

Water Joint Programming Initiative

# KEY ACHIEVEMENTS

## 2011 – 2016

APRIL 2016



[www.waterjpi.eu](http://www.waterjpi.eu)

# Foreword



The Water Joint Programming Initiative has been successful in mobilising important national water Research and Innovation funding. It has encouraged and stimulated the opening of the Joint Programming Initiative to several international cooperation partner countries, thus setting an example for other Joint Programming Initiatives

to become privileged partners with the European Commission in international Research and Innovation cooperation.

By adopting a multi-disciplinary approach and particularly addressing the early phase of the whole innovation cycle, the Water Joint Programming Initiative helped to complement our Horizon 2020 activities which focus on demonstration and scale up of eco-innovative solutions, market products and services.

We are looking forward to seeing the Water Joint Programming Initiative progressing in the harmonisation, alignment and coordination of the various water Research and Innovation agendas and activities to help us, together with other major partnering European water initiatives, such as the European Innovation Partnership on Water and the Water Supply and Sanitation Technology Platform, to better structure water Research and Innovation in Europe.

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# Executive Summary

Over the last few decades, a number of policies and Research, Development and Innovation (RDI) activities have been put in place in order to protect water resources. Despite these efforts, many regions in Europe still face water scarcity and/or water quality problems. Climate change, groundwater over-abstraction and diffuse pollution are, among others, the main factors influencing water availability and quality. If no action is taken, their impact will be even greater in the years to come.

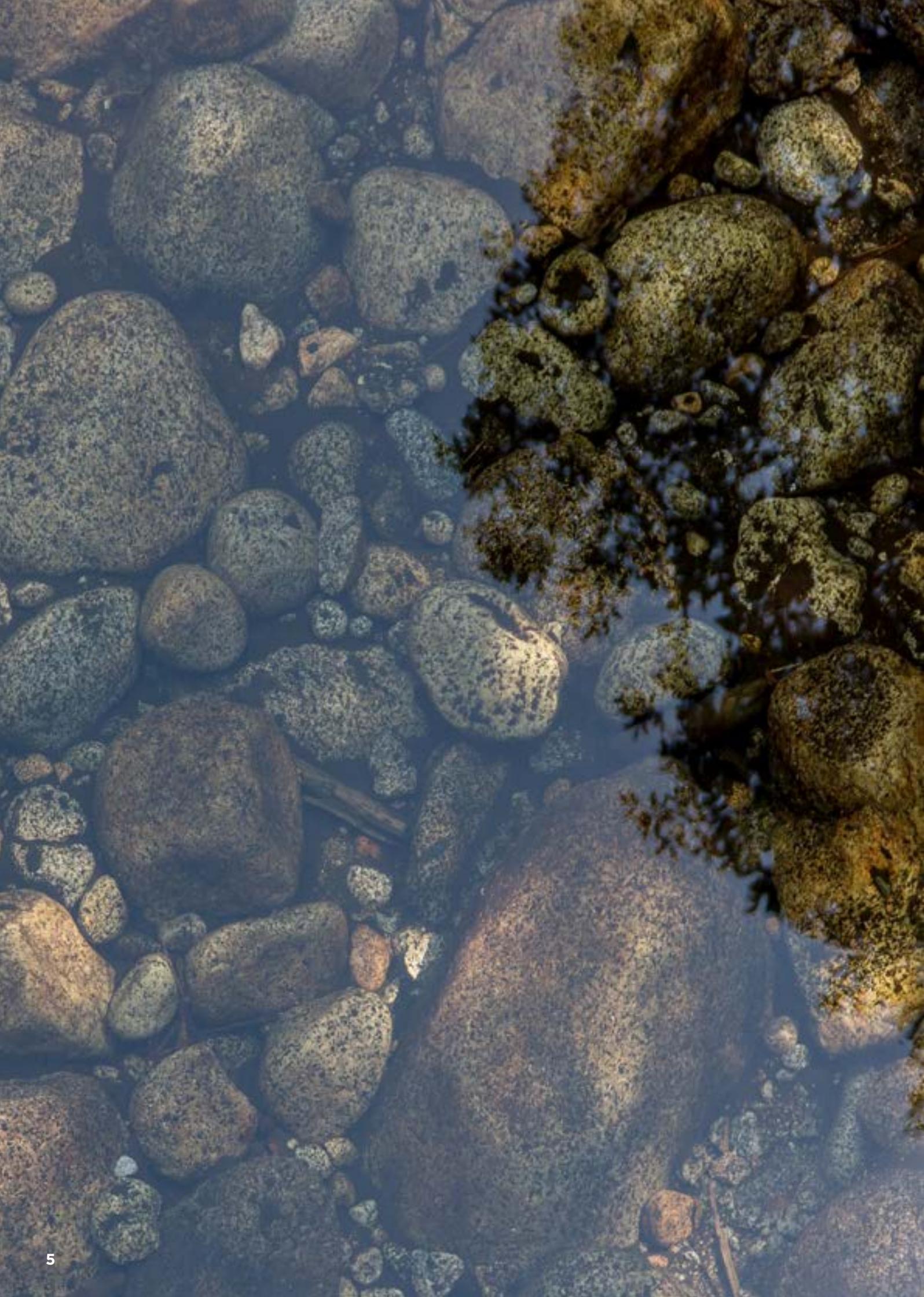
Guaranteeing a sustainable supply of good-quality water should be a priority for the European society. Both policy and RDI activities should, therefore, contribute to this aim. Water supply for the development of different activities (agriculture, energy production, public services, etc.) also needs to be ensured to benefit the economic prosperity of Europe. It is in this context that the Joint Programming Initiative (JPI) 'Water Challenges for a Changing World' (the Water JPI) has defined its grand challenge as '**achieving sustainable water systems for a sustainable economy in Europe and abroad**'.

JPIs are intergovernmental initiatives aimed at tackling societal challenges that cannot be addressed by single countries alone. To this end, JPIs foster cross-border collaboration and coordination. The Water JPI was launched in 2010. To-date, this initiative brings together 20 partner countries, the European Commission and four observer countries. This document describes the significant achievements of the Water JPI between 2011 and 2016.

## Water JPI Key Achievements 2011-2016

1. Progress towards alignment of national research agendas, which is a crucial priority enabling the optimal use of national research funds.
2. Agreement on a common Vision Document, which outlines the objectives the Water JPI should achieve by 2020.
3. The development of the Water JPI Strategic Research and Innovation Agenda (SRIA), which lays out specific RDI needs to tackle the Water JPI grand challenge.
4. The extension of the Water JPI membership to build a greater critical mass, which is required to provide an effective response to major societal challenges and to strengthen the European Research Area.
5. Establishment of the Water JPI Advisory Boards: Scientific and Technological Board (STB) and Stakeholders Advisory Group (SAG), to extend its partnership and involve multi-stakeholders.
6. The development and consolidation of international cooperation, starting from the level of European countries and widening the reach of the JPI to tackle RDI needs at a more global scale.
7. Strengthening the strong EU leadership regarding water RDI activities through publishing of several position papers, interacting with other EU initiatives, and creating synergies between them.
8. Completion of a comprehensive EU water RDI mapping report, including the creation of a Projects Database to better understand the European water-related RDI activities and take stock of national and regional research strategies, policies and programmes in the EU.
9. The launch of three Joint Calls for Proposals in 2013, 2015 and 2016. So far, 23 projects have been funded, with a total budget of approx. €24.9 million.
10. Establishment of a Dissemination Strategy since 2013, to implement and develop the Water JPI communication platform to reach different types of stakeholders and facilitate the engagement of the public at large.





# What are JPIs?

Joint Programming was developed by the European Commission (EC) in 2008, as a means to advancing the formation and realisation of the European Research Area (ERA).

To underpin and support the development of societal change and facilitate future economic growth, it is necessary to have a much broader joint focus on selected priority themes that pose significant challenges, but also offer real opportunities for collaboration.

JPIs are about tackling these major, common, European societal challenges in a coordinated way, through aligning national research programmes in an effective manner, making better use of Europe's limited public RDI funding and extending links to various international initiatives.

There are currently 10 JPIs:

- Alzheimer and other Neurodegenerative Diseases (JPND)
- Agriculture, Food Security and Climate Change (FACCE)
- A Healthy Diet for a Healthy Life (JPI HDHL)
- Cultural Heritage and Global Change: A New Challenge for Europe (JPI CH)
- Urban Europe - Global Urban Challenges, Joint European Solutions (JPI Urban Europe)
- Connecting Climate Knowledge for Europe (CliK'EU)
- More Years, Better Lives - The Potential and Challenges of Demographic Change (JPI MYBL)
- Antimicrobial Resistance - The Microbial Challenge - An Emerging Threat to Human Health (JPI AMR)
- Water Challenges for a Changing World (Water JPI)
- Healthy and Productive Seas and Oceans (JPI Oceans)

In this way, there will be coordination of effort in the wider common interest and outcomes will be mutually beneficial for all participating partners. JPIs provide a combined forum, which allows research knowledge and innovation to be collected, evaluated and assessed. They can also advise and reflect on the emerging and changing needs of new policies and stakeholder interests in a dynamic and responsive way.



# The Water JPI

The Water JPI, entitled “Water Challenges for a Changing World”, was launched in 2010 and later formally approved by the European Council in December 2011.

The Water JPI membership comprises a total of 20 Member States (and the EC as a non-voting member) with four observing countries, which collectively represent 88% of European public RDI investment in water resources.

The Water JPI is dedicated to tackling the ambitious challenge of achieving sustainable water systems for a sustainable economy in Europe and abroad. This will be realised through a multi-disciplinary approach, which includes economic, ecological, societal and technological considerations.

This JPI mobilises existing national and regional RDI programmes and aims to harmonise their research agendas. It defines common research needs and develops joint activities that will increase efficiency by avoiding duplication across Europe.

The Water JPI provides an opportunity for broader cross-border cooperation, greater collaboration and a more unified focus on water RDI across Europe. It must be remembered that the European water sector has a wide diversity of stakeholders and is highly fragmented: water resources, water supply and wastewater have often been locally managed.

The Water JPI will produce science-based knowledge leading to the support of European policies, comprising the identification of problems, their quantification, and the development of feasible technical and managerial solutions. It will coordinate water RDI in the participating countries and provide a powerful tool for international cooperation in the water area.

# Added Value of the Water JPI

The challenges identified by the Water JPI cannot be fully addressed by any individual partner country alone. Although the national and EC Framework Programmes have provided relevant funding to European water research, the wide variety of situations and issues to be tackled and their complex dimension have limited the deployment of successful technologies and policies.

The Water JPI has been designed to be sensitive to national, regional and municipal water problems, thus responding to the large variability in European water issues.

Among the RDI benefits of the Water JPI, five have a clear European dimension:

- Aligning the national RDI agendas, optimising their scope and the resulting funding efficiency; effectively covering the wide variety of European water environments.
- Increasing cooperation among European professionals.
- Designing, building and sharing large research and development facilities (e.g. experimental treatment plants).

- Creating, maintaining and co-operatively exploiting networks of open-field experiments and scientific observatory systems (e.g. experimental watersheds).
- Multiplying the scientific impact of European research, increasing its relevance and scientific leadership.

The Water JPI will target citizen well-being in Europe and beyond. The knowledge produced by this JPI will serve the purpose of reinforcing Europe in the international context.

The Water JPI is an outward looking initiative of the Member States which builds upon previous actions in this area. It will provide a powerful framework for promoting the international interests of the EU and its Member States in respect to economic growth and trade, foreign affairs, international development and humanitarian activities. Significant impacts can be envisaged in the scientific and water policy communities, as well as in developing countries.

# Timeline of the Water JPI

**2009**

**2009 – 2010**  
Preparatory Work to build the Water JPI



**2010**  
Initial EU water RDI mapping survey

**2010**

**2011**

Publication of the Water JPI Vision Document



**2011**

**2011**  
Maturity template submitted to the EC



**2012**  
Award of WatEUR CSA (2012-2016) FP7 supporting project



**2012**



**2011**  
Setting-up of the first Advisory Boards

**2011**  
Adoption by the European Council of Competitiveness



**2013**

First Water JPI Experts Stakeholders Workshop on the SRIA in Lyon, France



**2013**

**2013**  
Publication of the Water JPI Communication Strategy



**2014**

Publication of the Water JPI SRIA 1.0



**2014**  
Change in Leadership

**2014**  
First Online Public Consultation on the SRIA



**2013**  
Publication of the Water JPI SRIA 0.5



**2013**  
Water JPI Joint Pilot Call on Emerging Contaminants



**2014**  
First Water JPI Workshop on Alignment in Brussels, Belgium



**LEGEND**



**2014**  
Water JPI Implementation Plan 2014-2016

**2014**  
Publication of the Water JPI Mapping Report

**2015**  
Water JPI Joint Cofunded Call on water treatment and reuse, resources management and mitigation or water related extreme events

**2015**  
Second Water JPI Experts stakeholders Workshop on the SRIA, in Orleans, France

**2015**  
Water JPI Second Workshop on Alignment in Paris, France

**2016**  
Submission of IC4Water CSA proposal (H2020 supporting project 2017-2021)

**2016**  
Water/FACCE JPIs Joint Cofunded Call on Water Quality & Agriculture

**2016**  
Water JPI SRIA 2.0 & its related public-friendly Introduction document

**2014**

**2015**  
Second Online Public Consultation on the SRIA

**2015**  
Award of WaterWorks2015 ERAnet COFUND (2016-2020) H2020 supporting project

**2015**  
Renewal of the Advisory Boards

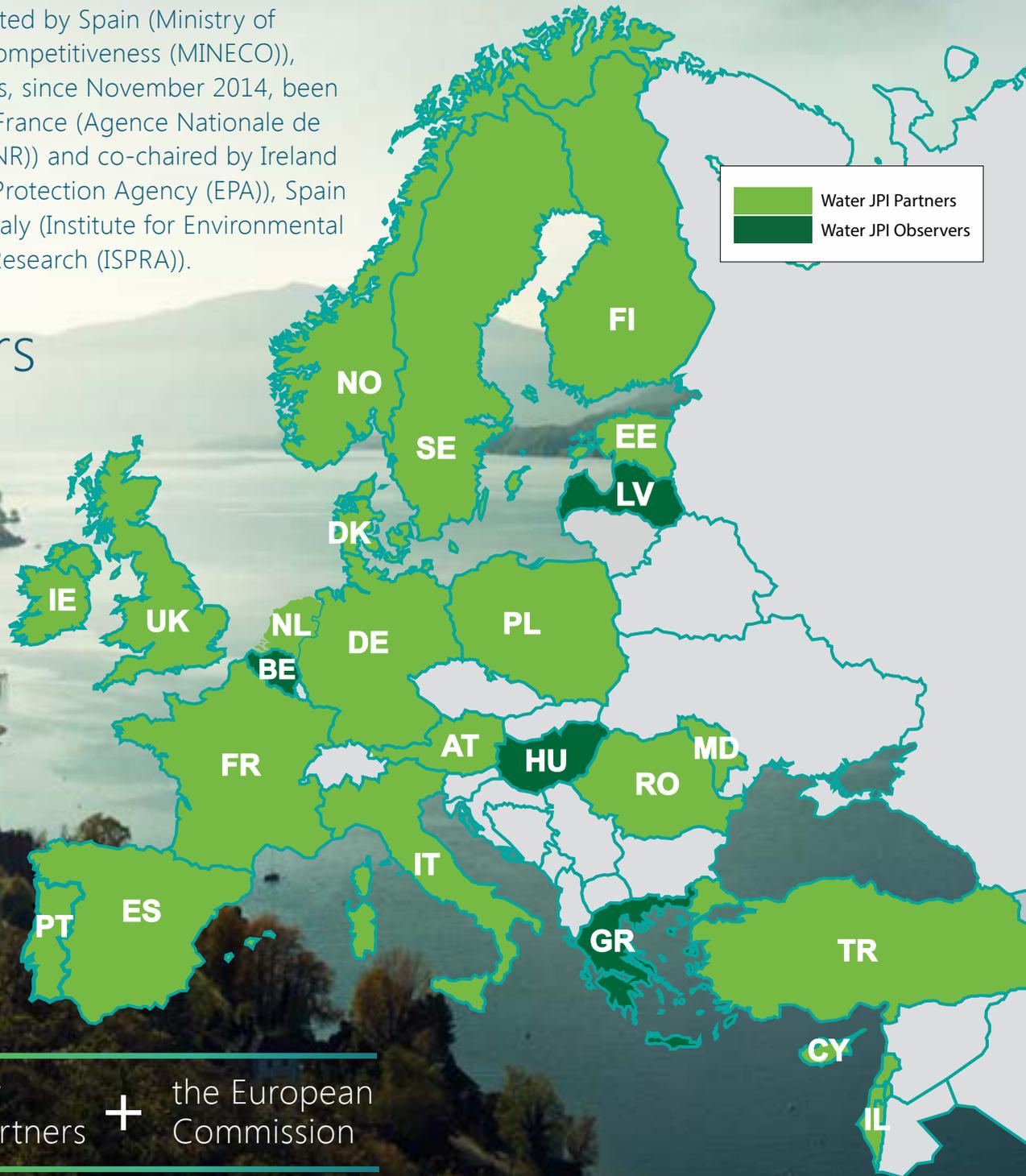
**2014**  
Award of WaterWorks2014 ERAnet COFUND (2015-2019) H2020 supporting project

**2019-2020**

# Water JPI Governance

Initially coordinated by Spain (Ministry of Economy and Competitiveness (MINECO)), the Water JPI has, since November 2014, been coordinated by France (Agence Nationale de la Recherche (ANR)) and co-chaired by Ireland (Environmental Protection Agency (EPA)), Spain (MINECO) and Italy (Institute for Environmental Protection and Research (ISPRA)).

## Partners



**20** Water JPI Partners + the European Commission

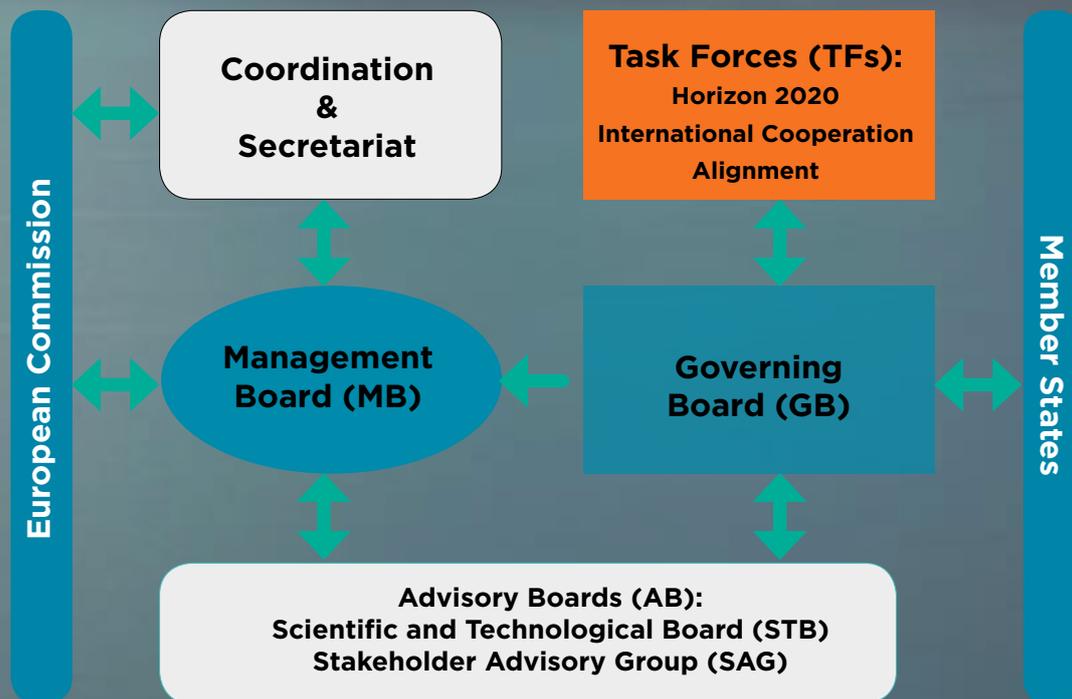
**4** Water JPI Observers

## Governance Structure

The Governing Board (GB) is the ultimate body responsible for the JPI, which deals with JPI policy and strategic issues. Its strategic decisions are based on advice provided by the Management Board (MB) and Advisory Boards. The GB is composed of a Chair,

three Co-Chairs and members (Water JPI participating countries and the EC). Task Forces are set up to respond to specific technical, scientific or administrative demands of the GB and/or the MB.

## Water JPI Governance



# Key Achievement 1: Progress Made Towards Alignment



# Key Achievement 1: Progress Made Towards Alignment

## Introduction

“At the start alignment is the strategic approach taken by Member States to modify their national research programmes, priorities or activities as a consequence of the adoption of joint research priorities in the context of Joint Programming, with a view to improving the efficiency of investment in research at the level of Member States and the European Research Area.”

(Source: ERA-LEARN 2020 Policy Brief on impact assessment of networks, 2015)

Alignment can be implemented via (joint) actions undertaken by Member States or Associated Countries that aim to foster greater coordination and complementarities among national research priorities, programmes and activities around jointly identified strategic priorities (e.g. a Strategic Research Agenda).

## Alignment aims to:

1. Increase synergies amongst (existing) national research programmes and activities
2. Trigger cost-efficiencies in research financing (e.g. via leverage effects)
3. Enhance the level of scientific performance
4. Help identify research gaps
5. Maximise research impact on policy making and innovation, in order to tackle more effectively societal challenges

## Why is it a major achievement?

Success of the Water JPI is dependent upon the willingness to share and to proactively encourage alignment of existing and future national research agendas. Alignment is a crucial achievement not only because it enables optimal use of national research funds, which ensures that global societal challenges are addressed more effectively with maximal societal impact, but it also supports the realisation of the ERA.

## What has been achieved?

Alignment of national water RDI agendas & activities is one of the main aims of the JPIs.

- ✓ Preparation of a Roadmap on Alignment Activities by a dedicated Task Force on Alignment composed of representatives from the UK (lead), Ireland (co-lead), Germany, Spain, France, Italy and the Netherlands.
- ✓ Two Water JPI workshops dedicated to alignment in 2014 & 2015:
  - **First Workshop on Alignment (October 2014)**, aiming at identifying priority activities for Water JPI alignment, based on experience in national and international programmes.
  - **Second Workshop on Alignment (November 2015)**, aiming at identifying 10 key recommendations for short-, medium- and long-term actions.

**Short Term (in next 6 months)**

1. Translate the non-technical vision document into the language of each Member State.
2. Disseminate the SRIA 2.0 in native languages at EU and national levels.
3. Prepare policy relevant flyers on the Water JPI for water directors and managers.
4. Use the mid-term meeting/ERA-NETs of those organisations involved in the pilot call as opportunities to develop wider engagement.

**Medium Term (in next 2 years)**

5. Arrange a meeting of research funders in Member States to explain the work of the Water JPI.
6. Improve contacts with water economic sector (e.g. Water supply and sanitation Technology Platform (WssTP)) and, where possible, create clusters to discuss and generate new research topics with SMEs and innovators along the supply-chain.
7. Consider all relevant actions related to the EU Water Framework Directive and any associated issues related to climate change.

**Long Term (over next 5 years)**

8. Help the countries without a national SRIA to define priorities for water research.
9. Develop mechanisms to gather and respond to wider national level RDI perspectives.
10. Upgrade the Water JPI SRIA as the European Agenda.

A series of Workshops on Good Practices and Exploratory Workshops, as well as Networking Workshops (alignment of ongoing projects) will contribute to identifying barriers and solutions and furthering progress alignment in both funding practices and specific thematic areas. In addition, the setting-up of a mobility & infrastructure platform, Knowledge Hubs and dedicated workshops & cases studies on alignment are also planned over the coming years.

- ✓ Contribution by the Water JPI to the Lund Declaration 2015 – submission of a Joint Position of the 10 JPI Chairs

Three items focusing on alignment were presented by the 10 JPI Chairs for consideration at the Lund Conference 2015. The resulting Lund Declaration 2015 emphasises the urgency of increased efforts in alignment at national and European level.

**Conclusion/Impact**

The conclusions of a survey of the GB members in 2015 indicated that there was an agreed water research agenda at some level in most countries and that most agendas were influenced to some degree by the SRIA of the Water JPI.

Alignment is a cross-cutting issue essential for the success of other activities and the implementation of the JPI itself. Therefore, all main key achievements of the Water JPI to-date have contributed in furthering its progress towards alignment.

- Agreement on a common Vision Document which outlines the objectives the Water JPI should achieve by 2020. (Key Achievement 2)
- The development of the Water JPI SRIA (now in its third iteration, 2.0), which lays out specific RDI needs to tackle the Water JPI grand challenge. (Key Achievement 3)

- The extension of the Water JPI membership to build a greater critical mass which is required to provide an effective response to major societal challenges and to strengthen the ERA. (Key Achievement 4)
- Establishment of the Water JPI Advisory Boards: STB and SAG, to extend its partnership and involve multi-stakeholders. (Key Achievement 5)
- The development and consolidation of international cooperation, starting from the level of European countries and widening the reach of the JPI to tackle RDI needs at a more global scale. (Key Achievement 6)
- Strengthening the strong EU leadership regarding water RDI activities through publishing of several position papers, interacting with other EU initiatives, and creating synergies between them. (Key Achievement 7)
- Completion of a comprehensive EU water RDI mapping report, including the creation of a Projects Database to better understand the European water-related RDI activities and take stock of national and regional research strategies, policies and programmes in the EU. (Key Achievement 8)
- The launch of three Joint Calls for Proposals in 2013, 2015 and 2016. So far, 23 projects have been funded, with a total budget of approx. €24.9 million. (Key Achievement 9)
- Establishment of a Dissemination Strategy since 2013, to implement and develop the Water JPI communication platform to reach different types of stakeholders and facilitate the engagement of the public at large. (Key Achievement 10)

### More Information

- Alignment Section of the Water JPI available from [www.waterjpi.eu](http://www.waterjpi.eu)
- ERA Learn website: [www.era-learn.eu](http://www.era-learn.eu)

Examples of actions progressing alignment using the ERA Learn Typology	
Actions (ERA Learn Typology)	Status - Water JPI
Conduct of joint foresight	Completed
Conduct of joint mapping	Completed
Adoption of common strategic research priorities	Completed - At JPI level
Adoption of a common strategic Implementation / Action Plan	Completed - At JPI level
Conduct of joint stakeholder consultations	Completed
Cooperation between JPIs	Ongoing with FACCE
<b>Research Funding</b>	
Organisation of a joint transnational call for research proposals	Completed (3 calls)
<b>Research Implementation</b>	
Set-up of a network of researchers for a narrow thematic area of research (relevant to a JPI strategic research agenda)	Planned by 2020, with the knowledge hub development
<b>Training of Researchers</b>	
Joint training of researchers	Planned by 2020 (Mobility Platform)
<b>Research Infrastructure and Data</b>	
Shared use of existing national research infrastructures	Planned by 2020 (Infrastructure Platform)



## Key Achievement 2: Towards a Common Vision

# Key Achievement 2: Towards a Common Vision

## Introduction

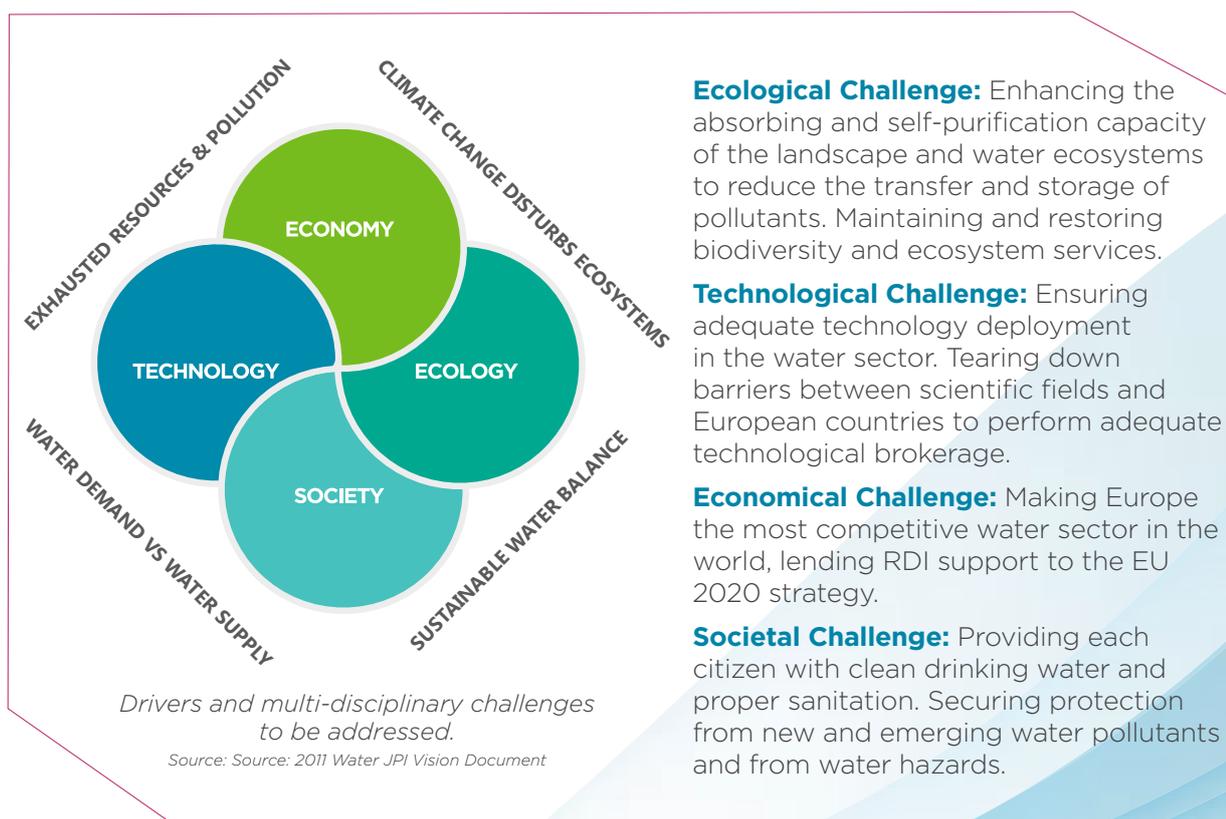
In order to align RDI activities amongst its member countries, the Water JPI needed to agree on a common “Vision Document” laying out the main objectives to be achieved by 2020. It provides context (trends, drivers and challenges) and outlines the JPI objectives and research questions responding to the issues and challenges facing the European water sector. The Vision Document was drafted by representatives of the JPI Partners and Observer countries and officially published on the 20th April 2011.

The Vision Document is the overarching roadmap that outlines what needs to be achieved by 2020 and sets the context for all other Water JPI activities.

## Why is it a major achievement?

A common Vision for the Water JPI is a major achievement, as “water knows no borders”, meaning that countries must work together in a spirit of cooperation to help address the challenges that are common to all and protect this precious resource for future generations.

In 2016, a summary of the Vision Document (What is it about?) was published. At the time of that publication, the membership had grown resulting in the Water JPI partnership accounting for 88% of all European public RDI annual expenditure on water issues. This represents a significant buy-in to the philosophy of the Water JPI and acceptance that European researchers can achieve more and make better use of public funds through research cooperation and RDI programming coordination vs working independently.



**Ecological Challenge:** Enhancing the absorbing and self-purification capacity of the landscape and water ecosystems to reduce the transfer and storage of pollutants. Maintaining and restoring biodiversity and ecosystem services.

**Technological Challenge:** Ensuring adequate technology deployment in the water sector. Tearing down barriers between scientific fields and European countries to perform adequate technological brokerage.

**Economical Challenge:** Making Europe the most competitive water sector in the world, lending RDI support to the EU 2020 strategy.

**Societal Challenge:** Providing each citizen with clean drinking water and proper sanitation. Securing protection from new and emerging water pollutants and from water hazards.

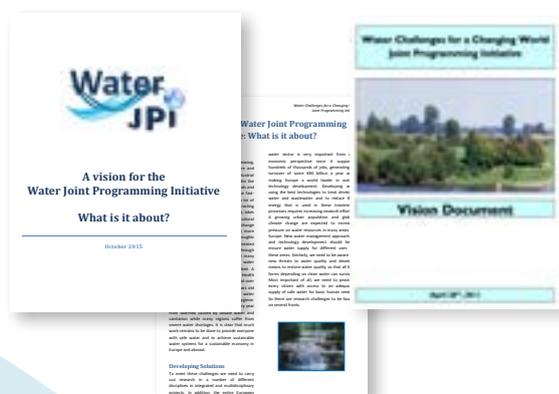
## What are the main elements of the Vision Document?

The Grand Challenge for the Water JPI is to achieve sustainable water systems for a sustainable economy in Europe and abroad. Addressing this challenge requires a multi-disciplinary approach, since several challenges are to be addressed.

The objectives of the Vision Document represent a contribution to the 2020 vision for the ERA. These objectives address the JPI and alignment through internal indicators.

The objectives are:

- Developing solutions
- Increasing scientific knowledge
- Joint programming
- Aligning European, National & Regional programmes
- Sharing resources and building networks
- Creating new opportunities for researchers



*'The Water JPI Vision Document' (2011) and 'A Vision for the Water Joint Programming Initiative - What is it about?' (2016)*

## The Vision Document's six main performance indicators

- ✓ Involving water end-users for effective RDI results uptake
- ✓ Attaining critical mass of research programmes
- ✓ Reaching effective, sustainable coordination of European water RDI
- ✓ Harmonising national water RDI agendas in Partner Countries
- ✓ Harmonising national water RDI activities in Partner Countries
- ✓ Supporting European leadership in science and technology

## Conclusion/Impact

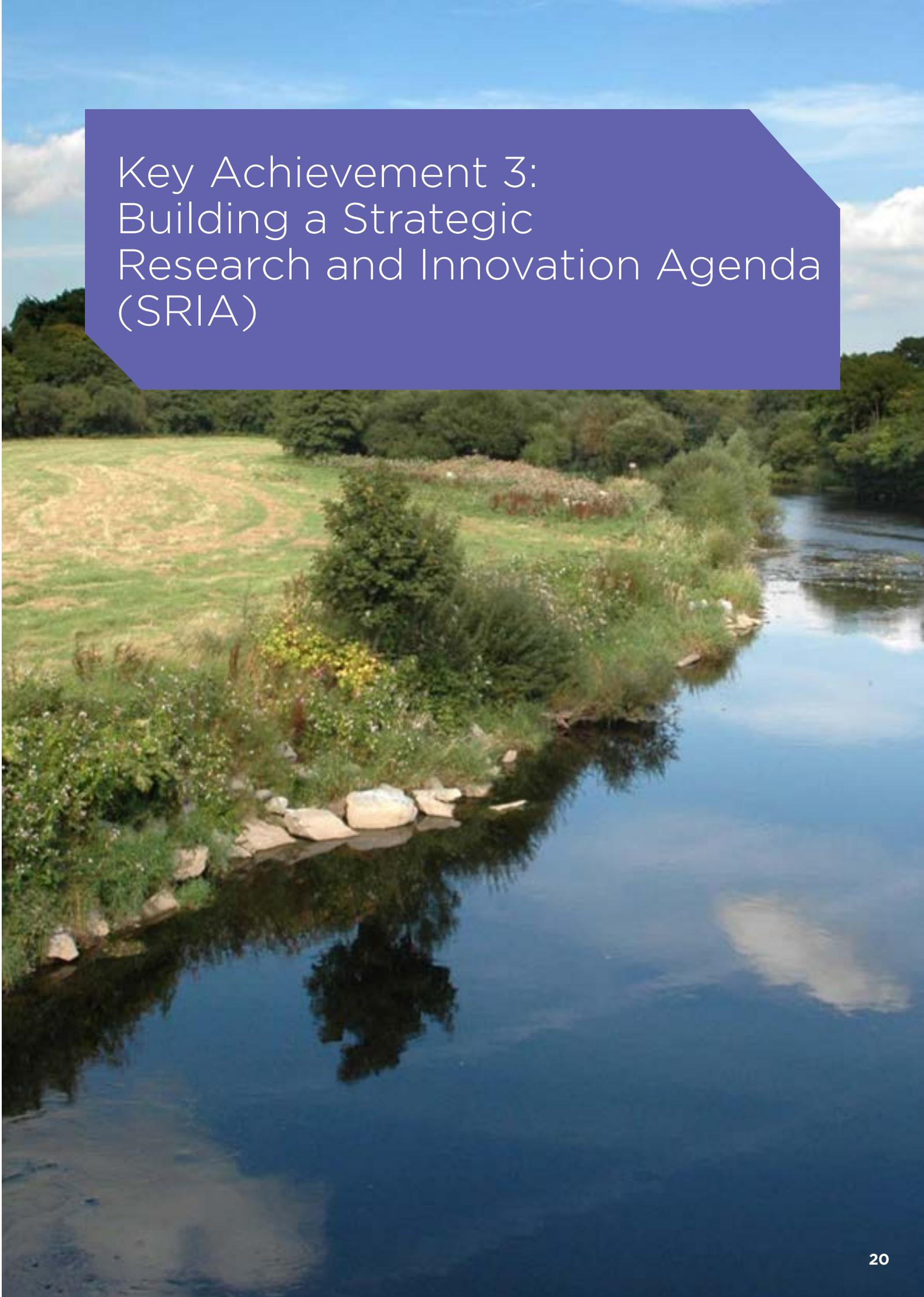
The publication of the Water JPI Vision Document in 2011 triggered an extensive process of collection and analysis of information, as well as stakeholder consultations, in order to select, refine and prioritise RDI needs and develop a SRIA.

It was a document that enabled the Water JPI to engage and communicate its vision with stakeholders. It has also supported attracting additional partners and observers (see Key Achievement 4), which has helped to further strengthen the JPI.

## More Information

- 2011 Water JPI Vision document
- 2016 Summary of the Water JPI Vision document

available from [www.waterjpi.eu](http://www.waterjpi.eu)



## Key Achievement 3: Building a Strategic Research and Innovation Agenda (SRIA)

# Key Achievement 3: Building a Strategic Research and Innovation Agenda (SRIA)

## Introduction

The Strategic Research and Innovation Agenda (SRIA) is a document that presents and prioritises RDI needs. The purpose of the SRIA is to lay down guiding principles and identify the policy-relevant research priorities for the future, while making them openly accessible to the various stakeholder groups, including policy makers, regulatory agencies, researchers, end-users (such as water enterprises; water managers) and the public.

## Why is it a major achievement?

The SRIA is a major achievement as it is a roadmap for future water-related RDI actions in Europe, including, but not only limited to, the Water JPI actions. To this end, it identifies areas where RDI actions

are required. The Water JPI covers the full range of RDI including the broad range of activities from academic research to innovation.

## What has been achieved?

- ✓ Development and formulation of three iterations of the Water JPI SRIA

The most recently published SRIA 2.0 (2016) has resulted from a comprehensive, iterative process, including the consultation, collaboration and consensus of a very broad base of Water JPI partners and stakeholders.

*The Water JPI SRIA  
version 1.0  
(Adopted June 2014)*



## SRIA Process

### Objectives

How?

Complete the identification of potential RDI needs

1. Selection and review of information sources (strategic documents, foresight, roadmaps, etc.)
2. Advisory Boards (June 2015)

Selection, refining and prioritisation of RDI needs

1. Public Consultations
2. Stakeholder Consultation Workshops (April 2014, October 2015)

SRIA 1.0 and 2.0 write-up

1. Revision of the description of themes, subthemes and introductory texts to match RDI needs
2. Higher involvement of Advisory Boards



Water JPI elaboration process

The SRIA has five main core themes. Each of these themes represents a specific aspect of the Water JPI grand challenge for which multi- and inter-disciplinary RDI actions are required. Themes are therefore challenge-driven.

Due to their cross-cutting nature, some of the RDI needs and objectives are obviously linked to others within the SRIA.

### Looking into the agenda... 5 Themes

Maintaining Ecosystem Sustainability



Developing Safe Water Systems for Citizens



Implementing a Water-wise Biobased Economy



Promoting Competitiveness in the Water Industry



Closing the Water Cycle Gap



For each theme, analysis of socioeconomic, environmental and policy impact

Water JPI SRIA: Themes & Subthemes	
<b>THEME 1</b>	Improving Ecosystem Sustainability and Human Well-being
<b>Subtheme 1.1</b>	Developing Approaches for Assessing and Optimising the Value of Ecosystem Services
<b>Subtheme 1.2</b>	Integrated Approaches: Developing and Applying Ecological Engineering and Ecohydrology
<b>Subtheme 1.3</b>	Managing the Effects of Hydro-climatic Extreme Events
<b>THEME 2</b>	Developing Safe Water Systems for the Citizens
<b>Subtheme 2.1</b>	Emerging Pollutants and Emerging Risks of Established Pollutants: Assessing their Effects on Nature and Humans and their Behaviour and Treatment Opportunities
<b>Subtheme 2.2</b>	Minimising Risks Associated with Water Infrastructures and Natural Hazards
<b>THEME 3</b>	Promoting Competitiveness in the Water Industry
<b>Subtheme 3.1</b>	Developing Market-Oriented Solutions for the Water Industry
<b>Subtheme 3.2</b>	Enhancing the Regulatory Framework
<b>THEME 4</b>	Implementing a Water-Wise Bio-Based Economy
<b>Subtheme 4.1</b>	Improving Water Use Efficiency for a Sustainable Bio-economy Sector
<b>Subtheme 4.2</b>	Reducing Soil and Water Pollution
<b>THEME 5</b>	Closing the Water Cycle Gap - Improving Sustainable Water Resources Management
<b>Subtheme 5.1</b>	Enabling Sustainable Management of Water Resources
<b>Subtheme 5.2</b>	Strengthening Socio-economic Approaches to Water Management

## Conclusion/Impact

Previous iterations of the SRIA have been used to develop the Water JPI Joint Calls (see Key Achievement 9), and as a basis to make recommendations to EU Funding Programmes including Horizon 2020 (see Key Achievement 7).

The Water JPI SRIA is neither the intersection of national (and regional) SRIAs, nor a brand new document resulting from a bottom-up approach. The SRIA has been conceived as a participatory, inclusive, shared and forward-looking document that sets out RDI directions. It builds upon national (and regional) SRIAs of partner Member States, foresight studies, the strategic agendas of all the actors involved in water management, and feedback from internal and external consultations.

The SRIA should be regarded as a living document that will be reviewed and revisited regularly. Hence, this collaborative exercise will be extended and undertaken again in the coming years.

A full update of the SRIA will be undertaken and published in 2019 in order to realign water RDI activities with future emerging challenges.

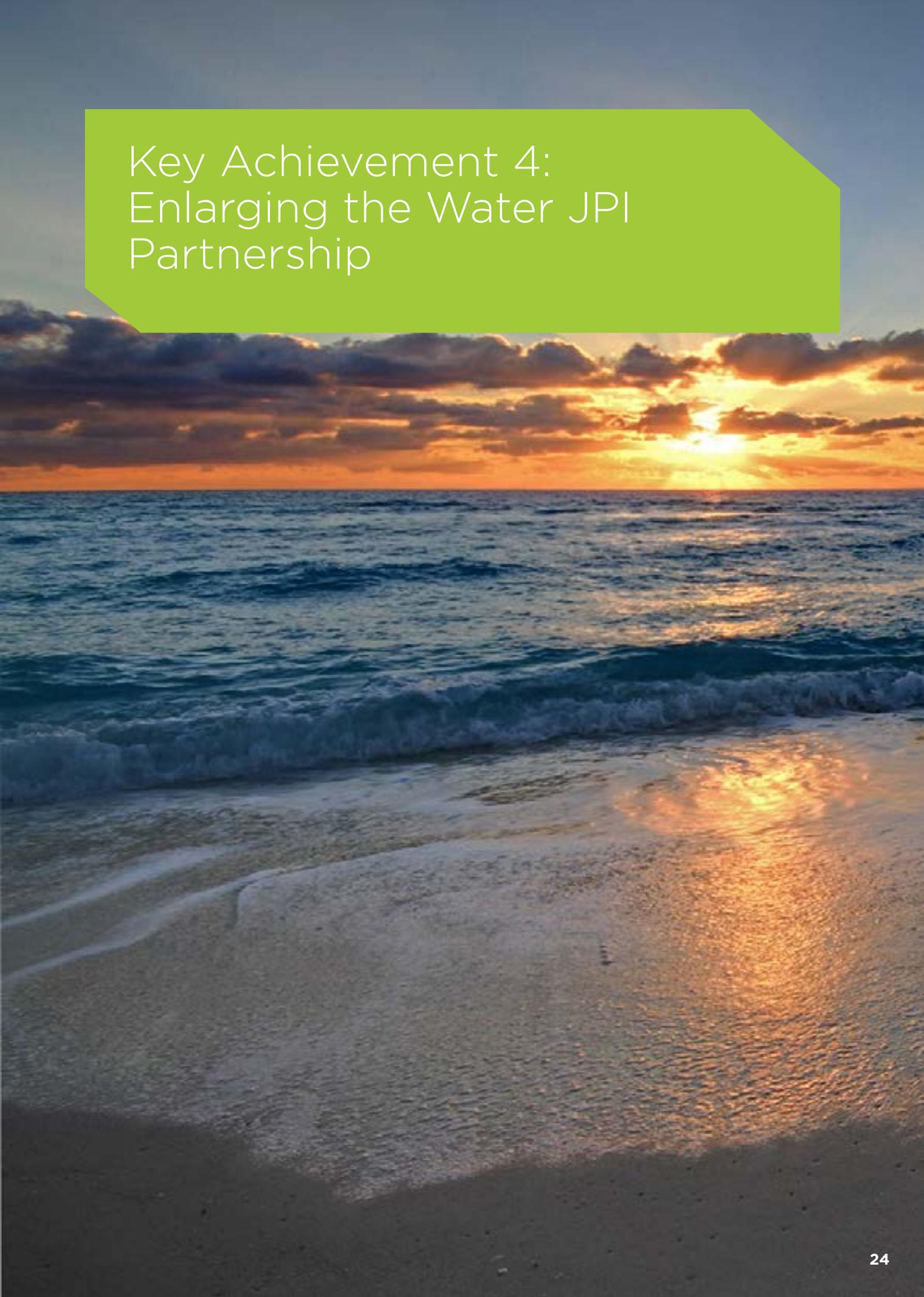
### Related Vision Indicators

- ✓ Involving water end-users for effective RDI results uptake
- ✓ Harmonising national water RDI agendas in Partner Countries

### More information

- Water JPI SRIA 0.5 (2013)
- Water JPI SRIA 1.0 (2014)
- Water JPI SRIA 2.0 (2016)
- Introduction to the Water JPI SRIA 2.0 (2016)

available from [www.waterjpi.eu](http://www.waterjpi.eu)



Key Achievement 4:  
Enlarging the Water JPI  
Partnership

# Key Achievement 4: Enlarging the Water JPI Partnership

## Introduction

The Water JPI provides an opportunity for enhanced cross-border programme collaboration resulting in a larger critical mass of resources and increased impact of research. The success of the Water JPI is dependent upon the willingness to share and to proactively encourage alignment of the national research agendas, existing and in future.

## Why is it a major achievement?

The SRIA is a commonly agreed document across European & national funding organisations and relevant ministries, describing the current & future water-related RDI challenges. It is a reference document for all of the Water JPI activities. Resources pooled by national funding organisations and relevant ministries are maximised to effectively address key societal challenges that could not be tackled individually by Member States. The added value of Joint Calls include minimisation of fragmentation, scientific excellence of transnational research teams, a multidisciplinary approach, and mobility of human resources. In addition, cooperation between national funding organisations and relevant ministries are developed, including the sharing of good practices.

Extending the JPI helps to build a greater critical mass which is required to provide an effective response to major societal challenges. It also strengthens the ERA.

## What has been achieved?

- ✓ The Water JPI currently contains 20 partner countries (Austria, Cyprus, Denmark, Estonia, Finland, France, Germany, Ireland, Israel, Italy, The Netherlands, Norway, Poland, Portugal, Romania, Spain, Turkey, United Kingdom, Moldova, Sweden), the EC (as a non-voting member) and four observer countries (Belgium, Greece, Hungary, Latvia)

This partnership collectively represents 88% of European public RDI investment in water resources. Currently the Water JPI is coordinated by France (ANR) and co-chaired by Ireland (EPA), Spain (MINECO) and Italy (ISPRA). In addition to European partners, the Water JPI has also an international cooperation dimension (see Key Achievement 6).

## Conclusion/Impact

“Water knows no borders” - an example is the river Danube which flows through 18 different countries. Countries must cooperate if linked ecosystems are to be protected for the future. The expansion of the Water JPI partnership demonstrates buy-in from Member States to the philosophy of the Water JPI resulting in increased critical mass, alignment and coordination of efforts.

The Chairs of the 10 JPIs proposed several actions to spread the “joint programming process” over the coming years in the 2015 Lund Declaration. These actions are not only of direct relevance to alignment (see Key Achievement 1), but also to maximising the outreach and awareness of the Water JPI to other Member States.

The Water JPI has launched contact in these countries, informing about recent developments and results.

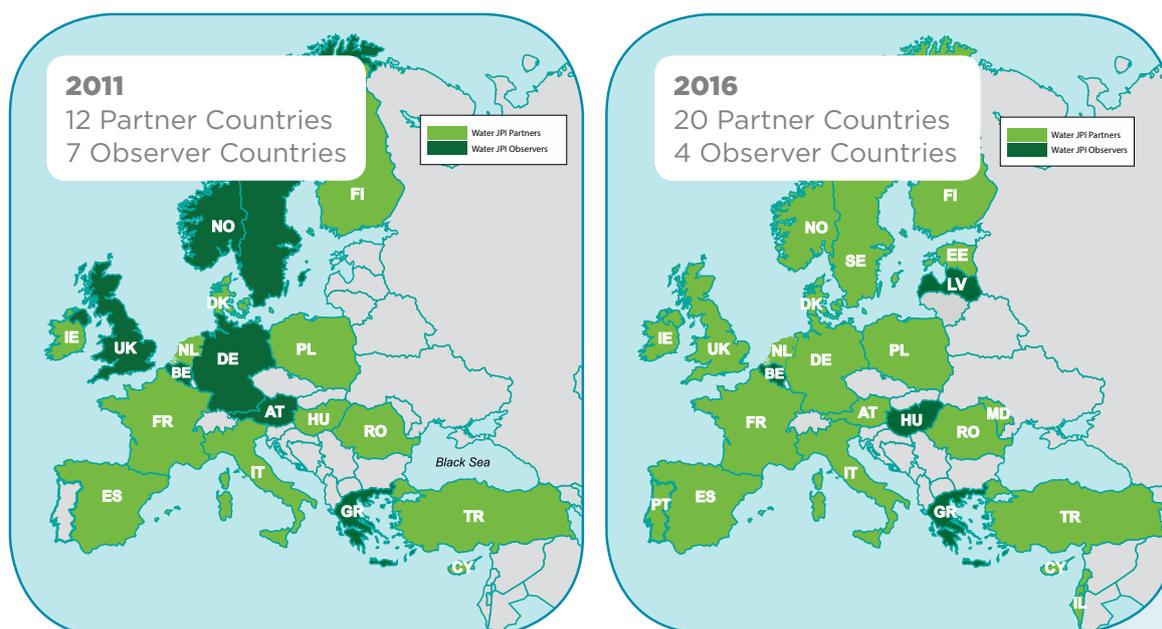
### Related Vision Indicator

- ✓ Attaining critical mass of research programmes

## More Information

- 2015 Lund Declaration
- Members Section of the Water JPI website

available from [www.waterjpi.eu](http://www.waterjpi.eu)



Progression of the Water JPI membership from 2011 to 2016

A photograph of a waterfall in a tropical forest. The water is white and cascades over dark, mossy rocks. The background is filled with dense green foliage, including ferns and hanging vines. A teal-colored banner is overlaid on the top left of the image, containing the text 'Key Achievement 5: Engaging Stakeholders'.

## Key Achievement 5: Engaging Stakeholders

# Key Achievement 5: Engaging Stakeholders

## Introduction

Water is vital for life, for drinking, cleaning, flushing, food production in agriculture and for the manufacture of many industrial products and commodities. Healthy water bodies are also necessary to support aquatic ecosystems. In addition, the water sector in Europe is very important economically, supporting hundreds of thousands of jobs and generating a turnover of €80 billion annually. Europe is leading in water technology development. However, increased pressures are placing a strain on water systems.

To ensure that the Water JPI addresses the needs of society, it is essential to ensure that RDI investments are correctly prioritised on the key challenges facing the sector. To do this, the inputs of a broad range of stakeholders and actors working across all aspects of the water sector are needed to arrive at a fit for purpose SRIA.

In turn, multi-stakeholder, multi-disciplinary teams are needed to work together to develop practical solutions to the challenges that exist and ensure that new knowledge is effectively transferred to end-users (policy-makers, water resources managers, water and sanitation utilities/enterprises, etc.) and adopted.

## Why is it a major achievement?

The water sector in Europe is diverse with a significant amount of actors involved. The Water JPI partnership has worked hard to operate openly and transparently, engaging as many stakeholders as possible (scientific, public authorities, industry, citizens, etc.) to ensure that views and perspectives are exchanged in developing its key documents and designing its activities.

It is expected that such an approach will result in a) robust impactful outputs and b) engagement and support by the European water sector and stakeholders.

## What has been achieved?

- ✓ The Consultation Process as part of the SRIA preparation

In addition to a thorough analysis of information sources, participatory approaches underpin the development of the SRIA. Such an approach calls for the involvement of stakeholders and society at large in the preparation of the SRIA, so that it better reflects water RDI needs with a clear link to societal challenges. Stakeholders and society at large are therefore meant to play a key role in the identification and prioritisation of the research needs.



### 2 Online Public Consultations

2014 - **637** respondents

2015 - **390** respondents



### 2 Experts Stakeholders workshops



2014  
Lyon, France  
c. **60** attendees



2015  
Orléans, France  
c. **40** attendees

✓ Setting up of Advisory Boards

Multi-stakeholder Advisory Boards were established early on (2011) and renewed in 2015 to give advice to the GB and MB on specific issues. The Advisory Boards will be the link between the JPI activities and ongoing national, international and EC-funded activities.

Two independent bodies, the Scientific and Technological Board (STB) and the Stakeholder Advisory Group (SAG), perform these tasks.

- **Scientific and Technological Board (STB)**

The STB is composed of 10 experts conducting RDI in the fields of interest of this JPI, serving in their individual capacity.

- **Stakeholder Advisory Group (SAG)**

The SAG represents the water industry, local/national policy makers, users, NGOs, etc. There are 10 members, contributing the views of their respective institutions.

### Water JPI Scientific and Technological Board Members

<b>Dermot Diamond</b>	Dublin City University
<b>Agathe Euzencnrs</b>	Centre national de la recherche scientifique (CNRS) – Laboratoire Techniques Territoires et Sociétés (LATTS), France
<b>Despo Fatta-Kassinou (Chair)</b>	Nireas-International Water Research Center, University of Cyprus, Cyprus
<b>Ing-Marie Gren</b>	Swedish University of Agricultural Sciences, Sweden
<b>Jaap Kwadijk</b>	Deltares/University of Twente, The Netherlands
<b>Inmaculada Ortiz</b>	University of Cantabria, Spain
<b>Jens Christian Refsgaard</b>	Geological Survey of Denmark and Greenland, Denmark
<b>Seppo Rekolainen (Co-Chair)</b>	Finnish Environmental Institute, Finland
<b>Karl-Ulrich Rudolph</b>	Institute of Environmental Engineering and Management, University of Witten, Germany
<b>Adrian Stanica</b>	National Institute of Marine Geology and Geocology – GeoEcoMar, Romania



Water JPI Advisory Boards meeting in Dublin, Ireland, in March 2016

Water JPI Stakeholder Advisory Group Members	
<b>ACQUEAU</b>	The EUREKA Cluster for water
<b>ARC</b>	Aqua Research Collaboration
<b>CIS</b>	Common Implementation Strategy
<b>EIFAAC-FAO</b>	European Inland Fishery and Aquaculture Advisory Commission
<b>EIP Water</b>	European Innovation Partnership on Water
<b>EU-INBO</b>	International Network of Basin Organisations
<b>Euraqua (Chair)</b>	European Network of Freshwater Research Organisations
<b>EurEau</b>	European Federation of National Associations of Water and Wastewater Services
<b>EWA</b>	European Water Association
<b>WssTP (Co-Chair)</b>	Water Supply and Sanitation Technology Platform

Other stakeholder involvement/engagement actions are also developed via:

- The Mirror/support Groups created in some Member States countries, enlarging exchanges to national, regional and local stakeholders (Ministries and Agencies of Research, Industry, Environment, Agriculture, Research Alliances and networks, Entreprises/Research centres, Innovation clusters, Representatives from other JPIs on national level)
- Specific activities with some key stakeholders (WssTP, EIP Water, COST association, etc.)
- The creation of a LinkedIn Water JPI researchers forum group (see Key Achievement 10)
- In the close future, the development of the Water Knowledge Hub (thematic workshops, process workshops) and training actions

#### Related Vision Indicator

- ✓ Involving water end-users for effective RDI results uptake

## Conclusion/Impact

The organisation of the two consultative workshops (2014: Lyon and 2015: Orleans) and two Online Public Consultations encouraged the participatory approach in the preparation of SRIA.

Via its links with the WssTP and EIP on Water, the Water JPI aims to build synergies with, and support water-related enterprises. The Water JPI SRIA can be an instrument for co-design and co-development of knowledge and solutions for their services. In addition, commercial actors actively working within the water-related support industries will be able to monitor RDI implementation, by helping to identify potential research outputs that could support or enable innovation and competitiveness.

The two Advisory Boards have been found to be effective high-level mechanisms to capture the inputs of different stakeholders. Their main role is to ensure that the Water JPI activities continue to be:

- Relevant to water research needs,
- Relevant to the needs of water sector stakeholders (enterprises, policy-makers, researchers),
- Of high scientific quality.

## More Information

- Water JPI SRIA 1.0 (2014)
- Water JPI SRIA 2.0 (2015)
- Advisory Boards Section on the Water JPI website

available from [www.waterjpi.eu](http://www.waterjpi.eu)



## Key Achievement 6: Increasing International Cooperation

# Key Achievement 6: Increasing International Cooperation

## Introduction

Even though the primary remit of the JPIs is to promote cross-border collaboration of European Member States, international cooperation has rapidly emerged as a priority key activity, given the nature of water as a global resource. In this respect, the Water JPI has three specific objectives:

- Strengthening the international dimension of European water RDI
- Developing durable partnerships for water RDI in the world
- Broadening the impacts of the Water JPI common activities

Water crises have been identified in 2015 by the World Economic Forum (nearly 900 experts took part in the Global Risk Perception Survey) as the TOP 1 risk in terms of impacts to economy and society for the upcoming years. The water crises, associated with the failure of climate-change adaptation, are also perceived as more likely and impactful than average risk. Global water requirements are projected to be pushed beyond sustainable water supplies by 40% by 2030. Decision-makers will be forced to make tough choices about allocations of water that will impact users across the economy.

Since the adoption in September 2015 of the United Nations 2020 Agenda for Sustainable Development, the EC has

defended the necessity for the EU to play a leading role at the global scale by fully integrating the Sustainable Development Goals (SDGs) in the framework of its internal and external policies. Within the new post-2015 development agenda, the place of water-related issues has been further strengthened. Indeed, water is at stake not only in SDG 6 to “Ensure availability and sustainable management of water and sanitation for all”, but in almost all of the 17 SDGs. The following SDGs are particularly relevant to water challenges:

- SDG 1 (No poverty)
- SDG 2 (No hunger)
- SDG 3 (Good health and well-being)
- SDG 11 (Sustainable cities and communities)
- SDG 12 (Responsible consumption and production)
- SDG 13 (Climate action)
- SDG 14 (Life below water)

Within SDG 6, the Target 6.a is dedicated to international cooperation: “By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.”

## Why is it a major achievement?

A more coordinated and consistent approach in international water RDI cooperation not only helps to build a greater critical mass needed to provide an effective response to major societal challenges but it also enables Europe to participate more effectively in agenda setting in international water fora and to convey consistent messages.

## What has been achieved?

- ✓ Mapping of RDI activities (from funding to execution) in Brazil, Canada, China, India, South Africa, the United States and Vietnam

A thorough analysis giving insight information on the degree of water RDI, water market perspectives and the opportunities for collaboration was carried out.

- ✓ Establishment of a dedicated Water JPI Task Force on International Cooperation

The Task Force, composed of members from Denmark, France (lead), Italy (co-lead), the Netherlands, Portugal, Moldova, Spain, Sweden and the United Kingdom, was established at the beginning of 2015.

It is in charge of preparing a Roadmap on International Cooperation Development, and has several aims including integrating all the various Water JPI activities in this area.

- ✓ Joint Calls in 2015 and 2016 with International partners

WaterWorks2014 has a South African funder joining the transnational Call. WaterWorks2015 includes eight organisations from Horizon 2020 associated and third countries<sup>1</sup>, in an effort to reinforce international cooperation in the area of “Sustainable management of water resources in agriculture, forestry and freshwater aquaculture sectors”. These international organisations join the transnational call as well as some Additional Activities carried out to support the strategy of the Water JPI.

- ✓ Submission of an Horizon 2020 Proposal in March 2016

The Horizon 2020 Proposal IC4Water is a coordination support action aimed at supporting and accelerating the successful development and implementation of the Water JPI at the international level in coherence with the overall objectives of the Water JPI.

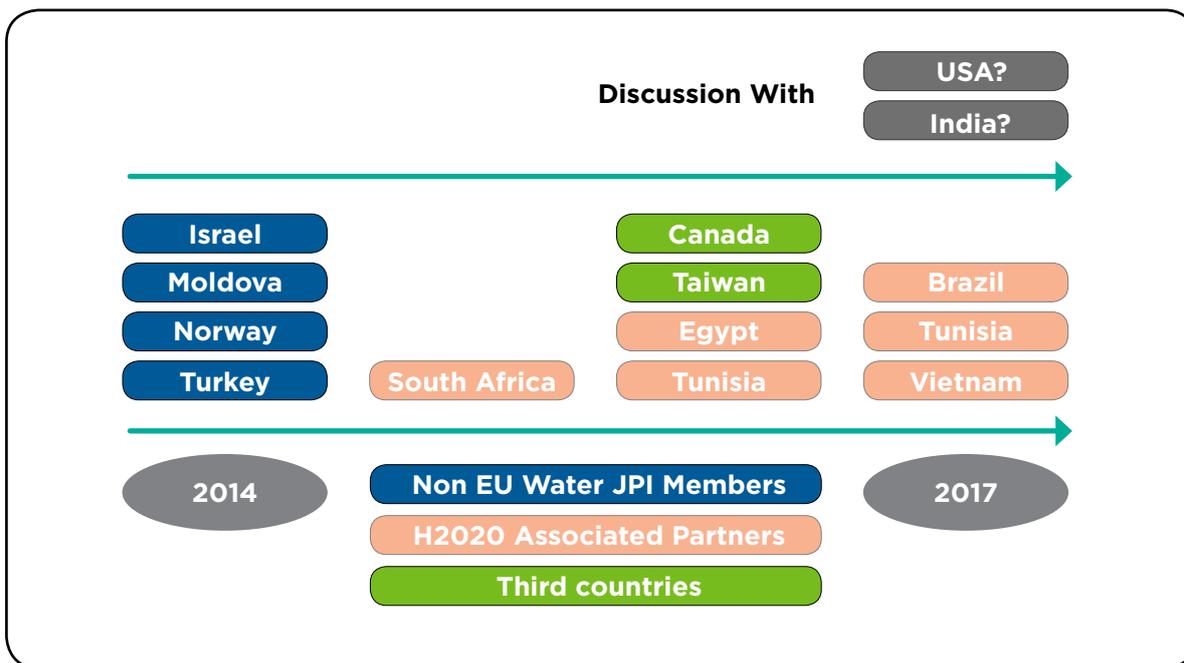
*2014 Mapping Report  
of RDI activities (from  
funding to execution) in  
Brazil, Canada, China,  
India, South Africa, the  
United States and Vietnam*



**1. Associated Country:** A third country which is party to an international agreement with the European Union, as identified in Article 7 of Regulation(EU) No 1290/2013 [Horizon 2020].

**Third Country:** A state that is not a member state of the EU.

Obtained from: [http://ec.europa.eu/research/participants/portal/desktop/en/support/reference\\_terms.html](http://ec.europa.eu/research/participants/portal/desktop/en/support/reference_terms.html)



Progression of international cooperation from 2011 to 2016



United Nations Sustainable Development Goals



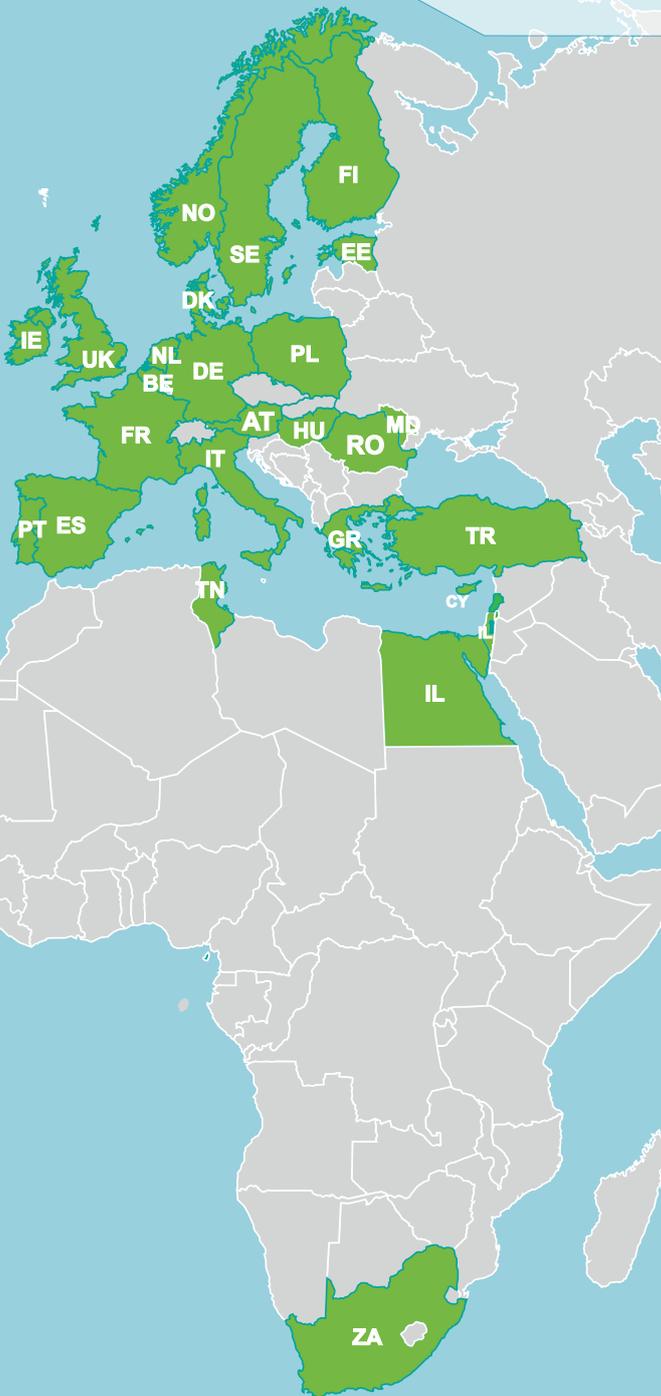
**Joint Calls in 2015 and 2016 with International partners**

2015		2016	
BL	Belgium	BE	Belgium
CY	Cyprus	CA	Canada
DK	Denmark	CY	Cyprus
EE	Estonia	DK	Denmark
IE	Ireland	IL	Egypt
IL	Israel	FI	Finland
IT	Italy	FR	France
MD	Moldova	DE	Germany
NL	The Netherlands	IE	Ireland
NO	Norway	IT	Italy
PT	Portugal	MD	Moldova
RO	Romania	NL	The Netherlands
ZA	South Africa	NO	Norway
ES	Spain	PL	Poland
SE	Sweden	PT	Portugal
		RO	Romania
		ES	Spain
		ZA	South Africa
		SE	Sweden
		TW	Taiwan
		TN	Tunisia
		TR	Turkey



# International linkages of the Water JPI

Countries involved in the 2015 and 2016 Joint Calls and IC4Water CSA proposal.



## Countries participating in the 2016 IC4Water proposal

BE	Belgium
BR	Brazil
CY	Cyprus
DE	Denmark
IL	Egypt
FI	Finland
FR	France
DE	Germany
IE	Ireland
IL	Israel
IT	Italy
ND	Moldova
NL	The Netherlands
NO	Norway
PT	Portugal
RO	Romania
ZA	South Africa
ES	Spain
SE	Sweden
TW	Taiwan
TH	Thailand
TN	Tunisia
UK	United Kingdom
VN	Vietnam

## Conclusion/Impact

International Cooperation is already having positive results on the activities of the Water JPI as well as extending the geographical scope of any impacts.

With increased international awareness on water challenges such as the recent adoption of the United Nations 2030 Agenda for Sustainable Development by world leaders, the Water JPI should play a more important role in providing and steering research and innovation in the Water sector, in close cooperation with upcoming international conventions/policies and international research fora.

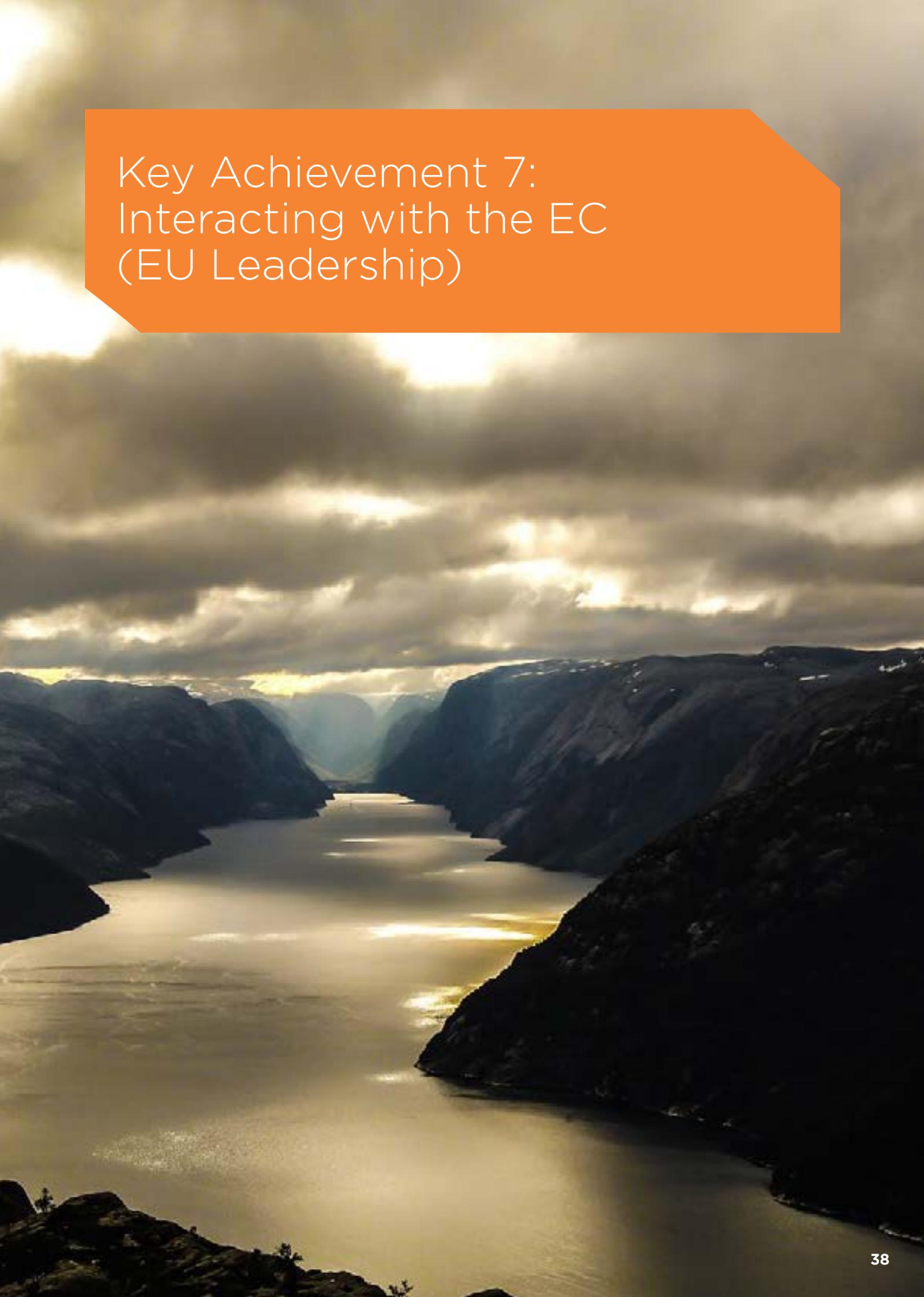
### Related Vision Indicators

- ✓ Attaining critical mass of research programmes
- ✓ Supporting European leadership in science and technology

## More Information

- 2014 Mapping Report of RDI activities (from funding to execution) in Brazil, Canada, China, India, South Africa, the United States and Vietnam
- International cooperation Section of the Water JPI website

available from [www.waterjpi.eu](http://www.waterjpi.eu)



Key Achievement 7:  
Interacting with the EC  
(EU Leadership)

# Key Achievement 7: Interacting with the EC (EU Leadership)

## Introduction

Horizon 2020 uses a cross-sectoral approach to the demand-driven and global challenge-based research and innovation for water across science excellence, industrial leadership and societal challenges. Horizon 2020 is the biggest EU Research and Innovation programme ever. Water is an overarching and cross-sectoral theme. With a budget of nearly €80 billion and running from 2014 to 2020, Horizon 2020 implements the Innovation Union Flagship initiative, which aims to secure Europe's global competitiveness, growth and jobs.

The Water JPI Implementation Plan (IP) 2014-2016 sets out the roadmap to deliver the Water JPI SRIA 1.0 from 2014 to 2016. The IP stands in parallel to a number of Horizon 2020 Work Programmes (WPs), in particular Societal Challenge 5 (SC5): Climate Action, Environment, Resource Efficiency and Raw Materials.

## Why is it a major achievement?

Both the Water JPI and Horizon 2020 use public funds to achieve their goals, and enjoy a significant area of synergy in their respective research priorities. These synergies can enhance knowledge and capacities in order to support national alignment of RDI activities. The JPI also provides a channel for dialogue with the EC on future Horizon 2020 calls.

## What has been achieved?

- ✓ Cooperation with the European Innovation Partnership - EIP Water

The JPI cooperates in the EIP objectives, targets and outputs, in order to facilitate the transfer of knowledge from European research to innovation. The EIP Water has been on the Water JPI SAG since 2011. The Water JPI is actively engaged in the Steering Group and the Task Force of the EIP Water. Some common activities are now envisaged (e.g. shared database on water RDI projects).

- ✓ Cooperation with the Water supply & sanitation Technology Platform (WssTP)

This European Technology Platform (ETP) has been the Chair of the Water JPI SAG between 2011 and 2015, and is now the co-chair since the board renewal in Spring 2015. The Strategic Research Agenda of the WssTP was a major reference for the Water JPI SRIA. WssTP members are partners in some of the Water JPI funded projects (under the 2013 Pilot and Water JPI 2015 Joint Calls). Proposals prepared by WssTP members are also expected in response to the Water JPI 2016 Joint Call. Finally, the WssTP is a partner in the recent Water JPI proposal: IC4Water on international cooperation in response to the Horizon 2020 2016 Call.

- ✓ Cooperation with EC (DG Research & Innovation)

Since its launch, the EC has been very supportive of the Water JPI and a non-voting member of its GB. In its 2013 Position Document on Horizon 2020,

the Water JPI committed to sustain a permanent dialogue with Horizon 2020, focusing on issues such as:

- The implementation of synergy areas in water RDI,
- Agenda setting within Horizon 2020.

To date, the Water JPI has prepared the following Position Papers.

- May 2012: Position Document on the European Innovation Partnership on Water
- June 2013: Position Paper on the Preparation of Horizon 2020 SC5 WP 2014/15
- June 2014: Position Paper in response to the Public Consultation on the the Horizon 2020 SC5 Expert Advisory Group Report
- February 2015: Preliminary Position Paper in response to the Call for Ideas on Large-Scale Demonstration projects
- March 2015: Preliminary Position Paper on the draft Horizon 2020 WP2016/17
- April 2015: Summary Position Paper on the draft Horizon 2020 SC5 WP2016/17
- March 2016: Water JPI Position Paper on the Climate JPI Research Agenda
- April 2016: Water JPI Position Paper on the Horizon 2020 SC5 WP2018-20 Strategic Roadmap

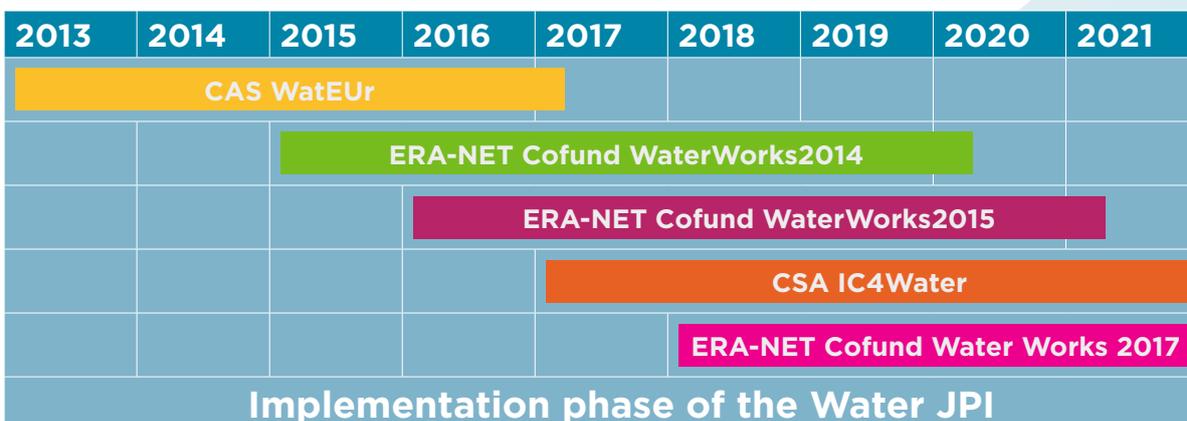
In turn, DG Research and Innovation has taken steps to support the growth and development of the Water JPI, with the inclusion of “supporting topics” into its FP7 and then Horizon 2020 SC5 WPs, to which the Water JPI has successfully submitted the following proposals:

- WatEUR FP7 Coordination and Support Action (2013 and 2016)
- WaterWorks2014 ERA-net COFUND (2015-2019)
- WaterWorks2015 ERA-net COFUND (2016-2020).

In addition, the Water JPI recently submitted (March 2016) a proposal for a Coordination Support Action (IC4Water) in response to the Horizon 2020 SC5 2016 Call.

✓ Collaboration with other JPIs

The Water & FACCE (“Agriculture, Food Security and Climate Change”) JPIs successfully submitted a joint proposal for an Horizon 2020 ERA-net COFUND: WaterWorks2015. Achieving a “sustainable water use in agriculture, to increase water use efficiency and reduce soil and water pollution” is at the intersection of the two JPIs, contributing to the implementation of their respective Strategic Research Agendas.



- ✓ Implementation of a dedicated Water JPI Task Force on Interactions with Horizon 2020.

The Water JPI Task Force on Interactions with Horizon 2020 is composed of representatives from Ireland (lead), Germany (co-lead), France, Italy, Sweden, Turkey and the Netherlands. On behalf of the Water JPI, the Task Force prepares feedback or contributions to the EC on the contents of the WPs for Horizon 2020 SC5 (Climate action, environment, resource efficiency and raw materials). In addition, the Task Force will proactively provide ideas to the EC from its own strategic objectives and agendas, from the consultation of EU-wide initiatives and through participation in Advisory Boards of EU-funded projects. The Task Force will make sure that relevant information is disseminated to the JPI Water community.

## Conclusion/Impact

The Water JPI aims at establishing a permanent and effective dialogue between Horizon 2020 and the JPI activities on the interaction between both initiatives. It has published several position papers in relation to the preparation of the EC Horizon 2020 WPs and has also interacted with other EU initiatives, such as the WssTP and EIP on Water, as well as collaborated with other JPI (2016 Joint call with FACCE).

Other activities to be developed include:

- Cooperation in the implementation of the synergy areas regarding mobility and infrastructure.
- Collaboration with the Knowledge and Innovation Communities (KICs) of the European Institute of Innovation & Technology, particularly with the Climate KIC, through its Land and Water theme.
- Cooperation with the European scientific, technological and industrial organisations in the water domain, which are for the most part represented in the Water JPI SAG.
- Synergies with the Joint Research Centre to further develop the ERA.
- Alignment with the objectives of the Water Framework Directive, the Blueprint to Safeguard Europe's Water and all related policies.

- Policy interaction on the regional Smart Specialisation Strategies in water and water-related fields of the Cohesion Policy.
- Develop a sustainable way forward for supporting the implementation of the JPIs.

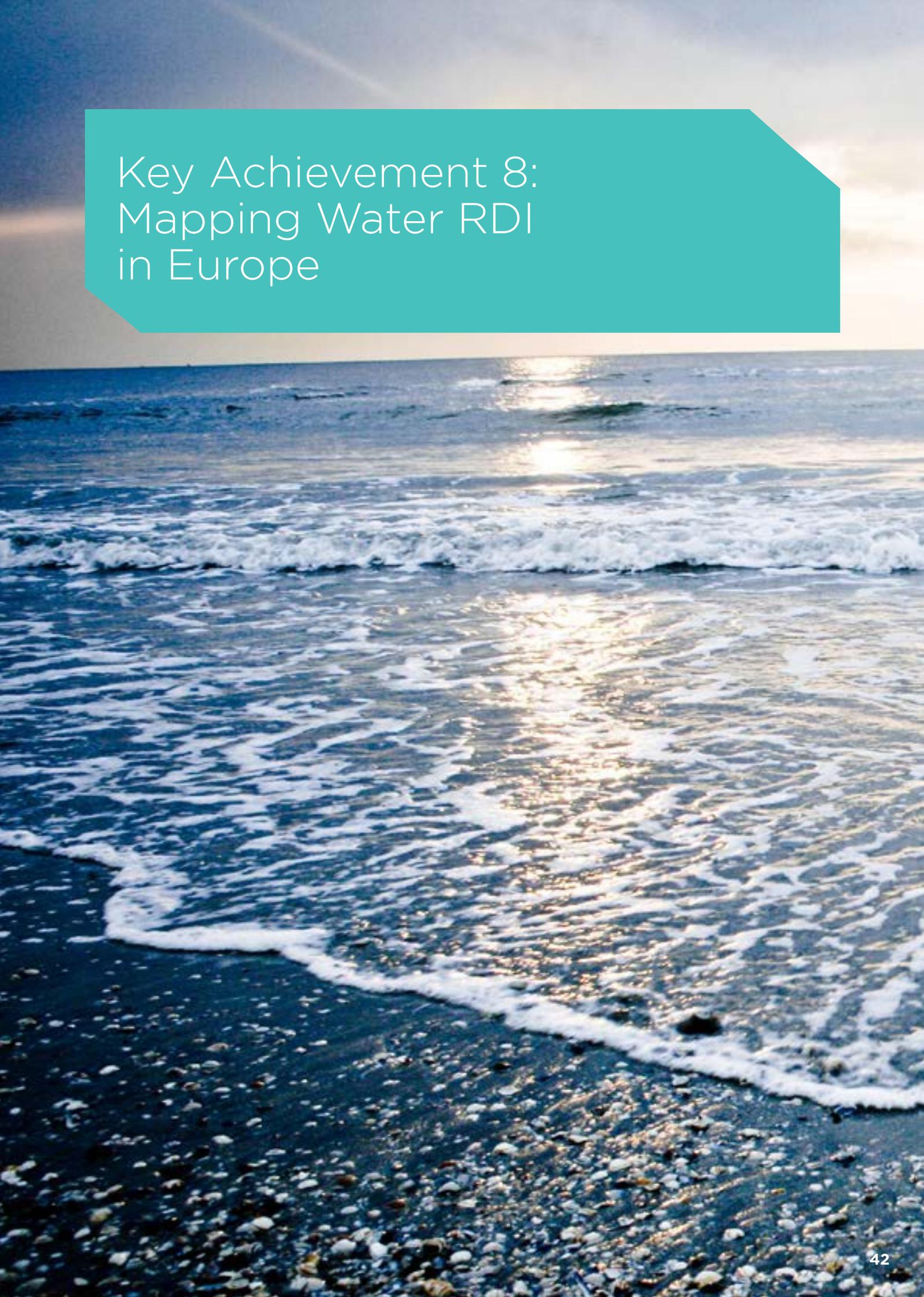
### Related Vision Indicators

- ✓ Attaining critical mass of research programmes
- ✓ Reaching effective, sustainable coordination of European water RDI
- ✓ Harmonising national water RDI activities in Partner Countries

## More Information

- Water JPI Implementation Plan 2014-16
- Position Document on the European Innovation Partnership on Water, May 2012
- Position Paper on the Preparation of Horizon 2020 SC5 WP 2014/15, June 2013
- Position Paper in response to the Horizon 2020 SC5 Public Consultation on the Expert Advisory Group Report, June 2014
- Preliminary Position Paper in response to the Call for Ideas on Large-Scale Demonstration projects, February 2015
- Preliminary Position Paper on the draft Horizon 2020 SC5 WP2016/17, March 2015
- Summary Position Paper on the draft Horizon 2020 SC5 WP2016/17, April 2015
- Water JPI Position Paper on the Climate JPI Research Agenda (March 2016)
- Water JPI Position Paper on the Horizon 2020 SC5 WP2018-20 Strategic Roadmap (April 2016)

available from [www.waterjpi.eu](http://www.waterjpi.eu)



## Key Achievement 8: Mapping Water RDI in Europe

# Key Achievement 8: Mapping Water RDI in Europe

## Introduction

Joint activities are of crucial importance in making the Water JPI instrumental to the RDI community and augmenting the effectiveness of tackling European water-related challenges. The mapping of national and regional RDI institutions, their programmes, projects and funding schemes constitutes one of these instruments.

## Why is it a major achievement?

The comprehensive mapping exercise developed by the JPI has been key in achieving the following results:

- Better understanding of the European water-related RDI activities,
- An inventory of national and regional research strategies, policies and programmes,

- Funding of research projects, infrastructures and mobility schemes in Water RDI,
- Multi-national coordination activities taking place in Europe,
- Evaluation of the European scientific publications and patents generation, and identification of relevant performing organisations
- Preliminary strategic analysis of the current water research strengths, weakness, gaps and barriers to cooperation.

## What has been achieved?

- ✓ Completion of an initial mapping survey in 2010

This initial exercise (carried out during the preparatory work of the JPI) identified the major research programmes active in the field of water in each JPI partner country.

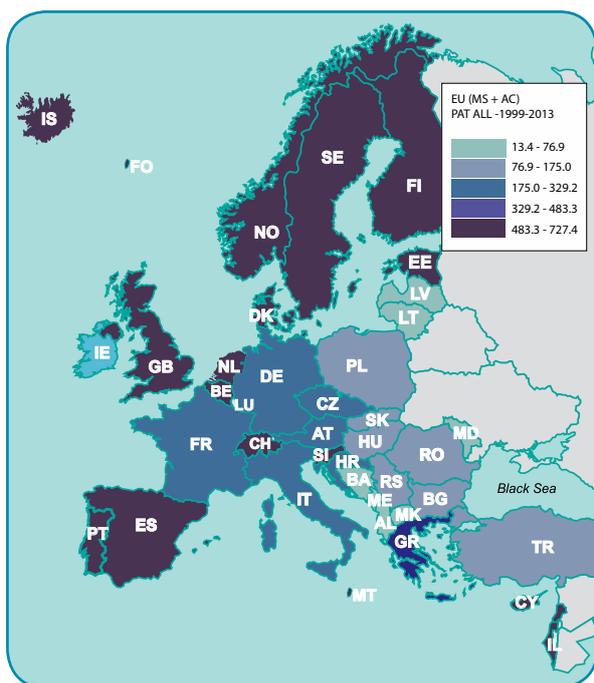
Estimation of Public National Water RDI funding per type of country and per type of association to the Water JPI			
Study Target	Groups of countries	National Public Water RDI funding (€M)	Percentage of funding respect to MS+AC (%)
Europe	Member States (MS)	351	94
	Associated Countries (AC)	21	6
	MS + AC	371	100
JPI	Partners	225	61
	Observers	123	33
	Partners + Observers	348	94

Source: 2014 Water JPI Mapping Report

✓ Publication of the 2014 Water JPI Mapping Report

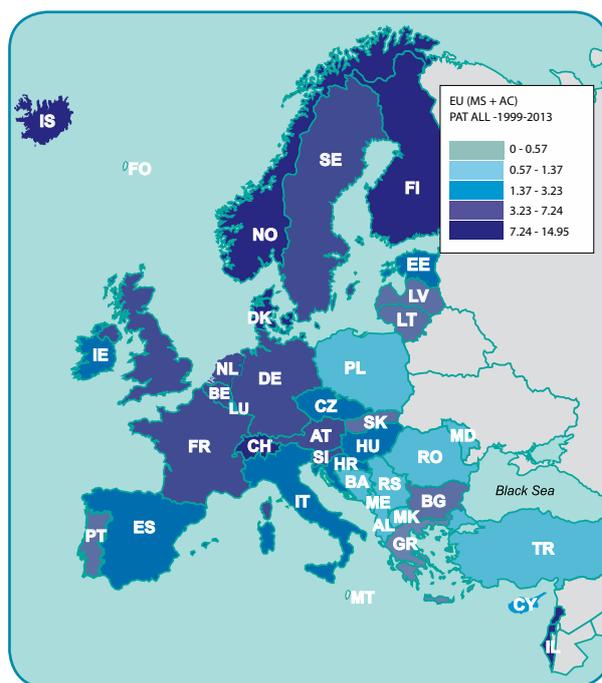
This report builds on the preliminary mapping survey, which focused only on programmes funding RDI projects. The WatEUR (Tackling European Water Challenges) CSA broadened the scope of mapping activities. The

JPI gathered information on water-related RDI, at national and regional levels. The following two maps show the intensity of publications and patents in Europe (Member States and Associated Countries) from 1999-2013, in which the number of inhabitants per country is taken into account.



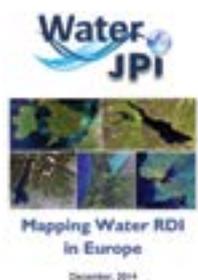
Intensity of publications in Europe (Member States and Associated Countries) normalised by population, from 1999 to 2013, for all water issues.

Source: 2014 Water JPI Mapping Report



Intensity of patents in Europe (Member States and Associated Countries), from 1999 to 2013, normalised by population, for all water issues.

Source: 2014 Water JPI Mapping Report



2014 Water JPI Mapping Water RDI in Europe Report

- ✓ Development of the Water JPI Projects Database

The comprehensive mapping exercise enabled the Water JPI to establish an inventory of the Water RDI projects in the JPI member countries, and to develop a searchable database accessible from its website.



*Water JPI Projects Database*

## Conclusion/Impact

The participation of 108 organisations in the second mapping exercise must be highlighted, and the effort of the participants in providing the most accurate information has to be acknowledged.

However, going forward, new mechanisms may be required to increase the number of participating organisations and countries involved. The JPI is currently expanding its project database, beyond the 21 countries listed at the moment. The database will provide the most up-to-date inventory of existing water-related research projects, which will enable further linkages among research institutes and increase awareness of past or ongoing research activities in the water sector.

### Related Vision Indicator

- ✓ Attaining critical mass of research programmes

## More Information

- 2014 Water JPI Mapping Report
- Water JPI Projects Database available from [www.waterjpi.eu](http://www.waterjpi.eu)

# Key Achievement 9: Water JPI-funded Projects & Joint Calls



# Key Achievement 9: Water JPI-funded Projects & Joint Calls

## Introduction

The Water JPI provides funding via competitive Joint Calls for transnational collaborative water RDI projects. To date, there have been three Joint Calls (2013, 2015 & 2016) including two with EC co-funding (as part of the Horizon 2020 ERAnets COFUND WaterWorks2014 & WaterWorks2015).

## Why is it a major achievement?

One of the key instruments to implement the Water JPI SRIA is to launch Joint Calls for proposals, in order to stimulate and

facilitate multi-national, collaborative RDI projects and increase synergies on cross-cutting issues.

## What has been achieved?

- ✓ Launch of three Joint Calls: 2013, 2015, 2016
- ✓ Increase in number of funding organisations participating in the Joint Calls, from 11 (2013) to 25 (2016)
- ✓ Increase in number of participating countries: from 10 (2013) to 22 (2016)
- ✓ Increase in amount of budget available: from €9.7 million (2013) to €25.5 million (2016)

Call	2013 Water Pilot Call
Topic	Emerging water contaminants - anthropogenic pollutants and pathogens
Scope	<ul style="list-style-type: none"> <li>• Identification and prevention of emerging freshwater contaminants</li> <li>• Control, mitigation and methods for treatment and removal</li> <li>• Impact on ecosystems services and human health</li> </ul>
Type of project	Multi-national, collaborative research, development and innovation projects
Call Secretariat	Academy of Finland (AKA), Finland
Budget	€9.7 million
Participating countries	11 funding organisations 10 countries (Cyprus, Denmark, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain)
Project duration	2 to 3 years
Funded projects	7
Number of proposals received	105 proposals submitted, of which 61 were eligible
Timeframe	CLOSED

## Funded projects under the 2013 Water JPI Pilot Call

Acronym	Title	Coordinator	Countries	Website
<b>FRAME</b>	A novel Framework to Assess and manage contaminants of Emerging concern in indirect potable reuse	Thomas Ternes (Germany)	France, Italy, Norway	<a href="http://www.frame-project.eu">www.frame-project.eu</a>
<b>METAWATER</b>	New METAgenomics and molecular based tools for European scale identification and control of emergent microbial contaminants in irrigation WATER	Rosina Girones (Spain)	Cyprus, Denmark, Germany	<a href="https://compgen.bio.uib.edu/MetaWater">https://compgen.bio.uib.edu/MetaWater</a>
<b>MOTREM</b>	Integrated processes for MOnitoring and Treatment of Emerging contaminants for water reuse	Javier Marugan (Spain)	Finland, France, Germany, Italy	<a href="http://www.motrem.eu">www.motrem.eu</a>
<b>PERSIST</b>	Persistence and fate of emerging contaminants and multi-resistant bacteria in a continuum of surface water groundwater from the laboratory scale to the regional scale	Corinne Le Gal La Salle (France)	Germany, Spain	<a href="http://www.persist.unimes.fr">www.persist.unimes.fr</a>
<b>PROMOTE</b>	PROtecting water resources from MObile TracE chemicals	Thorsten Reemtsma (Germany)	France, Norway, Spain	<a href="http://www.promote-water.eu">www.promote-water.eu</a>
<b>StARE</b>	Stopping antibiotic Resistance Evolution	Célia M. Manaia (Portugal)	Cyprus, Finland, Germany, Ireland, Norway, Spain	<a href="http://www.stareeurope.wordpress.com">www.stareeurope.wordpress.com</a>
<b>TRACE</b>	Tracking and assessing the Risk from Antibiotic Resistant genes using Chip technology in surface water ecosystems	Wolfgang Fritzsche (Germany)	Ireland, Italy, Portugal, Spain	<a href="http://www.jpi-trace.eu">www.jpi-trace.eu</a>

Source: [www.waterjpi.eu](http://www.waterjpi.eu)

<b>Call</b>	<b>2015 Joint Call - WaterWorks2014</b>
<b>Topic</b>	Water treatment and reuse, resources management and mitigation of water-related extreme events
<b>Scope</b>	Developing Technological Solutions and Services for: <ul style="list-style-type: none"> <li>• Water Treatment, Reuse, Recycling and Desalination;</li> <li>• Water Resources Management</li> <li>• Mitigate Impacts of Extreme Events (Floods and Droughts) at Catchment Scale.</li> </ul>
<b>Type of project</b>	Transnational and trans-disciplinary research and innovation actions
<b>Call Secretariat</b>	The Foundation for Science and Technology (FCT), Portugal
<b>Budget</b>	€15.2 million
<b>Participating countries</b>	17 funding organisations 15 countries (Cyprus, Denmark, Estonia, Ireland, Israel, Italy, Rep of Moldova, Norway, Portugal, Romania, South Africa, Spain, Sweden, The Netherlands)
<b>Project duration</b>	2 to 3 years
<b>Funded projects</b>	16
<b>Number of proposals received</b>	118 pre-proposals submitted, of which 106 were eligible and 41 short-listed for Step-2 (full proposals)
<b>Timeframe</b>	CLOSED

### Funded projects under the 2015 Water JPI Joint Call

Acronym	Title	Coordinator	Countries
<b>Watinctech</b>	Smart decentralized water management through a dynamic integration of technologies	Ignasi Rodriguez-Roda Layret (Spain)	Spain, Italy, Denmark, Portugal
<b>Pioneer_STP</b>	The Potential of Innovative Technologies to Improve Sustainability of Sewage Treatment Plants	Juan M. Lema (Spain)	Spain, Italy, Denmark, Sweden, Spain
<b>Biorg4Waste-WaterVAI+</b>	Bioorganic novel approaches for food processing waste water treatment and valorisation: Lupanine case study	Carlos Alberto Afonso (Portugal)	Portugal, Italy, Spain, Cyprus
<b>ACWAPUR</b>	Accelerated water purification during artificial recharge of aquifers - a tool to restore drinking water resources	Jens Aamand (Denmark)	Denmark, Spain, Sweden, Italy
<b>TH.E.R.BIO.R</b>	Thermal energy recovery from a novel sequencing batch biofilter granular reactor	Franciso Javier Batlles Garrido (Spain)	Spain, Italy, Denmark
<b>DESERT</b>	Low-cost water DEsalination and SEnsor Technology compact module	Pietro Rubio (Italy)	Italy, Spain, Belgium
<b>MEPROWARE</b>	Title: Novel methodology for the promotion of treated wastewater reuse for Mediterranean crops improvement	Alfieri Pollice (Italy)	Italy, Portugal, Spain
<b>PROGNOS</b>	Predicting in-lake responses to change using near real time models	Donal Pierson (Sweden)	Sweden, Ireland, Denmark, Norway, Israel
<b>WE-NEED</b>	WatEr NEEDs, availability, quality and sustainability Consortium Composition	Monica Riva (Italy)	Italy, Israel, Portugal, Spain
<b>IRIDA</b>	Innovative remote and ground sensors, data and tools into a decision support system for agriculture water management	Diego S. Intrigliolo (Spain)	Spain, Italy, Romania, Norway
<b>DOMINO</b>	Dikes and Debris Flows Monitoring by Novel Optical Fiber Sensors	Luca Palmieri (Italy)	Italy, The Netherlands, Spain

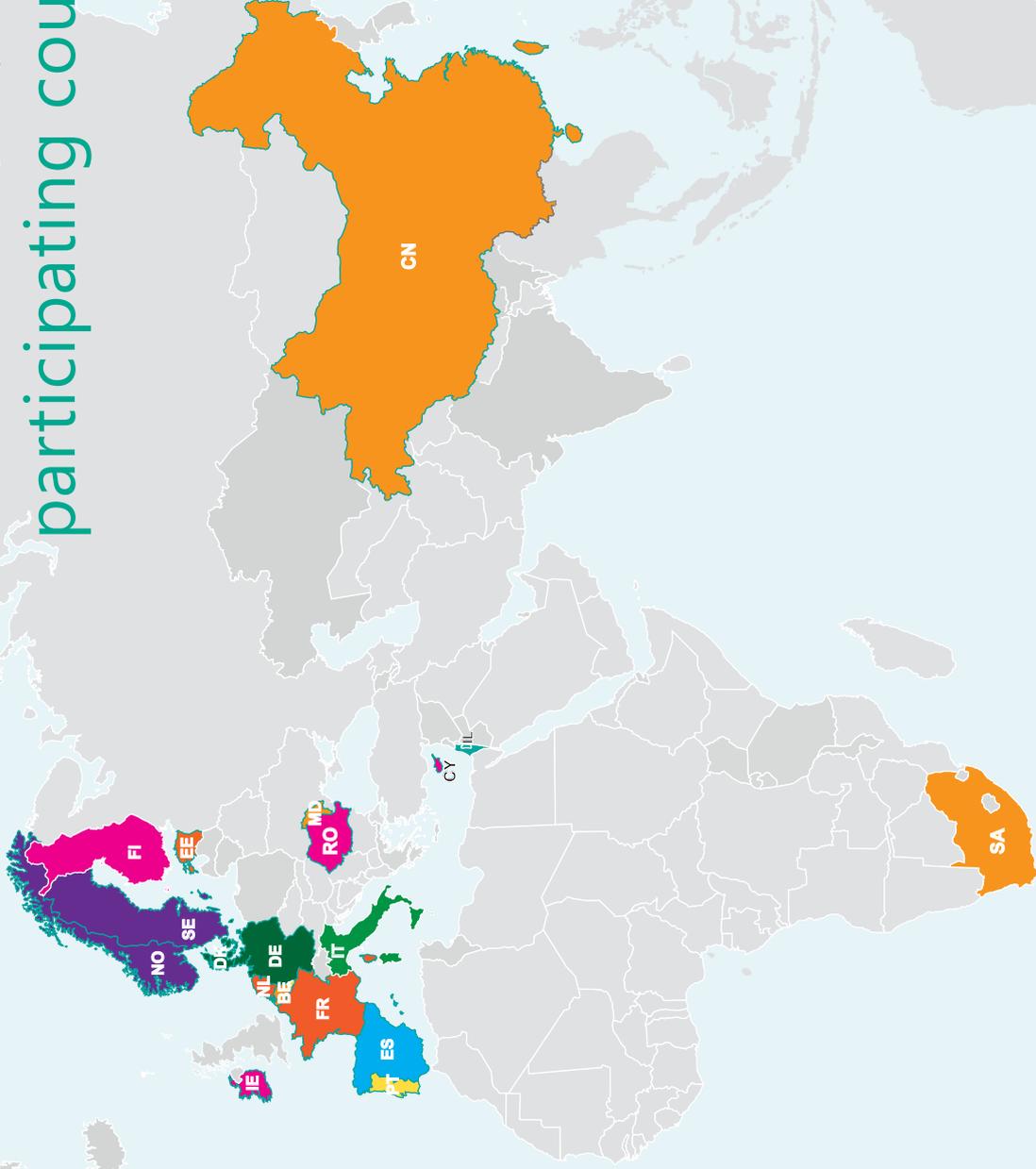
### Funded projects under the 2015 Water JPI Joint Call

Acronym	Title	Coordinator	Countries
<b>INXCES</b>	INnovations for eXtreme Climatic EventS	Tone Merete Muthanna (Norway)	Sweden, Norway, Netherlands, Romania
<b>SIM</b>	Smart irrigation from soil moisture forecast using satellite and hydro-meteorological modelling	Marco Mancini (Italy)	Italy, The Netherlands, Spain, China
<b>MUFFIN</b>	Multi-scale urban flood forecasting: from local tailored systems to a pan-European service	Jonas Olsson (Sweden)	Sweden, Denmark; The Netherlands, Finland
<b>IMDRO-FLOOD</b>	Improving Drought and Flood Early Warning, Forecasting and Mitigation using real-time hydroclimatic indicators	Sergio Vicente-Serrano (Spain)	Spain, Portugal, Romania, Estonia, Rep. of Moldova, South Africa
<b>STEEP STREAMS</b>	Solid Transport Evaluation and Efficiency in Prevention: Sustainable Techniques of Rational Engineering and Advanced Methods	Aronne A. Armanini (Italy)	Italy, Sweden, Portugal

**Source:** [www.waterjpi.eu](http://www.waterjpi.eu)

# Total number of Water JPI-funded projects per participating country

CH	China	1
MD	Moldova	1
EE	Estonia	1
BE	Belgium	1
SA	South Africa	1
IL	Israel	2
RO	Romania	3
CY	Cyprus	3
IE	Ireland	3
FI	Finland	3
FR	France	4
NL	The Netherlands	4
SE	Sweden	6
NO	Norway	6
DK	Denmark	7
DE	Germany	7
PT	Portugal	8
IT	Italy	15
ES	Spain	18



<b>Call</b>	<b>2016 Water/FACCE JPIs Joint Call - WaterWorks2015</b>
<b>Topic</b>	Sustainable management of water resources in agriculture, forestry and freshwater aquaculture sectors
<b>Scope</b>	<ul style="list-style-type: none"> <li>• Increasing the efficiency and resilience of water uses</li> <li>• Monitoring and reducing soil and water pollution</li> <li>• Integrating social and economic dimensions into the sustainable management and governance of water resources</li> </ul>
<b>Type of project</b>	Transnational and transdisciplinary research and innovation actions
<b>Call Secretariat</b>	The Foundation for Science and Technology (FCT), Portugal
<b>Budget</b>	€25.5 million
<b>Participating countries</b>	25 funding organisations 22 countries (Belgium, Canada, Cyprus, Denmark, Egypt, Finland, France, Germany, Ireland, Italy, Rep of Moldova, Norway, Poland, Portugal, Romania, South Africa, Spain, Sweden, Taiwan, The Netherlands, Tunisia, Turkey)
<b>Project duration</b>	2 to 3 years
<b>Funded projects</b>	TBC
<b>Number of proposals received</b>	TBC
<b>Timeframe</b>	1st step: CLOSED 2nd step: Deadline for submission of full proposals 15 September 2016

## Conclusion/Impact

From the 2013 Pilot Call to the current 2016 Joint Call, the Water JPI mobilised an expanding number of participant countries (from 10 to 22).

Joint Calls have been well received by the RDI community with high rates of applications.

Funded projects are expected to have the following impacts:

- Enable multi-national, collaborative research, development and innovation projects addressing questions relating to the water challenges faced by European society.
- Promote multi-disciplinary work and encourage proposals with fundamental and/or applied approaches.
- Stimulate mobility of researchers within the Consortium and enhance collaborative research and innovation during the project life and beyond.
- Support the development of innovative technological solutions and services for the implementation of EU water policy.

The research outputs of the funded projects have yet to be assessed as projects are still in progress/just starting but the follow-up and impact assessment will be a major next step going forward.

The Water JPI is planning to launch new Joint Calls on:

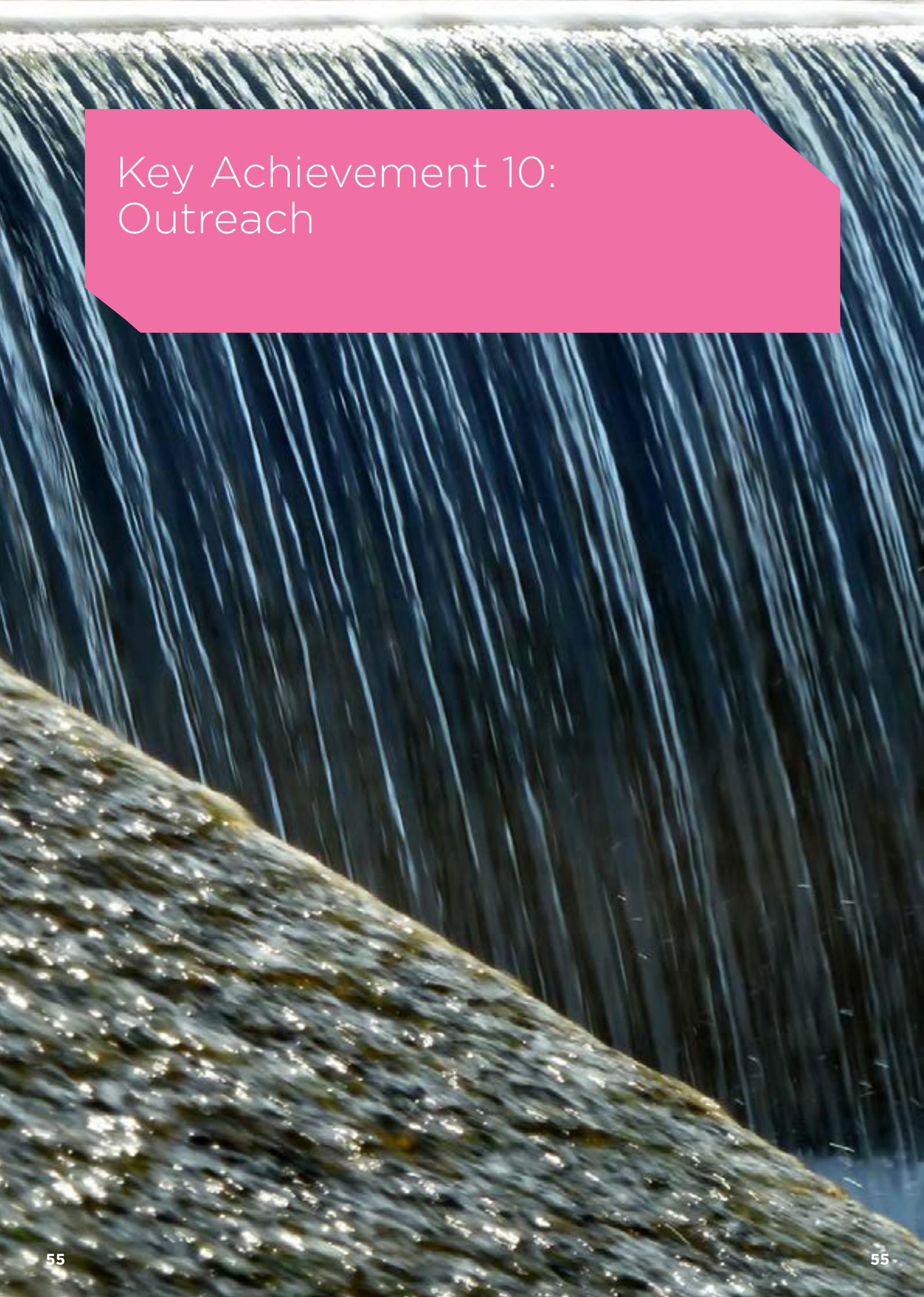
- 2017: the water-related UN SDGs
- 2018: Closing the water cycle gap - Sustainable water management

### Related Vision Indicators

- ✓ Attaining critical mass of research programmes
- ✓ Harmonising national water RDI activities in Partner Countries
- ✓ Supporting European leadership in science and technology

## More Information

- Joint Calls Section on the Water JPI available from [www.waterjpi.eu](http://www.waterjpi.eu)

A close-up, low-angle shot of a waterfall. The water is cascading down, creating a dense curtain of white and blue water. The foreground shows the turbulent water at the base of the falls, with many white foam bubbles and splashes. A bright pink rectangular box with a diagonal cutout on its right side is overlaid on the upper left portion of the image. The text 'Key Achievement 10: Outreach' is written in white, sans-serif font inside this box.

## Key Achievement 10: Outreach

# Key Achievement 10: Outreach

## Introduction

The goal of the Water JPI is to provide reliable and complete information to a large audience of stakeholders and general public in the spirit of openness and transparency and ensuring two-way exchange with different audiences. Such an approach supports the principle of “Responsible Research and Innovation” (RRI) and helps ensure that the Water JPI is responding to the needs of society. The outreach activities are intended to ensure that the Water JPI is communicating its vision, activities, achievements and impacts.

## Who are the target audiences?

Researchers, RDI funding organisations, the EC, policy makers, water supply & sanitation enterprises, water utilities & river basin management bodies, services & Technology providers, and society at large.

## Why is it a major achievement?

Information exchange and dialogue among all possible actors in the water RDI domain are key elements in developing a common vision for the water sector in Europe and beyond. Effective outreach has enabled efficient knowledge transfer, through encouraging the cooperation of European public and private stakeholders through regular information exchange.

Communicating the best available science and information on water challenges to key stakeholders and the general public supports the establishment of the Water JPI as the primary source of water research data and information for Europe.

## What has been achieved?



*2013 Water JPI Communication & Dissemination Strategy and social media*

- ✓ Development of a Communication & Dissemination Strategy 2013

The Water JPI Communication & Dissemination Strategy aims to reach a vast range of research and innovation water-related stakeholders in Europe and abroad through various communication channels.

- ✓ Development of a dedicated Water JPI website - [www.waterjpi.eu](http://www.waterjpi.eu)

The website has attracted c. 168,000 visitors (counted as website hits) in 2015.

- ✓ Distribution of monthly newsletters to 4,700 newsletter recipients

The main audience for the newsletters include representatives from government funding agencies and researchers performing Water RDI and/or environmental activities.

- ✓ Communication via social media such as LinkedIn Researchers' Discussion Forum, Facebook page and Twitter account.

### @WATERJPI

Currently, the Water JPI Twitter account (set up in May 2013) has 439 followers.

### LINKEDIN.COM/GROUPS/8455262

The Water JPI LinkedIn Researchers' Discussion Forum (set up in December 2015), which encourages discussion and networking among researchers in the Water RDI area in Europe, has 714 members.

### WWW.FACEBOOK.COM/WATER-JPI-517792798284596

The Water JPI Facebook page has 116 Likes.

#### ✓ Creation of a Projects Database

The Water JPI Projects Database provides the most up-to-date inventory of existing water-related research projects and enables linkages among research centres and increases awareness of past or ongoing research activities in the water sector.

#### ✓ JPI presence at key events

The Water JPI has hosted/presented at various events, for example:

- The European Innovation Partnership (EIP) Water Conference 2014, 5 November 2014, Barcelona, Spain
- Official launch of the Water JPI SRIA and Implementation Plan, 21 October 2014, Brussels, Belgium
- 7th World Water Forum 2015, 12-17 April 2015, Daegu & Gyeongbuk, Republic of Korea
- Milano Expo, 16 June 2015, Milan, Italy
- WssTP Annual Conference, June 2015, Brussels, Belgium
- South African Water Research Council, International Water conference, September 2015, Johannesburg, South Africa
- EU - INDIA STI Workshop, October 2015, Rome, Italy
- EURORIOB annual meeting, October 2015, Thessaloniki, Greece

- Various National Networking Events & Workshops in Member Countries
- The Water JPI will host its 2016 Conference in Rome on 19 May 2016. This international event is targeted to a wide range of stakeholders and will present the new version of the Water JPI SRIA, and discuss on how to implement it and the benefits from international cooperation.

## Conclusion/Impact

Going forward, the Water JPI will continue to implement its Communication and Dissemination Strategy and to raise awareness about present and future water challenges. It will provide user-friendly, reliable information and knowledge to citizens, policy makers and to the European and international water research community.

The Water JPI will strive to become THE place to go for water-related RDI in Europe.

### Related Vision Indicator

- ✓ Involving water end-users for effective RDI results uptake

## More Information

- 2013 Water JPI Communication & Dissemination Strategy
- 2016 Responsible Research & Innovation for the Water JPI document
- Communication Section of the Water JPI website available from [www.waterjpi.eu](http://www.waterjpi.eu)

available from **[www.waterjpi.eu](http://www.waterjpi.eu)**



# Next Steps



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REFLECTING ON  
SUSTAINABILITY  
OF THE JPI

JOINT CALLS

SUPPORTING  
THE  
UN SGDS

DEVELOPING  
COMMUNICATION  
& OUTREACH

SUPPORTING EU  
WATER-RELATED  
POLICIES



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