

ANNEX 2: INTERVIEWS



Laura Burke

Director-General of the Environmental Protection Agency (EPA)

I – The Environmental Protection Agency (EPA) is a multifaceted organisation, which is acting on several critical themes, with Water being one of them. How is EPA responding to the grand challenge of “Achieving Sustainable Water Systems for a Sustainable Economy in Europe and Abroad”?

Overall, while water quality in Ireland is good relative to other EU countries, Ireland faces some considerable challenges in the coming years to meet the requirements of the WFD and other water directives. The three main challenges for water quality management are to eliminate serious pollution associated with point sources (waste water treatment plants); to tackle diffuse pollution (pollution from agricultural activities and septic tanks); and to use the full range of legislative measures in an integrated way to achieve better water quality. There is a pressing need to develop site-by-site actions for the water bodies reported as being at less than good status. By prioritising a subset of these each year, improvements can be made in rivers in the short term (with a slightly longer recovery time for lakes and estuaries).

Protected Water Resources are a key Environmental Goal for the EPA and we have identified Clean Water as a Strategic Priority in our most recent Statement of Strategy 2013- 2015. In this Strategy we identify the need for ‘Clearly defined roles, responsibilities and resourcing for the EPA in water governance and as a regulator for Irish Water in relation to drinking water quality and waste water discharges’. I am glad to say that there has been significant progress in this area, as can be seen from the answer to Q2, where the new governance arrangements for the Water Framework Directive in Ireland are discussed.

Water research is considered a priority within the EPA research programme (total budget for the programme approximately €9m pa) and it is highlighted as one of the three pillars (along with Climate and Sustainability) of the programme for the period 2014-2020. The EPA Research's water pillar deals with groundwater, surface water, transitional and coastal water; as well as wastewater, drinking, bathing and shellfish waters. Over 70 research reports have been published by the EPA in the past 10 years in the area of Water, including policy support for WFD, novel treatment technologies, early warning systems, monitoring of priority substances, management strategies and more.

2 – Ireland is facing important challenges to achieve the targets of the Water Framework Directive (WFD). In your opinion, what are the largest barriers that hinder the application of important measures to improve water quality? What do you expect of cross-border cooperation concerning the matter?

One of the key barriers to successful implementation identified in the first set of River Basin Management Plans was the governance arrangements that were put in place. The published River Basin Management Plans noted that: "The current administrative systems are fragmented along administrative lines and do not facilitate analysis, identification and implementation of the most cost-effective solutions to manage water quality at river basin level. An RBD can cover the areas of responsibility of a large number of bodies e.g. 18 local authorities in the case of the Shannon RBD. Furthermore, the implementation of many of the measures necessary to achieve the objectives of the plans is the responsibility of national rather than local authorities."

To address this barrier the overall governance structures for the implementation of the Water Framework Directive in Ireland have been reviewed. The review concluded that the governance arrangements were overly complex with no single body having ultimate responsibility for delivery of the Water Framework Directive. As a result of this review, the Minister for the Environment, Community and Local Government is putting in place new governance structures and administrative arrangements for the implementation of the second cycle. Regulations were made in July 2014 to give effect to these new governance structures. Ultimately the Minister for the Environment, Community and Local Government will adopt the final river basin management plans. The new arrangements consist of 3 inter-locking levels that are proposed for effective governance and delivery. In summary the three tiers are

Tier I: National Management and Oversight: Led by the Department of Environment, Community and Local Government (DECLG)

Under the new arrangements, the Minister for the Environment, Community and Local Government at Tier I, has clear responsibility for policy, legislation and ensuring the provision of adequate resources for implementing the Directive. It is at this level also that the draft river basin management plan(s) and programme(s) of measures will be refined and finalised in consultation with key Departments and state agencies before presentation to the Minister for approval. A Water Policy Advisory Committee has been established under the new regulations to assist the Minister and its functions and membership are set out in the new Regulations.

Tier 2: National Technical Implementation and Reporting: Led by the EPA

Significant new responsibilities have been assigned to the EPA at Tier 2, including the crucial role of drafting environmental objectives, undertaking catchment characterisation, preparing template river basin management plan(s) and compiling common programme of measures for further development and input by local authorities at Tier 3 and finalisation and approval by the Minister.

Tier 3: Regional Implementation: Led by the local authority sector

The local authorities, operating at Tier 3 will lead implementation and enforcement of measures on the ground and have key responsibility for ensuring compliance with the Directive on public participation including consultation on draft river basin management plan(s) that are developed from the template plans prepared by the EPA.

DECLG will be putting specific administrative arrangements in place to coordinate requirements with Northern Ireland in relation to cross-border waters, encompassing water management units of the Neagh-Bann, the North Western and the Shannon River Basin Districts which flow into or out of Northern Ireland.

As the key aims of the WFD are to maintain the existing satisfactory water status where present in surface waters and groundwater and to achieve good status where the status is currently unsatisfactory, the governance structures and administrative arrangements must support this in every way possible. As such, it is essential that the relevant Government departments, State agencies and local authorities work in close partnership to meet Ireland's obligations under the WFD in as efficient and effective a manner as possible.

3 – Please comment the relevance of EPA's partnership in Water JPI in setting the foundations and directions of the EPA Water Research Programme?

Ireland's waters are one of our major natural resources. Plentiful availability of good quality water offers a significant competitive advantage to sectors such as agriculture, industry and tourism. Water is a resource that must be carefully managed, and improving water quality status is a national priority for Ireland. The EPA Research's water pillar deals with groundwater, surface water, transitional and coastal water; as well as wastewater, drinking, bathing and shellfish waters. It will support the emerging policy & implementation research needs in relation to the implementation of the Water Framework Directive (WFD), as well as marine research considerations to support to the formulation and implementation of policies. In addition, the EPA is coordinating a multi-agency transboundary programme of research on Environmental Impacts of Unconventional Gas Exploration & Extraction (UGEE), which has significant water elements, and is included under Thematic area 5: Emerging and Cross-cutting Issues. The overall aim of the water pillar is to support relevant water policy and to protect our water environment, contributing to achieving excellent water quality in Ireland. The EPA Research's water pillar has a strong focus on policy and has been driven by national regulations and European Directives. Policy-related research plays a vital role in ensuring that EU and national policies are implemented in the most cost-effective manner. A long-term water research programme is an essential component of Ireland's role in protecting its water resources and meeting its requirements under water-related EU directives and national policies. Ireland has a high-quality research, technical and scientific base in the water sector but

this needs to be further strengthened if we are to meet the major environmental and socio-economic challenges ahead. Technology and innovation have a significant role to play in meeting the environmental challenges and can also deliver economic benefits through enhanced competitiveness and improved efficiency. Behavioural change is another key area that requires focus. Between 2007-2013, the EPA STRIVE Programme funded over 100 research projects with a budget over €10,000 related to water with a total commitment from the EPA of approximately €19.5m. The range of projects funded includes desk-studies, scholarships, fellowships and large-scale multi-annual and multi-partner awards. The thematic areas under EPA Research's Water Pillar for 2014-2020 will be:

1. Safe Water;
2. Ecosystem Services and Sustainability;
3. Innovative Water Technologies;
4. Understanding, Managing and Conserving our Water Resources
5. Emerging and Cross-cutting Issues

Multi- and inter-disciplinary research is required on these themes, with expected social, economic, technology, environment and policy impacts. These thematic areas also reflect EPA Research's effort to align, where relevant, its programme with the international Strategic Research Agenda which was launched by the Water Joint Programming Initiative in May 2013.

4 – Success in meeting the challenges on water needs the involvement of all relevant stakeholders. What kind of tools does EPA uses to facilitate articulation between industry-society-academia?

National Linkages

In 2010 the EPA and Enterprise Ireland (EI) established in a national Water Research Coordination Group (WRCG), which is a research funders forum, where research priorities for inclusion in calls for research proposals and longer-term objectives are presented and discussed, with the aim of enhancing synergies and collaboration with other national funders, and avoiding duplication. As of 2014, the WRCG comprises of the EPA, EI, the DECLG, the Department of Agriculture, Food and the Marine, Teagasc, Science Foundation Ireland, Irish Research Council, the Geological Survey of Ireland, Marine Institute, Inland Fisheries Ireland, Office of Public Works, and Irish Water. Annual research calls are advertised widely and are open to all researchers and innovators.

International Linkages

A number of critical international linkages have also been established to promote Irish environmental research into the international arena including enhanced participation in the European Research Area (e.g. Framework Programme, Joint Programming Initiatives, Horizon2020, and European Innovation Platform on Water). By ensuring that Ireland is represented in significant European initiatives related to Water, the EPA will promote an increased efficiency, critical mass and impact of water research in Ireland. The EPA is participating at national level with the Horizon 2020 National Support Network which is led by Enterprise Ireland, and has developed a Catalogue of Environmental Research Expertise in Ireland to support engagement with national and European research activities. <http://erc.epa.ie/h2020catalogue>. We communicate our research as clearly as possible to a

wide range of audiences, while ensuring the basic science is not compromised. Options for communications range from large scientific reports and journal papers, to infographics and tweets. EPA Research also supports open data and open access and all projects funded by EPA Research will have to share their journal articles, data, analysis and all outputs wherever possible.

5 – It is generally agreed that the battle for science is the battle for the future of Europe and for the quality of life of European citizens. Envisioned as a critical factor of growth and competitiveness, much criticism has been raised about the allotment of funds to research in the current economic recession. How do you access the role of JPIs in fostering an effective use of Europe's limited public research funds?

JPIs play a key role in the construction of the European Research Area (ERA). JPIs contribute to developing common solutions, sharing of good Practices resulting in more efficient research programmes , to supporting the implementation of joint actions (such as cross-border collaboration projects or infrastructure sharing), and to improving coordination with other national and European RDI programmes. JPIs increase networking and experience of researchers in applying for European funding – indirectly supporting the participation in Horizon 2020. Ultimately, this will Increase effective update of Water RDI results and outputs.

6th November 2014



Durk Krol

Director of the WssTP - European Technology Platform for Water Research and Innovation.
Deputy-Secretary General of EUREAU

1 – What is the ultimate goal of the Water supply and sanitation Technology Platform (WssTP)? In your opinion, what has been the WssTP greatest achievement to date?

WssTP was created in 2004 in order to i) improve coordination and collaboration on RTD and Innovation, ii) to enhance the competitiveness of the EU water sector, and iii) to contribute to solving the EU's water-related societal challenges. WssTP has been very successful in laying out a vision for the water sector (2006) and gathering the water sector around a common Strategic Research Agenda (2007+2010) and related activities. By doing so WssTP has been very effective in addressing the fragmentation in the water sector. Currently WssTP represents 125 members from across water industry, research institutes and academia, utilities, the supply chain, and large industrial and agricultural water users who collaborate in a WssTP context to address water-related challenges for Europe's industry, society, and environment. WssTP also takes a unique position as it is the only European umbrella organization that represents the full water value chain.

2 – Given the number of organizations that contribute to “Achieving Sustainable Water Systems for a Sustainable Economy in Europe and Abroad”, what is the added-value provided by the WssTP?

The JPI Water has a unique potential for aligning the water dimensions of the different national research agenda's and funding mechanisms with the objective to achieve sustainable water systems for a sustainable economy in Europe and abroad. WssTP and the JPI water are very complimentary in that sense and can help each other by exchanging perspectives on water-related challenges, research priorities, and the best way to address these.

3 – WssTP strives to address the challenges related to an integrated and sustainable management of water resources. How effectively is this goal being pursued?

Very effective.

4 – How do you access the present European scientific and technological cooperation in the water domain? What do you expect of cross-border cooperation concerning the matter?

Since the launch of WssTP in 2004 the European scientific and technological cooperation on water has strongly increased. Today we see a great deal of cooperation going on. Water is a very local issue and the water sector is consequently very fragmented. This means that there is a big risk for wasting of resources and missed opportunities in the form of doubling of efforts and lack of awareness of problems and solutions that exist elsewhere in Europe. Initiatives such as the JPI Water and WssTP have a crucial role to play in overcoming this fragmentation.

5 – WssTP highlights that the European water sector needs to develop “a curiosity for innovation” and that “the water industry is too slow in studying and eventually adopting new technologies.” In your opinion, what are the largest barriers that hinder innovation and technology transfer in the water sector in Europe?

Water utilities are very conservative which can partly be explained by the fact that their services have a direct potential impact on human health but also by the fact how they are governed. Another issue is again the fragmentation of the water sector. For example, there is no single European market for water-related technologies; different countries apply different standards. There is also a huge financial challenge to recover the cost of water services and provide people an incentive to use the available water services wisely. Lack of funding availabilities hinders the potential to bring innovative solutions to the market.

6 –How do you evaluate the present level of cooperation between companies and research centres in Europe? How does WssTP contribute to this matter?

WssTP has an excellent track record of bringing research centres and companies together through its activities to jointly address water-related challenges.

7 – Based on your expertise and knowledge of the European RDI landscape, what are the key challenges that an integrated and effective water governmental policy faces today?

Coping with increasing water stress (quantity & quality), Reducing impact of extreme events (droughts and floods), Managing aging or lacking infrastructure, Facilitating technology transfer, Establishing an “Enabling Framework”, and the MDGs for Sustainable Water Supply and Sanitation Services in Developing Countries.

10th November 2014



Seppo Rekolainen

Director Freshwater Centre of the Finish Environment Institute (SYKE).
Vice President of SAG of the Water JPI.

1 – SYKE aims at providing information, skills and services for governing, public and private sectors, EU bodies and International Organisations. The range of action of the Institute is impressive. Focusing your answer on the Water domain, could you briefly describe examples of SYKE’s actions that contributed to improve Water quality in Europe?

List of most relevant actions:

- SYKE’s personnel are representing Finland in many of the WFD CIS Working Groups
- SYKE is a partner in many EU funded project, in which methods are developed for assessing European water, and also mitigation method are investigated to improve the status of waters
- SYKE is actively taking part in the implementation of the Transboundary Water Convention under the UNECE

2 – Societal Challenges, Industrial Leadership and Excellence in Science. Until recently, these issues were tackled almost independently. How important are Joint Programming Initiatives in setting these priorities and articulating industry-society-academia?

Very important. The water problems cannot be solved without a holistic approach.

3 – As Vice-President of the Stakeholders Advisory Group of the Water JPI, could you elaborate on SAG’s contribution to the implementation of the SRIA?

The role of SAG has not been very active, not at least as a group. On the other hand many of the group members have been actively taking part in the discussions

4 – Collaborative work is mandatory to meet the demanding goals of EU Directives. Given the asymmetric European landscape in Water RDI and Water

Policies, what is key to get all member-states engaged and “making it happen” (quoting from the International Annual UN-Water Conference)?

Water security is linked to food and energy security in all countries, and also crossing the country borders. Not only because of transboundary waters, but also because of the international nature of food and energy trade. To ‘make it happen’ all countries and all sectors should be involved.

5 – In your opinion, are Europe’s objectives of achieving “Sustainable Water Systems for a Sustainable Economy in Europe and Abroad” being accompanied by the scientific community? How do you evaluate the cooperation between companies and research infrastructures to meet these goals?

1st question: yes and no. On the other hand scientists are producing much new information about the status of waters and how to improve it. But many scientists also see, that the objective is too challenging. 2nd question: We can see a good start between industry and research, but there is a lot more to do.

6 – There is a pressure for applied scientific knowledge to solve present industrial challenges or to have an immediate impact on the lives of European citizens. As a leader of prominent research projects, please comment on the compatibility of the delivery of fast results with the continuous need to focus on fundamental research.

We still have a big challenge with the science-policy interface although we have seen some nice examples where decision makers have been inside the research projects already when they were designed. But unfortunately we still have many applied research projects where end-users are just end-users, not partners.

27th October 2014



Robert Schroeder

Policy Officer at the European Commission, Directorate General for the Environment, Unit C.1 Protection of Water Resources and presents the European Innovation Partnership on Water.

I – What are the main goals and achievements of the European Innovation Partnership on Water Efficiency (EIP)?

In the first place, please note that the correct name is the EIP on Water, not water efficiency. The word efficiency was dropped during the first consultations in 2011, as it was considered to limit the reach of the initiative.

With regard to the goals, the EIP on Water has three main, overarching objectives: in the first place, the EIP on Water aims to facilitate the development of innovative solutions to deal with the water challenges we are facing. Second, the EIP on Water aims to create market opportunities for such innovative solutions in case there is a market potential, or create demand for those solution that are not suited for the market, but for example focus on governance. Third, the EIP on Water aims to support the implementation of EU water legislation through application of innovative solutions.

In terms of achievements, after having been operational for less than 2 years, no concrete impacts or new innovative solutions can yet be expected. However, as a major achievement we should consider that in this short period of time, a wide variety of stakeholders have come together and have commonly agreed on a joint agenda for the EIP Water, defining 8 priority areas on which the EIP Water activities focus. Furthermore, given the fact that no direct funding is available, it is impressive to see how many stakeholders have been mobilized and have applied to become Action Groups. Currently, after two calls for Action Groups, we have 25 Action Groups active and working on innovative solutions in the framework of the priority areas, out of a total of 102 applications. In addition, an online Market Place, bringing demand and supply of water innovation together and providing visibility for the Action Groups has been developed and is actively used. Also, action plans to remove key barriers to innovation have been developed and action is expected in the coming months. In short, the major achievement at this moment is the fact that within a very short time, stakeholders have

embraced the EIP Water as the key platform for water innovation in Europe and are starting action. The next step is to ensure impacts of these actions.

2 – Innovation is vital for economic growth, for job creation and for improving the quality of life in Europe. What kind of tools does EIP uses to boost innovation with regard to water related challenges?

All activities of the EIP Water are developed exactly with those objectives in mind. The requirements for Action Groups ask that in the composition of Action Group partners, the entire innovation value chain is represented (as far as relevant), to ensure that the innovation supply side knows from the demand side what is needed for innovative solutions to be applied in practice, to ensure (market) uptake. In addition, the EIP Water online Market Place connects supply and demand of water innovation, allowing different actors to easily find each other, connect and drive towards impacts. Furthermore, the EIP Water develops action plans to remove key innovation barriers, to make it easier for actors to develop and implement their solutions and deal with the challenges they aim address.

3 – There is a pressure for applied scientific knowledge to solve present industrial challenges or to have an immediate impact in the lives of European citizens. How do you respond to criticism that focus has shifted from basic research to product research with short-term impacts on the market?

Please comment on the compatibility of the delivery of fast results with the continuous need to focus on fundamental research.

It is without doubt that there will always remain a need for fundamental research, to underpin policy development and increase knowledge on societal issues. However, we also have to ensure that the research results will become applied in practice. This is precisely where the cooperation between initiatives like the JPI Water and the EIP Water become relevant. Through coordination of research needs and activities in the JPI Water and connecting it with the wider innovation demand that is considered within the EIP Water, an efficient approach can be guaranteed from fundamental research to application of innovative approached in practice.

4 – Innovation requires articulation between industry-society-academia. In your opinion, what are the largest barriers that hinder innovation and technology/knowledge transfer in Europe?

There are a number of important barriers to innovation and knowledge transfer. The stakeholders in the EIP Water have defined the following key barriers: Regulation (or in some cases, the lack of legislation); Public procurement rules; Opportunities for public-public and public-private partnerships; the lack of targeted financial instruments; and the lack of good showcases and testing facilities. The EIP Water is working on actions to remove these barriers and driving to develop a better innovation enabling framework at the EU and member state level.

5 – It is generally acknowledged that public investment in RDI attracts private investment. In your opinion, is this assumption being met? How do you assess efforts between the public and private sectors in which regards funding of research and development?

Indeed, public investments can be an important driver and means of leveraging private investments. This is certainly happening, as many of the public funding opportunities require co-financing. In addition, initiatives such as the EIP on Water create perspectives for private sector investors, providing a view where policy development and public funding will go in the coming years. At the same time, there still is significant room for working on further incentives to connect private investors and public sector investment.

6 – How can innovation support the implementation of European water policies?

The European Commission's Blueprint to safeguard Europe's waters, published in 2012, clearly stated the importance of innovation as a tool to support water policy implementation. The EIP on Water is a result of this conclusion. The role of the EIP Water is to connect the demand of innovation to support policy implementation to the suppliers of the innovative solutions. The priority areas of the EIP Water reflect the policy needs and we are mapping the key challenges of member states in their water policy implementation. This is being matched with the activities of the EIP Water Action Groups, so we can see how they can concretely contribute to support policy implementation. Furthermore, when relevant, Action Groups are being invited to discuss new policy developments with the European Commission, so we can learn from their expertise and experiences.

15th October 2014



Jean-Philippe Torterotot

Deputy Director of Research, Development and Innovation of the Ministry of Ecology, Sustainable Development and Energy.

Former President of EWA - European Water Association.

I – Considering the different degree of challenges faced by the European member-states regarding climate change and water management, how do you see the role of Joint Programming Initiatives, networking and interdisciplinary knowledge transfer in creating a genuine single market for knowledge, research and innovation?

Research and knowledge transfer about water resources, aquatic ecosystems and water uses are quite specific because of different key features of water issues:

- These issues take place in an “open world” and require systemic approaches because of many interactions with other sectors, with different types of activities and phenomena
- They concern a wide diversity of stakeholders, addressing the three dimensions of sustainable development
- They may address various time scales (from real time risk alert to long term asset management) and space scales (local characteristics influenced by global trends)
- They need a real interdisciplinary approach, because of the above mentioned features.

In addition, in many countries research and development teams are quite scattered. As an example, in France there are about 200 public research labs addressing, at least for part of their activities, water related research topics.

On the demand side, water public policies and effective water management are strongly structured and influenced by European directives, and among these by the Water Framework Directive. The WFD is a real trigger for research, depending on knowledge and methods which are produced along the implementation of the regulation.

These are part of the reasons for collaborating, networking, and more generally joining forces and resources in European water related - or more generally environment and agriculture related - research. In this context, JPIs and their outcomes are an important asset to reinforce research: making resources available for key topics which cannot be sufficiently addressed at

national levels, creating better opportunities through extended cross-collaborations, avoiding duplicating efforts while other key issues might be insufficiently addressed...

In addition, interdisciplinary research is highly necessary but also quite complex to initiate and to develop. “Downstream driven” research topics appear to be a quite efficient way to foster interdisciplinary work and approaches.

2 – Innovation is vital for economic growth, for job creation and for improving the quality of life in Europe. In your opinion, what are the largest barriers that hinder innovation and technology/knowledge transfer in Europe?

Let us focus on some barriers to innovation and knowledge transfer which may be specific to water issues, in addition to the complex features mentioned above (considering open systems, many interactions, space and time scales...).

Water is an intensively regulated sector. This can be both a barrier or a trigger, according to the specific question addressed. Public procurement regulations may also make support to innovation in the real world more complicated, because in many cases investors and owners of assets and systems are public. Different initiatives are dealing with this point. In addition, there is a concern about the way a single local authority may invest in a real size experiment, carrying the burden and the responsibility of a more or less risky investment, while many others may benefit by the conclusions of such an experiment. Finding ways to mutualize experiments amongst local water managers is of crucial importance.

Water management often involves and relies on long life assets, which may be difficult to adapt significantly over time without rebuilding. Regulation, pressures and societal needs may evolve quite quicker than the life cycle of such assets.

Finally, there is a strong need for reinforced dialogue and interaction between research, development and innovation on one hand, decision making and management on the other hand: co-construction of research questions, scientific accompaniment of the implementation of institutional, managerial or technological innovation... This must be based not only on mutual knowledge and understanding, but also on explicit collaboration and interaction frameworks recognizing the respective needs and stakes. For instance, time scales for scientific or operational activities are quite different, and this must be taken on board for fruitful collaboration.

3 – Following the latter question, how do you assess efforts between the public and private sectors regarding research funding and development?

Innovation and public-private collaboration on research are high on national and European agendas, in order to support both sustainable water management and economic competitiveness. Green growth objectives fully apply to water issues, on one hand by protecting resources and reducing production inputs, on the other hand by developing new technologies and know-how which are competitive internationally.

At strategic level, European initiatives like the Water supply and sanitation technology Platform - WssTP, the Water JPI and other related JPIs, the European Innovation Partnership on Water, are complementary in fostering and coordinating research, development and innovation in a multi stakeholder and multilateral perspective. Their strong interaction and collaboration

guarantees for this complementarity and coherence. More generally, the growing dialogue amongst different European level initiatives and bodies on water (including thematic and professional associations) is fruitful and positive.

At local level, development of multi stakeholder R&D and innovation consortia, such as the competitiveness clusters in France, allow for more intensive and long term public-private collaboration and co-funding. Given the specific features of the water domain, such clusters need to involve both technology providers, utility operators, engineering and their R&D teams on the private side, scientific institutes, education, operators and local authorities on the public side.

4 – To the public opinion, concepts such as “economic growth” and “sustainable development” are often perceived as independent. However, without a societal consensus for sustainability, governments cannot sustain the political power necessary to protect their natural and human resources. How do you evaluate public awareness, in Europe and worldwide, regarding this critical issue?

From a personal view on media and public expression of opinions in France, I have quite a feeling that public awareness about sustainable development continuously increases, in spite of the economic crises which may favour short term choices, depending on specific issues and stakeholders. Environmental issues are not the easiest ones for understanding, because of the mixture of global and local phenomena, because of the systemic nature of many of them, because of the “hidden” or time delayed character of part of human impacts...

A recent consultation about water shows that people in France prioritize health concerns over other ecological concerns, but the latter are still considered as important by a vast majority, for example with a majority of opinions in favour of the polluter pays principle. The understanding of environmental issues increases within the population, still in a heterogeneous way according to the different topics. When it comes to taking sustainable development in consideration for decision making, understanding is one point, but conflicting objectives and stakes is another one: personal vs collective, short term vs long term, ...

The dependence between on one hand sustainable development and on the other hand economic growth, or economic and social well-being, is now more addressed and expressed than ever before, by policies and politics. In my view, the understanding of this dependence, for instance with green growth/economy concepts, is growing. It is still important to go on explaining, showcasing experiments and results, and involving all concerned stakeholders in the implementation of innovation.

5 – What are the priorities regarding the post-2015 agenda for water and sustainable development?

A recent action plan for water policy has been set in France, based on an assessment of public policy. The headlines of this action plan are:

- Struggle against pollutants (nitrates, pesticides, micro pollutants, heavy metals)
- Struggle against wasting water

- Recovery of the quality of aquatic ecosystems and ecological continuities, struggle against the coverage of soils by artificial surfaces
- Job creation
- Articulation of water policy with other policies impacting aquatic ecosystems.

In a wider perspective about sustainable development, the French agenda is currently addressing two major laws, one on energetic transition for green growth, under discussion at the Parliament, the other one about biodiversity in preparation. To mention examples of the legislative contents which make sense in relation to JPIs, the first law expresses the importance of research in the energy sector, in order to support decision and action, while the second considers reorganising some of the agencies active in interaction with research and transfer of knowledge/methods to practitioners.

A national strategy for ecological transition towards a sustainable development has been prepared, and has been presented to public consultation. The initial drivers are climate change, loss of biodiversity, growing scarcity of natural resources, increase of environmental health risks, which all are concerns for the water sector. Recommendations and targets address the following issues:

- Develop territories which are sustainable and resilient
- Enter into a circular and low carbon economy
- Prevent and reduce environmental, social and geographic inequalities
- Create new economic and financial models
- Accompany the ecological mutation of economic activities
- Turn production of knowledge, research and innovation towards ecological transition
- Educate, teach and raise awareness for ecological transition and sustainable development
- Mobilize stakeholders at all levels
- Promote sustainable development in Europe and internationally.

11th November 2014



Marina Villegas Gracia

General Director of Scientific and Technical Research Ministry of Economic Affairs and Competitiveness.
President of the Water JPI GB.

1 – Societal Challenges, Industrial Leadership and Excellence in Science. Until recently, these issues were tackled almost independently, and difficulties in articulating industry-society-academia are well known around. How important are Joint Programming Initiatives, networking and interdisciplinary knowledge transfer to take RDI in Europe to a higher level?

Providing effective solutions to society through RDI and involving both academia and the industry requires setting ambitious global strategies based on the definition of real and urgent needs and challenges, as well as offering the most appropriate instruments to tackle them. In these days there is a clear need to develop business opportunities contributing to the economic sustainability in Europe. Ensuring seamless integration of the elements of the knowledge value chain (research, development and innovation) is critically important to overcome the economic crisis and to progress towards a sustainable economy. This requires serious effort on the part of Member states, through a comprehensive collaborative work involving all actors: stakeholders, civil society, policy makers, scientists, technologists and entrepreneurs. Joint Programming Initiatives have set out to make these connections among European countries and within the European countries.

2 – Our most valuable natural resource, Water, is pivotal to Europe. Given the number of organisations working towards similar goals, and the proliferation of initiatives regarding Water RDI, how close is Europe from having a clear, unified, and effective strategy for Water RDI (include strengths and weaknesses)?

There is still plenty of work to be done to coordinate the agendas and the activities of the European countries. The Water JPI has performed a strong contribution to this objective in quite a short time. For the first time in Europe, we have a Strategic Agenda and an Implementation Plan. These documents result from the consensus of almost ninety percent of the national public water funding... I believe that these documents underline that we are on the right track to a clear, unified and effective strategy. At the same time, this strategy needs

to cover the specific needs of all partner Countries. The Water JPI can be proud of the bold commitment that took us to this point, and of how the European Water sector leads the world in research and innovation. However, stronger commitment will be required to attain the objectives of the Water JPI, established for 2020. Among them, end-user involvement and Alignment of National Programmes will require renovated efforts.

3 – Please elaborate on Water JPI’s main achievement(s) up to date, including the contribution for the alignment of national water research programmes and policies, and new opportunities opened to the Water RDI community.

As previously discussed, the Water JPI community is very proud of its Strategic Research and Innovation Agenda (SRIA 1.0) and its Implementation Plan 2014-2016. Both documents were officially launched in October 2014. Additional key achievements include:

- The involvement of a critical mass of European RDI funders;
- The publication of our Pilot Call for proposals on Emerging Pollutants, and the evaluation and ranking of the proposals;
- The development of team spirit and cooperation habits among partners, which has led to the energetic development of tasks such as mapping RDI programmes, alignment of National programmes, design of cooperation activities outside Europe and dissemination.

4 – On the same topic, what do you consider as Water JPI’s challenges related to the convergence with H2020? What collaborative actions are foreseen in the future to foster synergies?

Cooperation with Horizon 2020 is critically important for all Joint Programming Initiatives. Since Horizon 2020 and National programmes perform similar activities, the JPI can play a key role in fostering synergies and avoiding the duplication of efforts. This cooperation is already resulting in a more comprehensive use of resources and in the implementation of more coherent research and innovation actions. The challenges identified by JPIs in their Strategic Agendas should be taken into account as an input to the Horizon 2020 biannual work programmes. The Water JPI has already produced a position paper in this sense, recommending ten topics for adoption of Horizon 2020 Societal Challenge 5. On the Other hand, Horizon 2020 has already published one topic for Coordination and Support Action and two topics for ERA-NET Cofund based on the SRIA of the Water JPI.

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

In my view, innovation and knowledge transfer need to be firmly established in the European Research and Innovation system. Emphasis is needed on setting research results in value. This can critically contribute to growth and jobs. However, in the field of water it is also very important to contribute to develop more advanced policies protecting water quantity and

quality, and controlling water related risks. In my responsibility as Director General for scientific and technological research, I promote knowledge flow from science to technology. The challenge remains to make technology work for the economy and the quality of life. An enabling policy framework for entrepreneurs and access to risk funding are critical factors for success.

How can the public and private sectors create a favorable environment for innovation in companies/enterprises?

I believe that there is not a single answer to this question, but rather a set of conditions. Some of them could be:

- Developing new policies in research at national level for fostering the collaboration between Academia and industry.
- Promoting the creation of spin-off companies from research results.
- Providing new, efficient, problem oriented RDI and instruments within the national Programmes.
- Providing sufficient resources for excellent researchers and innovators.
- Increasing the involvement of end-users, SMEs, and other stakeholders in the definition of national research programmes.

6 – How do you envisage the future of the Water JPI, regarding challenges, goals and outcomes?

We live days of celebration and the Water JPI, since we have recently launched our SRIA and Implementation Plan. I am positive that this initiative will continue evolving, and growing. The commitment of our partners is a clear sign of future success. The Water JPI will continue to set new objectives and strategies for achieving sustainable water systems in Europe, strengthening European leadership and competitiveness in the water sector and contributing to the alignment of the national and regional programmes on water research, innovation and development. I believe that by doing so, the Water JPI will perform a measurable contribution to its societal challenge.

31th October 2014