

EU bets on transnational consortium for Water - Water Challenges for a Changing World ¹

The motto is clear: to implement effective and sustainable water systems for the sustainability of European and world economy, through the coordination of policies, strategies and programs in European research, development and innovation in key-issue water. The building of an efficient European front in the management of this common challenge presided to the launch of Water JPI (Joint Programming Initiative), financially supported by the European Commission through WatEUr. Funding projects and other joint actions, European mapping and a strategic agenda are among the main activities of this initiative which had its official launch in February this year in Madrid. Spain (through Ministry of Economy and Competitiveness – MINECO) is the country responsible for the coordination of this consortium which gathers 18 participating countries, including Portugal (represented by the Foundation for Science and Technology).

Ciência Hoje spoke with the coordinator of Water JPI, Enrique Playán.

Ciência Hoje - To begin with, how would you describe the spirit of this ambitious European initiative?

Enrique Playán – Joint Programming Initiatives (JPIs) have been created by European Member States following the impulse of the European Commission. The first steps towards the development of JPIs started in 2008. The National Research, Development and Innovation (RDI) programmes of the Member states manage about 80% of the total investments, while the European Framework Programme (FP7 today, and soon Horizon 2020) represent about 20% of the investments. Member states have in their hands the largest share of European water RDI funds: the coordination of National programmes is a very promising activity in terms of mobilization and impact. Ten Joint Programming Initiatives have been created, responding to major European societal challenges. The Water JPI is concerned about the quantitative and qualitative aspects of continental water, groundwater and coastal zones. It responds to the grand challenge of “Achieving Sustainable Water Systems for a Sustainable Economy in Europe and Abroad”. Partner funding organizations are committed to coordinate their programmes, to develop a common Agenda and to organize and execute joint activities. In the context of the wide cultural and economic differences in Europe, this is not an easy task. Countries have teamed up in the Water JPI under the principle of “Variable Geometry”: participation in the Water JPI and in each of its activities is completely voluntary. This principle adds plenty of flexibility to the Water JPI and permits to respond to a changing RDI environment.

CH - What factors differentiate Water JPI from other European and international actions on water policies?

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EP – The first differentiating aspect is our challenge-oriented nature. The water JPI builds its research and innovation activities around the challenges faced by the European society. We aim at developing and accessing the best scientific knowledge and technological developments in order to tackle our grand challenge. The second important aspect is the light management. The Water JPI is not a legal entity, most of the management means are pooled by partner countries through “in kind” contributions, and there are no permanent assignments. The third differentiating aspect is that we intend to go well beyond the launching of calls for proposals... we want to establish effective coordination of National activities in the field of Water RDI: promote the creation and alignment of thematic programmes in partner countries, and develop a culture of developing activities with European dimension. These activities must be embedded in the core of National programmes, so as to develop a genuine “opening” to cooperation in Europe and beyond. Water is a very international endeavor. As a consequence, the Water JPI is committed to attract relevant players outside Europe to RDI programming and to the launching of coordinated activities. A final difference is that European water science is currently leading the world, while European water companies are leading the international market. The Water JPI is determined to continue providing first-class scientific knowledge to our companies so that they can develop the innovations that result in quality jobs and economic growth in Europe.

CH - Detailing a bit further, what are the challenges that Water JPI proposes to address?

EP – The grand challenge of the Water JPI is split into five challenges. The first challenge is to maintain ecosystem sustainability. Activities will be developed in the fields of ecological engineering, ecohydrology, managing the effects of extreme water events (floods and droughts) on ecosystems, and on the concept of ecosystem services. The second challenge is to develop safe water systems for the citizens. In this challenge, we will focus on the emerging water pollutants, their treatment and risk management. We are also concerned about the thousands of kilometers of ageing water infrastructure, and the devastating effects of urban floods on lives and assets. The third challenge concerns the competitiveness in the water industry. We intend to develop RDI activities to support water purification, treatment, reuse, desalination, to name just a few industrial fields. Water and energy efficiency will be sought to ensure sustainability and competitiveness. The development of innovation-friendly regulatory frameworks will also be sought. The fourth challenge is related to the implementation of the Bio-Based Economy, and the increased pressure on waters resources resulting from the integration of food and non-food agricultural and forestry activities. Seeking resource efficiency in agriculture, forestry, aquaculture and related industries will be a major concern. Alleviating the resulting pollution on natural resources (soil and water) will constitute another area of activity. The fifth and last challenge is about closing the water cycle gap. This gap currently separates water supply and demand in quantitative and qualitative terms. Activities within this challenge will concentrate on enabling sustainable management of water resources and on strengthening socio-economic approaches to water management. As you can see, the grand challenge splits into a large number of challenges, whose complexity is only comparable to the capacities of European researchers and technologists.

CH - In practice, which actions will be implemented during the initiative?

EP – Joint Programming Initiatives are implemented through the coordination of National (and where relevant, regional) RDI programmes and through the development

of Joint Activities. Increasing funding efficiency, avoiding duplications and searching for the most competitive consortia will result in faster progress and better delivery of knowledge to society. The Water JPI will gain visibility in the community through the development of Joint Activities. 2013 is the year when we are kicking off with a Pilot Call for proposals. Joint activities will materialize in: sharing good practice in RDI funding, sharing RDI results, funding networking of RDI groups around specific topics, funding RDI projects through multinational consortia, establishing multinational mobility programmes for scientists and technologists, and developing and exploiting RDI infrastructure. Joint activities will undoubtedly be the corner stone for the appreciation of the Water JPI by researchers and innovators.

CH - The alignment of national water programs through the definition of a Strategic Agenda is a complex purpose. Can you give us an overview of this agenda and generally explain how is it being set up?

EP – The Water JPI agenda takes the name of a “Strategic Research and Innovation Agenda” (SRIA, in the JPI jargon). This agenda was adopted by partner countries on May 30st in what represents a milestone for the Water JPI. Having started in 2008, reaching this point has taken five years of intense debate and trust building. In addition, the European Innovation Partnership on Water is quickly progressing in their goals of removing barriers to water innovation and developing public-private partnership for supporting water innovation. The SRIA identifies a specific niche in: 1) the transnational funding of Research-oriented activities; 2) Addressing water challenges of sub European dimension (concerning specific areas of Europe); the valorization of research and development findings obtained at the Water JPI or at National Programme projects through market-oriented innovation activities; the cooperation with other European programmes and initiatives; and cooperation outside Europe with a light management approach. The SRIA also describes the water challenges and the implementation through joint activities in the already discussed terms. Since we like challenges, we have already started refining the SRIA in preparation for the next release, which is due in a year time. Wide consultation with the scientific and technological community and society at large will be one of the ingredients of the next release.

CH - When will be launched the first call for transnational projects within Water JPI?

EP – The Pilot Call for proposals of the Water JPI will be published in September, and the participating partners will cooperate under the leadership of the Academy of Finland to organize a Joint call on the topic of “Emerging Pollutants”. The Joint Call will use a common mechanism for intergovernmental programmes: The “virtual common pot”. Under this funding mechanism, the funds pledged by a given country are used to fund the partners from that country composing the consortia of the proposals selected by an international evaluation panel. I expect to see the first Water JPI projects operative by summer 2014. This will be another major milestone in the history of our initiative.

CH - It is visible a high interest of the initiative to involve the collaboration of national scientific communities, companies and national policymakers, namely governmental. How are you planning to reach this goal?

EP - At the Water JPI we are quite satisfied with the follow-up of our activities by all types of stakeholders. A permanent stakeholder representation has been secured

through the establishment in 2011 of our Advisory Boards. A Scientific and Technological Board and a Stakeholder Advisory Group have been set up, with 17 and 11 representatives, respectively. Their contribution to define the SRIA has been very important. Wider stakeholder involvement is continuously being sought in order to define our activities, update our key documents and guide the selection of proposals for Joint Activities. Policy makers have the opportunity to streamline our SRIA to cater for their policy support needs, while the research and innovation community and the industries can additionally be funded by the Water JPI activities. Finally, the Water JPI is establishing an evaluation plan, which will quantify our contribution to the challenge. This activity will be based on the stakeholders' perception of the added value of the Water JPI.

CH - What is the biggest difficulty and the greatest pleasure of coordinating 18 countries aiming to succeed on such a work plan?

EP - Difficulties, there are many. It is great to belong to this human species characterized by selective memory. As a consequence, the complicated moments tend to fade away and one only remembers their general traits. The diversity and complexity of Europe are obvious to all of us, and these are the main sources of difficulties. Having European waters evolve towards coordination is indeed a complex problem. Finding the common grounds of the water problems of all geographical and cultural corners of Europe is often exhaustive. As happens in many aspects of life, the difficulties live in the same neighbourhood as the pleasures... building a European initiative, sharing good moments with all our partners, addressing water challenges and creating new opportunities for scientists and technologists all over Europe is a major source of content. When looking at the efforts performed by so many persons in so many European countries to build the Water JPI, all the preoccupations and all the headaches are clearly worth it!