context in the greater water/agriculture landscape, and improve coordination and knowledge sharing with key stakeholders.

In a world already facing water stress, largely due to over 70% of freshwater being consumed by the agricultural sector, water has been identified as a potentially limiting factor for bioenergy development. Depending on where and how bioenergy development takes place, it could further increase the pressure on water resources, or leverage the introduction of efficient water management techniques, increase water absorption capacity of soil in dry areas, or improve access to water by providing energy for pumping and cleaning of water. It is hence critical to bring further clarity to the issue and help inform decision-makers in governments and industry, based on available scientific knowledge.

The workshop brought together bioenergy and water experts from different regions of the world to:

- discuss areas of critical importance, exchange experiences on ways to address potential risks, and identify needs for further research,
- start to prepare a report on the bioenergy and water nexus, building on available science but without rehashing the general water debate.
- provide a starting point to engage in the development of sustainable water use strategies for bioenergy developments

Workshop participants will contribute to the drafting of the report, by teaming up around self-selected chapters, to deliver a joint report that will serve as the reference document to inform decision-makers in governments and industry.

For more information on the workshop visit <http://www.unep.fr/energy/activities/water/index.htm>.

The **draft outline of the report** kicked off the process, and it is expected to change, becoming further refined and amended with milestones on 'who is doing what by when' as a result of the discussions at the workshop.

Special thanks to those that contributed to the report - please click [here](#) for their contributions.

## Global review of environmental flow policies released



*The report presents a brief synopsis of environmental flow policies enacted to date, describes the three major challenges to implementing those policies, and offers nine guidelines for overcoming the obstacles and moving forward to full implementation.*

The report on environmental flow policies by WWF and TNC takes stock of international progress toward achieving effective environmental flow policies and conveys the emerging lessons, illustrated by stories from around the world.

Le Quesne, T., Kendy, E., and Weston, D. 2010. **The implementation challenge: Taking stock of government policies to protect and restore environmental flows.**

## Special issue of Water Alternatives revisits the large dam controversy



*The entire June 2010 Special Issue of Water Alternatives which revisits the World Commission on Dams is available for free download.*

The World Commission on Dams (WCD) was an experiment in multi-stakeholder dialogue and global governance that was fraught with conflict and controversy. The WCD Report, Dams and Development: A New Framework for Decision-Making, was published in 2000, buoying hopes that broad-based agreements would be forged on how to better manage water and energy development.

Ten years later, this Special Issue of Water Alternatives revisits the WCD and its impacts. It also came out as a CD produced and distributed by UNEP and WaA. The CD was released at the **Stockholm World Water Week** on 7 September 2010 at a special session convened by Water Alternatives and UNEP ([See programme here](#)), with the collaboration of M-POWER, International Rivers, the Swedish Water House, WWF, IUCN, GTZ, CPWF, International Hydropower Association, and Water Integrity Network.

The special issue can be downloaded [here](#).

## Special issue of Freshwater Biology pushes environmental flow boundaries



The entire January 2010 Special Issue of *Freshwater Biology* is available for free download.

The special issue presents new analytical and modeling approaches to support the development of environmental flow standards at multiple spatial scales in any economic and societal setting. Articles describe ELOHA, ecological trait analysis, Bayesian hierarchical modeling, Bayesian decision networks, Integrated Basin Flow Assessment, and more.

The special issue is available for download [here](#).

## African freshwater species threatened - livelihoods at stake



*Twenty-one per cent of freshwater species in continental Africa are threatened with extinction, putting the livelihoods of millions of people at risk. With so much to lose, inland waters must be managed not just for their supply of freshwater but also to sustain the abundant life within.*

In the most comprehensive assessment of its kind, 5,167 African freshwater species were evaluated by 200 scientists over a five-year period for the IUCN Red List of Threatened Species™, including all known freshwater fish, molluscs, crabs, dragonflies and damselflies, and selected families of aquatic plants. Some of the biggest threats to African freshwater species come from agriculture, water abstraction, dams and invasive alien species.

This study highlights the perilous state of our natural environment and will provide vital information for decision-makers as they plan to greatly expand the use of Africa's inland water resources. The results are particularly important for resource managers as, for the first time, species have been mapped to individual river basins.

"Freshwaters provide a home for a disproportionate level of the world's biodiversity. Although they cover just one per cent of the planet's surface, freshwater ecosystems are actually home to around seven per cent of all species," says Jean-Christophe Vié, Deputy Head of IUCN's Species Programme. "This latest IUCN Red List assessment clearly shows that lakes, rivers and wetlands haven't escaped the grasp of the current extinction crisis."

Even the loss of a single species can have a dramatic impact on livelihoods. In Lake Malawi, a group of fish, known as 'chambo' by locals, forms an extremely important source of food. Of these, *Oreochromis karongae*, an Endangered species, has been hugely overfished, with an estimated 70 per cent reduction in the population over the past ten years. In Lake Victoria, a decline in water quality and the introduction of the Nile Perch (*Lates niloticus*) have caused a reduction in many native species over the past thirty years, threatening traditional fisheries. This IUCN Red List assessment studied 191 fish species in Lake Victoria and found that 45 per cent are threatened or thought to be extinct.

Around the great lakes of Africa, fish provide the main source of protein and livelihoods for many of the continent's poorest people. The livelihoods of an estimated 7.5 million people in sub-Saharan Africa depend on inland fisheries. These new data will be invaluable in helping to safeguard these fisheries, freshwater supplies and the many other associated resources.

"Africa is home to an astonishingly diverse range of freshwater species, many of which are found nowhere else on earth," says William Darwall, leader of the project and Manager of IUCN's Freshwater Biodiversity Unit. "If we don't stem the loss of these species, not only will the richness of Africa's biodiversity be reduced forever, but millions of people will lose a key source of income, food and materials."

Priority areas of highly threatened and restricted range species can now be identified. For example, in the waters of the crater-lake Barombi Mbo, in Cameroon, 11 species of fish are highly threatened and live a precarious existence as deforestation increases the risk of lake 'burping', where large levels of carbon dioxide are released from deep within the lake, suffocating the fish. Without management intervention these species, some of which are important food sources, may be lost forever.

Fish are clearly important to people, both as a source of food and income. But other freshwater species such as molluscs, dragonflies, crabs and aquatic plants also play vital roles in maintaining functioning wetlands and these should not be ignored. In the rapids of the lower reaches of the Congo River 11 species of mollusc, found only within a 100km stretch of water, are highly threatened due to upstream pollution. Molluscs such as these provide important functions including water filtration.

"This new study gives us a unique opportunity to try to influence developers and governments when they're planning freshwater infrastructure projects, which are still in the early stages in most of Africa," says Anada Tiéga, Ramsar Secretary General. "Until now we've not had the information we need about species and the threats they face but, armed with these IUCN Red List assessments, we hope that decision-makers in Africa will now make the right choices to develop their water resources in a sustainable manner whilst protecting and valuing global biodiversity."

The findings of this assessment are also being published in a series of regional reports. More information is available [here](#).

## Manual for the assessment of environmental flows - In Spanish



*This manual details the experience around water allocation in Spain to calculate the ecosystem requirements and to implement Water Management Plans.*

The book provides information on the methodological development of environmental flows in Spain and gives insight into one of the first nation-wide programmes of environmental flow assessment and implementation.

It was edited in 2009, and it was titled "Manual técnico de cálculo de caudales ambientales"

Title: Manual técnico de cálculo de caudales ambientales (in English, Manual for the assessment of environmental flows)

Authors: Fernando Magdaleno Mas

Editors: Colegio de Ingenieros de Caminos, Canales y Puertos (Monografía 102)

Year of publication: 2009

Country: Spain

Language: Spanish

ISBN: 978-84-380-0411-1

<http://www.ciccp.es/libreria.asp?cdcla=MON>

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