

# Water challenges for a changing world

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## EDITORIAL



Dominique Darmendrail  
The new coordinator

The Water JPI has a new chair and coordinator! Maurice Herval and Dominique Darmendrail of the French *Agence National de la Recherche*, who have wide experience in several national, European and international working groups and research & innovation programmes. We are sure that they will give us a new impetus and enthusiasm to continue our collaboration. Welcome on board then, Maurice & Dominique, and thank you for your commitment to the hard but very stimulating challenge of coordinating so many countries and institutions involved in the Water JPI!

As part of the new governance structure, they will be assisted by three co-chairs from Spain, Ireland and Italy.

Special acknowledgements must be warmly expressed to Marina Villegas, Director General of the Spanish Ministry for Economy and Competitiveness, who has efficiently chaired the Governing Board during these last four years and to Professor Enrique Playan, who has coordinated the Water JPI from the beginning in 2010 and has passed this role to Dominique at the Water JPI Governing Board of Oslo. He has worked hard for the progress of the initiative, keeping useful contacts with the European Commission, the other JPIs and all of us involved in this ambitious challenge for water research and innovation. Thanks to his wealth of experience and skills in establishing good public and working relations, we have worked very well together and we are much better ready to tackle the next steps. We wish him every success in his new role at the *Consejo Superior de Investigaciones Cientificas* and hope to meet him again soon.

## PROGRESS ON WATER JPI ACTIVITIES



After the official [presentation](#) of the Strategic Research and Innovation Agenda (SRIA) of the Joint Programming Initiative "Water challenges for a changing world" (Water JPI) and its 2014-2016 [Implementation Plan](#) last 21st October 2014 in Brussels, new important steps have marked the progress of our intergovernmental initiative. [Read more](#)

## FOCUS ON WATER RESEARCH AND INNOVATION

### in France

Twelve French scientific research players have joined forces to found a national research alliance for the environment, [AllEnvi](#), which now also comprises fifteen associate members. AllEnvi is the fourth such alliance created in France, after those for health (Aviesan), energy (Ancre) and digital technologies (Allistene), and its main objective is to ensure better synergy, both within metropolitan France and in the French overseas regions, between research players working on scientific issues relating to food, water, climate and territories. [Read more](#)

## INTERVIEW WITH PROFESSOR STEVEN EISENREICH



SJ Eisenreich, professor of environmental organic chemistry at the Minnesota and New Jersey Universities, former consultant of the Joint Research Centre's Strategic Research Programme Directorate of the European Commission, is now visiting professor in the Vrije Universiteit Brussel. He has a long experience on research, innovation and development activities.

[Read his opinions on water research](#)

## RESEARCH HIGHLIGHTS

### Vulnerability assessment of drinking water infrastructures



Several activities focused on risk assessment issues related to water quality and quantity are being carried out within a research agreement between the Italian Department of Civil Protection (DPC) and the Water Research Institute (IRSA) of the National Research Council (CNR).

These activities have been carried out in close cooperation with some water utilities. One of these activities is particularly oriented at the development of a vulnerability assessment methodology for drinking water infrastructures exposed to hazardous events, helpful for suggesting the best operative strategies to implement in order to cope with hazardous occurrences.

A strategic Decision Support System is being developed, aiming to help decision makers in managing risks induced by both natural and anthropogenic hazards (with specific attention to the emergency phase), on drinking water supply systems. The model is mainly based on a probabilistic analysis tool, developed through Bayesian Belief Networks, working in GIS environment, and coupled with an hydraulic functioning model. The DSS was implemented with remarkable results in several case studies developed with Italian water utilities (Acquedotto Pugliese for landslide, GSA Ltd. for l'Aquila earthquake and AIMAG Ltd. for Emilia Romagna earthquake).

The DSS is going to be completed with a dynamic analysis approach, for describing phenomena in their temporal

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evolution, and with a module capable of estimating the resilience of organizations involved in emergency management.

#### FP7 Dancers project for the Danube macroregion



This project aims to develop new instruments and tools that will enhance environmental research and promote innovation in the Danube Region, including the Danube Delta and the Black Sea. The new instruments and tools do not start *ab initio* but build on existing projects – covering multiple source of funding (public, private or PPP), whether national, regional or European – which will be identified and clustered.

The project has undertaken a critical analysis of what has been achieved so far in the region and has built upon results of achievements to-date, to design innovative solutions to strengthen knowledge transfer in this area. This has been achieved by a series of meetings, that gathered top level representatives of the academia and business communities as well as decision makers, specialized in various sectors of integrated management of the Danube – Black Sea system.

The ultimate deliverable will be a toolbox of instruments, which will yield a **strategic research agenda**, a concept and detailed plan of the **distributed research infrastructure** – both for the Danube – Black Sea system and proposals for an **integrated educational program** to be implemented at a regional level in the immediate future, with the full cooperation of partners from the Danube - Black Sea System. More information is available on the [project website](#)

#### Water saving technologies



The report STRIVE 108 “*Water saving technologies to reduce water consumption and wastewater production*” part of the Irish EPA funded research project on Assessment of disposal options for treated wastewater from single houses in *low permeability subsoil* is available [here](#)

#### Results of the IWRM-NET projects



New solutions for integrated water resources management in Europe were investigated by six research projects funded within the second common call of the FP 6 ERANET IWRM-NET. Outputs and outcomes were presented during the final conference of the scientific coordination project held in Brussels on last 21-22 October. Presentations of these six European research project tackling climate change and adaptation, water scarcity and droughts, economics and social values for integrated water management are available from the [IWRM-NET](#) website.

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## DROPLETS

#### Proceedings of the IAHR Symposium on Hydraulic Structures

The full papers of the proceedings of the 5th IAHR International Symposium on Hydraulic Structures held in Brisbane, Australia, last June are available [here](#).

#### Publication on Water and the Future of Humanity

Written by the *Gulbenkian Think Tank*, a panel of international experts which aims to reflect on the main problems facing the field of water in an interdisciplinary and multisectoral way, the book presents discussions on water consumption to 2050 and the state of water resources in the global environment and takes into account that pressure on water use could create serious constraints to the development of humanity. This study clarifies the needs for change as regards the availability, evaluation and utilisation of water alongside other related resources, such as food and energy. More information is provided [here](#).

#### EuroMed Conference On Water Challenges



An international conference aiming at enhancing cooperation in the Euro-Mediterranean region on research and innovation embracing the proper management of inland and marine waters was held in Naples last 3-4 November under the Italian presidency of the Council of the European Union and with the support of the European Commission. Information on the event organized by the National research Council of Italy and the four parallel workshops is provided [here](#). The recordings of the opening and of the plenary session is available at this [link](#) and [click to see](#) the a short video report by CNR WebTV.

#### RDI Initiatives Supported by the EU Cohesion Policy

According to the [Sixth Relation](#) on Cohesion Policy of the European Union structural funds provided support to over 60,000 RTD projects by the end of 2012, to over 21,500 cooperation ventures between enterprises and research centres and to almost 80,000 business start-ups. The funds provided over 5 million more people with access to broadband, 3.3 million with an improved supply of drinking water and 5,5million with main drainage and a connection to waste water treatment facilities.

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## OPPORTUNITIES

#### EIP WATER Third Call for Action Groups



Implementation of the European Innovation partnership on water is based on the activities of voluntary multi-stakeholders groups organized to develop, test and disseminate the uptake of innovation by market and society for major water-related challenges. The EIP Water third call is open till 31 January 2015. See [here](#) for more information.

#### ERANETMED Joint Call



FP7 project for Euro-Mediterranean cooperation ERANETMED has launched a joint call on “*Renewable energies, water resources and their connections for the Mediterranean Region*”. Details are provided [here](#)

#### PHD in Marine Engineering Funded by NERC

The UK Natural Environment Research Council will support a student on a project focused on modelling hydraulic and physical features of riverine fish habitats. More information is available [here](#) in the *Euraxess* Jobs website.

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## UPCOMING EVENTS

**WSSTP and ERRIN Annual Brokerage event**

ERRIN European Regions  
Research and Innovation Network



The European Water Platform

This annual brokerage H2020 event organized by the European Water Platform and the European Regions Research and Innovation Network will be held on next 26th and 27 November at Lombardy Region Brussels' delegation. See [here](#) for details.

**International Conference on Nanotechnologies**

NanotechItaly 2014 will showcase how nanotechnologies, together with the other key enabling technologies (KETs), can sustain a responsible research and innovation (RRI) assuring a competitive advantages to a variety of industries, relevant to EU and national economy. The programme is available [here](#)

**Conference on Future-Oriented Technology Analysis**

This 5th international conference on FTA organized by the Joint Research Centre of the European Commission aims at developing communities of foresight, forecasting and technology assessment. The event will be held in Brussels on 27-28 November 2014. Click [here](#) for details.

**Event in view of the Third Call of Urban-Europe JPI**

A meeting to bring interested parties from research and practice together will take place in Utrecht on 3 next December to focus on the consortia that can jointly submit research proposals for the third call of the JPI Urban-Europe. More information is available [here](#).

**CALL FOR PAPERS**

The second international conference [ISRivers](#) will be held in Lyon from 22-26 June 2015. Papers on integrative sciences and sustainable development for rivers can be sent until next 1st December.