



# **European Centre for River Restoration**

# NEWSLETTER - March 2008

Editor: Francesco Pra Levis

### CONTENTS:

- SPRING RIVER RESTORATION CLASSES
- NEWATER GWSP SUMMER SCHOOL 2008 PROGRAM "MANAGING CHANGE: TOOLS AND METHODS FOR ADAPTIVE RIVER BASIN MANAGEMENT" – 9-19 July 2008, Königswinter, Germany
- RIVER RESTORATION: FLUVIAL-GEOMORPHIC AND ECOLOGICAL PROCESSES – 5-DAY SHORTCOURSE – 23-27 June 2008 – Provence, France
- TECHNOLOGICAL PERSPECTIVES FOR RATIONAL USE OF WATER RESOURCES IN THE MEDITERRANEAN REGION – 29 October-2 November 2008, Marrakech, Morocco
- PUBLICATIONS
- TOP NEWS
- EVENTS (March 2008 April 2008)
- BECOME A MEMBER





## SPRING RIVER RESTORATION CLASSES

- 1. Introduction to River Restoration, Part I: Physical Processes
- 2. Introduction to River Restoration, Part II: Ecological Processes

These are the first two courses in a five course series, which partially fulfills the requirement for the River Restoration Professional Certificate. Please note that the Physical Processes course is a prerequisite for the highly popular Restoration Design course offered each Fall. To Register or for more information: 503-725-5388 or <a href="http://www.epp.esr.pdx.edu/">www.epp.esr.pdx.edu/</a>

#### April 15-17, 2008

#### Introduction to River Restoration, Part I: Physical Processes

This introductory course provides a wide-angle view of the constantly evolving philosophy and science of river restoration. It will give you an understanding of the physical processes that create and maintain stream channels and their associated habitats. Course topics include: stream energy, process and form, hydrology, sediment dynamics, vegetation, hydraulics, soil mechanics, geomorphology, stream classification, hydraulic modeling, and much more. This course is designed for consultants, natural resources managers, regulators, environmental planners, engineers, biologists, contractors and concerned members of the public that have an interest in river restoration. It will be led by facilitator and program technical director Dr. Janine Castro, a regional expert in river restoration and geomorphology, and will feature invited speakers and field visits.

Facilitator: Janine Castro, Ph.D. Time: 8:00 am to 5:00 pm Location: Leach Botanical Garden, Portland, Oregon

#### May 20-22, 2008 Introduction to River Restoration, Part II: Ecological Processes

This three-day course will provide river restoration professionals with essential knowledge of the types of streams present in the Pacific Northwest and the habitat and aquatic ecosystems common and unique to each. The instruction will focus on stream ecology as it relates to river restoration planning, implementation, and monitoring. Participants will learn how the success of river restoration is dependent on the proper assessment of current and desired-condition stream ecology. Instruction will be field-intensive and focused on the biology and habitat needs of salmonids.

Facilitator: Willis (Chip) McConnaha, Ph.D Time: 8:00 to 5:00 pm Location: Leach Botanical Garden, Portland, Oregon

To Register or for more information: 503-725-5388 Or <u>www.epp.esr.pdx.edu/</u>





## NEWATER - GWSP SUMMER SCHOOL 2008 PROGRAM "MANAGING CHANGE: TOOLS AND METHODS FOR ADAPTIVE RIVER BASIN MANAGEMENT" – 9-19 July 2008, Königswinter, Germany

Applications are now being accepted for the 2008 NeWater-GWSP Summer School "Managing Change: Tools and Methods for Adaptive River Basin Management" Königswinter, Germany (on the Rhine River)

Weds. 09 July - Sat. 19 July, 2008

#### Themes include

- Introduction to basic concepts of Adaptive Management
- Freshwater Ecology
- Concepts of Resilience and Adaptive Capacity in River Basins
- Systems Dynamics Modeling conceptual and quantitative
- Participatory Processes Scenario Analysis of future vulnerability and adaptive capacity in river basins
- Introduction to the NeWater Web Portal: tools and training for adaptive water management
- Adaptive Management in Practice: Experiences from Africa, Asia, Australia and Europe

GWSP provides financial support for up to 7 participants from developing countries and economies in transition.

Please refer to the NeWater webpage for more details on the programme and application procedure: <u>http://www.newater.info/everyone/3112</u>

#### Deadline for applications is 1 April 2008.

## RIVER RESTORATION: FLUVIAL-GEOMORPHIC AND ECOLOGICAL PROCESSES – 5-DAY SHORTCOURSE – 23-27 June 2008 – Provence, France

#### Organized by:

Hervé Piégay (CNRS Lyon) and Matt Kondolf (UC Berkeley)

#### Course Description

The course emphasizes understanding geomorphic process as a sound basis for planning and designing river restoration projects and programs. It covers general principles and case studies from a wide range of environments, with specific applications and field visits to Mediterranean and mountain environments. The course and course materials are in English, but draw heavily on river restoration and management experiences in France and elsewhere in the EU, complemented by experiences in North America.

The innovative European Union legislation, the Water Framework Directive was based in part on river-basin management practices underway in France since the 1960s. The shortcourse is held near rivers in which managers have undertaken innovative environmental management practices, e.g., to restore sediment loads, provide a "space of liberty" (floodway or channel





migration corridor) for rivers, restore former channel habitats, increase minimum discharge downstream of dams, remove dikes and riprap bank protection, and preserve riparian forests. There are tremendous opportunities to learn from comparing experiences implementing the WFD in Europe with the longer and more extensive experience in river restoration in North America.

The shortcourse features detailed analysis of lessons learned from comprehensive programs to restore more natural flow regimes on the Colorado, Trinity, San Joaquin, and Truckee rivers in western North America, to restore sediment loads on the Sacramento River system, the Rhine and Drome, and to restore floodplain connectivity and former channel habitats along the Rhine, Rhone, Ain, Missouri, and Sacramento rivers. The course also addresses key issues in managing delta environments starved of sediment by upstream reservoirs, reviewing ongoing planning to restore sediment delivery to combat subsidence in the Mississippi Delta. The course emphasizes learning opportunities from completed projects and programs through systematic post-project appraisal, providing critical data for informing adaptive management programs, assessing economic benefits of river restoration programs, and assessing the ecological status of rivers under the WFD. The innovative 10-year monitoring programs implemented by the Bonneville Environmental Foundation are reviewed, along with consideration of essential questions to be addressed in assessing restoration project performance. Recent experiences in river restoration in Europe and North America provide many opportunities to learn from the complementary nature of restoration approaches and the experiences to date.

For more information, please visit: <u>http://institutbeaumont.com/</u>

TECHNOLOGICAL PERSPECTIVES FOR RATIONAL USE OF WATER RESOURCES IN THE MEDITERRANEAN REGION – 29 October-2 November 2008, Marrakech, Morocco

#### First Announcement and Call for Papers

#### Introduction

Water availability is a prerequisite for the sustainable development of the Mediterranean region. Major current and future problems with fresh water resources in this region arise from the pressure to meet the food, agricultural, human settlement and industrial needs of a fastgrowing population. The scarcity of water and low reliability of supply services and infrastructures are important constraint for the socio-economic development of the south Mediterranean countries and some parts of the Northern and Eastern Mediterranean countries. According to this, there are no doubt that there is an increasing need of transdisciplinarity approaches and comprehensive knowledgebase of new technologies to enable integrated and sustainable water planning and management, which takes into account all the constraints and reflects them in a sufficiently long term physical-socio-economic scenario.





#### Objectives

The second workshop of MELIA project (Mediterranean Dialogue on Integrated Water Management, Contract FP6 517612) dedicated to technological perspectives for rational use of water resources in the Mediterranean region, intends:

- i) to formulate a consensus on the socio -economic environment future perspectives that water technology must envisage in the Mediterranean and to assess relevant Mediterranean wide options and experiences brought directly into MELIA or provided indirectly by the different external stakeholders;
- ii) to asses and promote sector options and schemes of water saving optimal water use and water conservation, considering the fact that the important saved water yield will be provided by agriculture.

The workshop will address the following bullet topics :

- Strategies for Basin management : Water resources balance and constraints to socioeconomic development
- Assessment of the technical, economic, social and environmental aspects for saving water
- Sustainable technological solutions for water treatment, recycling and reuse
- Tools for water quality-quantity monitoring and modelling: Telemetry, Satellite Image processing for management of water resources
- Efficiency and equity in water policies

The structure of the Workshop will consist in a number of Key-Note lectures on the above bullet topics, a few oral presentations on the current situation of the national practices on the above mentioned topics in the Mediterranean Countries and some other selected presentations. Posters presentations are welcome. Besides the oral and posters presentations, Round-Tables on these issues will be organized on the basis of the contributions in order to elaborate consensual recommendations for the different stakeholders. Therefore, participants are kindly invited to propose within their contributions a few number of key recommendations to implement the objectives of the Workshop which will be analysed in the Round Tables. A number of questions related to the above mentioned bullet topics will be posted in the MELIA Web Site to orient the Round tables debate and the content of the contributions. All interested people are invited to register in the INTERNET site address provides below. In the same registration formulary they should add an Abstract of their proposed contribution.

#### Deadlines

- April, 30 (2008): Submission of abstracts
- May, 26 (2008): Notification to authors
- July, 30 (2008): Submission of papers

For more information, please visit <a href="http://www.meliaproject.eu/">http://www.meliaproject.eu/</a>



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



## PUBLICATIONS

Adaptiveness of IWRM - Analysing European IWRM research Editors: J. G. Timmerman, C. Pahl-Wostl, J. Moltgen

The Adaptiveness of IWRM provides new insights and knowledge on the challenges and solutions that current water management faces in a situation of complexity and uncertainty. Drawing on the available results from a wide range of European research projects under several framework programmes, the book provides an overview of the state of the art in European research on Integrated Water Resources Management on the topics of Participation, Transboundary regimes, Economics, Vulnerability, Climate change, Advanced monitoring, Spatial planning, and the Social dimensions of water management. The achievements of EU research projects are considered in view of the extent to which IWRM responds to the current complexity and uncertainty water management is facing. These achievements are positioned in a wider context of worldwide developments in the respective topics which account for the future challenges. From this, the book concludes with the required focus of European research in the near future and promotes the concept of Adaptive Water Management as the preferred direction for the development of IWRM.

#### Integrated Evaluation for Sustainable River Basin Governance

Editors: N. Videira, G. Kallis, P. Antunes and R. Santos

This Report synthesizes the main results obtained throughout the ADVISOR research project ("Integrated Evaluation for Sustainable River Basin Governance") funded by the European Commission, under the - 'Energy, Environment and Sustainable Development' theme of the 5<sup>th</sup> Framework Research Programme.

The aim of ADVISOR was to improve the understanding of evaluation processes as part of river basin planning and management and to provide a framework supported by a toolkit for the conduct of integrated and participatory evaluations. The project comprised four workpackages.

Work Package 1 examined past water project or plan evaluation cases in five EU states and drew insights on the problems of past evaluation practices.

Work Package 2 interpreted these past experiences from different analytical angles leading to a theory for an integrated evaluation process, emphasizing issues of deliberation, multiple values, quality in the use of information and governance.

Work Package 3 moved from theory to practice. Different tools which could contribute to integrated evaluation processes were tested in experimental case applications. These included scenario workshops, mediated modelling supported by a quality assurance protocol, social multi-criteria evaluation, cost-effectiveness analyses and monetary valuation.

Work Package 4 aimed at transferring the experience and lessons learned during the ADVISOR project to policy makers, contributing especially to the implementation process of the Water Framework Directive. A guidance document for designing and implementing Integrated Deliberative Decision Processes (IDDP) was developed, detailing a step-by-step procedure to achieve integrated evaluations.

The synthesis of the main results achieved throughout the ADVISOR project is presented in this report in three parts: Part A sets the stage for the role of integrated evaluations in river basin planning and management; Part B unfolds the set of relevant principles and tools developed in the project and Part C concludes with futures challenges for integrated evaluation processes.





#### Urban Water Resources Toolbox

Editors: L. Wolf, B. Morris and S. Burn

Holistic but applicable approaches are urgently needed to help plan long-term, cost-effective and sustainable urban water management systems. Groundwater is a central element in the urban water cycle of all cities located on aquifers, yet it remains inadequately integrated into urban water management practices.

This book describes holistic approaches for quantification and balancing of urban water and solute fluxes that have been developed by the joint Euro-Australian research project AISUWRS. The new tools comprise a chain of interconnected models that link urban water supply, urban drainage and urban groundwater resources. These include a new sewer exfiltration, model that is based on pipe asset conditions which permits flows to the environment to be estimated. The book provides details on the further processing of this information through the unsaturated zone down to aquifer, where numerical groundwater flow and transport models are applied. Concise documentation is provided on each of the models.

The practicability of applying the chain of models was tested by applying it in four case study cities in Australia, Germany, Slovenia and the United Kingdom that have diverse conditions in terms of hydrogeologic setup, climate and data availability. This permitted additional validation by field investigations, including problem-oriented monitoring campaigns aimed at assessing the impact of wastewater practice on groundwater.

The book provides guidance and examples of the application of multilevel piezometers, on adapted monitoring strategies, and the use for interpretation purposes of microbiological parameters, pharmaceutical residues and related marker species.

The socio-economic analysis in the case study cities sometimes uncovered distinctively different problem perceptions and priorities, both in the groups of experts responsible for the water management and with the remaining stakeholders. The AISUWRS project has developed tools to foster these urgently required deliberation processes. Methodologies for formal sustainability assessment with a triple bottom line background were also elaborated and tested during the case studies.

The case studies have shown that the approach is valid and constitutes an important step towards integrated urban water management.

## Integrated Deliberative Decision Processes for Water Resources Planning and Evaluation

Editors: G. Kallis, N. Videira, P. Antunes and R. Santos

Integrated Deliberative Decision Processes for Water Resources Planning and Evaluation is part of the ADVISOR ("Integrated Evaluation for Sustainable River Basin Governance") research project funded by the EC, under the "Energy, Environment and Sustainable Development" theme of the 5th Framework Research Programme.

The aim of ADVISOR is to improve the understanding of evaluation processes as part of river basin planning and management and to provide a framework supported by a toolkit for the conduct of integrated and participatory evaluations.

Integrated Deliberative Decision Processes for Water Resources Planning and Evaluation is Work Package 4 of the project and helps to transfer the experience and lessons learned during the ADVISOR project to policy makers, contributing especially to the implementation process of the Water Framework Directive.

An Integrated Deliberative Decision Process (IDDP) is proposed to be adopted as the platform to achieve integrated evaluations and this book explains and provides a step-by-step guidance on how to design and run such a process.





Integrated Deliberative Decision Processes for Water Resources Planning and Evaluation has been written especially for policy makers, with theoretical reflections also provided where these bear importance to practical implementation.

#### LIFE and Europe's wetlands - restoring a vital ecosystem



Wetland ecosystems hold an important part of Europe's biodiversity. They provide ideal conditions for a vast diversity of habitats and species, and are especially important for birds providing vital nesting and migratory flyway areas. Despite their importance, however, wetlands are disappearing at an alarming rate and are among Europe's most threatened ecosystems. This brochure presents a selection of wetland projects that have received LIFE co-funding since 1992. The majority of case studies focus on the restoration and management of wetlands, while a number also target key wetland species.

World Wetlands Day (WWD) on 2nd February, has, since 1997, provided opportunities to raise public awareness of the importance of wetland ecosystems, which sustain some of Europe's most important bird, amphibian, invertebrate and plant species during key stages in their life-cycle. This month's LIFEnews celebrates World Wetlands Day by highlighting some of the exciting LIFE projects that have worked to conserve or restore these vulnerable habitats. **Read more** 

#### **TOP NEWS**

#### Environmental Performance Index

The 2008 Environmental Performance Index (EPI) ranks 149 countries on 25 indicators tracked across six established policy categories: Environmental Health, Air Pollution, Water Resources, Biodiversity and Habitat, Productive Natural Resources, and Climate Change. The Index provides a powerful tool for improving policymaking and shifting environmental decision-making onto firmer analytic foundations. The Global Environment Monitoring System (GEMS)/Water collaborated on the Water Pollution section of the EPI.

The EPI focuses on two overarching environmental objectives:

- reducing environmental stresses to human health;
- promoting ecosystem vitality and sound natural resource management.

## <u>Serbia Takes Over Presidency of the International Commission for the Protection of the Danube River</u>

On the 21st of January took over the Presidency of the International Commission for the Protection of the Danube River (ICPDR) for the year 2008. The handover was made during an official ceremony hosted by the outgoing Presidency, Romania, at the premises of the Permanent Mission of Romania in Vienna, Austria.





#### www.connect2earth.org: a new platform to start changing the world

Forget Facebook, MySpace or You Tube: here comes connect2earth, a new online community where young people can upload videos, pictures and comments about the environment.

On <u>www.connect2earth.org</u>, users and visitors will be able to write, speak, illustrate and video present their concerns on subjects important to them, and share environmental ideas and solutions.

#### Summer floods 'not linked to climate change'

A report suggesting that last summer's extreme flooding in the UK was a freak event that cannot be directly linked to climate change has caused a media storm.

### EVENTS (March 2008 – April 2008)

<u>4th International Conference on the Water Resources in the Mediterranean Basin,</u> WATMED 4

22/24 March 2008 – Algiers, ALGERIA

Water and the Developing World: Voices from Industry, Policy, and the Human Rights Perspective

11/12 April 2008, Stanford, California USA

Several sediment sessions at the European Geosciences Union annual symposium in Vienna 12/10 April 2000, Vienna AUSTRIA

13/18 April 2008, Vienna, AUSTRIA

Water Management Congress Europe

14/15 April – Prague, CZECH REPUBLIC

Knowledge Management for Decision Makers in the Water Sector

14/24 April – Delft, THE NETHERLANDS

9th RRC Conference 2008

16/17 April – University of Exeter, UK

<u>Nature oriented flood damage prevention - INTERREG IIIB Project nofdp</u> 16/18 April – Darmstadt (Near Frankfurt), GERMANY

Second MEDA Water Regional Event on Local Water Management 28/29/30 April – Marrakech, MOROCCO

UNESCO ISI workshop on Erosion, Transport and Deposition of Sediments 28/29/30 April – Bern, SWITZERLAND





## 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

European Centre for River Restoration C/o Centro Italiano per la Riqualificazione Fluviale Viale Garibaldi 44/A 30173 Mestre – Venezia, ITALY Tel/fax: +39 041615410 e-mail: info@ecrr.org