



# The Water JPI

Joint Programming Initiative  
Water Challenges for a Changing World

January 2019



# Joint Programming Initiatives - Driving Research and Innovation

Already 10 years of Joint Programming...  
Watch the [Movie!](#)



# Increasing the value and impact of national investments in research and innovation

## Research Funding in Europe

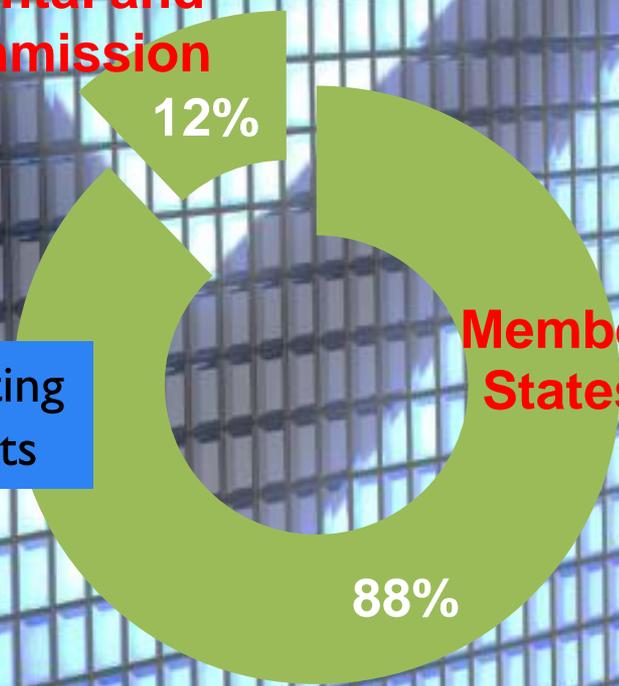
**Intergovernmental and  
European Commission**

12%

**Member  
States**

88%

JPIs ensure leverage of existing national funding investments



# 10 JPIs since 2008



**Water Challenges for a Changing World**



**Healthy and Productive Seas and Oceans**

**MORE YEARS  
BETTER LIVES**

**More Years, Better Lives -  
The Potential and  
Challenges of  
Demographic Change**



**Antimicrobial Resistance-  
The Microbial Challenge -  
An Emerging Threat to  
Human Health**



**Connecting Climate  
Knowledge for Europe**



**Global Urban Challenges,  
Joint European Solutions**



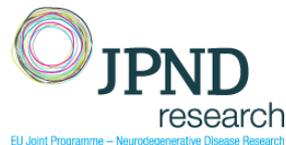
**Agriculture, Food  
Security and Climate  
Change**



**Cultural Heritage and  
Global Change: A New  
Challenge for Europe**



**A Healthy Diet for a  
Healthy Life**



**Alzheimer and other  
Neurodegenerative  
Diseases**

# Water Challenges Keywords:

*Scarcity, stress, pollution, management, reuse*

Water, the first mineral resource to be exhausted on the blue planet



Water JPI - Sustainable water systems for a sustainable economy

Watch the [Movie!](#)

# Water JPI Objectives

Providing and steering research and innovation in the water sector

Attaining critical mass of research programmes

Reaching effective and sustainable coordination of Water Research, Development and Innovation programmes

Harmonising national Water RDI agendas and activities in Partner Countries

Involving water end-users for effective RDI results uptake

Promoting interactions and networking between different communities (researchers, enterprises, policy-makers, civil society, etc.)

Supporting European Leadership in science and technology in this global challenging area

# Implementation principles

- ▶ **Variable geometry**

Water JPI partners only participate in activities of their specific interest

- ▶ **Flexibility**

This supports the development of activities responding to partners' needs and opportunities

- ▶ **Responsiveness**

The Water JPI provides an enabling environment: the water challenge is tackled through specific and tailored activities

- ▶ **Everything in Common, except the Funding**

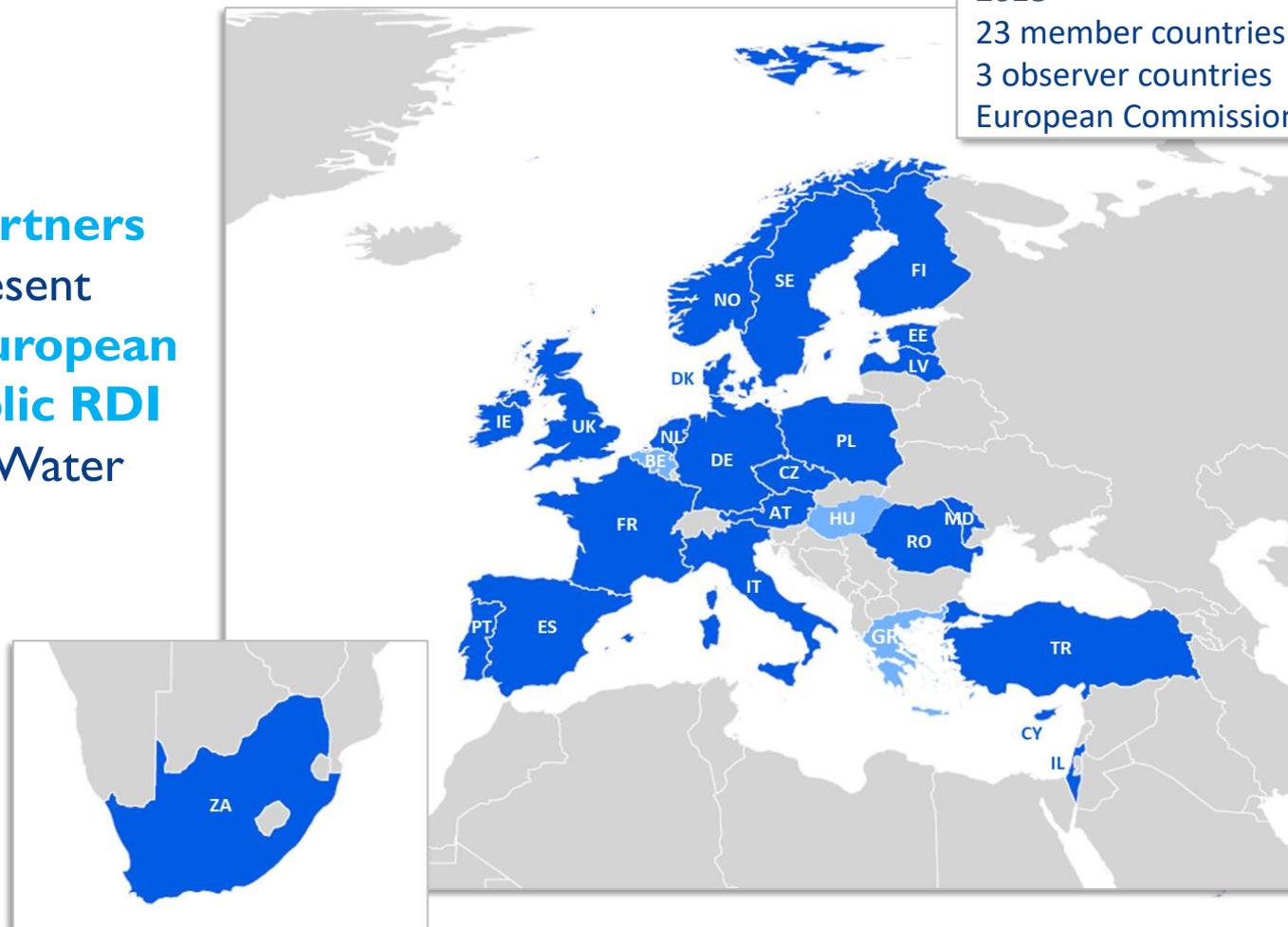


# Water JPI Membership

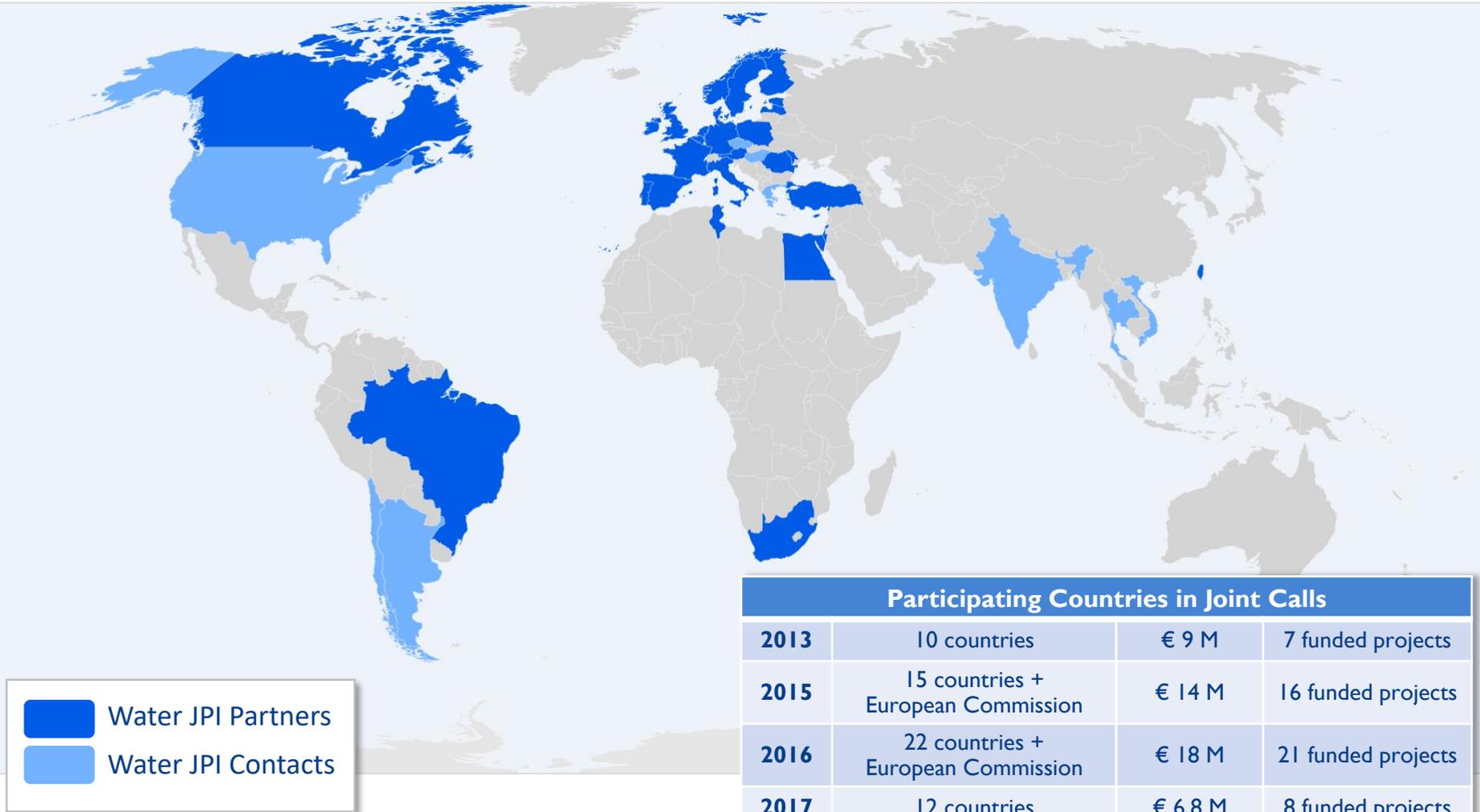
 Water JPI Members  
 Water JPI Observers

**2018**  
23 member countries  
3 observer countries  
European Commission

**Water JPI partners** currently represent **88% of the European National Public RDI investment on Water**



# Global Partnership



A dynamic splash of clear blue water against a white background, with many small bubbles and droplets visible.

# How to engage with the Water JPI?

As funding partner organisation

As researcher



# Engaging with the Water JPI - Funders

## Gateway

- A unique contact point for engaging with research & innovation funding agencies in Water challenges
- Connecting to collaborative actions on global water challenges

## Being an Observer

- Mutual interest
- Commitment of the external party
- Available national / regional funding (cash and/or in kind) for their participation in meetings

## Becoming an Associated Partners

- Commitment to the Water JPI Vision
- A beginning of successful cooperation with the JPI activities
- Interest and means of getting involved in more than one joint action
- Formal request to join the JPI – *For GB approval / VOTE on the strategy*

## Becoming a Voting Member

- Strong commitment to the Water JPI Vision and Missions (Alignment, European Networking, International Cooperation, ...)
- History of successful cooperation
- Interest and means of getting involved in more than one joint action and to contribute to the JPI strategy and functioning (fees and/or in-kind)
- Formal request to join the Governing Board – *For GB approval / VOTE on the strategy and on financial decisions*

# Engaging with the Water JPI - Researcher

## Gateway

- A unique contact point for engaging with research & innovation funding agencies in Water
- Connecting to collaborative actions on global challenges – See our Strategic Research and Innovation Agenda

## Becoming an JPI research community member

- Subscribe to Water JPI newsletter and follow us on social network
- Join the LinkedIn Water JPI researcher Forum Group
- Register the details of your national/EU/international water research in our Projects Database

## Be informed in joint activities

- Be informed of your national commitments for all activities: Available national / regional funding (cash and/or in kind) to participate
- Participate in JPI mirror group at national level (if any)

## Becoming an active community member

- Suggest updates of the Strategic Research and Innovation Agenda
- Apply to Joint calls, to Knowledge Hubs' to national activities
- Become an Evaluation Panel expert or a Follow-up group member
- Contact your national contact point and declare your interest in becoming an Advisory Board members (selected by the Governing board)

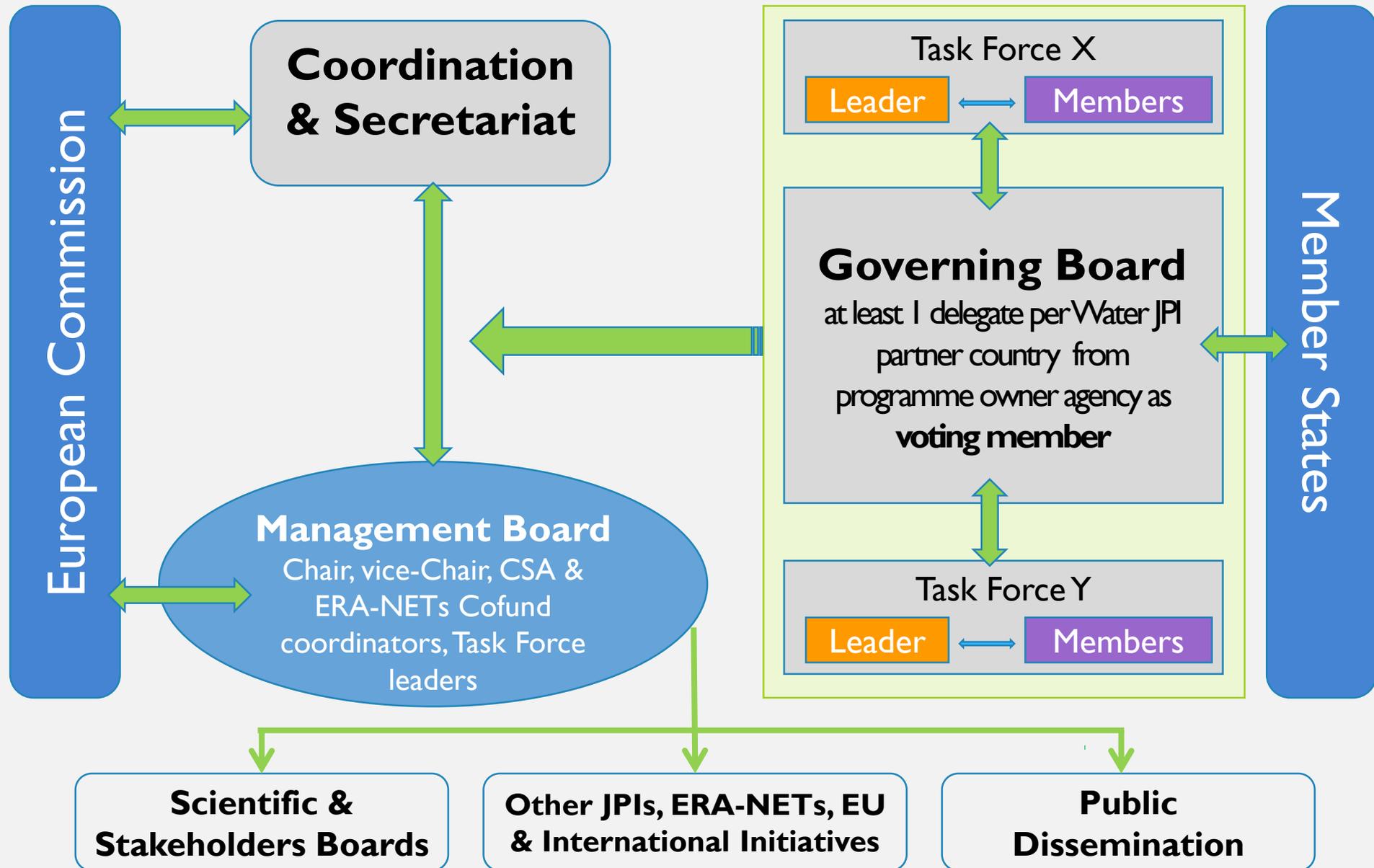


# Governance

Introduction

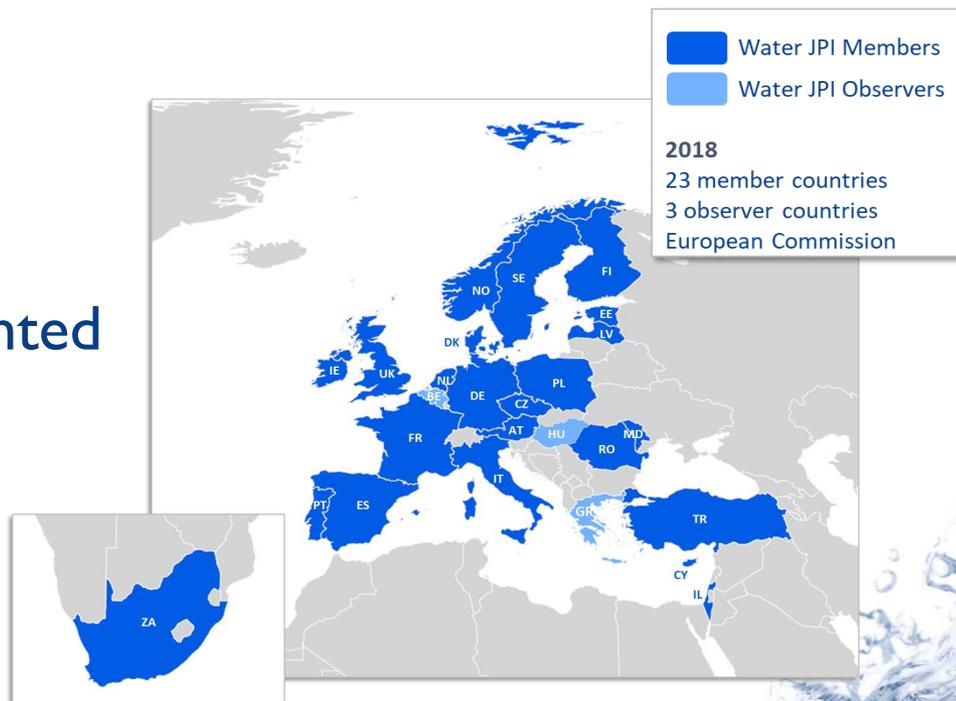


# Water JPI Governance Structure



# Water JPI Governing Board

- ▶ Decision making body
- ▶ 23 member countries
  - ▶ 1 country = 1 vote
  - ▶ 36 institutions represented
- ▶ European Commission
  - ▶ non-voting member
- ▶ 3 observer countries
  - ▶ non-voting members



# Water JPI Task Forces

- ▶ **Task Forces** for integrating all activities on the long term
  - ▶ Alignment
  - ▶ Interactions with Horizon 2020 / Horizon Europe
  - ▶ International Cooperation
  - ▶ Research Infrastructures



# Water JPI Advisory Boards

Renewed in 2018!

- ▶ Scientific and Technological Board (STB)
  - ▶ Stakeholders Advisory Group (SAG)
- 
- ✓ Ensure that the work of the Water JPI is relevant to water research needs, relevant to the needs of water industry stakeholders, and of high scientific quality
  - ✓ Give advice to the GB and MB on specific issues as requested.
  - ✓ Link between the JPI activities and ongoing national, international and EC-funded activities

# Scientific and Technological Board up to March 2019

Name	Surname	Organisation
Olga	COVALIOVA	Institute of Chemistry of Moldova
Dermot	DIAMOND	Dublin City University (DCU) CNRS - Laboratoire Techniques Territoires et Sociétés (LATTS)
Agathe	EUZEN	
Despo	FATTA-KASSINOS	Nireas, International Water Research Center (Nicosia)
Jaap	KWADIJK	Deltares / University Twente
Jaime	MELO BAPTISTA	Laboratório Nacional de Engenharia Civil (LNEC)
Yolanda	PICÓ	University of Valencia (UV)
Fiona	REGAN	Dublin City University (DCU)
Seppo	REKOLAINEN	Ministry of Agriculture and Forestry
Ülkü	YETİŞ	Middle East Technical University (METU)

# Stakeholders Advisory Group

## ORGANISATIONS

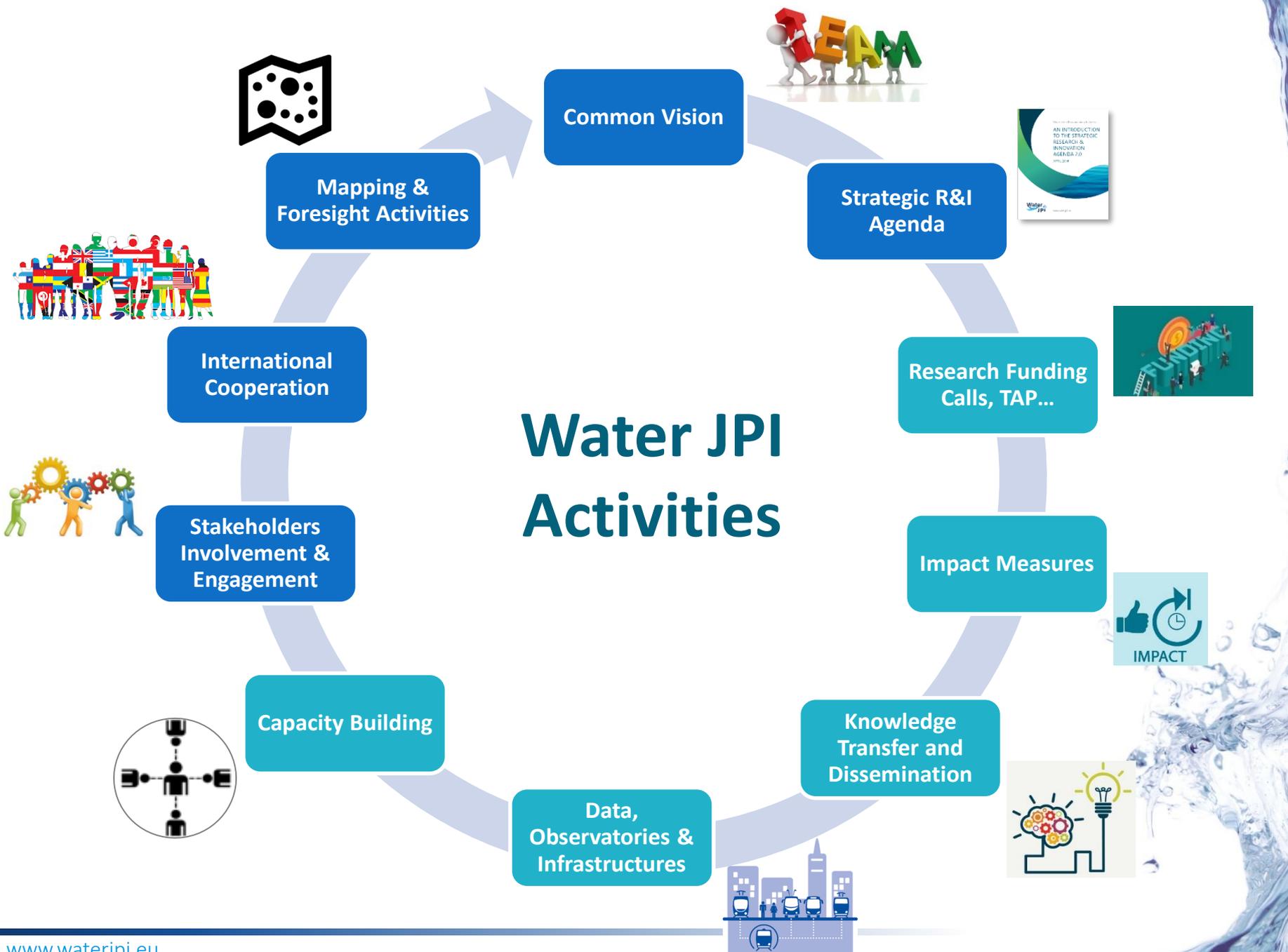
ARC	Aqua Research Collaboration
CIS & EIP on Water	Common Implementation Strategy and European Innovation Partnership on Water
EIFAAC-FAO	European Inland Fishery and Aquaculture Advisory Commission
EU-INBO	EU Network of River Basins Organisations
EurAqua	European Network of Freshwater Research Organisations
EurEau	European Federation of National Associations of Water and Wastewater Services
EWA	European Water Association
FAO	Food and Agriculture Organisation of the United Nations
GWRC	Global Water Research Coalition
OECD	Organisation for Economic Co-operation and Development
UN Water	Coordinating the UN's work on water and sanitation
WssTP	Water Supply and Sanitation Technology Platform

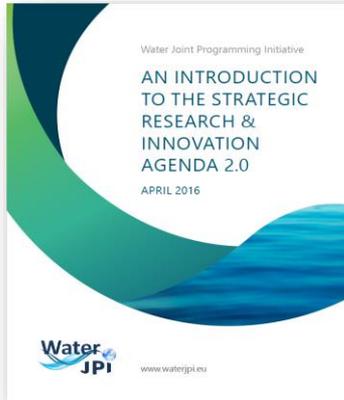


# Key Achievements

Since 2011





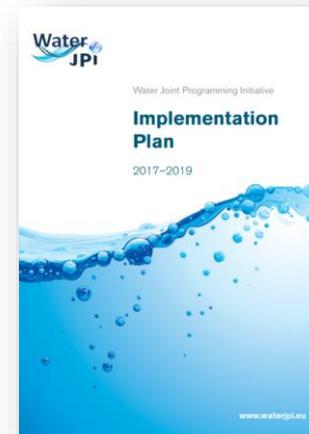


**Vision:** Global Challenge &  
Strategic Research Areas  
10-Year Forward Looking

**Strategic Research &  
Innovation Agenda**  
5-year Roadmap

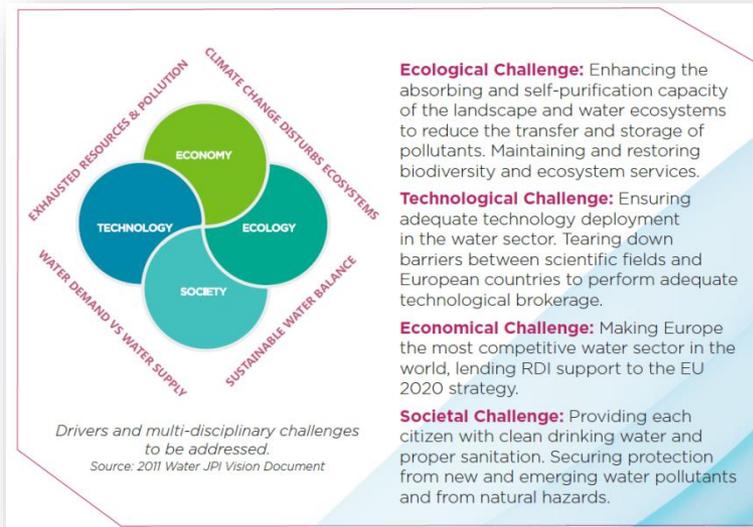
**Implementation Plan**  
3-year Work Plan

**Joint Actions**



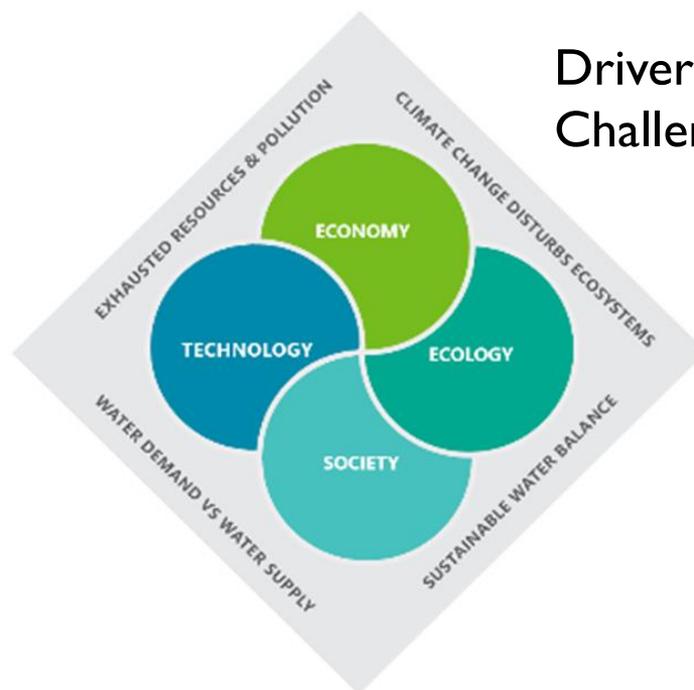
# What is the Vision?

- ▶ **Context (trends, drivers and challenges)** - Outlines the **JPI objectives and research questions** responding to the issues and challenges facing the European water sector.
- ▶ **Overarching roadmap** that outlines what needs to be achieved and sets the context for all other Water JPI activities.



# Water JPI Vision 2020

*Achieving Sustainable Water Systems for a Sustainable Economy in Europe and Abroad*



Drivers and Multidisciplinary Challenges

# Strategic Research and Innovation Agenda

## Vision Document

- 5 themes -



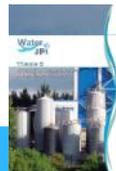
**Theme 1**  
Improving  
Ecosystem  
Sustainability  
and Human  
Well-being



**Theme 2**  
Developing  
Safe Water  
Systems for  
Citizens



**Theme 3**  
Promoting  
Competitiveness  
in the  
Water  
Industry



**Theme 4**  
Implementing  
a Water-wise  
Bio-based  
Economy



**Theme 5**  
Closing the  
Water Cycle  
Gap  
Improving  
Sustainable  
Water  
Resources  
Management



**SRIA 2.0**

- 5 themes and 11 sub-themes -

# What is the Implementation Plan?

- ▶ An Implementation Plan specifies which of the needs, identified in the SRIA, will be instigated via the **Water JPI activities**
  - ▶ e.g. calls, strategic and exploratory workshops, knowledge hubs, and alignment of national programmes
- ▶ **Roadmap to deliver the Water JPI SRIA**
  - ▶ The Implementation Plan stands in parallel to several Horizon 2020 Work Programmes (WPs), in particular Societal Challenge 5 (SC5): Climate Action, Environment, Resource Efficiency and Raw Materials



# Timeline of the JPI Water Implementation Plan

For the full list of activities, please see Table 2.1



## 2017-2019

**Water-18**  
Update the Water JPI SRIA

**Water-24**  
Share strategy on international cooperation with other JPIs, Article 185 initiatives

**Water-32**  
Identify RDI needs to efficiently implement the UN SDGs

**Water-34**  
Plan and Set up the second Water JPI Knowledge Hub

**Water-35**  
Review the methodology and update the 2014 mapping exercise

**Water-47**  
Global Impact Assessment

**Water-37**  
Communication and dissemination

**Water-39**  
Develop knowledge and innovation

**Water-46**  
Development of the interactive platform to facilitate access to mobility schemes and research infrastructures

**2020+**

**Water-33**  
Networking workshop between the funded projects under the 2017 Water JPI joint call and other relevant EU projects/initiatives

## 2017-2018

**Water-26**  
Develop the international cooperation on water challenges

## 2018-2019

**Water-05**  
Impact assessment of the 2013 pilot call

**Water-17**  
Preparation of the next Water JPI Vision Document to 2030

**Water-21**  
Update the SRIA: building the SRIA 3.0: Consultations

**Water-20**  
Build the SRIA 3.0: Stakeholder Experts' Consultative Workshop

2017

2018

2019

- Water-01** Exploratory Workshop
- Water-06** Knowledge Hub Workshop 1
- Water-10** Common vision with the FACCE JPI
- Water-41** Alignment Workshop

**Water-25**  
Develop an action plan for the valorisation of water research beyond Europe

**Water-42**  
Review of national mirror/stakeholders' groups as a tool to progress alignment

**Water-44**  
Roadshow in Estonia to raise awareness of the Water JPI

**Water-30**  
Water JPI 2017 joint call on UN SDGs (multiple pressures)

**Water-05**  
Monitoring of 2013 pilot call project (final review)

**Water-06**  
Set up Water JPI Knowledge Hub

**Water-06**  
Knowledge Hub: Workshop 2

**Water-07**  
Exploratory Workshop

**Water-09**  
Networking workshop between 16 2015 joint call projects and other relevant EU projects/initiatives

**Water-38**  
Second Water JPI international conference in Helsinki in spring 2018

**Water-45**  
Mobility workshop to facilitate the development of the interactive platform

**Water-13**  
Water JPI joint call on 'Closing the Water Cycle Gap'

**Water-27**  
Revision of the international cooperation mapping

**Water-29**  
Coordination with other JPIs, policymakers and European public Research and Development Initiatives

**Water-36**  
Improve water-related project databases

**Water-43**  
First Water JPI Thematic Annual Programming Cluster

**Water-02**  
2019 Water JPI joint call

**Water-03**  
Develop a common vision between the Water JPI and the other relevant initiatives (e.g. BiodiERSA, FACCE & Climate JPIs)

**Water-19**  
Full update of the Water JPI SRIA (v3.0)

- Water-04** Exploratory Workshop
- Water-10** Common vision with the FACCE JPI – Workshop 2
- Water-12** Networking workshop between 2016 joint call projects and other relevant EU projects/initiatives
- Water-41** Alignment workshop
- Water-45** Infrastructure workshop to facilitate the development of the interactive platform

**Water-15**  
Develop a common vision with the Climate JPI and Belmont Forum

**Water-16**  
2nd Water JPI Thematic Annual Programming

**Water-28**  
Definition of public-private partnership cooperation models with the water economic sector

**Water-29**  
Coordination with other JPIs, policymakers and European public Research and Development Initiatives

# Implementing the Water JPI Strategic Research and Innovation Agenda



Closing the  
water cycle gap



A water-wise bio-  
based economy



Improving ecosystem  
sustainability and human  
well-being



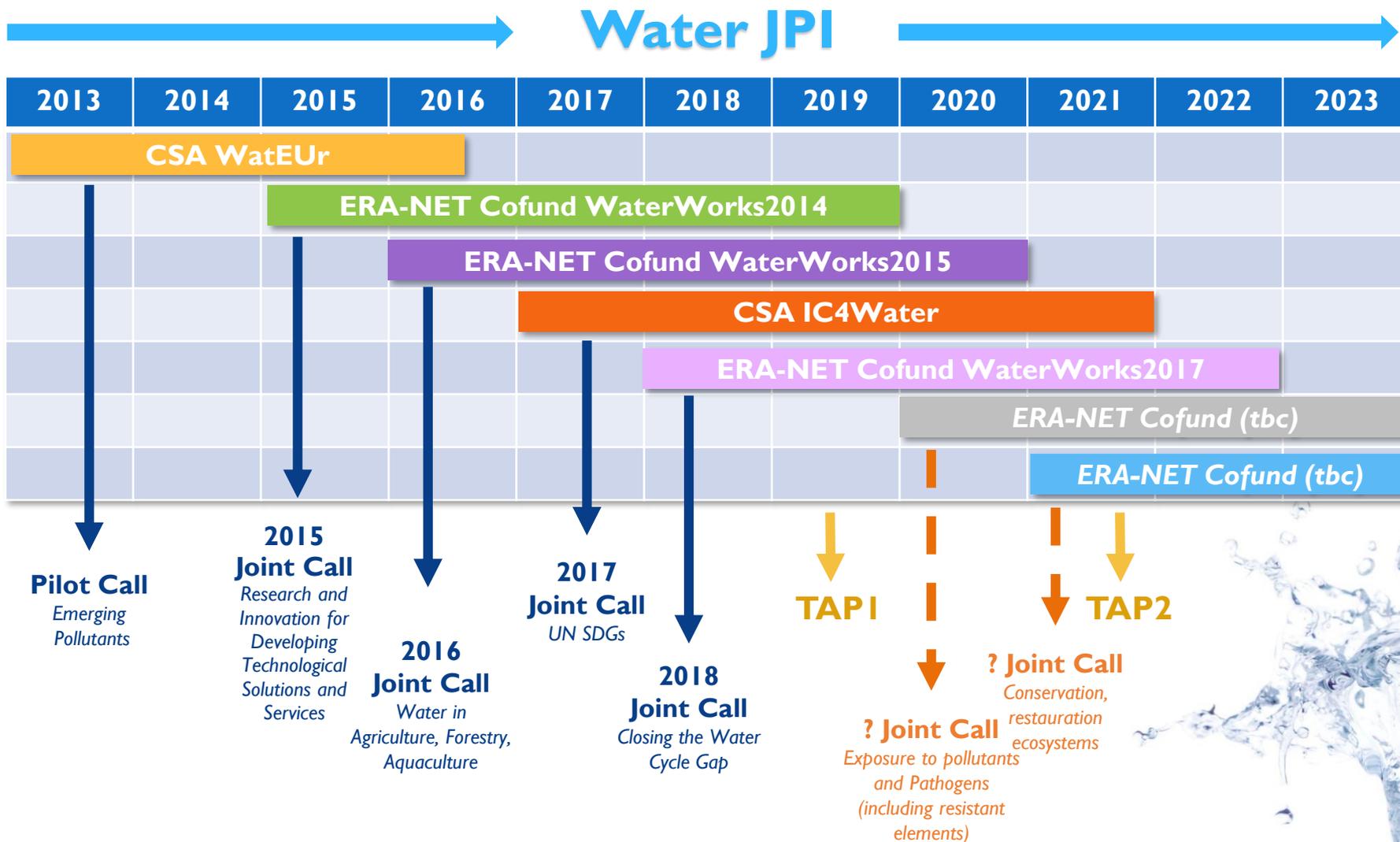
Competitiveness in  
the water industry



Safe water systems  
for citizens



# Calls for Research & Innovation proposals



# Water JPI Joint Transnational Calls 2013-2017



Improving ecosystem  
sustainability and  
human well-being



Safe water systems  
for citizens



A water-wise bio-  
based economy



Closing the water  
cycle gap



Competitiveness in  
the water industry



# Joint Transnational Calls

## 2013 Pilot Call

Identification and prevention of emerging freshwater contaminants

Control, mitigation and methods for treatment and removal

Impact on ecosystems services and human health

**€ 9 million**

## 2015 Joint Call

Water Treatment, Reuse, Recycling and Desalination

Water Resources Management

Mitigate Impacts of Extreme Events (Floods and Droughts) at Catchment Scale

**€ 14 million**

## 2016 Joint Call

Increasing the efficiency and resilience of water uses

Monitoring and reducing soil and water pollution

Integrating social and economic dimensions into the sustainable management and governance of water resources

**€ 18 million**

# Joint Transnational Calls

## 2017 JOINT CALL

Multiple pressure effects on ecosystems and ecosystem services as well as effective mitigation

*adaptation tools and assessments for implementing the water related targets of the UN SDGs*

Developing accessible solutions for clean water management to address UN SDG6 targets and associated SDGs

**€ 6,8 million**

## 2018 JOINT CALL

Enabling sustainable management of water resources

Strengthening socio-economic approaches to water management

Supporting tools for sustainable integrative management of water sources

**€ 15,2 million**



Improving ecosystem  
sustainability and  
human well-being



Safe water systems  
for citizens



A water-wise bio-  
based economy



Closing the water  
cycle gap



Competitiveness in  
the water industry

# Upcoming opportunities...

- ▶ ERA-NET Cofund 2019: **2020 Joint Call**
  - ▶ Risks posed to human health and the environment by pollutants and pathogens present in water resources
  - ▶ In collaboration with the **JPIs AMR** and **Oceans**
- ▶ ERA-NET Cofund 2020: **2021 Joint Call**
  - ▶ Conservation and restoration of degraded ecosystems and their biodiversity, including a focus on aquatic systems
  - ▶ In collaboration with **BiodivERsA**



**More than just  
Joint Transnational Calls!**



# Alignment

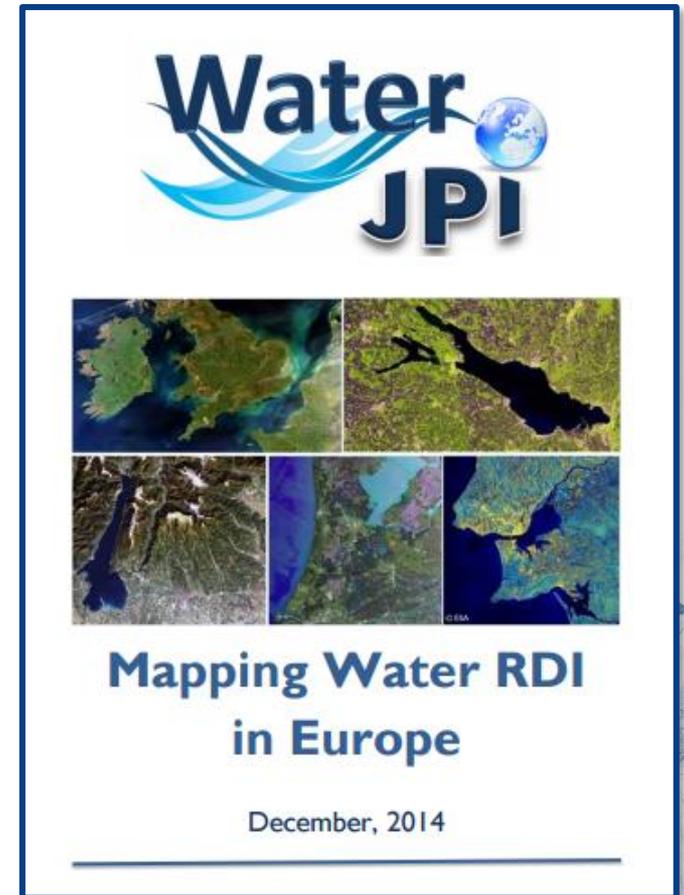
## Levels, Approaches, Actions



Levels & approaches	Potential enabling / confirming actions (alignment criteria)
<b>Strategic</b>	RDI Mapping; Identification of National Programmes; The EU Regulatory Framework; Foresight and Consensus Activities; SRIA as a Unifying Unit; Consolidation of Priorities*
<b>Funding</b>	Funding Foreigners / Foreign Institutions; Implementation of Real Common Pot; Harmonised and Predictable Timelines and Funding Rules
<b>Operational</b>	Common/harmonised Rules for: Participation in All Water JPI Activities, Project Reporting, Project Monitoring, Project Evaluation
<b>Scientific</b>	Database and Information Technologies Development; Standardization of Research Practices/Outputs; Mobility Schemes, including shared access to Research Infrastructures; Knowledge Hubs; Open Access and Open Data approach

# Why a mapping exercise?

- ✓ Better understanding of the European water-related RDI activities
- ✓ Inventory of national & regional research strategies, policies and programs
- ✓ Funding of research projects, infrastructures & mobility schemes in Water RDI
- ✓ Multi-national coordination activities taking place in Europe
- ✓ Preliminary strategic analysis of the current water research strengths, weaknesses, gaps and barriers to cooperation



# Outcome

- ▶ Country summary reports were produced for all countries (30 = JPI + rest of Member States + some Associated Countries)
- ▶ Surveyed / Estimated mobilisation of resources through the JPI

Study Target	Countries	National Public RDI Funding (M€)	Funding respect to MS+AC (%)
Europe	Member States	351	94
	Associated Countries	22	6
	MS + AC	372	100
Water JPI	Partners	328	88
	Observers	30	8
	Partners + Observers	358	96

- ▶ The EC invests 130 M€/yr through the FP (average of FP6 and FP7 so far)
- ▶ Total investment in public RDI: about 500 M€/yr in MS+AC+EC

# Mapping Beyond Europe

- ▶ Mapping of RDI activities in 7 targeted countries and first contacts with research funding organisations to invite them to participate in the ERA-NET

- ✓ Brazil
- ✓ Canada
- ✓ China
- ✓ India
- ✓ South Africa
- ✓ USA
- ✓ Vietnam



**Criteria:** Scientific excellence, development and market

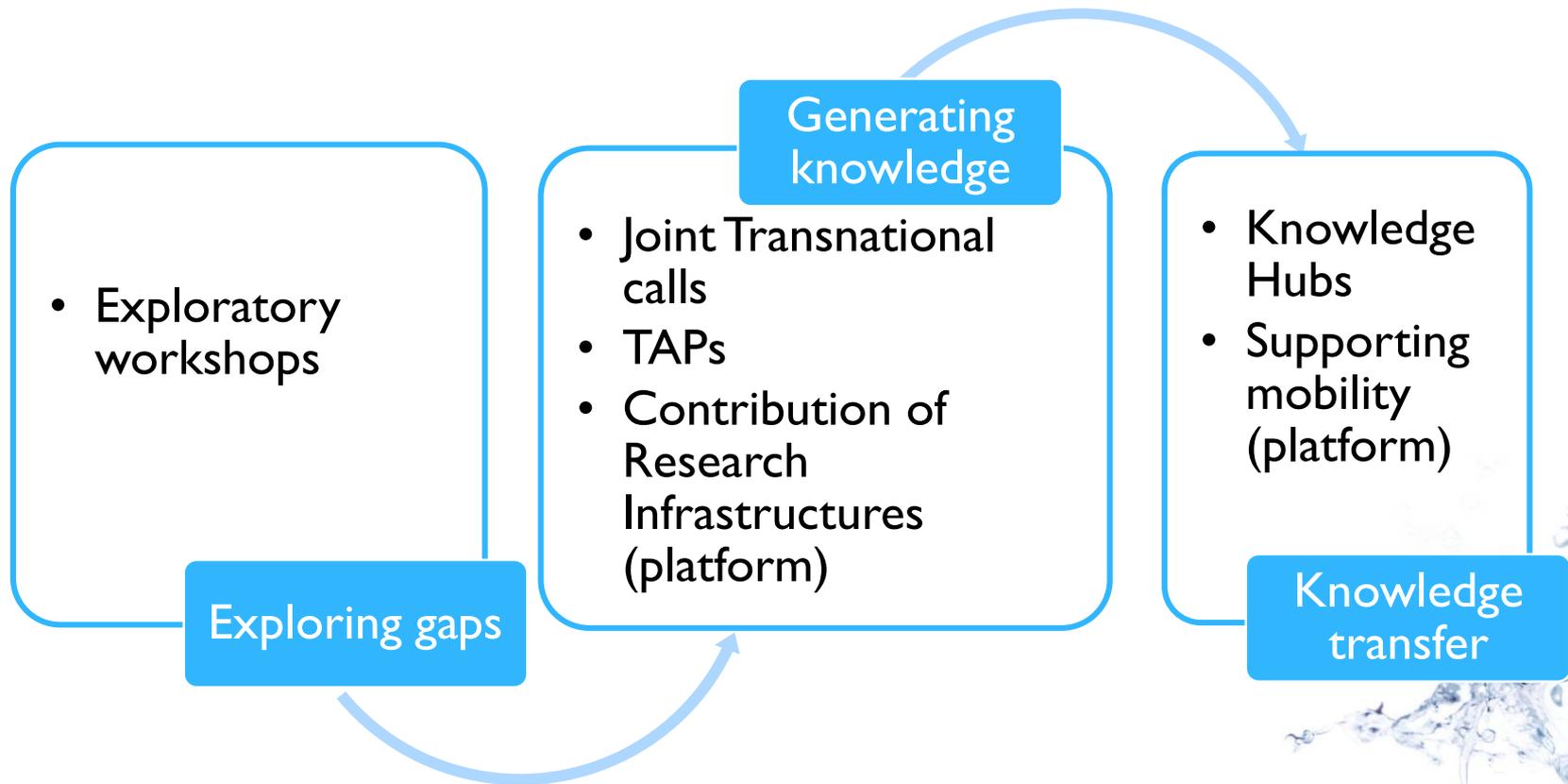
# Water-related project database (OA/OD interface)

- ▶ National projects identified by Water JPI members
- ▶ Water JPI funded projects
- ▶ Panorama of EU Water-related projects funded under H2020 Work Programme 2014-2015

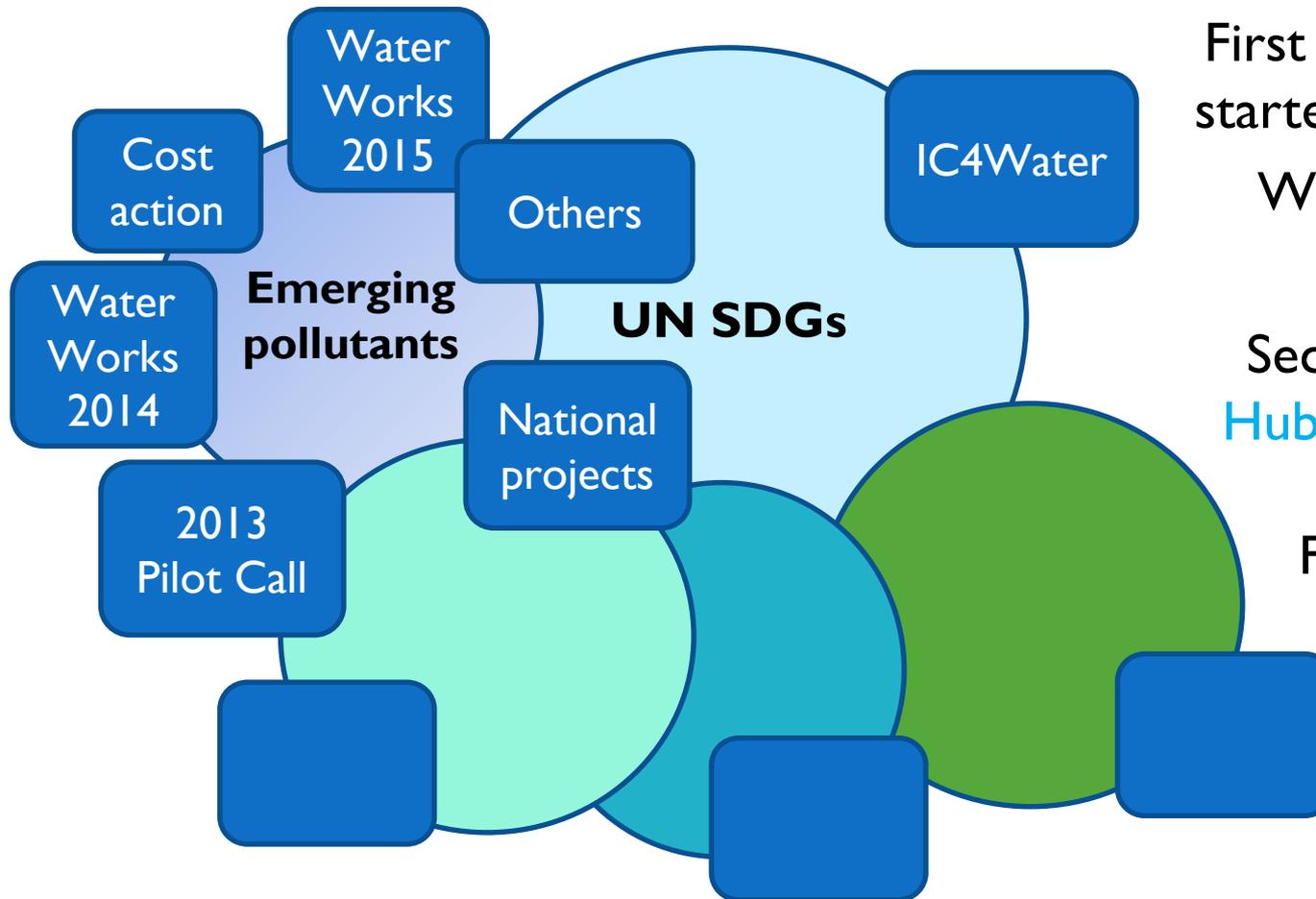
## Objective

Link the Water JPI project database with other relevant databases, such as DG R&I, EIP Water, WssTP, WISE-RTD...

# Clustering researchers/programmes on a specific topic of the SRIA



# Water JPI Knowledge Hubs



First **Knowledge Hub** started in March 2018  
With 23 experts

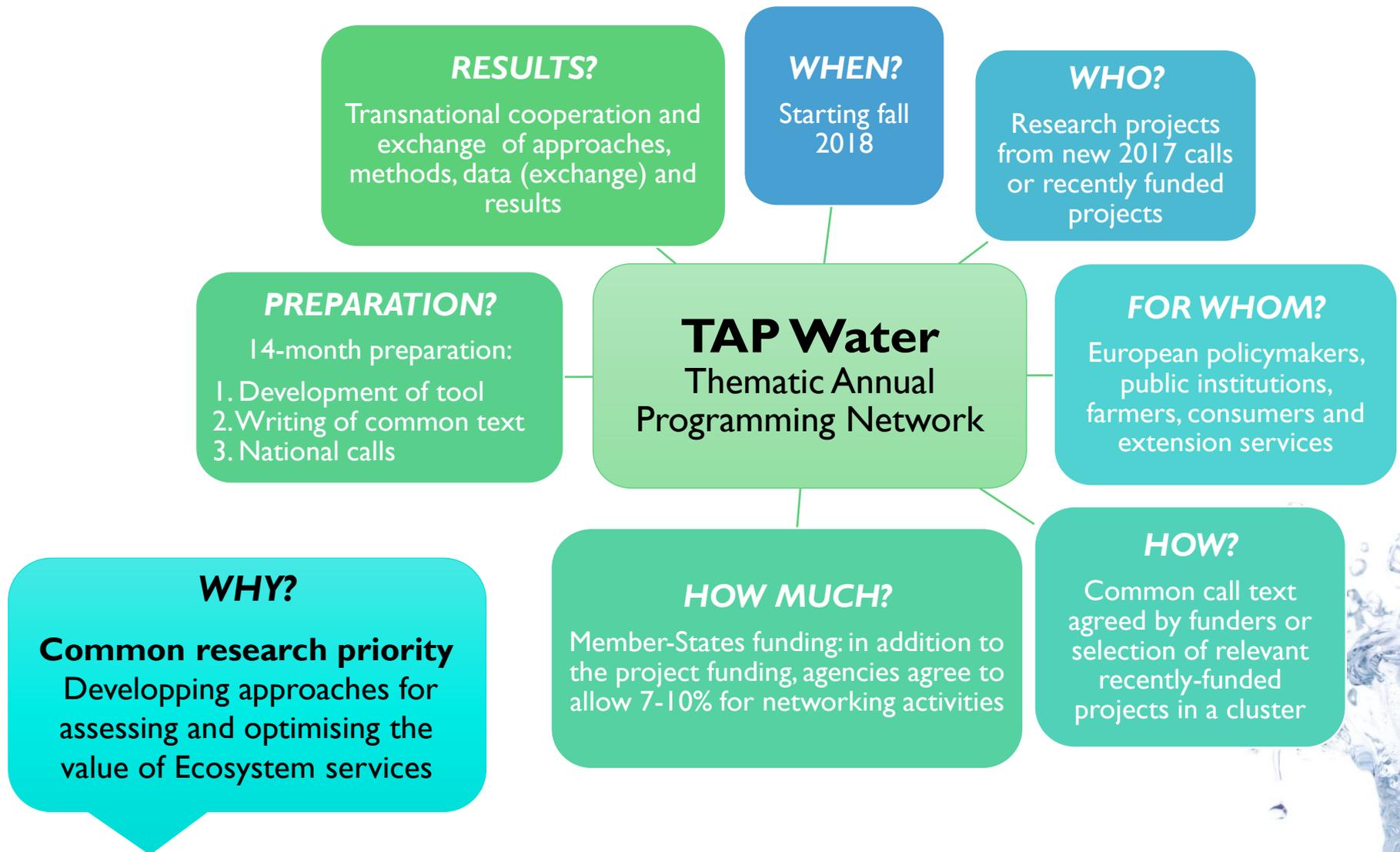
Second **Knowledge Hub on UN SDGs** to be started in February 2019

# Knowledge Hub

## Terms of Reference

- ▶ **Expected Outputs** (*included but not limited to*)
  - ▶ Peer-reviewed publications (additional / related to the cluster);
  - ▶ Online thematic forum;
  - ▶ State of the Art Report;
  - ▶ Foresight exercises (participating in events / workshops...);
  - ▶ Providing input into the update of the SRIA;
  - ▶ Knowledge exchange;
  - ▶ Mutual learning;
  - ▶ Exchange of good practices;
  - ▶ Fostering coordination and sharing of results;
  - ▶ Fostering mobility and sharing of infrastructure;
  - ▶ Developing common practices / Standard methodologies developed;
  - ▶ Presentation at Water JPI events; and
  - ▶ Preparation of policy briefs, joint scientific publications, joint topic synthesis, harmonisation of protocols, working seminar outputs.

# Thematic Annual Programming Action

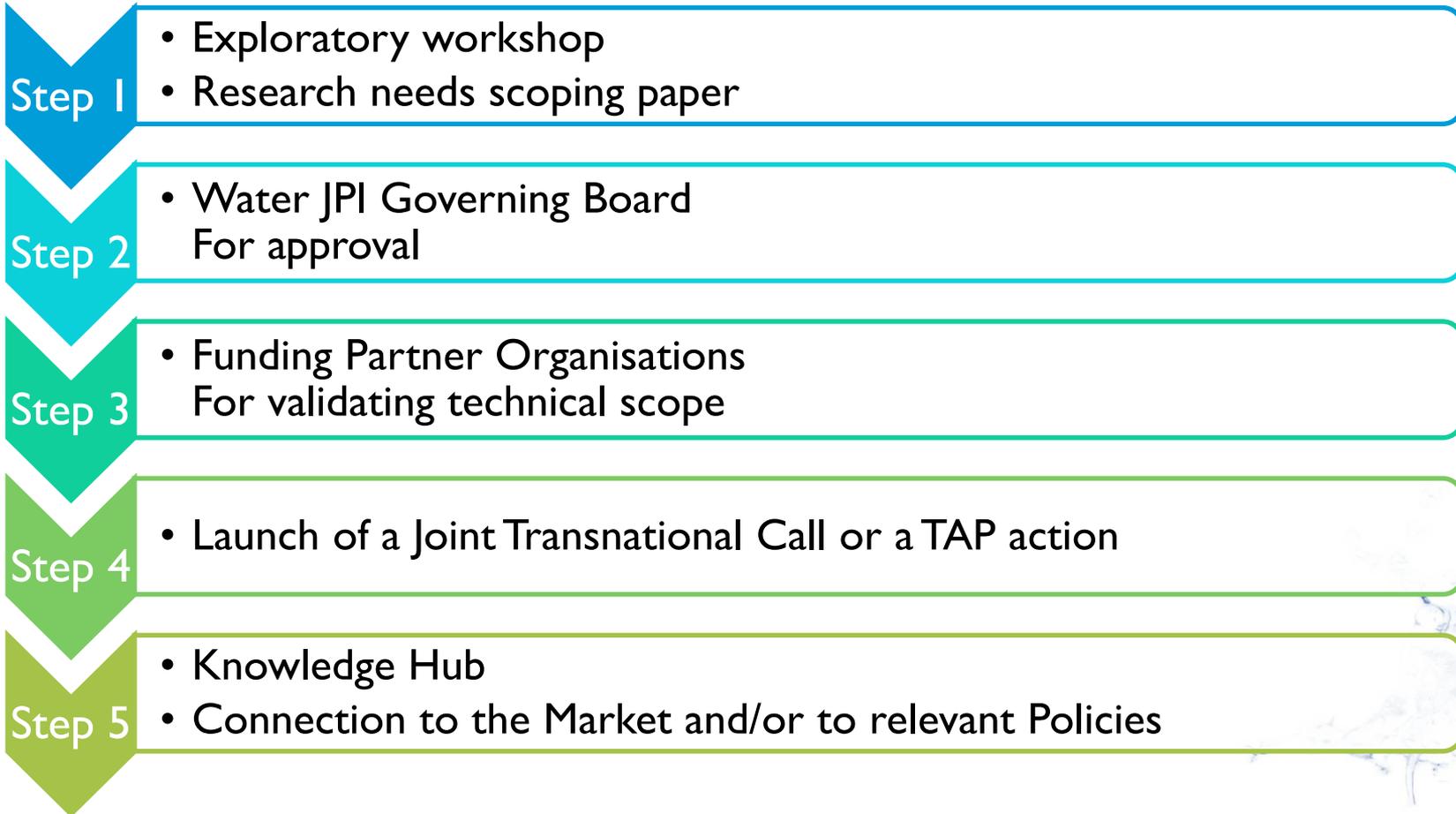


# Exploratory Workshop

## AIMS

- ▶ Identification of the Key Knowledge Gaps in the area of interest
  - ▶ In a collaborative and participatory approach
- ▶ The **TOP 3 gaps** to be considered in priority actions
- ▶ Complete the template for updating the Water JPI **SRIA** (online form available on the Water JPI website)

# Exploratory Workshop - Process



A dynamic splash of clear blue water against a white background, with water droplets and ripples visible.

# International Cooperation Development



# International Partners

The Water JPI already has already

- ▶ Members in several EFTA countries, enlargement countries and countries covered by the European Neighbourhood Policy



- ▶ Contacts and joint activities beyond these countries
  - ▶ Other EFTA / Neighbourhood Policy countries
  - ▶ Industrialised countries and emerging economies
  - ▶ Developing countries

# International Partners in Joint Activities

## ▶ Brazil

- ▶ CONFAP and States Agencies (Call 2017, 2018),
- ▶ Sectoral Dialogue on Water (EC, JPI members, BR Ministries)

## ▶ Canada

- ▶ Natural Sciences and Engineering Research Council - NSERC (Call 2016)

## ▶ Egypt

- ▶ Academy of Scientific Research & Technology - ASRT (Call 2016, 2017, 2018)

## ▶ Taiwan

- ▶ Taiwanese Ministry of Science and Technology - MOST (Call 2016)

## ▶ Tunisia

- ▶ Institution for Agricultural Research and Higher Education – IRESA (Call 2016, 2018)
- ▶ Ministry of Higher Education and Scientific Research – MHESR (Call 2018)



### Discussion with

- Chile
- China
- India
- USA

Mediterranean countries (PRIMA)

Israel

Moldova

Norway

Turkey

South Africa

Canada

Taiwan

Egypt

Tunisia

Brazil

Argentina

Thailand

Vietnam

2014

Non EU Water JPI Members

H2020 Associated Countries or Eligible for funding

Third countries

2018



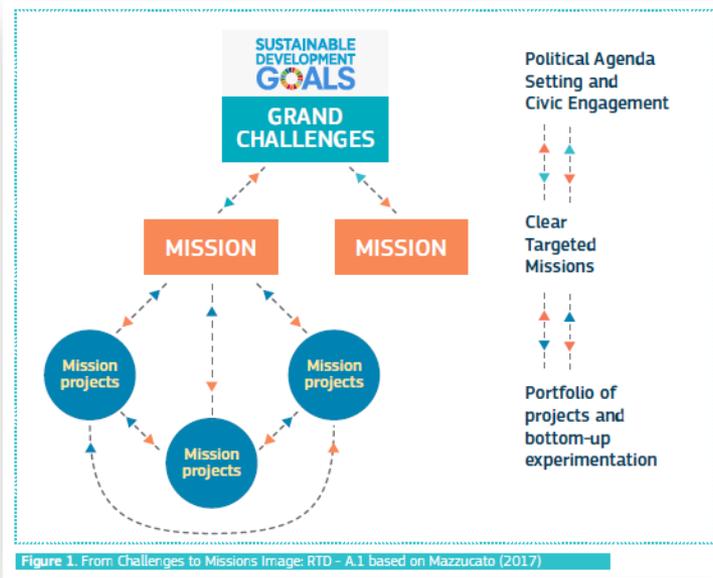
# Updating the Water JPI Vision and the Strategic Research and Innovation Agenda

Upcoming activities...



# Why do we need to update the Water JPI Vision and SRIA...

- ▶ Emerging challenges
- ▶ New policy context
- ▶ Re-align Water JPI Objectives and RDI Priorities



# Towards Vision 2030

Policy Drivers



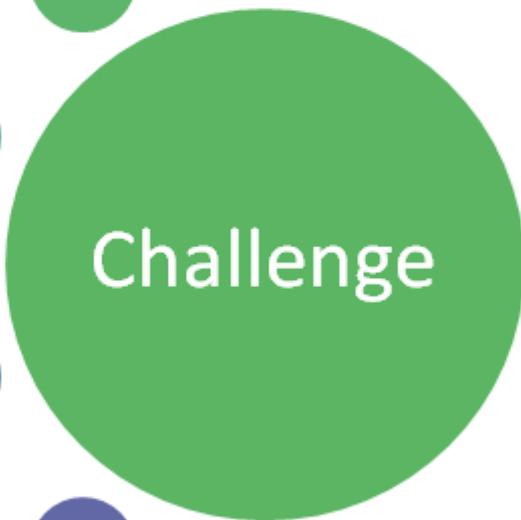
R&D Drivers



Foresights



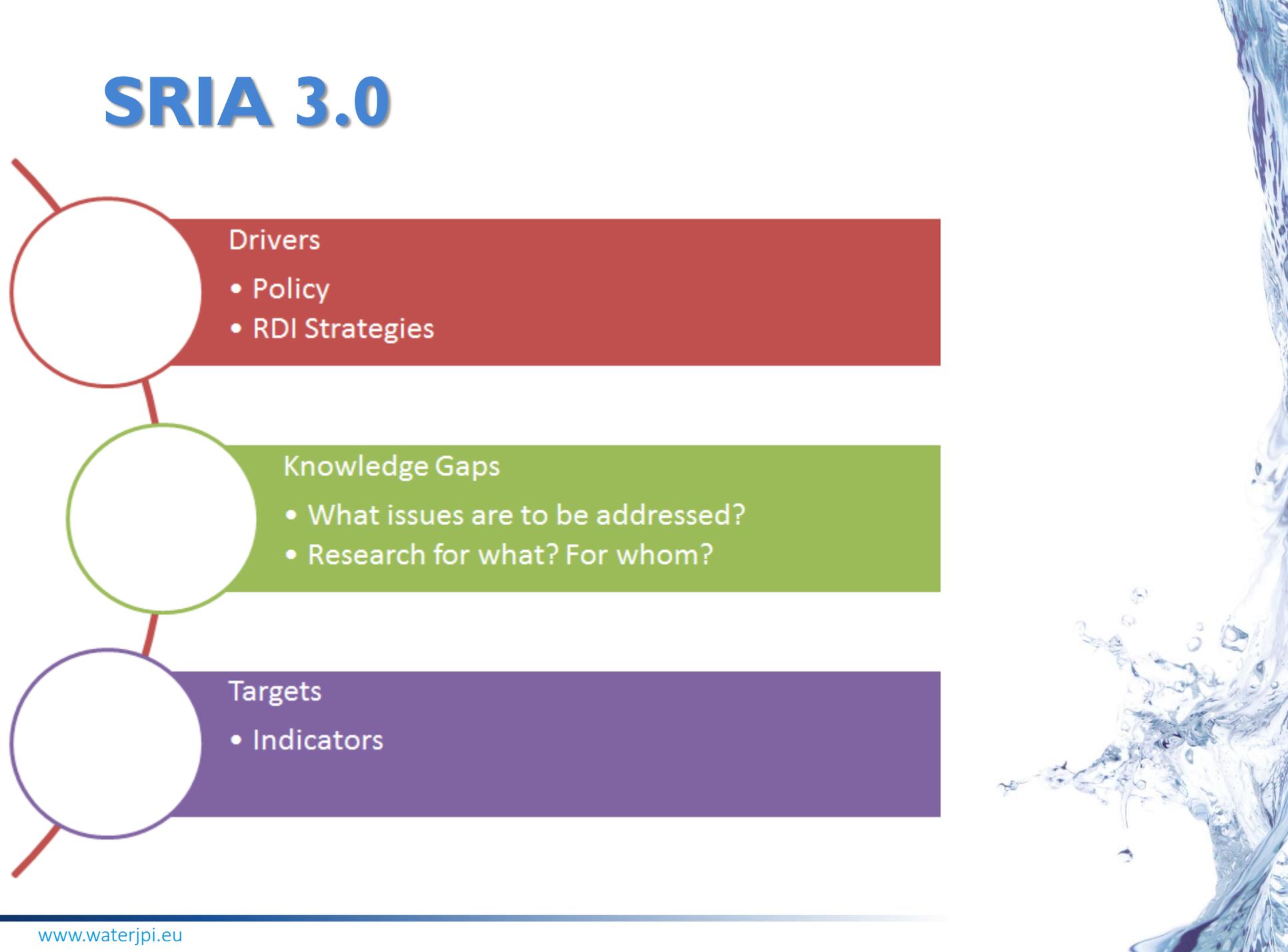
Vision 2020



# Vision 2030



# SRIA 3.0



## Drivers

- Policy
- RDI Strategies

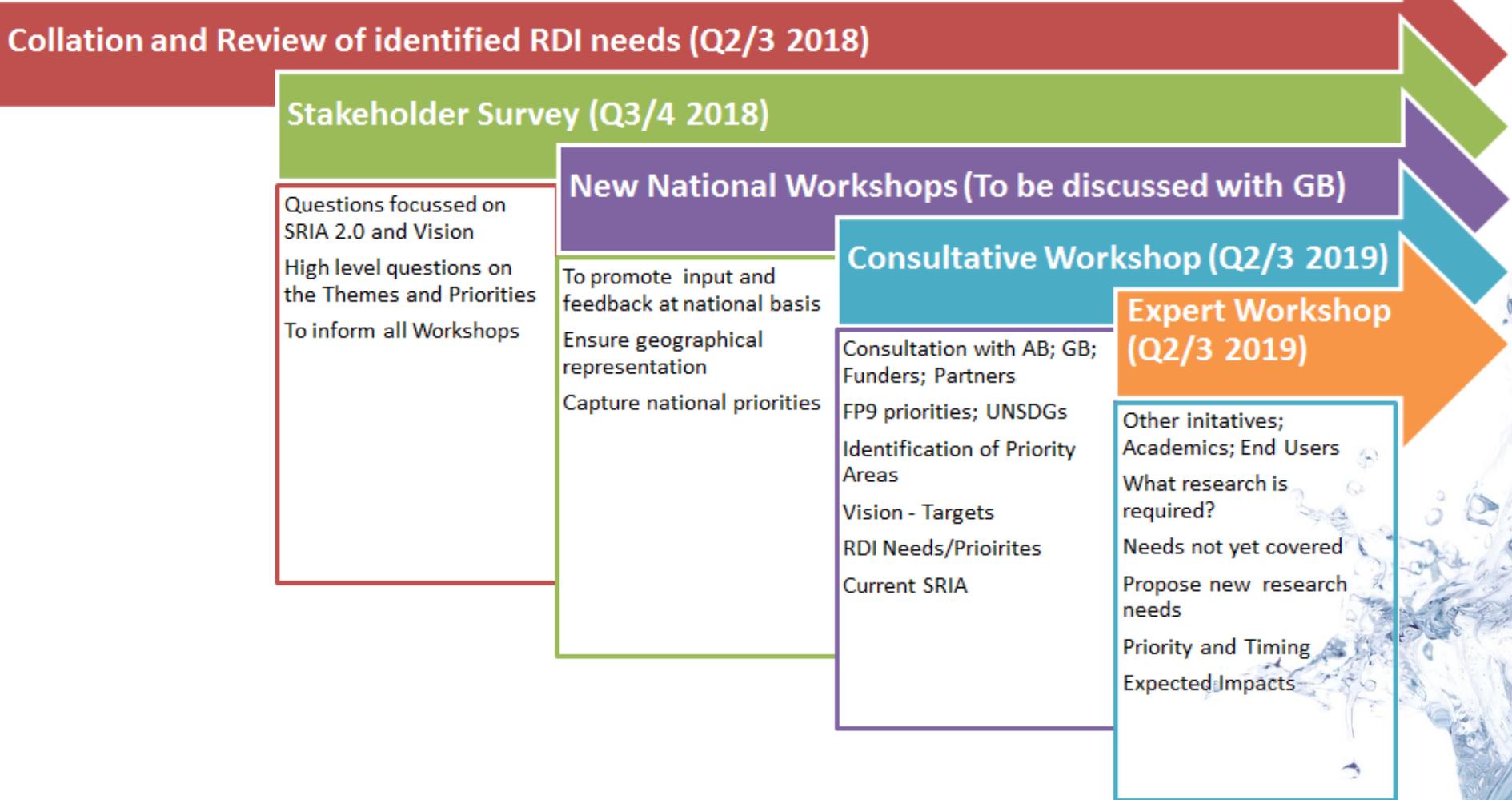
## Knowledge Gaps

- What issues are to be addressed?
- Research for what? For whom?

## Targets

- Indicators

# Update Process...



# For more information...



- Website : [www.waterjpi.eu](http://www.waterjpi.eu)
- A Newsletter – **Subscribe on line!**
- [@WaterJPI](https://twitter.com/WaterJPI)
- LinkedIn - Water JPI researcher forum group (ca. 2000 members)  
<https://www.linkedin.com/groups/8455262>
  - Joint Calls announcements & Networking
  - Announcement of events and activities
- A unique contact point
  - [waterjpisecretariat@agencerecherche.fr](mailto:waterjpisecretariat@agencerecherche.fr)
  - Phone + 33 | 78098120

