ECRRNEWS - 3/2014



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Introduction

Dear readers,

The summer has arrived and, although for some of us the holiday period is nearing, many activities are upcoming. Until now and as always lots of efforts have been accomplished on the river restoration front.

In this ECRR newsletter you will find interesting articles, for example by Herman Wanningen about the recent World Fish Migration day, and an article by Natasja Smolara about Environmental flows. In addition this edition contains also an article about the morphological processes of rivers, written by Joris Eekhout. On the news items side, a short report about the recent ECRR plus National Centers and partners meeting is presented. This newsletter contains also the announcement and some relevant information about the European River Prize 2014. In combination with this nice event, the next European River Restoration Conference which will be organized in October once again in Vienna. Of course you can find the latest information about this event. For more information I refer also to the special website of this event: www.errconference.eu

As always, apart from these interesting articles, this newsletter offers you an overview of activities and upcoming events.

I wish you pleasant readings and a very good and refreshing holiday time.

Hil R. Kuypers Secretary ECRR



World Fish Migration Day big success!

Pao Fernandez (1), Kerry Brink (1), Herman Wanningen (1) & Gijs van der Linden (2) & Jeroen van Herk (2)

(1) Wanningen Water Consult & (2) LINKit Consult

The 24th of May 2014 marked the first ever World Fish Migration Day - a worldwide celebration of healthy rivers and free-running fish with over 270 events. On this day, about 500 different organisations contributed to WFMD2014, through support and/or participation, in over 50 countries worldwide. The primary aim of the celebrations, around the globe, was to raise awareness about the significance of migratory freshwater fish species, the many threats they face and the importance of healthy free flowing rivers.

The first celebrations started in New Zealand, with the official opening in Christchurch and finished off at an event in Hawaii. The majority of activities were educational activities suitable for the whole family. In total there were about 50 field excursions (river visits, kayak, fishway and boat trips); 5 fish migration festivals; 50 workshops, seminars and conferences; 15 zoo's, museums and aquaria; 8 Fish Passage visitor centers opening their doors; 10 official openings of fishways and dam removals, including the first ever Dam removal project in Japan.



The concept of WFMD2014 was proudly initiated in The Netherlands, with the headquarters and coordination hub established in Amsterdam. Overall, Europe participated in 38% of the total number of events. In the build-up to WFMD2014, one of the largest fishways in Europe was officially opened in Italy (Isola Serafini, Piacenza) and a number of full week activities, including a film festival in The Netherlands. On the 24th of May 2014, 27 countries scattered across Europe opened their doors to local communities, policy makers, specialists, students and children. The events ranged from fun-filled river clean-ups in Poland to successful conferences in Spain and open days of a nature-like bypass channel and releasing young eel in the UK. Here is some of the feedback received from the participants:

"1000s of people turned out to Denny & Dunipace gala yesterday" CATCA



"I hope everybody enjoyed the day as we did at the river Dosse!" Fario e.V.'s

"39 people and 60,000 alewives celebrate @WFMD2014 & revival of Blackman Stream, Penobscot River, Maine" TNC

"More than 5000 people were involved in WFMD-2014 celebration in Russia. They learned a lot about fish and realized that the river should be free flowing for fish living safely in it." WWF Russia Amur branch partners.

In an effort to draw on this energy and to continue communication efforts, the WFMD2014 Partnership also launched the World Fish Migration Platform (WFMP) on the 24th of May. The partnership includes Wanningen Water Consult, LINKit Consult, WWF, The Nature Conservancy and IUCN SSC/WI Freshwater Fish Specialist Group. The intention is to use WFMP to continue stimulating efforts to Create Awareness, Share Knowledge and Build Solid Networks on a global scale around the themes of fish migration and free-flowing rivers. Thanks to this platform we will all be able to learn crucial and unknown information for many people, like updated data of dam removals in the world (almost 1200 dam removals in USA done by now, 660 carried out since 1999), fishways experts opinions and much more.

However, this is just the beginning, the tip of the iceberg, the snowball just started rolling down the mountain: participants are already asking for next WFMD, so get ready for World Fish Migration Day 2016 (May 21st) because people all around the world are really going to be LOUD!

More information can be found at: fishmigrationplatform and worldfishmigrationday



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The need for environmental flows

Water abstraction and diversion from rivers can cause ecological changes through altered flow regimes, morphological adjustments, loss of habitats, changes in physico-chemical parameters, and changes in diversity of flora and fauna. To reduce these impacts, a number of different methods and approaches have been developed to define regulated flow regimes, which are termed as environmental flows, instream flows or ecologically acceptable data about thresholds in nature. In the last 40 years, the world-wide problem of determination of EAF has been tackled through the development of a number of different methods and these have been reviewed by a number of authors. Methods can been categorised into four groups reflecting the main attributes of the approach used to define the environmental flows; hydrological, hydraulic rating and habitat simulation methods and also holistic methodologies, which are under development in the last ten years and include the whole river ecosystem. based on the reversibility, quantity, length and duration of water abstraction, the ecological type of watercourse, and the ratio between the mean flow and mean low flow. A lower value of EAF may be determined on the basis of an holistic approach at the request of the applicant for the water right. The holistic approach evaluates the hydromorphological, biological and chemical characteristics of the river where the water diversion/abstraction occurs. The final determination of the EAF should also include the protection arrangements. In Slovenia, we have made significant progress in de-



flows. There are a number of their definitions, but the most used is definition by Dyson et. al 2003, who defined environmental flows as the amount of water needed in a watercourse – a river, wetland or coastal zone – to maintain a healthy, natural ecosystem and the benefits associated with this where there are competing water uses and where flows are regulated. The The first definition of minimum flows on running waters in Slovenia was defined in a Decree in 1976, as a quantity of water that enables the survival of aquatic organisms. With the implementation of the Water Framework Directive, a new Water Act in Slovenia was accepted in 2002. The "Decree on the criteria for determination and on the mode of monitoring and reporting veloping the Decree on EAF, but it is needed to start with its implementation through monitoring.

Restoring the status of river ecosystems with the environmental flow regimes is a big challenge to fulfil objectives of the Water Framework Directive and to achieve good ecological status. It ensures the long



basic components of environmental flows include channel and habitat maintenance flows, minimum flows that preserve aquatic and riparian ecosystems and enable habitats for target species; and flows that enable the seasonality of flood flows.

The quantitative determination of environmental flows is a difficult task, because of the lack of predictive linkages between water use and ecology and also the lack of on ecologically acceptable flow" was prepared on the basis of Article 71 of the Water Act. The Decree consists of six chapters including general provisions, criteria, the mode of monitoring, supervision, penal provisions and transitional provisions. The Decree prescribes the use of either one of two approaches for the determination of an Ecologically Acceptable Flow (EAF), i.e., the hydrological approach and the holistic approach. The hydrological approach is term availability of water for the various users and contributes to the community's livelihood.

Nataša Smolar-Žvanut

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ECRR National Centers and Partners met in Warsaw

On 12-13 May 2014 ECRR organized a meeting with its partners and the National Centers for

River Restoration. The meeting was attended by 4 NC's, ECRR (chair and secretariat) plus partners Wetlands International (WI) and Global Water Partnership (GWP). The event was hosted by the Polish NC from the Warsaw University of Life Sciences.



Getting to know each other

One of the purposes of events like these, is to meet and introduce the different parties present and to share common views and exchange mutual approaches and way of working. The NC's concluded that there is no common blueprint for NC's; its organization depends on situation and opportunities in different countries. Furthermore it was noted that, in many countries, still public perception towards water and rivers needs to change, an

some times can bee seen as too problematic. And for some NC's it is still difficult to convince river managers. The recently developed new RiverWiki was considered to be a useful tool here, showcasing a great amount of case studies all over Europe.



Networking, cooperation and communication

It was stated that mutual connections and an active international network are important. The ECRR secretariat being a central point here, but not above other partners/members. Key actions are strengthening network, institutional development, professionalising communication and cooperation.

Funding opportunities

During the meeting, options for possible funding opportunities, both for the NC's, partners or ECRR initiated projects for river restoration were surveyed and discussed, guided by Dorothea Palenberg form Blue! consultants. It became clear that financing requires co-funding, implicating that in relevant cases where projects are already in planning is is advised to think about how to transfer these into a EU project. Currently, three programs are recommend: Horizon (20 billion € total), Interreg (50 specific regions) (plus only 1 project Interreg Europe (formally Interreg C) and LIFE.



Field trip to Vistula River Valley

After the meeting an inspiring field trip was organized to the Vistula river *in Warsaw*, where in an urbanized setting, the values and benefits of a natural river was once more explained and made visible.



Hil Kuypers

2014 European River Restoration Conference – SEE River project final event

Connecting River Restoration Thinking to Innovative River Management

ERRC2014!

Through the combined effort of a number of (partner) organisations the inaugural 2013 European Riverprize and European River Restoration conference were highly successful events attracting a large number of participants and having a very positive feedback. This year's organizers, the SEE river project and the ECRR are optimistic, that the 2014 conference and riverprize gala can - again with support of many (partner) organisations - build upon this success and continue to strengthen the recognition and support to good river management in Europe.



This year they have again received applications for our oral and poster sessions, showing that this year's conference is shaping up to be a great event. Make sure you're a part of it and check out this year's conference themes and go for more information to the conference website.

Key challenges for Integrated River Basin Management and River Restoration

This year's conference deals with some key challenges for the future:

How can we innovate Integrated River Basin Management using

- Green Infrastructure,
- · Natural Water Retention; and
- · Contemporary River Corridor Management.

The **Green Infrastructure** (GI), a strategically planned network of (semi) natural areas designed and managed to deliver a wide



range of ecosystem services is now being supported as the crosssectoral approach by the EU. This solution for climate change and disaster risk reduction may one day form the basis for sustainable growth in Europe. The EU is developing both strategy and technical guidance, establishing research priorities and improving the access to finances for GI.

Another cross-sectoral approach is the **Natural Water Retention Measures** (NWRM) aimed at reducing vulnerability to natural disasters, namely flooding and drought. Ecosystems and their service provision should be maintained and restored by agricultural buffers and environmental flows. The EU will develop guidance for NWRM and ecological flows by 2014 and promote the NWRM in the IRBM planning cycle.

Conference sessions will also focus on an innovative new approach called **Contemporary River Corridor Management** (CRCM). Over the period of the last two years, the SEE River project has worked in 12 countries of Central and South East Europe to develop a new approach of cross-sectoral cooperation in river management. The project focused on the river corridor as the part of river basin where most pressures are likely to occur.



By bringing different actors together, like experts, administration representatives and people living and working in the river corridors, they worked towards new concepts and tools enabling to reconcile the water management, conservation, restoration and development interests. By facilitating this stakeholder dialogue, the project has improved the awareness and capacities on contemporary river corridor management of over 500 stakeholders in the region supporting river restoration for a sustainable future management of rivers. In various sessions conference delegates can learn about the inspiring experiences and lessons learned from 6 pilot rivers in the region.

Ecological River Restoration is one of the cross-cutting themes and solutions for supporting GI, NWRM and CRCM. Best practice approaches of river restoration have already been developed for most sectors. Existing web database and wiki tools, like the ECRR RESTORE River Wiki, can easily be refined to support GI, NWRM and CRCM. But first of all, NWRM and CRCM need awareness raising, outreach, ownership and capacity building. Networking events like the ERRC2014 – See River Project final event, can play an important role for this. In this framework the conference will showcase and discuss the realization of new river restoration initiatives and approaches on a focused number of river restoration themes; urban resilience, sustainable land use and hydropower, hydro-morphological continuity, fish migration and ecological and economical benefits. Moreover the conference will also examine the overall approach to integrated river basin management by examining cross-sectoral engagement and stakeholder dialogue. Furthermore, cooperation on local, regional, national and international levels will be discussed. EEA's plenary session and WI's, GWP's and EEA's thematic sessions will specifically deal with these new approaches.





The conference is organised by ECRR and the SEE River project

The ECRR is a European network consisting of national centres and individual members united in their mission to enhance and promote river restoration best practice throughout greater Europe. The ECRR counteracts the threats to natural riverine habitats by fostering the establishment of national river restoration networks, and by disseminating information on river restoration through the website, the newsletter and by organising events like the European River Restoration Conference.

SEE River project is led by the Institute for Water of the Republic of Slovenia and involving 25 more partners from 12 countries. The project aims at developing innovative approaches to contemporary river corridor management by engaging stakeholders along 6 international rivers in the South East Europe. It is co-funded by the EU in the framework of the Territorial Cooperation Programme South East Europe.





Morphological processes in lowland streams : implications for stream restoration

Halfway the 20th century, groundwater management in agricultural areas led to channelization of the majority of lowland streams in the Netherlands. This has led to degradation of the aquatic and (semi)terrestrial ecosystems, characteristic for lowland streams. Over the past 25 years, water authorities in the Netherlands have aimed at restoring these degraded streams. Until recently, only little was known about the morphological processes following the completion of such stream restoration projects. The Dutch Foundation for Applied Water Research (STOWA) funded a PhDresearch at Wageningen University in order to increase the understanding of morphological processes in lowland streams. This has resulted in a PhD thesis, which Joris Eekhout successfully defended on May 9th, 2014.

The aim of PhD thesis was to characterize the morphodynamic developments of restored lowland streams, with a focus on meander processes. Field data were obtained from four stream restoration sites, located in the Netherlands. Over a period of 2-3 years after construction of the new channel, morphological data were obtained and related to discharge dynamics and vegetation development.

The main morphological response was the adjustment of the channel slope. In three out of four projects a reduction of the channel slope was observed. This reduction was mainly caused by:

- (1) Narrowing of the channel width at the downstream end of the project site (e.g. caused by a bridge). This resulted in backwater effects and sedimentation of the channel bed;
- (2) Upstream located weirs, which were maintained after stream restoration measures were implemented. This caused a reduction of the sediment transport at the upstream end of the project site, which led to channel bed erosion.

Bank erosion was only observed in a limited number of channel bends and was related to the absence of riparian vegetation and heterogeneity of the floodplain. The main morphological adjustments were concentrated in the first year after implementation of the stream restoration measures. The temporal and spatial resolution of the morphological measurements was increased in two streams showed. The morphological development in these two streams showed that after the channel banks and channel bed stabilized, small scale morphological changes did occur during the majority of time. These results are relevant for ecological conditions, where sediment transport and small scale morphodynamics are beneficial for ecology.

The results from this PhD research are recorded in a PhD thesis, which is available at the following location: results. And a Dutch report, which is available at the following location: report. For more information contact Joris Eekhout through: joriseekhout@gmail.com

Date/periode	Titel/issue	Location	Links
8 July		Salisbury: LIK	
o Suly		Salisbury, OK	www.there.co.uk/rrc_workshops.php
3-8 Aug	Annual conference river restoration centre	Oulu, Finland	ser2014@metla.fi
1- 5 Sept	Fifteenth World Lake Conference	Perugia; Italy	WLC15 Conference Website
9 Sept	RRC training course; best practical design	Peterborough, UK	rrc@therrc.co.uk
21–26 Sept	IWA World Water Congress	Lisbon; Portugal	http://www.emwis.org/thematicdirs/ events/2014/09/2014-iwa-world-water-congress- exhibition
22-24 sSept	Conference Stream restoration	Lycksele in Lappland, Sweden	johanna.gardestrom@emg.umu.se
2-3 Oct	NCR-days	Enschede Nether- lands	http://www.ncr-web.org
27-29 Oct	6th European River Restoration Conference	Vienna; Austria	http://www.errc2014.eu
12-15, Nov	Euro- INBO 2014	Bucarest;	http://bliskienaturze.sggw.pl/
15-19 June 2015	REFORM Final Conference	The Netherlands	http://www.reformrivers.eu/events/final-conference
22-25 June 2015	IS. RIVERS 2015	Lyon France	isrivers@graie.org
23-25 June 2015,	Fish Passage 2015 Conference	Groningen (The Neth- erlands)	http://www.fishpassageconference.com

Events calendar For events in other continents please consult the website



Call for articles

The newsletter of the ECRR should also be a way to share with one another what interesting work is being done, information about seminars or literature.

One way of doing this is by writing an article of any project, event or literature you may be acquainted with. Send this article (maximum of 500 words) to the secretariat of the ECRR at info@ eccr.org.

We will take a close look to the content and if it is coherent with the philosophy of ECRR (ecological river restoration and sharing knowledge) your article will be published with pleasure in the next edition (s) of the ECRR Newsletter.

The secretariat of the ECRR hopes to receive any article on ecological river restoration from any of its members

Free Membership ECRR

All who are interested in river restoration and sustainable water management are encouraged to join.

Members receive the ECRR newsletter approximately four times per year, and are the first to be informed about activities by the ECRR, its members and partner organisations.

To register, go to www.ecrr.org, and click contact.



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