



# European Centre for River Restoration NEWSLETTER – May 2009

n. 5/2009 - Editor: Francesco Pra Levis

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FINAL PROGRAMME OF THE ECRR SEMINAR "Synergies between River Restoration and River Management focussing on Natura2000 and Ramsar sites" (28-29 May 2009 – Lebested The Netherlands)	ECRI	28-29 May 2009 – Lelystad, The Netherlands
Lelystad, The Netherlands) p. 1-2-3		Thursday 28 May: Seminar day
Top News p. 3-4	08.45 09.15	Registration and Coffee Opening addresses on behalf of: - Rijkswaterstaat Centre for Water Management - Municipality of Lelystad
Measuring the success of River Restoration p. 4		<ul> <li>International Network of Basin Organisations; INBO</li> <li>European Centre for River Restoration; ECRR</li> </ul>
Geomorphic and Ecological Fundamentals for River and Stream Restoration (Agehen Creek Field Station, Truckee, California, USA, 17-21 August 2009) p.5	09.30	<ul> <li><u>Keynote Speeches</u></li> <li><u>Ecological rehabilitation in the River Rhine catchment, with special regard to the re-introduction of salmon in North-Rhine-Westphalia, Germany.</u> Detlev Ingendahl, Fishery ecology, State Authority for Nature, Environment and Customers Protection of Nort-Rhine-Westfalia, Germany.</li> <li>With contributions from André Beukelaar, Rijkswaterstaat Centre for Water Management, The Netherlands.</li> <li>River Restoration and nature conservation along the Lower Danube River; Delta and Green Corridor.</li> </ul>
Events p.5-7		Mircea Staras, Scientific Director Danube Delta National Institute; DDNI, Romania With contributions from Jenica Hanganu and Ion Grigoras, DDNI





Publications		<ul> <li>Upstream – downstream, wetlands connect us all; Tobias Salathé, Regional Unit Europe, Ramsar Convention on wetlands, Switzerland.</li> </ul>
Climate Change		Facilitated discussion about the keynote speeches
Adaptation in the Water Sector	11.15	Coffee break
p. 6 Publications Protecting Europe's Nature: Learning from LIFE p. 6 Become a member p. 7	11.45	<ul> <li>Presentation of selected subjects</li> <li>Methodology for analysing the problems of the Órbigo river in Spain, in the framework of the Spanish National River Restoration Strategy; Felipe Gutiérrez, Infraestructura y Ecologíca, S.L.</li> <li>Film: Development of an ecosystem based management plan for the Tuzlov River in Russia; Kosolapov, North Caucasus Research Institute for Integrated Water Management, N. Prokhorova, Russian Research Institute for Integrated Water Management and Protection and G. Radko, Kuban River Basin Administration, Russian Federation.</li> <li>Climate adaptation by River Restoration in the IJssel Delta; Arjan Otten, IJsseldelta project, Province of Overijssel, The Netherlands.</li> <li>Strategic River Restoration Activities to link management of</li> </ul>
		- Strategic River Restoration Activities to link management of the river Avon and the Valley Natura2000Sites. (STREAM Project); Frank Allan, Natural England, United Kingdom (reservation).
		Facilitated discussion about the presentations Formulation of the "Lelystad Declaration on River Restoration"
		Lunch
	13.15 14.30	<u>Celebrative Programme</u> <b>River Restoration and the role of EU Water Framework Directive</b> <b>in the Danube Basin;</b> <i>Philip Weller, Executive Secretary of the International Commission for</i> <i>the Protection of the Danube River; ICPDR, Austria</i>
		Intermezzo: The Flora of the Lower Volga and Volga Delta; Russian Federation.
		Invisible Connections for rivers and wetlands in Europe and beyond Jane Madgwick, CEO, Wetlands International; WI, The Netherlands. Developments in River Restoration and the European Centre for River Restoration; ECRR, Italy Bart Fokkens, President of the ECRR, The Netherlands.
		Closing Ceremony
	16.00	Reception at Seminar Venue
	16.30	Surprise and end of reception
	18.30	Sailors buffet at the Batavia Yard
	19.30	





#### TOP NEWS

Water: the essence of life -LIFE and River Basin Management Plans European citizens rank water quality as one of their main environmental priorities and a number of LIFE projects are helping to guide the implementation of EU water policy.

#### <u>UK opens flood forecasting</u> centre

A joint venture between Government, the Environment Agency and the Met Office should improve the accuracy and timeliness of flood warnings in the UK.

#### <u>CIWEM looks at flooding</u>

The annual conference of the Chartered Institution of Water & Environmental Management (CIWEM) brought together dozens of speakers to look at issues from flood risk management to climate change.

#### <u>Bluesky Adds to Flood</u>

<u>Risk Modelling Software</u> The latest aerial photography and detailed earth surface models from Bluesky are being used for demonstration in a software package developed to assess the risk and impact of flooding. To support the launch of ISIS 2D Halcrow has included some GeoPerspectives aerial photography and Digital Terrain Models (DTMs) from Bluesky, to enable users to evaluate the improved modelling functionality.

#### Friday 29 May: Excursion day

09.00 <u>Departure by bus from Apollo Hotel</u> - Bus trip through the IJsselmeerpolders

# 10.00 Boarding on the Veerman van Kampen for a trip along the River IJssel, the northern branch of the River Rhine.

- River restoration projects in the IJssel Delta, a Natura 2000 site Lunch on board of the Veerman van Kampen
- River restoration plans with combined urban and wetland development partly by bus
- Floodplain river restoration project, with a short walk

#### Embarking and bus trip back to Lelystad

16.00

Back at Lelystad train station

17.00

More info about the seminar are available at the **ECRR website**.





#### <u>Software release : The ETo</u> <u>calculator</u>

ETo calculator is a software developed by the Land and Water Division of FAO. Its main function is to calculate Reference evapotranspiration (ETo) according to FAO standards.

More news are available in the <u>news section</u> of the ECRR website.

#### News from the newsletter "Science for Environment Policy", a service from the European Commission

#### MEASURING THE SUCCESS OF RIVER RESTORATION (ISSUE 151)

Organic pollution was once the main cause of poor river condition, but today, the loss of a river's natural channel form due to engineering and confinement, or 'hydro-morphological degradation', represents a major threat. A new study assesses the success of restoring German rivers from this damage.

Only an estimated 5-10 per cent of river restoration projects are monitored or assessed in any way. German research, funded under the EU Euro-limpacs scheme1, has assessed seven restored lengths of typical central European mountain rivers. Many have been degraded in the past by river straightening and confinement. In Germany, hydromorphological degradation is the most widespread reason for the poor ecological status of rivers, affecting 67 per cent of river length.

Each unpolluted study area has been restored to a more natural form, with multiple-channels. They were compared with neighbouring unrestored channels. The study sampled floodplain vegetation, ground beetles in the gravel and sand bar river habitats, and benthic invertebrates (riverbed species) in aquatic microhabitats to obtain fifteen separate indicators of river condition.

Of the fifteen rivers, seven indicated significant differences between restored and unrestored sections. Important structural changes to the floodplain were highlighted by a large increase in the amount of available habitats, i.e. an increase in vegetation types and a large increase in ground beetles. However, no significant differences were recorded in benthic invertebrate samples and therefore no difference in ecological quality by the standard measure.

It is suggested that the lack of improvement of aquatic microhabitats and invertebrate creatures may be due to restoration being localised and separated by unrestored sections. Floodplain habitats may be more rapidly populated by diverse species than riverbed microhabitats. Many aquatic species may also have previously fallen extinct as a result of organic pollution. It is hoped that isolated populations of sensitive species, surviving in isolated habitats in degraded rivers, may still be able to repopulate following widespread restoration. River management and monitoring should be designed to account for the different responses of different organisms. Benthic invertebrates are the most commonly used marker of river health (and the focus of monitoring under the WFD), but they appear likely to respond more to catchment-scale improvements and require long-term monitoring.

Floodplain habitats and wildlife provide a shorter-timescale indication of localised restoration and may fulfil some requirements of the EU Habitats Directive2. Likewise, structural changes may suit the aims of the Floods Directive3. The European Commission suggested in 2007 that around 70 per cent of European water bodies are in danger of failing to achieve the good ecological status required under the Water Framework Directive4. This study suggests that recognition of success within the full legal framework may be necessary to generate public and legislative support for the longer-term measures required to achieve the aims of the WFD.

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#### **EVENTS**

Forum on Integrated Water <u>Resource Management</u> 1/3 June 2009 - Université de Sherbrooke, CANADA

<u>Stream restoration short</u> <u>course</u> 1/5 June 2009 - Cromwell Valley Park near Baltimore, USA

<u>8th World Wide Workshop</u> for Young Environmental <u>Scientists -- WWW-YES</u> <u>2009</u> 2/5 June 2009 - Paris-Créteil, FRANCE

<u>Constitutional meeting of</u> <u>the Spanish Centre for</u> <u>River restoration (Centro</u> <u>Ibérico de Restauración</u> <u>Fhuvial - CIREF</u>) 3/4 June 2009 - Barcelona, SPAIN

<u>International conference</u> <u>about water footprint</u> 4 June 2009 - Madrid, SPAIN

<u>Water Framework</u> <u>Directive Conference 2009</u> 4 June 2009 – Hallam Conference Centre, London, UK

<u>World Environment Day</u> 5 June 2009

### Geomorphic and Ecological Fundamentals for River and Stream Restoration

Sagehen Creek Field Station, Truckee, California 17-21 August 2009

This five-day introductory course emphasizes understanding geomorphic and ecological process as a sound basis for planning and designing river restoration, covering general principles and case studies from a wide range of environments. Incorporating insights from recent research in fluvial geomorphology and ecology, the course emphasizes developing predictive connections between objectives and actions, learning from built restoration projects, and developing restoration strategies and innovative management approaches to address underlying causes of channel or ecosystem change, rather than prescriptive approaches.

The course integrates perspectives from leading academic researchers to consulting practitioners in river restoration, and across that spectrum it draws on a range of approaches from state-of-the-art hydraulics and sediment transport, historical geomorphic-ecological process analysis, urban-infrastructure-focused approach, to resource-focused approaches. In addition to field techniques, the course uses spreadsheet models to calculate sediment transport and channel design based on this analysis, map and aerial photo analysis, and sequential problem solving in approaching restoration of fluvial processes. The course includes field trips to the Truckee River and streams in the Lake Tahoe Basin, and workshops on stream restoration problems faced by participants for discussion and ideas on analytical approaches and resources.

This course is one of several related introductory courses taught by a consortium of leading researchers and practitioners (in various combinations) across the US, drawing upon common teaching methods and emphasizing analysis of geomorphic and ecological process as a sound basis for planning and designing river restoration. The introductory courses emphasize integration of hydrology, hydraulics, sediment transport, geomorphology, aquatic ecology, fisheries, and riparian ecology, and include field activities in degraded, unimpacted, and reconstructed channels. An advanced course focuses explicitly on geomorphic, sediment transport, and riparian vegetation principles applied to channel design. These other course offerings are listed below.

The California course, now in its 15th successful year, is held at Sagehen Creek Field Station, 15 mi north of Lake Tahoe, and 45 minutes from the Reno airport. The station combines a beautiful natural setting with excellent research and teaching facilities, free wireless internet, and excellent meals. Sagehen Creek is steps away from the teaching facilities, and provides an excellent on-site laboratory to illustrate many of the concepts taught in the course. Participants can stay on-site (\$20/night) or commute from hotels in Truckee (15 minutes). With on-site lodging, the total cost including lodging, all meals for five days, registration, course materials, text, and continuing education credit from University of California is an excellent value at only \$2,080 inclusive for the week.

The course is taught by leading researchers and practitioners, both applied scientists who focus on bringing the science together with the practice to solve typical environmental problems, a principal focus of the course by bringing cutting-edge expertise and methods to bear on planning, design, and evaluation of river restoration. Collectively, the instructors have broad experience on rivers in North America, Europe, and Asia, including analysis and project design in the Lake Tahoe basin and throughout California.

More info: http://sagehen.ucnrs.org/courses/geomorph.htm



European Centre for River Restoration Secretariat: Italian Centre for River Restoration Viale Garibaldi 44/A 30173 Mestre – Venice, ITALY



#### Final conference of the Life

<u>Nature project "Head water</u> <u>streams"</u> from experimentation to management of the Head water streams 9/11 June – Dijon, FRANCE

<u>Our Living Rivers: the 6th</u> <u>Canadian River Heritage</u> <u>Conference</u> 14/17 June – Ottawa-Gatineau, Ontario and Quebec, CANADA

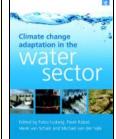
<u>STREAM - Project</u> <u>seminar and site visits</u> 23/25 June – Salisbury, UK

<u>Green Week 2009</u> 23/26 June – Brussels, BELGIUM

<u>Managing Natura 2000</u> <u>rivers: restoration,</u> <u>monitoring and linking with</u> <u>the floodplain</u> 24-25 June 2009 – Dinton Village Hall, UNITED KINGDOM

European Water Resources Association (EWRA) 7th International Conference: Water Resources Conservancy and Risk Reduction Under Climatic Uncertainty 25/27 June – Limassol, CYPRUS

<u>SER Summer School -</u> <u>Restoration Ecology 2009</u> 29 June/ 3 July 2009 – University of Münster, GERMANY



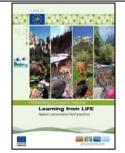
Climate Change Adaptation in the Water Sector

Today's climate variability already has a large impact on water supply and protection. Millions of people are affected every year by droughts and floods. Future climate change is likely to make things worse. Many people within the water sector are aware that climate change is expected to have serious consequences for water resource management, but they are unsure how to incorporate climate information into their management structures.

Currently no book is available for students and practitioners in the water sector on how to adapt to climate change and variability. So the main purpose of Climate Change Adaptation in the Water Sector is to offer a compendium of specific adaptation strategies students. for water managers and decision makers. After reading this book, water professionals and advanced students should feel much more comfortable in using climate data in decision support and/or managing water resources. They will know what kind of data or information on climate change and variability is available and how they can be used within the water sector.

The book consists of two parts: the first part describes the general issues and is written mainly by the editors of the book and the second part contains specific case studies. These are drawn from a wide range of contrasting countries, including Australia, Thailand, the Netherlands, Germany, Philippines, South Africa, and Yemen.

#### PUBLICATIONS



Protecting Europe's Nature: Learning from LIFE

This 66-page publication is based on the proceedings of the LIFE Nature thematic conference, "Protecting Europe's Nature: Learning from LIFE", which took place in November 2008, in Brussels.

Organised within the framework of the EU LIFE programme, the conference sough to identify 'best practice' approaches to the conservation of forest, marine, river and grassland habitats, as well as focusing on climate change and invasive alien species. It also examined LIFE experience in international cooperation on biodiversity protection and the challenges linked to ensuring a favourable conservation status for Europe's species.

This follow-up publication introduces these topics, presents LIFE project responses and the lessons and best practices identified during the conference.





<u>Second International Youth</u> <u>Symposium for Biodiversity</u> 5/9 July 2009 – Ottawa, CANADA

<u>Stream restoration short</u> <u>course</u> 13/17 July 2009 – Logan, Utah, USA

<u>Stream restoration short</u> <u>course</u> 10/14 August 2009 – Logan, Utah, USA

World Water Week 2009: "Responding to Global Changes: Accessing Water for the Common Good; with Special Focus on Transboundary Waters" 16 August 2009 – Stockholm, SWEDEN

<u>Stream restoration short</u> <u>course</u> 16/21 August 2009 – Sageben Creek Field Station, Truckee, California USA

WFD meeting of European <u>River Basin District</u> <u>Authorities : The Water</u> <u>Framework Directive -</u> <u>Sharing experiences and</u> <u>meeting future challenges</u> 19 August 2009 – Stockholm, SWEDEN

## BECOME A MEMBER!

#### Joining the ECRR is FREE!

Acting as an international network the ECRR is pleased to get contributions from its members: they are all very welcomed to provide us information on projects, events, news, training courses, etc.

The ECRR newsletter, for example, is thought as a tool (available to all members) for advertising to an international platform the outcomes of the project, important events worldwide, new publications, etc.

As a member of the ECRR, you will:

- keep on receiving a monthly newsletter with the most recent international information related to river restoration (conferences, projects, policy document, funding opportunities...);
- have the opportunity to share your experiences and spread the results of your projects;
- become a part of a network of people and institutions involved in river restoration and sustainable river management at European level, find partners for your project proposals and develop joint activities;

To Become a member of the ECRR fill in the <u>application form</u> in our website.

For request of information please contact

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