

Water challenges for a changing world

HOME Water JPI Implementation Mapping & Agenda Joint Calls Alignment International Cooperation Resources

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NEWSLETTER

EDITORIAL

It was May 2010 when we started our first activities in coordinating water research at European level to avoid duplication of efforts and investments. The first steps were a mapping exercise of the existing programmes focused on water research and innovation at national and regional level and the sharing of this information among the countries which supported the idea of having a joint programming initiative on water challenges. Then a common [Vision Document](#) was drafted and presented to the European Commission to show the maturity of this collaboration among EU member states and associated countries. The Water JPI was officially approved by the EU Competitiveness Council on 6 December 2011.

Since then, new member countries have joined the team, three joint calls have been launched and we are now going to present the second updated version of the Water JPI Strategic Research and Innovation Agenda on the 19th May 2016 in Rome. This international event is targeted to a wide range of stakeholders and we are pleased to present activities, outcomes and future steps of the Water JPI to a large audience. So, please, register for the conference by filling in this [form](#). More information is available at www.waterjpi.eu. Thank you and see you in Rome!



PROGRESS ON WATER JPI ACTIVITIES

Third joint call open till 19 April 2016

The first step of the joint call on "*Sustainable management of water resources in agriculture, forestry and freshwater aquaculture sectors*" launched within the frame of the WaterWorks 2015 ERANET and co-funded by organizations of the Water JPI and FACCE JPI will close on **19 April 2016 at 17:00 CET**. To have more information visit this [webpage](#) of the Water JPI [website](#).

Outcomes of the WaterWorks 2014 call

A total of 16 transnational collaborative research projects presented on the call theme "*Research and Innovation for Developing Technological Solutions and Services for Water Systems*" were selected for funding by the Call Steering Committee:

- ACWAPUR** (Accelerated Water Purification during Artificial recharge of Aquifers – A Tool to Restore Drinking Water Resources),
- Biorg4WasteWaterVal+** (Bioorganic novel approaches for food processing waste water treatment and valorisation: Lupanine case study),
- DESERT** (Low-cost water DESalination and SEnsoR Technology compact module), **DOMINO** (Dikes and Debris Flows Monitoring by Novel Optical Fiber Sensors), **IMDRFLOOD** (Improving Drought and Flood Early Warning, Forecasting and Mitigation using real-time hydroclimatic indicators),
- INXCES** (INnovations for eXtreme Climatic EventS),
- IRIDA** (Innovative remote and ground sensors, data and tools into a decision support system for agriculture water management),
- MEPROWARE** (Novel Methodology for the Promotion of Treated Wastewater Reuse for Mediterranean Crops Improvement),
- MUFFIN** (Multi-Scale Urban Flood Forecasting: From Local Tailored Systems to a Pan-European Service),
- Pioneer_STP** (The Potential of Innovative Technologies to Improve Sustainability of Sewage Treatment Plants),
- PROGNOS** (Predicting In-Lake Responses to Change Using Near Real Time Models),
- SIM** (Smart Irrigation from Soil Moisture Forecast Using Satellite and Hydro-Meteorological Modelling),
- STEEP STREAMS** (Solid Transport Evaluation and Efficiency in Prevention: Sustainable Techniques of Rational Engineering and Advanced MethodS),
- TH.E.R.BIO.R** (Thermal Energy Recovery from a Novel Sequencing Batch Biofilter Granular Reactor),
- Watintech** (Smart decentralized water management through a dynamic integration of technologies),
- WE-NEED** (WatEr NEEDs, availability, quality and sustainability).

These projects will be funded by 17 partner organisations from 15 different countries: F.R.S.-FNRS (Belgium-French-speaking community), RPF (Cyprus), IFD (Denmark) MoE-EE and ETAg (Estonia), EPA (Ireland), MoE-IL (Israel), MIUR (Italy), CIP (Moldova), RCN (Norway), FCT (Portugal), UEFISCDI (Romania), WRC (South Africa), MINECO and CDTI (Spain), FORMAS (Sweden) and NWO (The Netherlands). Grants will be awarded to each consortia partner by their national funding organizations according to national rules and procedures. Grant according to the ERANET funding

rules is also provided by the European Commission. The kick-off of the projects is scheduled after the conclusion of all national funding procedures and the signature of a Consortium Agreement between the consortia partners. For more information and details on the evaluation procedure read this [press release](#).

Report on March meetings in Dublin

An Advisory Boards meeting was held on last 21st March to collect comments on two documents under finalisation: an introduction to the Water JPI Strategic Research and Innovation Agenda aiming at disseminate the contents of the SRIA to a larger public in a more friendly manner and a booklet reporting the first achievements of the initiative covering the period 2011-2016. The Implementation Plan 2017-2019 was also discussed as well as the emerged need to extend to three years the mandate of the members of the Scientific and Technical Board and Stakeholders Advisory Board.

The preparation of workshops to be organized within the additional activities of the ERANET WaterWorks2014 was tackled the day after, while the 7th Management Board meeting held on 23 March was focused on the agenda of the 8th Governing Board to be held in Malaga on 14-15 April 2016, the activities of the three Task Forces in place and the progress in the international cooperation and relations with water-related European organisations.

8th Governing Board in Malaga

The members of the Water JPI Governing Board will convene in Malaga (Spain) on next 14-15 April to approve the Strategic Research and Innovation Agenda, version 2.0, which lays out research, innovation and development needs in the water sector grouped by thematic areas and priorities selected after a stakeholders' consultation for their scientific and societal importance and structured around these five core themes: *Improving Ecosystem Sustainability and Human Well-being; Developing Safe Water Systems for the Citizens; Promoting Competitiveness in the Water Industry; Implementing a Water-Wise Bio-Based Economy; Closing the Water Cycle Gap Improving Sustainable water Resources Management*.

The evolution of joint programming initiatives in the years to come will be presented by a representative of DG Research and Innovation of the European Commission. Monitoring and benchmarking exercises on the development of the Water JPI are in the meeting agenda and also the implementation actions envisaged in the following months.

A new updated factsheet

Papers to provide quick and easy information on the activities of the Water JPI have been constantly produced since the beginning of the Coordination and Support Action WateUR. These papers are useful and practical means to communicate and disseminate news about the progress of the initiative to the stakeholders audience. An updated version on the Water JPI Factsheet has been recently produced and it is now available on the [Water JPI website](#).



FOCUS ON WATER RESEARCH AND INNOVATION IN HUNGARY

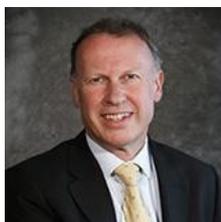
The National Research, Development and Innovation Strategy (2013-2020), entitled 'Investment into the Future' was approved by the government in 2013. The strategy aims to raise the RD&I investments, and as a result, to mobilise the Hungarian economy and strengthen its competitiveness. The strategy set the target, amongst others, to raise the amount of research and development (R&D) expenditures to 1.8 % of the Gross Domestic Product (GDP) and increase the number of researchers from 37 000 in 2012 to 50 000 by 2020. The strategy focuses on three main fields: knowledge creation, knowledge transfer and knowledge utilisation. The National Research and Development and Innovation Strategy is accompanied by a two year Action Plan to contribute to its implementation.

Since July 2014, the Prime Minister's Office is responsible for science, research and innovation policies. A government commissioner has been appointed to manage the establishment of a new government office (National Office for Research, Development and Innovation), set up as from 01/01/2015, which will take over these responsibilities from the PMO.

The [Hungarian Scientific Research Fund](#) (OTKA) has been the major funding agency of basic science and scholarship since 1986. OTKA operates as an independent non-profit organisation since 1991. Its legal status and rules of operation have been designed to provide independent support to scientific research activities and infrastructure, to promote scientific achievements of international standards, and to provide assistance to young researchers. As an independent institution, OTKA reports to the parliament and the government of Hungary. With regards to the funds provided within the annual budget of the Republic of Hungary, the appropriations of OTKA are administered via the budget of the [Hungarian Academy of Sciences](#), operating as programme owner. During the two decades of its operation, OTKA has supported approximately fifteen thousand research projects with an overall funding worth 218 M€. OTKA's annual budget for 2008 was about 20 M€. It covers the annual financial support of around two thousand research projects (two to four years of duration each), with three hundred to four hundred new research projects starting every year. OTKA administers two rounds of open calls for proposals with a bottom-up approach towards research proposals, postdoctoral research proposals, and proposals for international cooperation every year. The agency operates without thematic restrictions and with a special emphasis on the careers of talented young researchers and on the reintegration of Hungarian researchers returning from postdoctoral trainings or research projects carried out abroad.

The [National Innovation Office](#) (NIH) is the research, development and innovation organization of the Hungarian Government. They provide professional support for private and government initiatives aiming to exploit and promote the market access of national R&D results. To this end they have created a team of analysts and information management experts. NIH supports national and international cooperation, and creates incentives for the formation of innovation networks. The National Innovation Office represents Hungary at the EU and at international organisations in issues relating to research and innovation. NIH does not have a specific programme for water but has funded a number of projects on the topic. Additionally, the NIH president has identified *Water Challenges* as a major research priority, calling for integrated transnational cooperation on R&D for the Danube region.

INTERVIEW WITH ALAN JENKINS



Alan Jenkins is Water and Pollution Science Director at the Centre for Ecology & Hydrology of NERC (UK Natural Environment Research Council) He is chair of the UK Committee for National and International Hydrology, head of the UK Delegation to the UNESCO International Hydrology Programme, hydrological adviser to the UK Government with the World Meteorological Organization, UK representative to the European Network of Water Research Centres (EurAqua), leader of the Working Group on Hydro-climatic Extremes in the EU Water Supply and Sanitation Technology Programme, represents the UK on the Governing Board of the EU Joint Programming Initiative on Water and is a member of the Steering Group of the Scottish Government Centre for Research in Water. He is also a member of the UK National Hazards Partnership Steering Committee. He is an honorary professor at the Lancaster Environment Centre, Lancaster University, a visiting professor at the Department of Geography, University College London and an

Honorary Research Fellow of the James Hutton Institute, Aberdeen.

Our most valuable natural resource, water, is pivotal to Europe and globally. Given the number of organisations working towards similar goals, and the proliferation of initiatives regarding water research and innovation, is Europe close or still far from the goal of having a clear, unified, and effective strategy for water RDI?

I believe that many good and helpful initiatives have been put in place to foster the development and delivery of an effective strategy for water research and innovation at European scale. These initiatives, however, still remain as individual silos to a large extent and the necessary integration remains elusive.

How important are Joint Programming Initiatives to foster and achieve alignment of programmes and agendas in the tackled sectors at European and international level?

Aligning the water research agendas and strategies within Member States is an obvious route to greater integration and to more effective and efficient delivery within Europe. Duplication of effort between researchers in Member States needs to be avoided with the focus on added value. This is a key ambition of the Water JPI.

Innovation plays an important role in economic growth, job creation and the improvement of the quality of life. In your opinion, what are the largest barriers that hinder innovation and technology/knowledge transfer in Europe?

I do not believe that significant barriers to innovation and technology transfer exist. New research has led to many new products/processes which have generated jobs and economic growth. These can be found through engagements between research community and both large consulting and commercial companies and SMEs. A question remains in my mind, however, as to whether the current efforts to 'force' greater cooperation to generate further innovation is effective and efficient.

How can public and private sectors cooperate to create a favorable environment for innovation and development in companies and enterprises?

Any scheme relevant here needs to focus on equitable resource and benefit allocation for all concerned in any project/initiative.

As a leader of prominent research projects applied in many areas of the world, please comment on the benefit provided by international cooperation in RDI activities.

The cooperation of European researchers is extremely important if European consortia are to compete for projects and deliver them effectively on a global scale. Working internationally demands a broad range of skills and expertise which effective European partnerships can offer. In terms of water governance and legislation, the European approaches, such as the Water Framework Directive, are much respected by countries around the world making a European partnership very attractive. The same is true of the European approach in respect of science-based policy.

You are dealing with new hydrological climate services. Can you explain better the aims of this research and innovation domain?

Climate services is a term used to describe the data and systems that can be delivered to enable citizens, business, governments and other stakeholders to understand and manage the opportunities and risks in the natural environment. Many such services have been provided for several years such as climate change risk assessment, flood forecasting and seasonal water resources forecasting. These services can be used in the design of flood protection, assessment of insurance risks against natural hazards, assessment of ecosystem service provision and optimal water resources allocation, as examples. Clearly, there exists an enormous possibility for developments and requirements in this field as we continue to understand the meteorological and climatological drivers on our environment. This is a tremendous opportunity area for new research and innovation.

RESEARCH HIGHLIGHTS

Local climate services for the water sector

Climate is changing and so is the perception about the impact of human intrusiveness. The increasing demands of the growing population will put further pressures on the climate and the environment. In order to meet the challenges of climate change, the development of both climate modelling and science for climate services is required. Local climate services become increasingly necessary in making adaptation to changing climate more understandable and manageable.

Koutroulis et al. (2015) explored the ability of current climate information to develop and support local climate services for water resources management in close collaboration with local users of the water sector from the island of Crete. Climate modeling output ranging from event scale to decadal and centennial experiments, at hourly to monthly temporal scales and at high resolution (2 Km) to GCM spatial scales (100–250 km), are used to assess climate change impacts on water resources availability and extremes. A robust signal of temperature increase and precipitation decrease is projected for all future periods, in parallel to an increase in magnitude of extreme precipitation.

These results were collectively reported to the local water managing authority trying to meet the information needs in the context of a user-provider interaction. Updated basin scale climate information was delivered to the user, information that is useful in prioritizing certain water resources related to infrastructure development. The planned development policy of new water resources engineering is very closely connected with the growth of new irrigated areas leading to an increase of irrigation demand. The conclusion is that an alternative policy of development of new infrastructure should be adapted. [To know more](#)

DROPLETS

Water reuse in circular economy

In the recent communication by the European Commission (EC) on *Circular Economy* water reuse is indicated as an important topic. Furthermore, a series of actions is under development to promote [water reuse](#) at EU level. This theme was also discussed during a side meeting of the EIP Water conference in Leeuwarden. [To know more](#)

Forests contribute to water security

The Food and Agriculture Organization of the United Nations has launched a new [programme](#) aiming to enhance the critical role of forests in improving water quality and water supplies. Forests influence how and where rain falls, and they filter and clean water. See also this [video](#).

UN report on water and jobs

The [report](#) illustrates that nearly 3 out of 4 jobs of the global workforce (3.2 billion people) are dependent on access to water and water-related services. Water stress and the lack of decent work can exacerbate security challenges, force migration and undo the progress made against poverty.

EEA report on use of freshwater resources

On the occasion of World Water Day 2016, the European Environment Agency (EEA) has published a new report assessing the use of freshwater resources across Europe. Among the key messages coming to light in the report it stands out that while water is generally abundant in Europe, water scarcity and droughts continue to affect some regions, especially those that are densely populated and have high demands for water from agriculture and tourism during the summer, and that the service sector has become one of the main pressures on renewable water resources. [To know more](#)

A bigger market for water public-private partnership projects

An article available [here](#) provides interesting data on the economic growth expected in public-private partnership water projects summarizing the analysis carried out by Bluefield Research which examined more than 1,800 PPP projects in 44 countries.

Eurobarometer on water

Close to three quarters of Europeans think that the EU should propose additional measures to address water problems in Europe, according to a Eurobarometer survey published on 22 March 2016. A sizeable majority – 68 % – think that water-related problems are serious. Droughts, floods and chemical pollution are seen as significant challenges. 62 % of citizens also feel they are not sufficiently well informed, while 67 % think the most effective means of reducing water-related problems would be awareness-raising about water-related problems. Heavier fines for polluters, a fairer pricing policy or financial incentives (tax breaks or subsidies) also gained support. Against that backdrop, 73 % of Europeans call for more measures at EU-level to reduce water problems. [To know more](#)

Official launch of DANUBIUS-RI

DANUBIUS-RI will be a pan-European distributed research infrastructure supporting interdisciplinary research on large river-sea systems. The research infrastructure will comprise a hub and a data centre in Romania, a technology transfer office in Ireland, and supersites and nodes across Europe. Nodes will be centres of expertise providing facilities and services, data storage and provision, experimental and in situ measurements facilities, state-of-the-art analytical capabilities and implementation of standardised procedures and quality control. [To know more](#)

Water in the Urban Agenda

The Water Group established by members of the European Parliament held a public session dedicated to the theme 'Water in the Urban Agenda' Last 6th of April. The session was chaired by **Esther de Lange**, in her capacity as the President of the MEP Water Group and featured **Aziza Akhmouch**, Head of the OECD Water Governance Programme, **Mario Cerutti**, Senior Water Expert, Dutch Ministry of Infrastructure & Environment, **Richard Eielman**, Coordinator of the BlueSCities Project and **Pavel Misiga**, Head of the Water Unit, European Commission as speakers of the session. Speakers identified as an important challenge the difficulty in linking the EU and local level implementation of policies as well as integrated water management in urban areas. Their presentations are available [here](#).

European water factsheet

On occasion of the **World Water Day 2016**, DG Environment of the European Commission has published a policy information sheet providing an **overview of EU water policies**. The information sheet is available [here](#).

Report on the evaluation of joint programming

A publication available [here](#) presents the finding, conclusions and recommendations of the Expert Group established by the European Commission to carry out an evaluation of joint programming to address societal challenges. The key message from this report developed through an iterative process of stakeholders consultations, workshops analysis and evaluation activities is that the joint programming process does not yet have sufficient commitment from national stakeholders to achieve its potential.

OPPORTUNITIES

The European Investment Project Portal

EIPP is a brand new web portal enabling EU based project promoters – public or private – to reach potential investors worldwide. It is part of the Investment Plan for Europe initiative to mobilise investment, promote economic growth and create more jobs across the EU. It responds to investors' desire to see more potential EU investment opportunities in a central information platform able to be the meeting place for project promoters and investors. [To know more](#)

Interreg second call for proposals

The Interreg Europe programme is financed by the European Regional Development Fund (ERDF) to reduce disparities in the levels of development, growth and quality of life in European regions through its cohesion policy. The Interreg Europe programme is divided into four priority axes related to the Europe 2020 strategy: one is " *Protecting the environment and promoting resource efficiency*". The second call for proposals is open from 5 April 2016 to 13 May 2016, at 12:00 p.m. CET. [To know more](#)

ERA4CS joint call with JPI Climate

This call for proposals on " *Researching and Advancing Climate Services Development*" is open from 1 March to 15 June 2016 for proposals on topic A and to 15 July 2016 for proposals on topic B. [To know more](#)

ERANETMED second joint call

This call for research proposals on *Environmental challenges and solutions for vulnerable communities* is co-funded by the following Euro-Mediterranean countries: Algeria, Cyprus, Egypt, France, Germany, Greece, Italy, Jordan, Lebanon, Malta, Morocco, Spain, Tunisia, Turkey on the following themes: *Land & Water/ Food and Environment, Energy and Environment, Climate/demographic change and Environment, Societies/Ecosystems and Environment*. Deadline for the submission of proposals is 31 May 2016. [To know more](#)

UPCOMING EVENTS



Adaptation Futures 2016

The International Climate Change Adaptation Conference is a biennial event. Its fourth edition is organized by the Global Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA), and hosted by the government of The Netherlands. This event will be held in Rotterdam on 10-13 May 2016 and wants to be an interesting platform to show and highlight adaptation practices and solutions for people, government and business where science and practice are connected and communities of practice are engaged in order to build new partnerships, linking adaptation actions to current development, investment and planning. [To know more](#)



ECRA workshop on changes in hydrological cycle

This workshop will be held on 16 May at the Stockholm University and aims to discuss recent achievements in science related to hydro-meteorological modelling, extreme events and hydrology. The programme is available [here](#).



ICWRS 7th International Water Resources Management Conference

This conference to be held in Bochum (Germany) on 18-20 May 2016 is organized by the International Commission on Water Resources Systems (ICWRS). It represents an interesting platform bringing together experts from different countries and expertise to discuss about modern water management. It will focus on the spatial dimensions of water management - redistribution of benefits and risks. [To Know more](#)



Geo-enabled water industry conference

The Geospatial World Forum (Rotterdam, Netherlands, 23-26 May 2016) is a big event for the professionals engaged in the geospatial sector and its application domain. Within the section *Geospatial in Practice*, the workshop "**Geo-enabled Water Industry**" aims to highlight how the geospatial technology provides solutions for the entire water infrastructure lifecycle, from planning, designing, and construction, to operation and maintenance of water and wastewater systems. Stakeholders in water industry will discuss the impact of geospatial technology in water utility business and its future areas of application. [To Know more](#)



INBO 10th World General Assembly

The next **10th World General Assembly of the International Network of Basin Organizations - INBO** - will take place in Merida, Mexico, from **1st to 4th June 2016**. Works are organised around major strategic issues to ensure the necessary implementation of programs of adaptation to great global challenges such as population growth, food and energy demand, or **adaptation to the effects of climate change, in the basins of local, national and transboundary rivers, lakes and aquifers**, which will be addressed in plenary sessions, roundtables and side events. [To know more](#)



10th ISEB conference

The International Society for Environmental Biotechnology will have its 10th conference in Barcelona on 1-3 June 2016. Groundwater bioremediation, biological wastewater treatment, water valorization and reuse will be discussed during this event. [To know more](#)

INVESTING for a greener future



Green Week 2016

This annual event promoted by DG Environment of the European Commission to debate and discuss European environment policy, will take place from Monday, 30 May to Friday, 3 June. It will focus on the theme "**Investing for a greener future**" and the many aspects related to it, such as investing for greener cities to improve the quality of urban life, explore ways of securing our future through investments in the countryside, or investing in our oceans. The High Level Conference will be held in Brussels on Wednesday 1 June, but during the whole week numerous and varied events and activities will take place across Europe in each Member State [To know more](#).



Conference of the Citizens Observatories for water management

Citizen Observatories promote communication and support the sharing of technological solutions (e.g. sensors, mobile apps, web portals) to enable citizens to become active stakeholders in information capturing, evaluation and communication for the water environment. An international event focussing on the potential of **Citizen Science** in the European water innovation landscape, and in particular in the fields of flood risk management, environmental monitoring and meeting the challenges of the European Water Framework Directive (2000/60/EC) and Flood Directive (2007/60/EC) is organised in Venice on 7-9 June 2016. See the [programme](#).



13th IWA Leading Edge Conference on Water and Wastewater Technologies

This conference of the International Water Association will be held in Jerez de la Frontera (Spain) from 13-16 June 2016 and will focus on the topic "**Evaluating Impacts of Innovation**". See the [programme](#).



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