

10 JPIs since 2008



Water Challenges for a Changing World



Healthy and Productive Seas and Oceans



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

Joint Programming

- ▶ Is a new way for tackling Current Grand Challenges with (at least) European dimension
 - ▶ An initiative of European Member States and the European Commission
 - ▶ in a structured way, through:
 - coordinating national / regional, public, research, development and innovation programmes in Europe
 - developing Joint multilateral activities
 - aligning national research programmes in an effective manner
 - making better use of Europe's limited public RDI funding
 - extending links to various international initiatives.

FACCE-JPI: towards Sustainable Agriculture in a Changing Climate



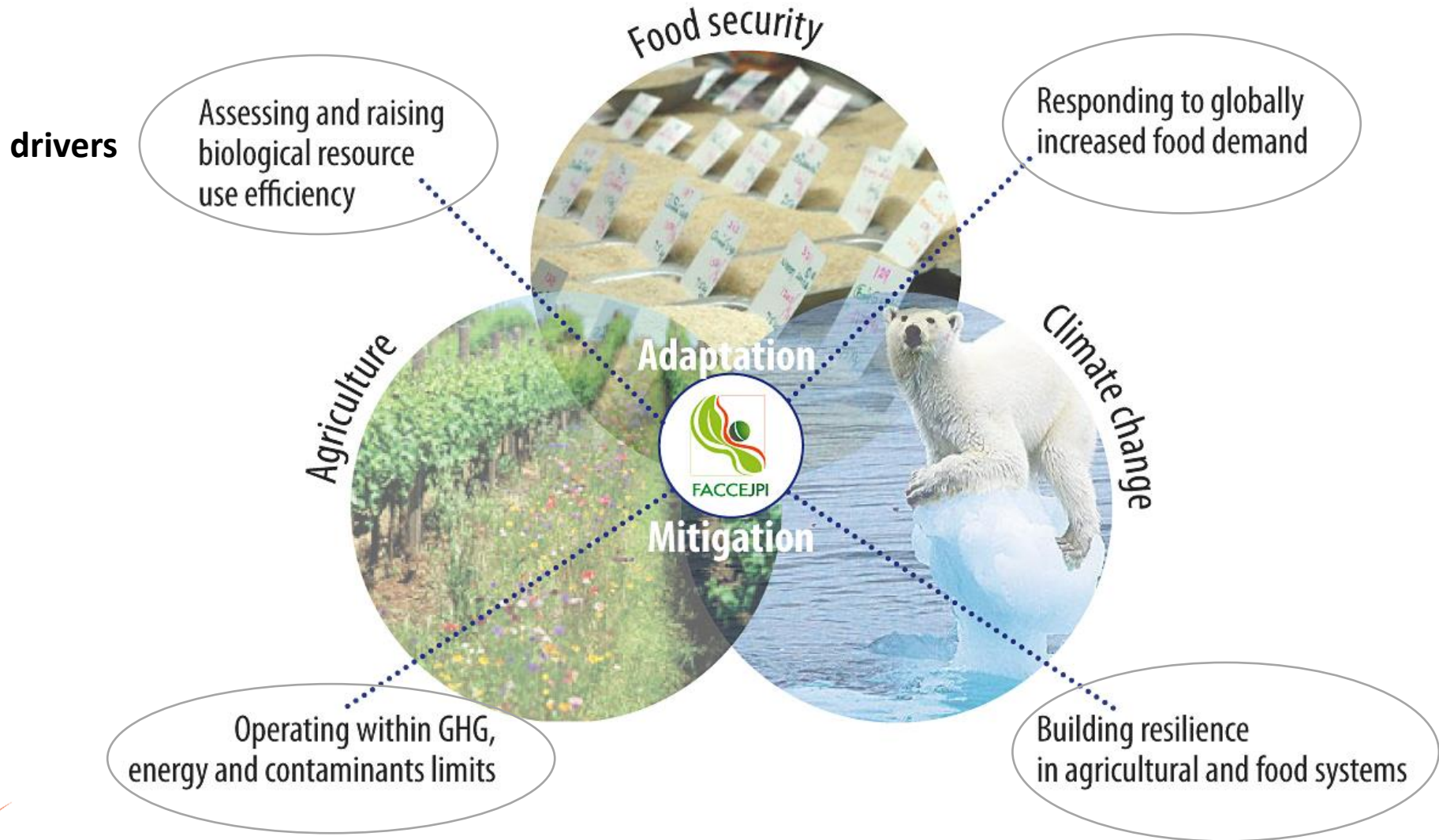
FACCEJPI

Joint Programming
Initiative on
Agriculture, Food Security
and Climate
Change

Maurice Héral
Vice- Chair, FACCE-JPI Governing Board

FACCE /PRIMA 21/112019

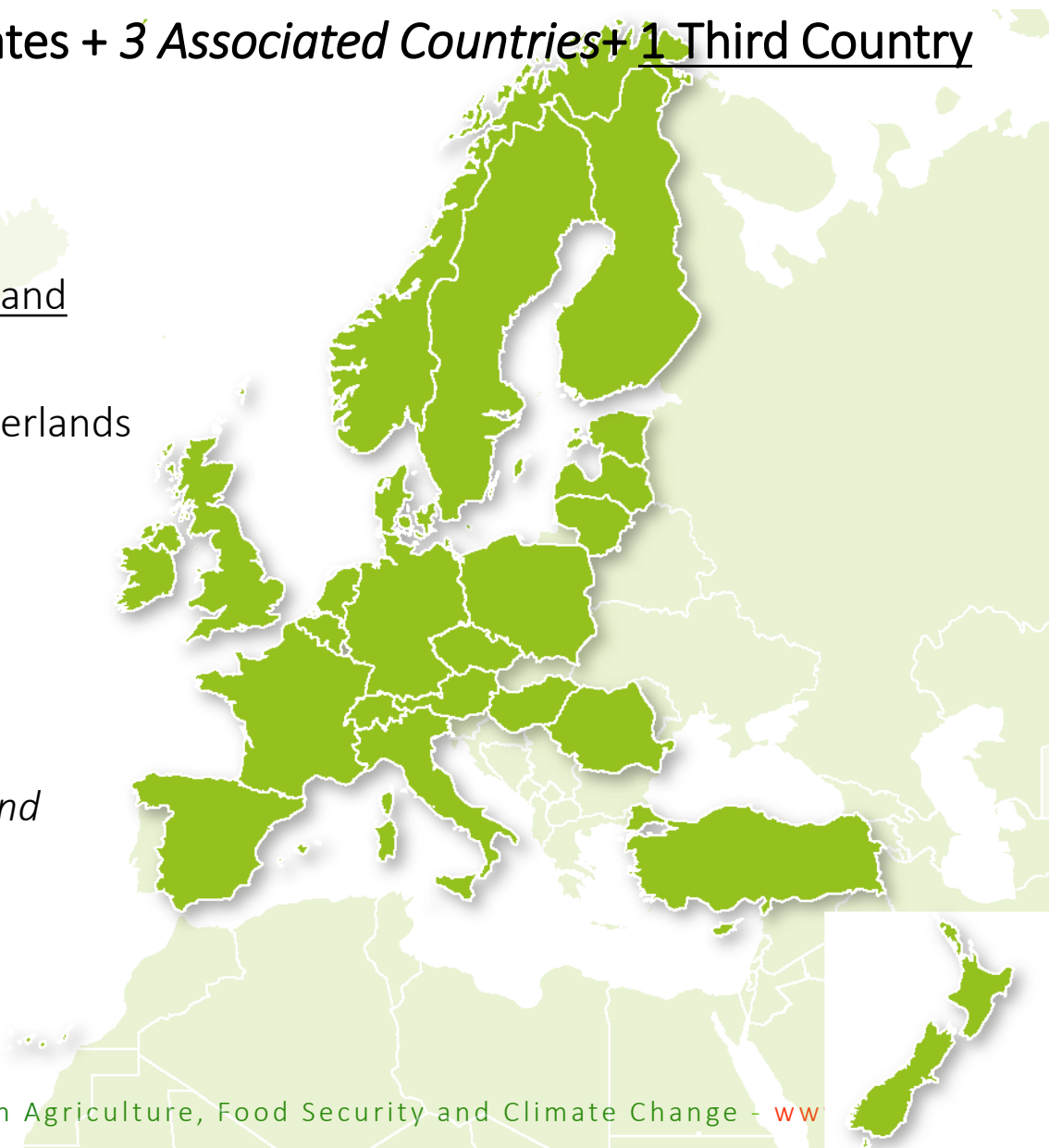
FACCE-JPI



FACCE-JPI Global Partnership

20 EU Member States + 3 *Associated Countries* + 1 Third Country

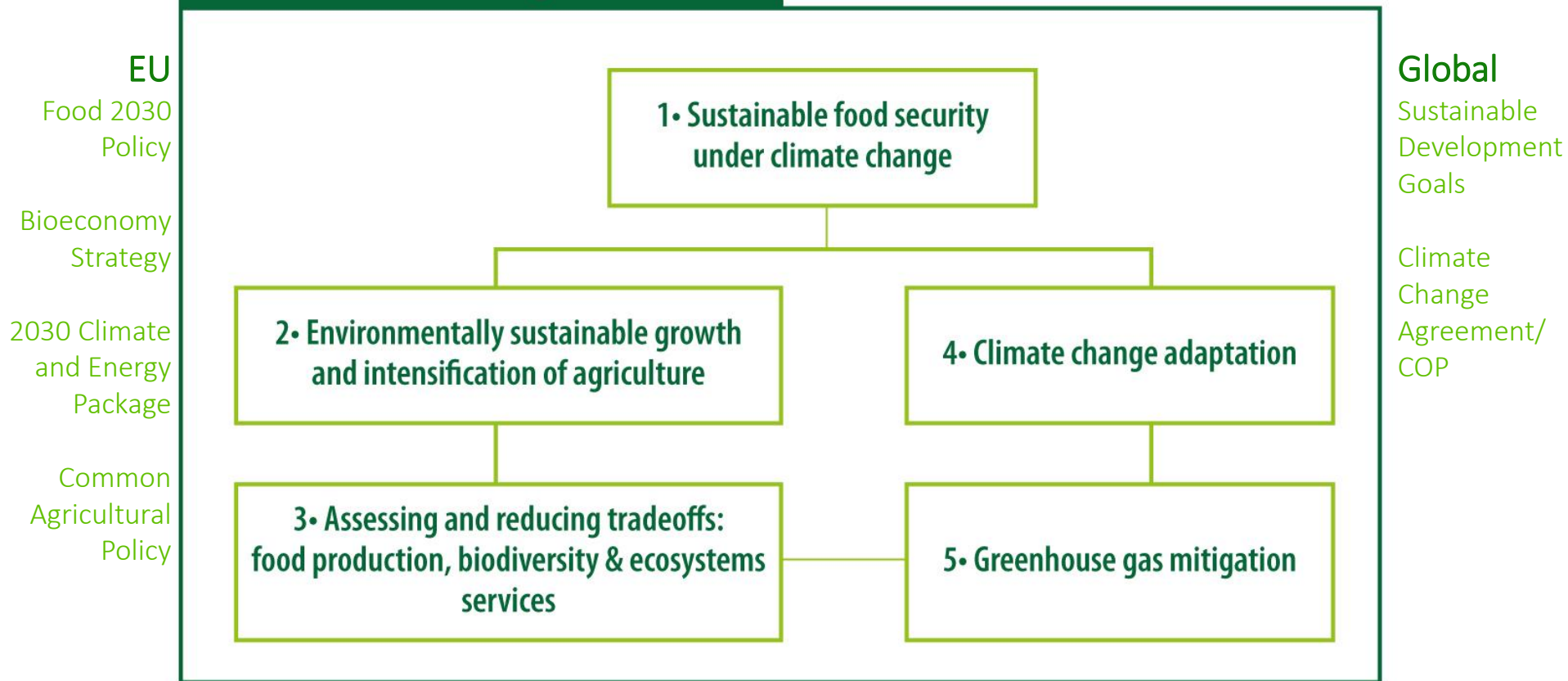
Austria	Lithuania
Belgium	<u>New Zealand</u>
Cyprus	Italy
Czech Republic	The Netherlands
Denmark	<i>Norway</i>
Estonia	Poland
Finland	Romania
France	Spain
Germany	Sweden
Hungary	<i>Switzerland</i>
Ireland	<i>Turkey</i>
Latvia	UK



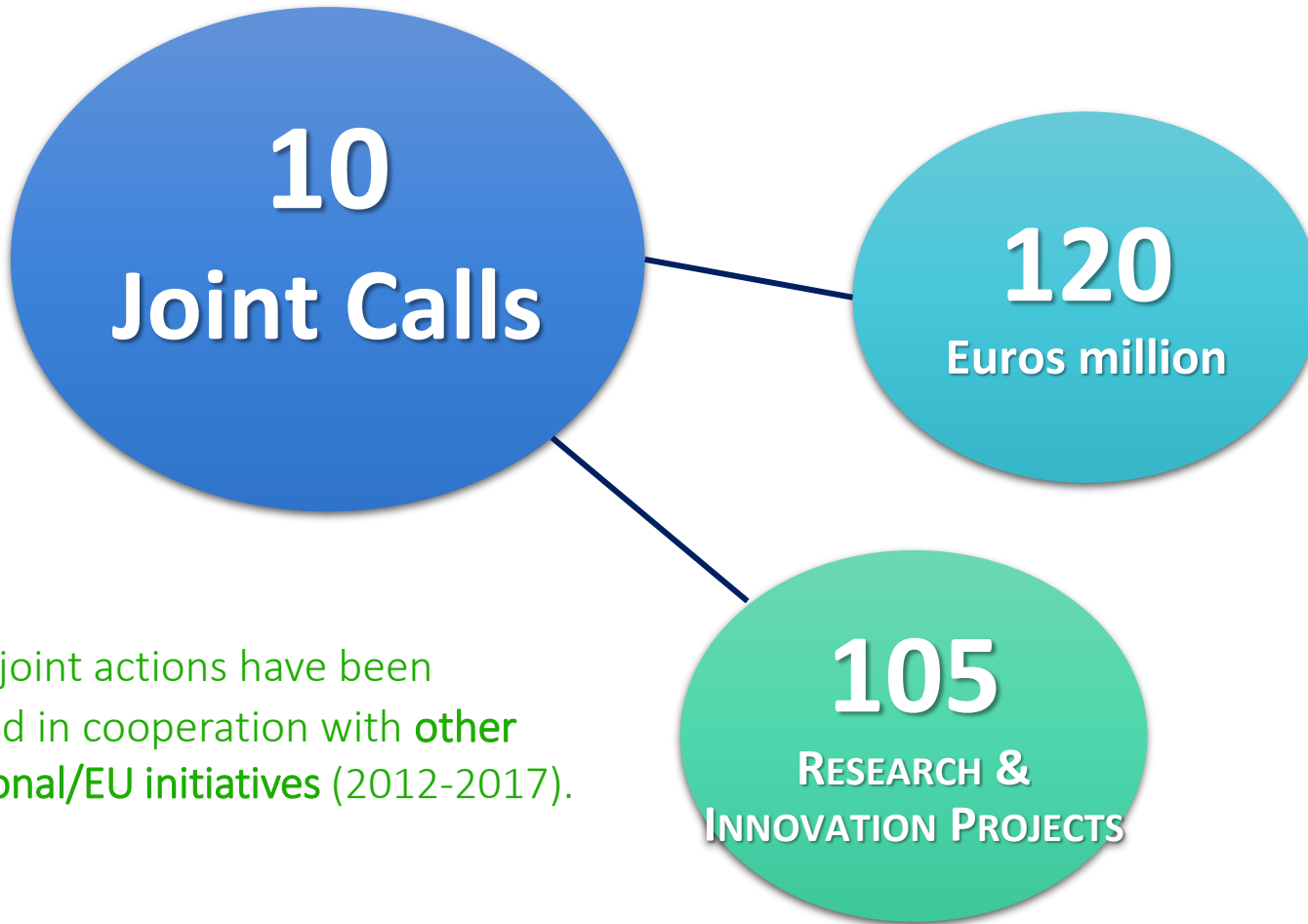
Strategic Research Agenda:

5 Core Themes providing evidence for EU and international policies

The five core themes forming the FACCE – JPI



FACCE-JPI Joint Transnational Calls 2012-2018



50% of joint actions have been developed in cooperation with **other international/EU initiatives** (2012-2017).

+ alignment actions including Knowledge Hubs, Knowledge Networks....

FACCE-JPI Recent Joint Actions

FNR-01-2020
CSA Agroecology Living
Labs

FNR-04-2020
CSA soils and land
management

EJP SOIL
(40M€ MS + 40M€ EC)
Starting early 2020

FOSC ERA-NET
Food System and Climate
change
Start 1 October 2019

**Sci-Pol Knowledge
Hub**
Kick Off Nov. 2019

FOSC

ERA-NET Cofund on Food Systems and Climate

Towards the development of sustainable and resilient
food systems in Europe, Africa and Latin America

Maurice Héral, ANR

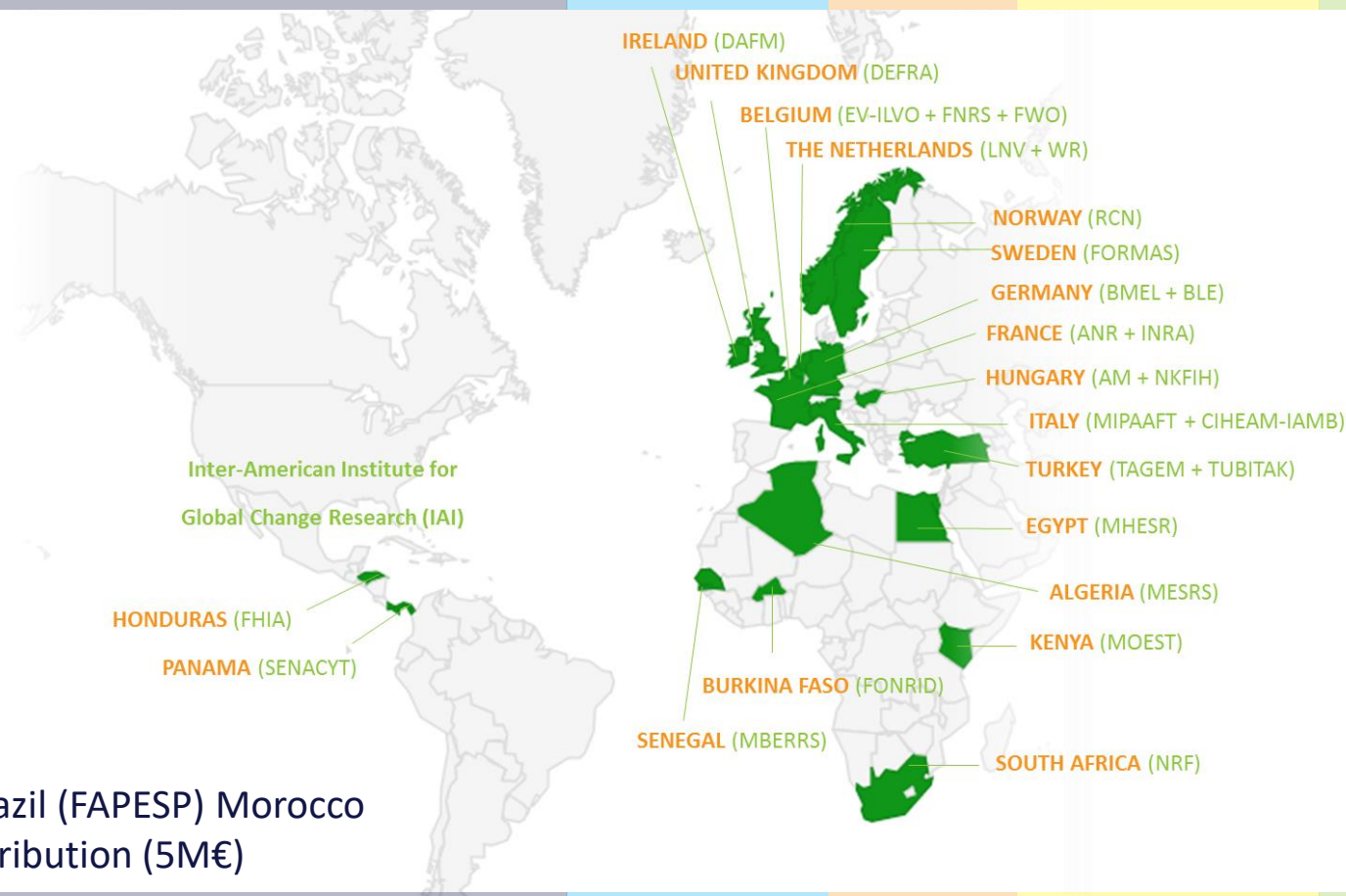


Objectives



- **A joined action between JPI FACCE, BELMONT Forum and LEAP AGRI.** It supports the Sustainable Development Goal (SDG) 2 to “end hunger, achieve food security and improved nutrition and promote sustainable agriculture”, recognizing the important inter-linkages with SDG13 to “take urgent action to combat climate change and its impacts”, and several other targets such as eradicating extreme poverty as well as those related to health, soil, water, and biodiversity.
- **The ERA-NET-Cofund on Food Systems and Climate (FOSC) is a new ERA-Net Cofund under Horizon 2020 that will announce the first trans-continental Call in the field of food systems and climate.** The call for proposal is focused on the interactions between climate change and food systems: assessing the consequences of climate change on agri-food markets, developing sustainable and resilient food value chains, influenced by changing food needs and patterns (diets).

FOSC Cofunded call: 21 countries, 17M€



including Brazil (FAPESP) Morocco
and EU contribution (5M€)

FOSC Cofunded call: 4 themes

- **Assess climate change-related risks for food value chains, including impacts on producers, prices, availability, quality, international trade and food security, and resulting changes in consumer behaviors;**
- **Promote innovative technology deployment to build sustainable and resilient food value chains influenced by changing food needs and patterns, and to develop better efficiency of the inputs and outputs of food systems;**
- **Improve resilience and reduce volatility in agri-food production and food markets to sustainably improve food security in the context of climatic variation;**
- **Reduce food losses under climate change, including novel approaches to valorize side streams and reduce food waste.**

FOSC Cofunded call: timeline

Date	Action
4th November 2019	Pre-announcement Co-funded Call
2nd December 2019	Launch of the call
12th February 2020	Deadline pre-proposals
12th May 2020	Selected pre-proposals are invited for 2nd step
21st July 2020	Deadline full proposal
13th October 2020	Applicants are informed of the selection results + start of national negotiation
Dec./2020-Feb./2021	Start of projects

FACCE-JPI Strategic Research Agenda Update

New Core Themes

- Climate neutrality in agricultural landscapes
- Sustainable & resilient farming (agriculture)
- Nutrition-sensitive agricultural production in food systems
- Trade offs and synergies between food production, ecosystems and climate





FACCE-JPI's ambitions for the future

Europe can lead the way in transforming agricultural systems

Feeding the world will require a major transformation in the way that we produce, manage and consume food.

Sustainable and resilient agricultural production systems that can at the same time help mitigate GHG emissions and adapt to changing environmental conditions, while providing food and nutrition security.

Rethinking how we produce food, reducing waste and losses, and taking an agroecological approach that safeguards biodiversity and ecosystems services.



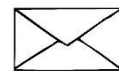


Thank you for
your attention!



FACCEJPI

Joint Programming
Initiative on
Agriculture, Food Security
and Climate
Change



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The Water JPI

Joint Programming Initiative
Water Challenges for a Changing World



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!](#)

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

Water JPI Membership

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

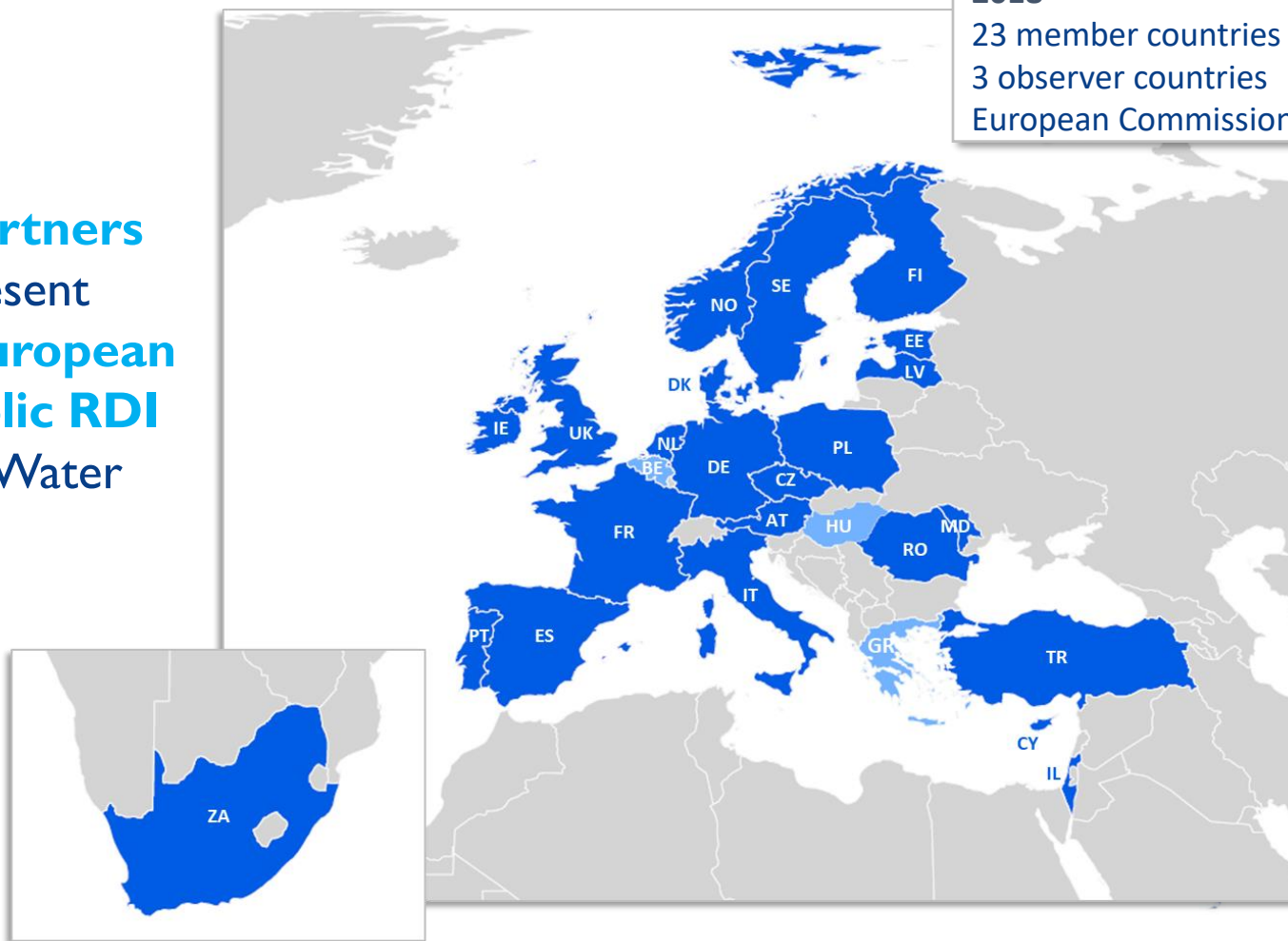
 Water JPI Members
 Water JPI Observers

2018

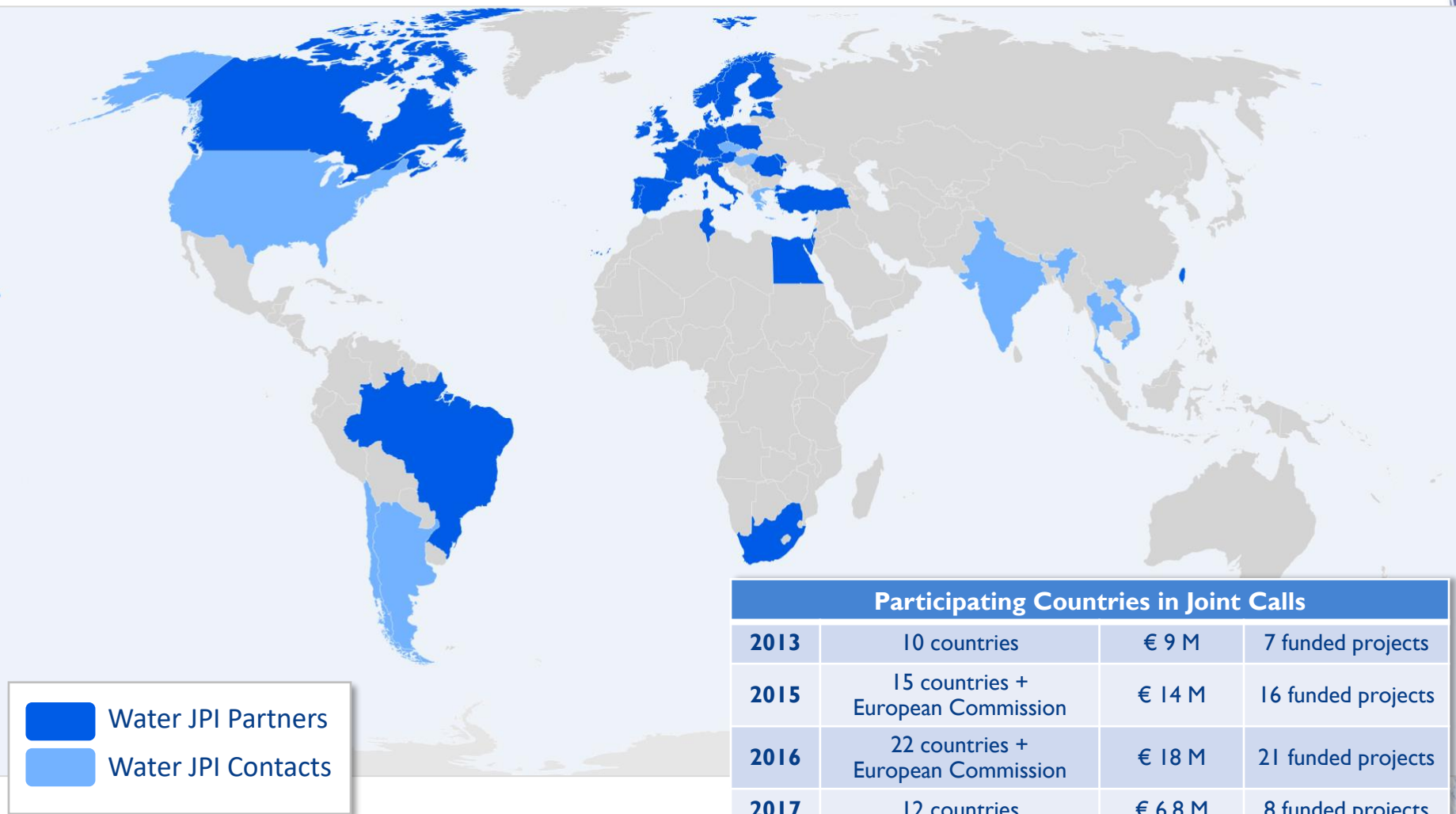
23 member countries

3 observer countries

European Commission



Global Partnership



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

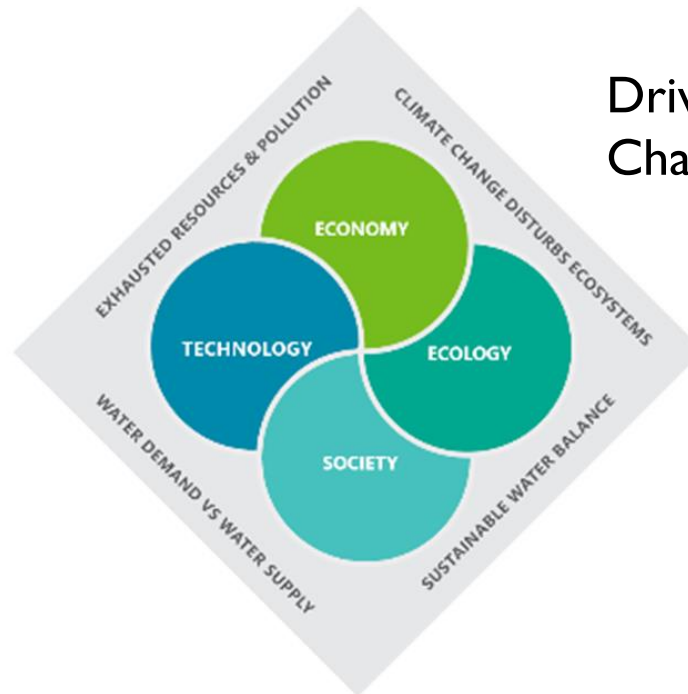
H2020 Associated Countries or Eligible for funding

Third countries

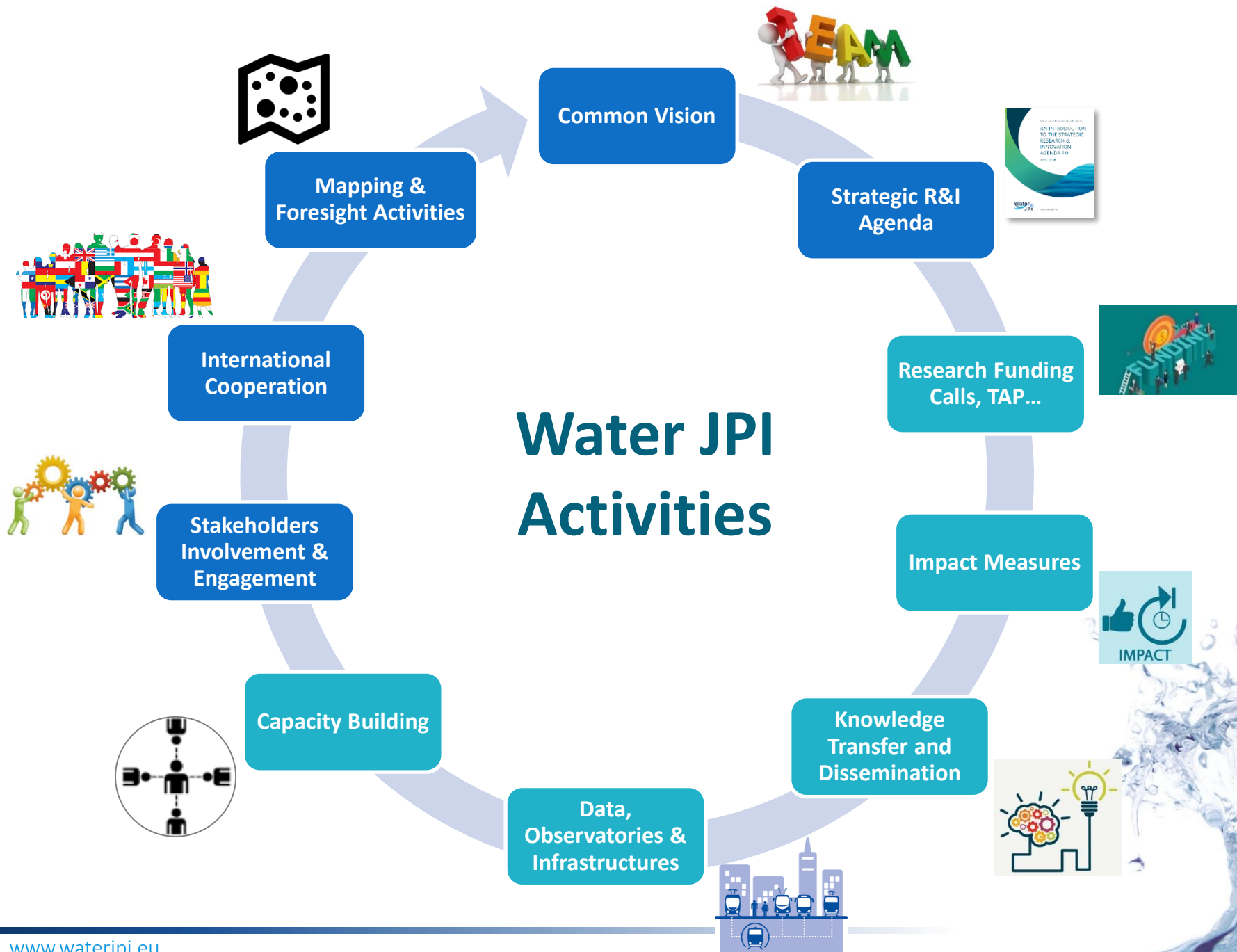
2018

Water JPI Vision 2020

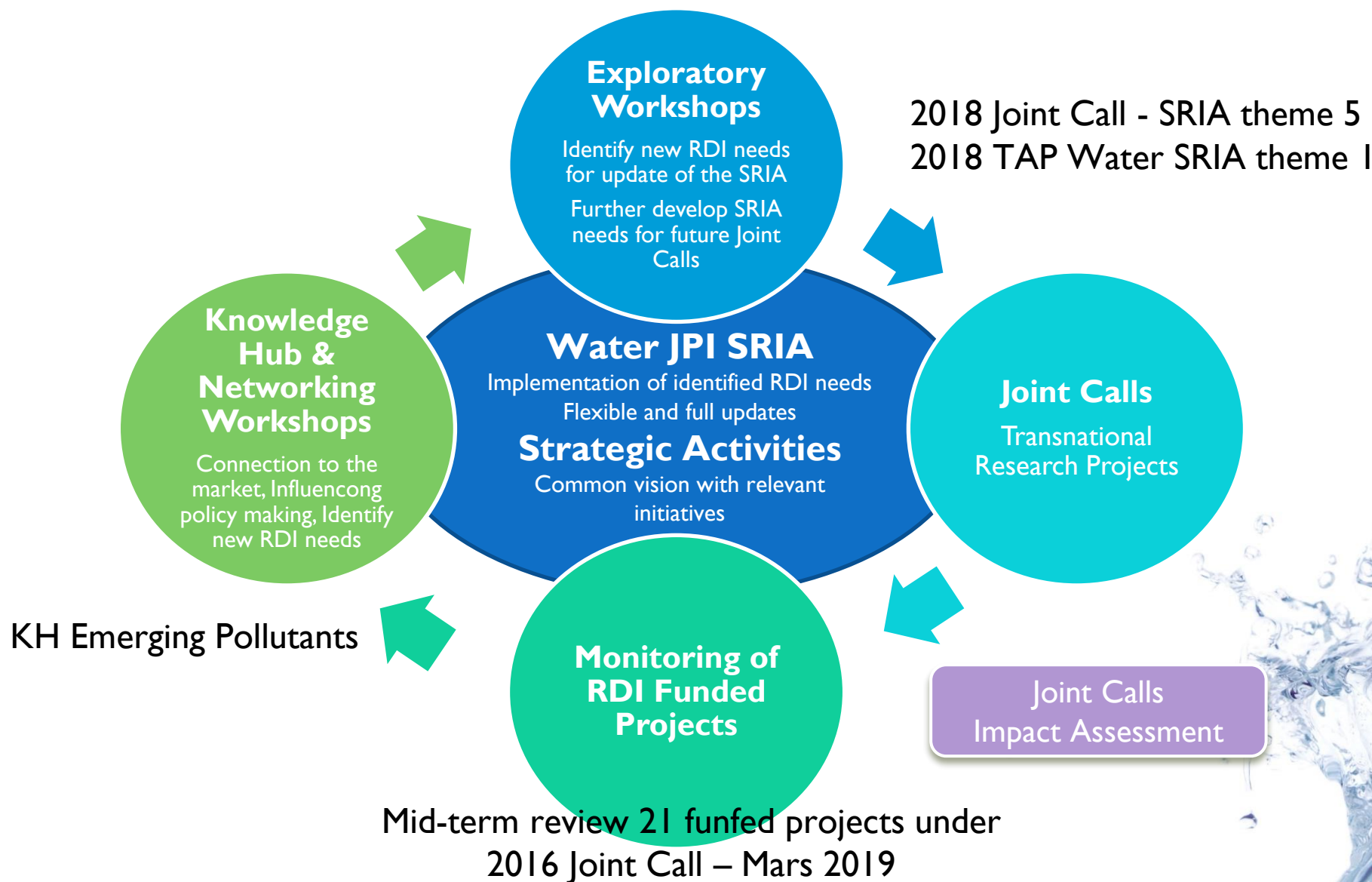
Achieving Sustainable Water Systems for a Sustainable Economy in Europe and Abroad



Drivers and Multidisciplinary Challenges



Thematic Activities



Water JPI Joint Transnational Calls 2013-2017



Improving ecosystem
sustainability and
human well-being



Safe water systems
for citizens



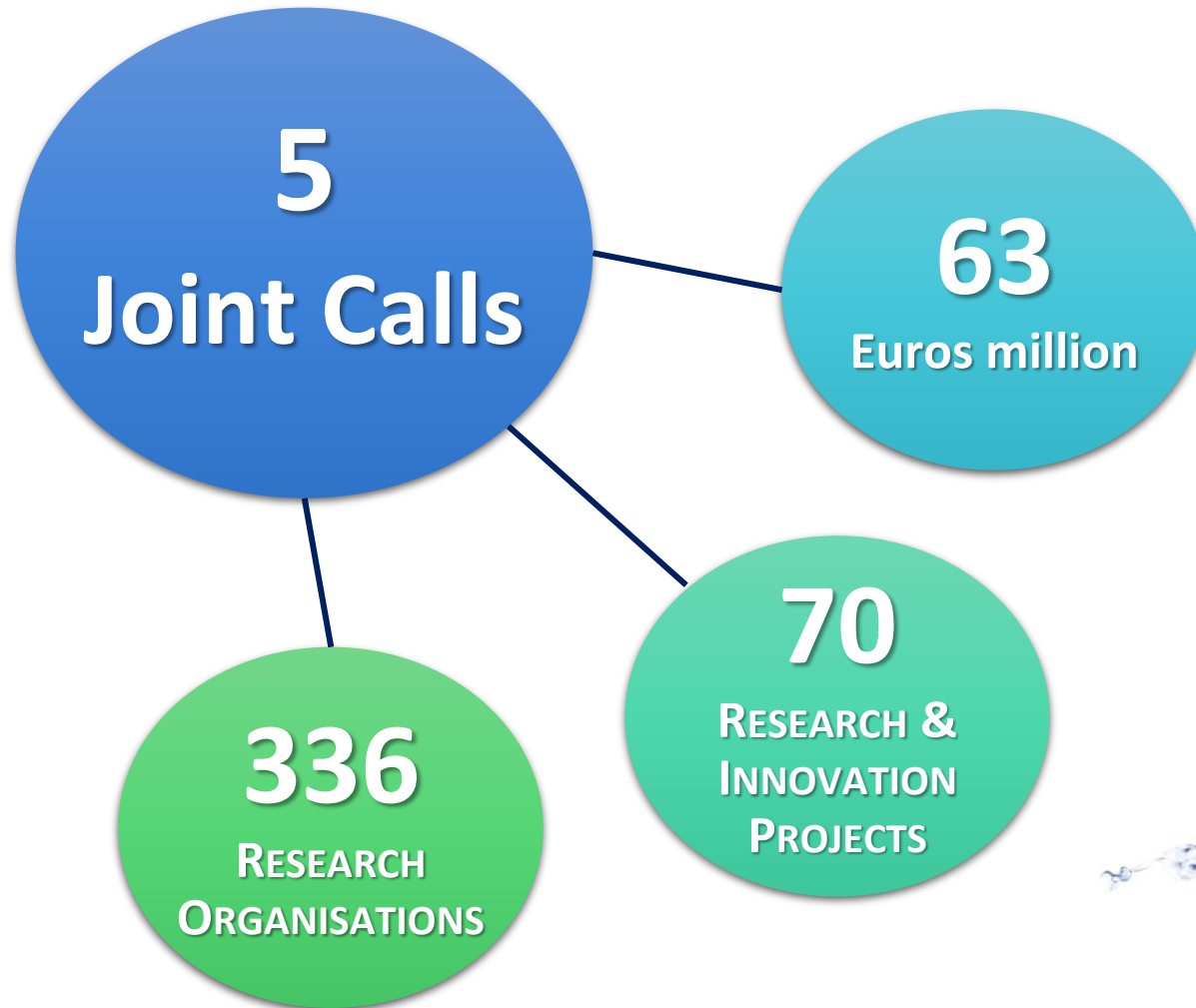
A water-wise bio-
based economy



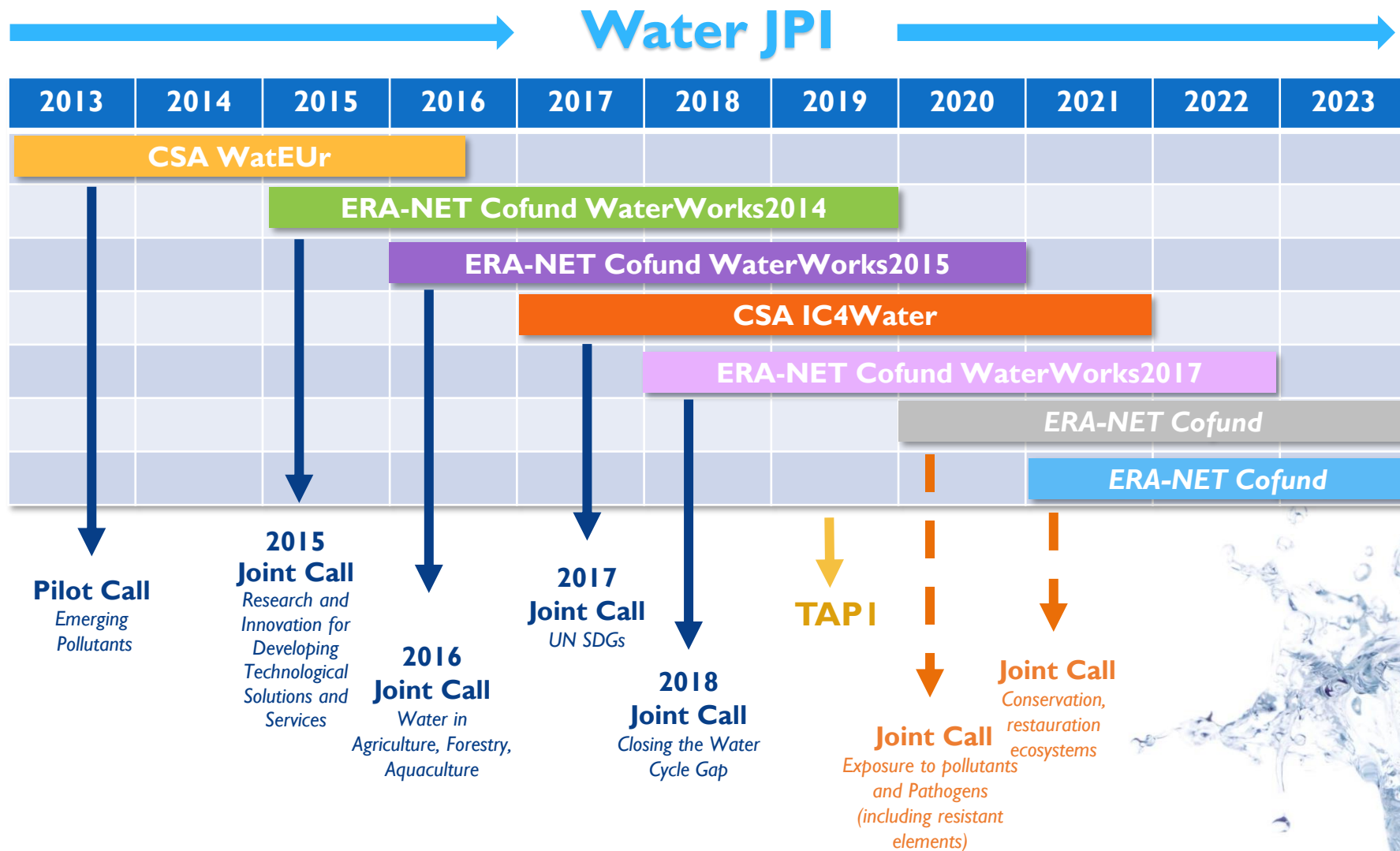
Closing the water
cycle gap



Competitiveness in
the water industry



Calls for Research & Innovation proposals



Upcoming activities 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

Knowledge hub – What for?

- ▶ Knowledge management (collecting – sharing)
- ▶ Knowledge usability
- ▶ Knowledge synthesis
- ▶ Knowledge sharing to extended domain(s)
- ▶ Knowledge transfer (to end-users)
- ▶ Knowledge communication & dissemination

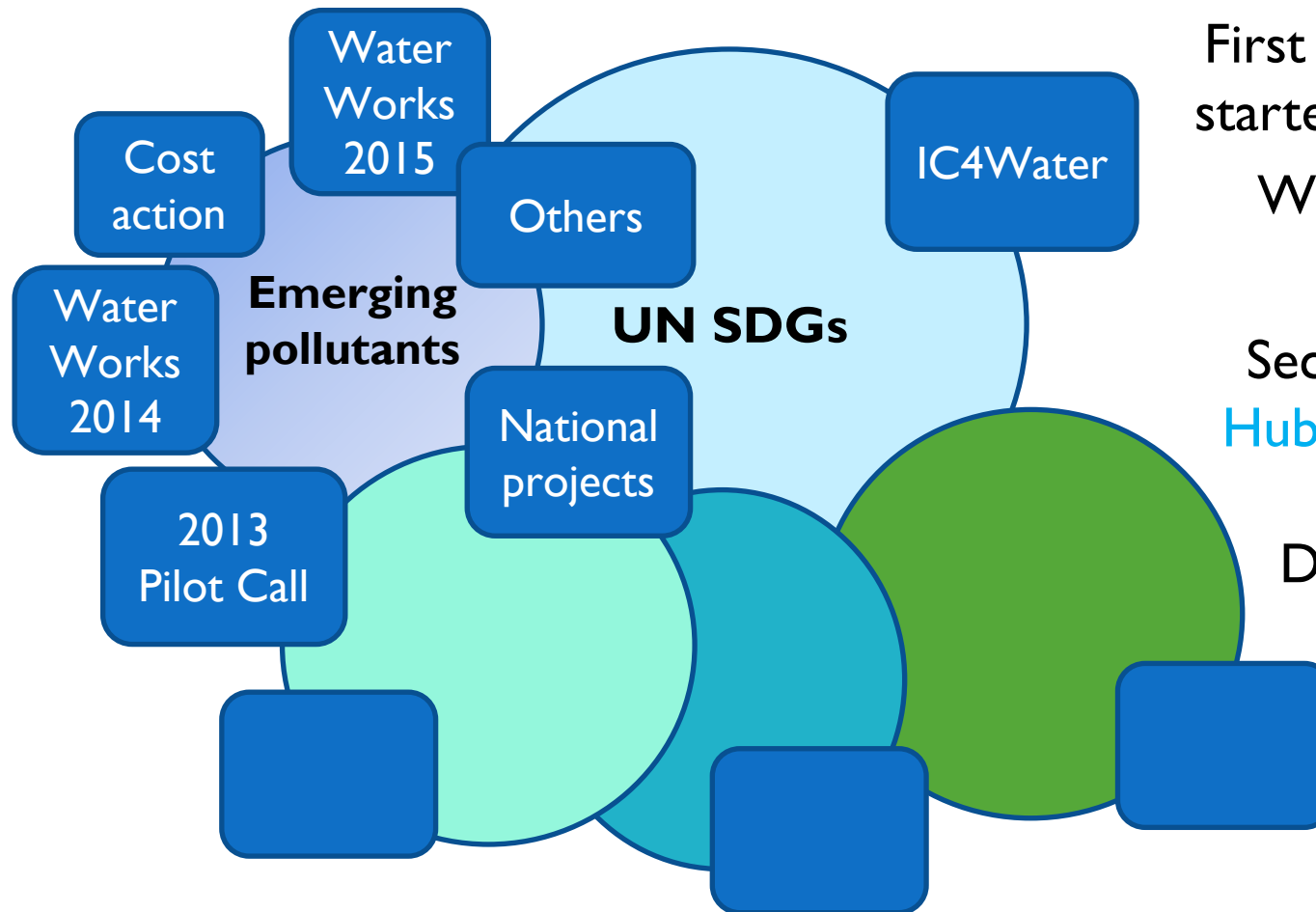


Current Opportunities for Knowledge transfer



- ▶ Knowledge Hub on Contaminants of Emerging Concern:
 - ▶ Prolongation.... Possibility to join
- ▶ Knowledge Hub on New water under water scarcity: new sources, treatment, recycling, reuse, water-health-food-energy nexus:
 - ▶ Just starting >>> express interest during ongoing consultation
 - ▶ First meeting – 3 December 2019, Lisbon (PT)

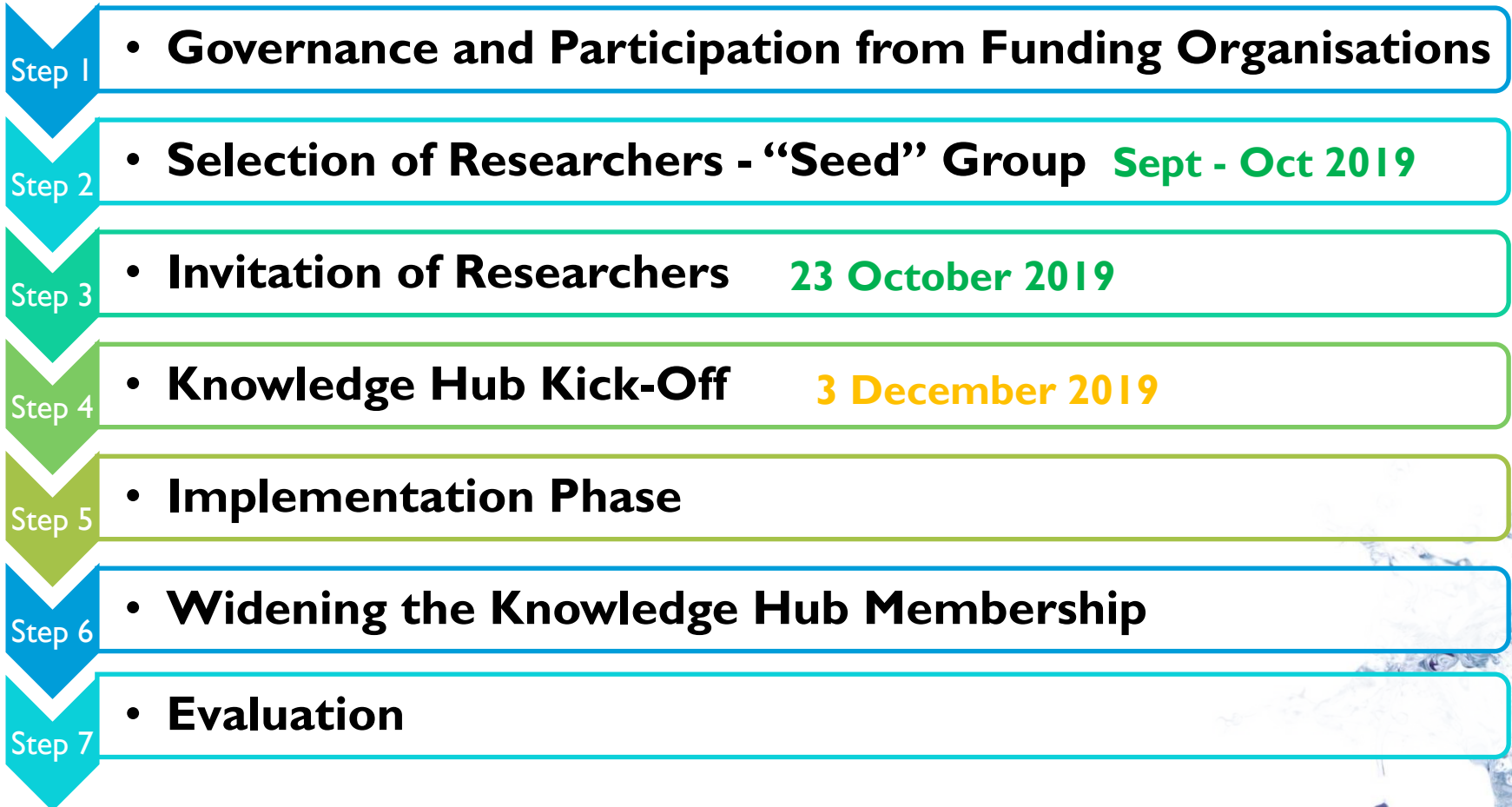
Water JPI Knowledge Hubs



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

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

Setting up a Water JPI Knowledge Hub



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.

What is contaminating our waters next?

CONTAMINANTS OF EMERGING CONCERN (CECs) – NOVEL WAYS TO REDUCE THEIR HUMAN AND ENVIRONMENTAL RISKS

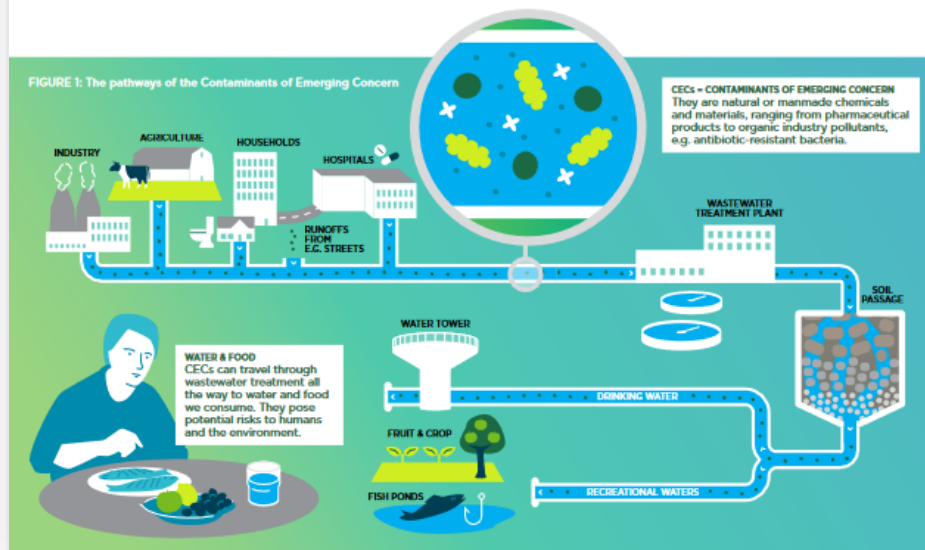
CECs are a rising problem in the waters we use. Contaminants of emerging concern (CEC) is a designation that can be attributed to contaminants that appeared recently or that are present in the environment for some years, but which only recently have raised the concern about their ecological or human health impacts. Although CECs refers most commonly to chemicals, the broad perception herein presented applies also to microorganisms, such as antibiotic resistant bacteria and their antibiotic resistance genes, or particles, such as nanoparticles or microplastics. All these contaminants can occur and diffuse through the water cycle mostly in ways we do not fully understand.

As society continues to generate these chemicals by e.g. creating and designing new compounds and new materials by industrial processes, as well as, by individual consumption behaviour, we find them more and more in the aquatic environment all over the world.

There is a general concern that they pose threats to aquatic life and, thus to human and environment health.

The current body of evidence on the nature and behaviour of CECs is thin and new scientific knowledge is needed to improve the management of their potential risks that are related to humans and the environment.

It is necessary that current European Union (EU) legislation, chemical regulatory and water management agencies be fully capable to address the problem in a sustainable and efficient manner. To take full responsibility of the CECs we produce, policymakers and water management practitioners need clear guidelines to respond to this environmental and societal challenge. By 2030, we should reach the Strategic Development Goals (SDGs) of United Nations (UN), where Goal number 6 is "Ensure availability and sustainable management of water and sanitation for all".



First Water JPI Policy Brief

- ▶ Seven Pilot Call Projects on “Emerging water contaminants - anthropogenic pollutants and pathogens”
- ▶ Published in Nov 2018

Emerging Pollutants – an emerging risk in our waters

Climate change and rising demands to satisfy human and economic needs put increasing pressure on our water resources. The amount of chemicals used in our daily life has increased tremendously over the last decades and new chemical substances are regularly put on the market. During or after their use these compounds find their way into our water bodies and in the environment where they can be found together with their transformation products.

Denoted as emerging pollutants (EP) or contaminants or emerging concern (CECs), these substances are not regulated (and therefore not included in routine monitoring programmes). Their widespread occurrence in the environment raises specific concern because their potential adverse effects on environmental and human health are not yet elucidated.

The concern is not limited to chemicals, but involves also other emerging concerns such as, antibiotic resistance, microplastics and novel pathogenic organisms. Our knowledge on their effects on environmental and human health, as well as their fate in the environment and as a result of abatement techniques, is still limited.

Effects on human and animal reproduction, cancer, antibiotic resistance as well as on the environment – to name only few – nowadays are accepted as being caused by certain EPs that can be found in effect triggering concentrations in surface and ground water bodies. By far not all correlations between occurrence of EPs and effects are understood. However, new chemicals are detected on a regular base and we do not know what effects they could trigger in the environment and the human.

Findings indicate that effects from EPs take their time to have an impact on environmental systems. E.g. decreases in fertility and reduction of resilience, may not affect an individual, but result in a steady weakening of environmental and human societies over time. This is even amplified by the situation, that both, in the aquatic environment and the urban water cycle we observe a multitude of EPs at the same time. This results in mixed substance exposure that can boost effects exponentially.

Knowledge of emerging pollutants in our society must be improved - the problems we are aware of today are just the tip of an iceberg.

We need to use a precautionary principle to protect future generations. Research on how these substances behave, their toxicity and health impact are crucial.

- Despite the yet existing knowledge gaps to be filled in by scientific research, there is an urge to set immediate measures targeting EPs in the aquatic environment.
- The implementation of new technologies for monitoring, wastewater treatment and risk assessment are all non-regret steps that even support the precautionary principle.
- New technologies and approaches will only occur with accompanying legislation in place that could stimulate such preliminary non-regret steps.



KNOWLEDGE HUB

KNOWLEDGE HUB

WATER JPI

The most important actions needed and possible are:

- Implement new monitoring strategies focusing on EPs to establish a sound database for risk assessment, trend observation and success control.
- Implementation of advanced technologies in wastewater treatment to significantly decrease species and amounts of EPs.
- Development of standards for environmental quality, drinking water and wastewater reuse following new approaches like effect based methods that consider toxicity of a mixture of substances.
- Harmonization of till now isolated legislation like registration of chemicals, biocides, water quality, human health and others.
- Courage and confidence to implement new approaches in legislation.
- Consolidation of knowledge on EPs and CECs and development of strategic approaches for research and information management.
- Raising awareness for the importance of EPs and CECs on a broad base.
- Further financial support for targeted research on various aspects of EPs and CECs.

Advances in sustainable energy production and mobility, health care and resilience, IT and digitalisation will all become compromised and meaningless, if we do not react on the proven indications of effects from EPs and CECs. As successful as we have been in handling traditional water quality issues such as organic pollution, we are facing much greater challenges today due to a changing world that leaves its footprint in the water we rely on for drinking, for economy and for the future generations we today have a huge responsibility.

What is Water JPI Knowledge Hub?

The purpose of the Water JPI Knowledge Hub is to share knowledge that can be used by regulatory authorities, environmental scientists and that allow professionals to make informed decisions. Another purpose is to raise awareness of these issues to the public.

The Water JPI Knowledge Hub brings together experts from several research areas to collaborate and communicate across different scientific disciplines and with decision makers. It closely works together with other European Networks as the NORMAN Association. Emerging Pollutants is the first research area developed within the Water JPI Knowledge Hub.

More information and contact:

- www.waterjpi.eu/
- Implementation/Thematic Activities/Water JPI Knowledge Hub



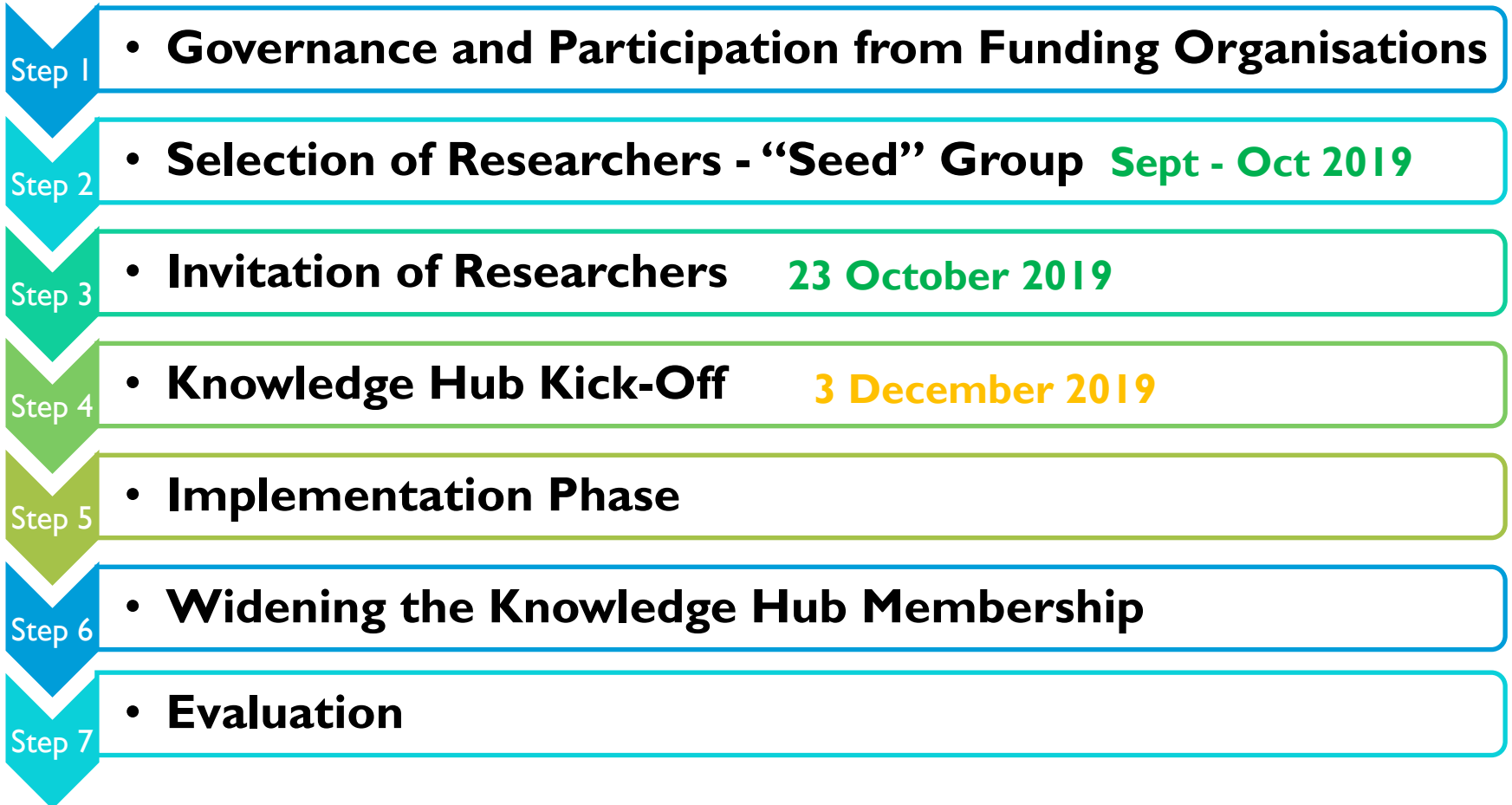
KNOWLEDGE HUB

KNOWLEDGE HUB

New water under water scarcity: new sources, treatment, recycling, reuse, water health-food-energy nexus (KH IC)



Setting up a Water JPI Knowledge Hub



Minimum requirements for operating the KH (1/2)

- Logistic and support costs for the face-to-face meetings (coordination and scientific) of the Seed Group (2/year)
- Support for the experts nominated in the Seed Group and its scientific coordinator for attending the KH meeting
- Contracting a facilitator to support the implementation and operational aspects of the KH
- Support of a communication expert for the development of policy-briefs and other public documents

Minimum requirements for operating the KH (2/2)

- Costs for printing and communicating outputs of the KH (Policy-briefs, flyers, reports, dedicated webpages, internal communication platform)
- Evaluate the number of Water JPI partners interested in the KH, to determine if the minimum requirements for operating the KH are met.
- The preliminary budget can be set on the above minimum requirements after the identification of the interested countries and the establishment of the list of the Seed Group (number of experts to be invited, location, establishment of the Implementation plan).

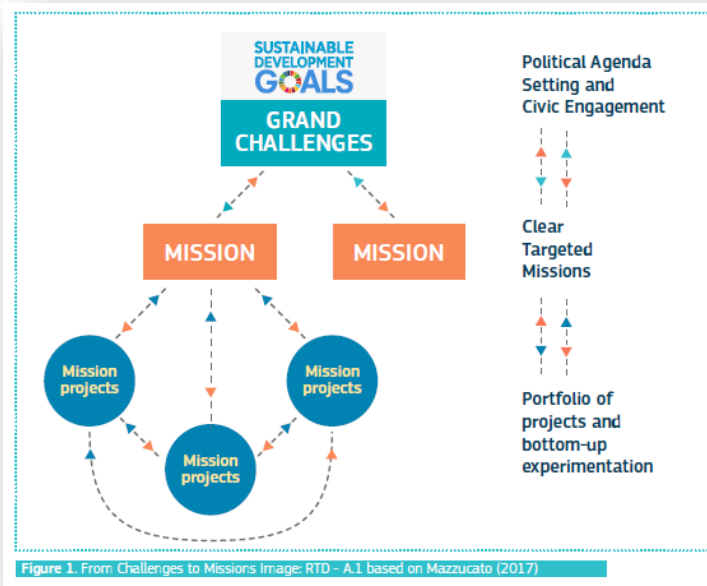
A dynamic splash of water in shades of blue and white, with droplets and ripples, set against a white background.

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



Upcoming activities 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

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The upcoming challenge



Horizon Europe

- ▶ From Horizon2020 to Horizon Europe!
- ▶ Novelties:
 - ▶ New financial instruments (Missions, Non-institutionalised partnerships) vs. Normal work programmes organised in interventions areas in thematic Clusters
 - ▶ Rationalisation of partnerships (co-programmed, co-funded)
- ▶ Water related parts:
 - ▶ Cluster 6 « Bio-economy, Food, Natural Resources, Agriculture and Environment »
 - ▶ Missions: « Healthy Oceans, seas, coastal and inland waters »
« Adaptation to Climate Change, including Societal Transformation »
 - ▶ Partnerships: Water4ALL

For more information...



- Website : www.waterjpi.eu
- A Newsletter – [Subscribe on line!](#)
- [@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
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