



Water Joint Programming Initiative

Implementation Plan

2017–2019



Abbreviations

EC:	European Commission
EU:	European Union
GPC:	High Level Group on Joint Programming
JPI:	Joint Programming Initiative
RDI:	Research, Development and Innovation
SDGs:	Sustainable Development Goals
SRIA:	Strategic Research and Innovation Agenda
TAP:	Thematic Annual Programming
TRL:	Technology Readiness Level
UN:	United Nations

Acknowledgements

The Water JPI has received funding from the European Union's Horizon 2020 Programme for Research, Technological Development and Demonstration under Grant Agreement No. 641715 (WaterWorks2014). We also wish to acknowledge the invaluable contribution from our advisory boards, the WaterWorks2014 ERA-NET Cofund partners, the Water JPI governing board and the European Commission.

Contents

Foreword	i
Executive Summary	iii
Timeline of the Water JPI Implementation Plan	v
1 WATER JOINT PROGRAMMING INITIATIVE	1
2 WATER JOINT PROGRAMMING INITIATIVE IMPLEMENTATION PLAN	2
2.1 What is the Water JPI Implementation Plan?	2
2.2 Who Is This Implementation Plan Relevant to?	3
2.3 How Will the Implementation Plan Be Put into Action?	7
2.3.1 Thematic activities	7
2.3.2 Horizontal activities	13
3 IMPLEMENTATION OF THE WATER JOINT PROGRAMMING INITIATIVE STRATEGIC RESEARCH AND INNOVATION AGENDA: THEMATIC ACTIVITIES	14
3.1 Water JPI Planned Activities under Theme 1: Improving Ecosystem Sustainability and Human Well-being	17
3.2 Water JPI Planned Activities under Theme 2: Developing Safe Water Systems for Citizens	20
3.3 Water JPI Planned Activities under Theme 3: Promoting Competitiveness in the Water Industry	22
3.4 Water JPI Planned Activities under Theme 4: Implementing a Water-wise Bio-based Economy	24
3.5 Water JPI Planned Activities under Theme 5: Closing the Water Cycle Gap – Improving Sustainable Water Resources Management	26
3.6 Recommendations for Other EU Funding Programmes	28
3.6.1 Recommendations for Horizon 2020	28
3.6.2 Recommendations for other EU funding programmes	29
4 PROGRESSING THE JOINT PROGRAMMING PROCESS: HORIZONTAL ACTIVITIES	31
4.1 Towards a Common Vision	31
4.2 Updating the SRIA	31
4.3 Enlarging the Water JPI Membership	32
4.4 Engaging Stakeholders	32
4.5 International Cooperation	33
4.5.1 UN SDGs – RDI needs for implementation by the Water JPI	33
4.6 Updating the Mapping of Water RDI in Europe	34
4.7 Outreach and Dissemination	34
4.8 Progressing Alignment	35
5 MEASURING IMPACT	37

A blue-tinted background featuring a dynamic splash of water at the top and bottom edges. The central area is a solid, deep blue color. The water splash at the top shows individual droplets and bubbles, while the splash at the bottom is more turbulent and layered.

“ Access to water is a common goal. It is central in the social, economic and political affairs of the country, African continent and the world. It should be a lead sector of cooperation for world development. ”

Nelson Mandela.

Foreword



With its broad range of activities, the Water Joint Programming Initiative contributes to the achievement of the global and universal challenge of sustainable water systems for a sustainable economy in Europe and abroad. Ten key achievements have been reached during the first implementation phase (2011 – 2016), in particular:

- The development of the Water JPI Strategic Research and Innovation Agenda (SRIA), which lays out specific research, development and innovation (RDI) needs to tackle the Water JPI grand challenge;
- 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;
- 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; and
- The launch of three joint calls for proposals in 2013, 2015 and 2016. So far 23 transdisciplinary projects have been funded with a total budget of approx. €25 million. 21 additional projects are recommended for funding in early 2017.

Under its second implementation plan, the Water JPI will start new activities such as the alignment of national RDI programmes, the development of knowledge hubs on dedicated topics (the first one will address emerging contaminants), support access to key infrastructures and observatories while developing an action plan with the water economic sector, and a strategy for developing its international cooperation network. All these activities will contribute to achieving a critical mass and showcasing its contribution in a changing policy context (constrained public RDI budgets, launch of regional initiatives such as the PRIMA Article 185 around the Mediterranean Sea, implementation of the UN Sustainable Development Goals on water, etc.). This second implementation plan is crucial for setting the long term sustainability of the Water JPI.

Maurice Héral
Agence Nationale de la Recherche, France
Water Joint Programming Initiative Chair

Executive Summary

The Water Joint Programming Initiative (JPI) (www.waterjpi.eu), entitled “Water Challenges for a Changing World”, was launched in 2010 and was later formally approved by the European Council in December 2011. The Water JPI membership comprises a total of 20 Member States and four observer countries, which collectively represent 88% of European public research, development and innovation (RDI) investment in water resources. The Water JPI is dedicated to tackling the ambitious grand challenge of “achieving sustainable water systems for a sustainable economy in Europe and abroad”.

This document is the Water JPI Implementation Plan for the three-year period 2017–2019. The purpose of the document is to guide the operations of the Water JPI.

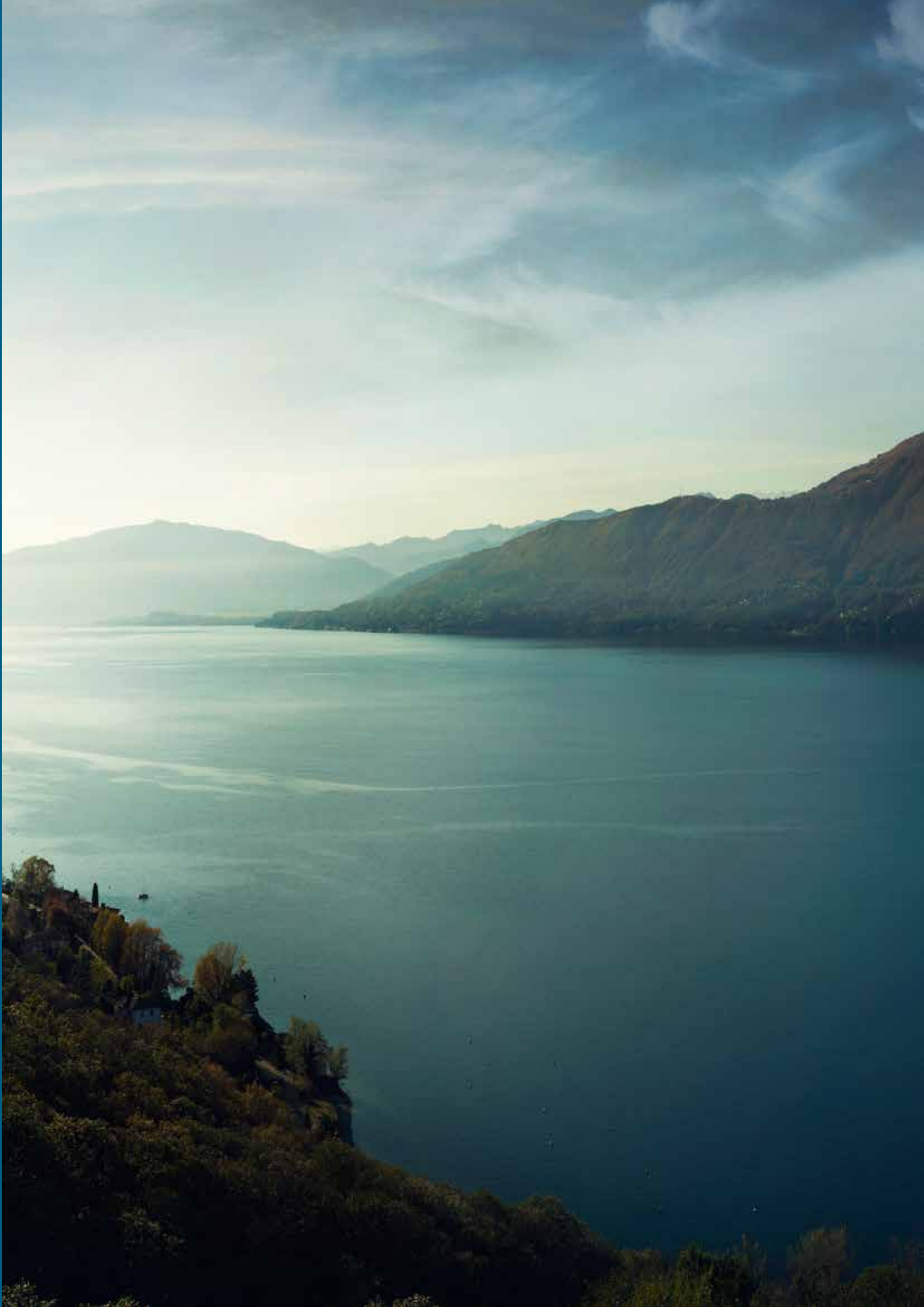
In particular, the Implementation Plan:

- focuses on the development of the Water JPI;
- presents priority items that are to be implemented;
- permits planning ahead for agreed joint activities;
- lists specific goals for the three-year period; and
- outlines the efforts to be deployed

This Implementation Plan is organised into:

- **Thematic activities**, which are proposed activities implementing specific RDI needs of the Water JPI Strategic Research and Innovation Agenda (SRIA 2.0), consisting of:
 - water JPI activities; and
 - recommendations to other European Union funding programmes (section 3.6).
- **Horizontal activities**, which are proposed activities, not specific to a particular theme of the SRIA, but that instead progress principal JPI activities (e.g. update of the SRIA, mapping of RDI funding, international cooperation, outreach and dissemination, etc.).

This Implementation Plan was finalised in December 2016.



Timeline of the JPI Water Implementation Plan

2017-2019



Water-18
Update the Water JPI SRIA



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



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



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

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

Water-47
Global Impact Assessment

2017-2018



Water-26
Develop the international cooperation on water challenges

2017

2018



T1 Water-01
Exploratory Workshop

T2 Water-06
Knowledge Hub Workshop 1

T4 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



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



T2 Water-05
Monitoring of 2013 pilot call project (final review)



T2 Water-06
Knowledge Hub: Workshop 2

T2 Water-07
Exploratory Workshop

T3 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



T2 Water-06
Set up Water JPI Knowledge Hub

For the full list of activities, please see Table 2.1



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

2018-2019

T2 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



T5 Water-13
Water JPI joint call on "Closing the Water Cycle Gap"



Water-36
Improve water-related project databases



Water-27
Revision of the international cooperation mapping

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



Water-43
First Water JPI Thematic Annual Programming Cluster

T1 Water-02
2019 Water JPI joint call

T1 Water-03
Develop a common vision between the Water JPI and the other relevant initiatives (e.g. BiodivERSA, FACCE & Climate JPIs)

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



T1 Water-04
Exploratory Workshop

T4 Water-10
Common vision with the FACCE JPI – Workshop 2

T4 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



T5 Water-15
Develop a common vision with the Climate JPI and Belmont Forum



T5 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

1 Water Joint Programming Initiative

The Water Joint Programming Initiative (JPI) (www.waterjpi.eu), 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 four observer countries, which collectively represent 88% of European public research, development and innovation (RDI) investment in water resources. The Water JPI is dedicated to tackling the ambitious grand challenge of achieving “sustainable water systems for a sustainable economy in Europe and abroad”.

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.

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

- aligning the national RDI agendas, optimising their scope and the resulting funding efficiently, 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 cooperatively 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 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.

For more information, please refer to the **Water JPI Key Achievements 2011–2016** document.¹



¹http://www.waterjpi.eu/images/welcome/WATER_JPI_Key_Achievements%202011-2016.pdf

2 Water Joint Programming Initiative Implementation Plan

2.1 What is the Water JPI Implementation Plan?

The Water JPI Implementation Plan is a high-level roadmap to implement the proposed Water JPI joint activities, which will be refined and adjusted as the initiative progresses towards meeting its six objectives of its **2020 Vision document**,² namely:

1. involving water end-users for effective RDI results uptake;
2. attaining critical mass of research programmes;
3. reaching effective, sustainable coordination of European water RDI;
4. harmonising national water RDI agendas in partner countries;
5. harmonising national water RDI activities in partner countries; and
6. supporting European leadership in science and technology.

The Implementation Plan specifies which of the RDI needs, identified in the **Water JPI Strategic Research and Innovation Agenda (SRIA) version 2.0**,³ will be instigated via the Water JPI joint activities (e.g. calls, strategic and exploratory workshops, knowledge hubs, and alignment of national programmes). The Implementation Plan also recommends that RDI needs to be implemented via other European Union (EU) funding programmes (e.g. Horizon 2020, LIFE, COST, etc.). The Implementation Plan adds to the visibility of the Water JPI and informs policymakers, RDI ministries, RDI Programme owners and managers, RDI performers, and society at large how the Water JPI will tackle water challenges in the period 2017–2019. In addition, the Implementation Plan is a guide for researchers and innovators interested in participating in Water JPI activities.

This document is the Water JPI Implementation Plan for the three-year period 2017–2019. The purpose of the document is to guide the operations of the Water JPI.

In particular, the Implementation Plan:

- focuses on the development of the Water JPI;
- presents priority items that are to be implemented;
- permits forward planning for agreed joint activities;
- lists specific goals for the three-year period; and
- outlines the efforts that are to be deployed.

Section 2.2 describes the various instruments that will be used by the Water JPI to carry out the activities listed in this Implementation Plan. A detailed listing of all activities for the period 2017–2019 is provided in Annex 1. This Implementation Plan is structured into:

- **Thematic activities** (Chapter 3), which are activities implementing specific RDI needs of the Water JPI SRIA 2.0, consisting of:
 - Water JPI activities (sections 3.1–3.5); and
 - recommendations to other EU funding programmes (section 3.6).
- **Horizontal activities** (Chapter 4), which are not specific to a particular theme of the SRIA, but that instead progress principal JPI activities (e.g. update of the SRIA, mapping of RDI funding, international cooperation, outreach and dissemination, etc.).

²http://www.waterjpi.eu/images/documents/Vision_Document.pdf
³<http://www.waterjpi.eu/images/documents/SRIA%202.0.pdf>

2.2 Who Is This Implementation Plan Relevant to?

This Implementation Plan is targeted at the Water JPI stakeholders, which is a wide group composed of researchers, RDI funding bodies and programmes, policymakers, enterprises, water utilities and river basin management bodies, services and technology providers, the European Commission (EC), and the general public.

Figure 2.1 illustrates the implementation timeline of specific RDI needs (i.e. order of the thematic activities). Table 2.1 provides the list of the Water JPI Planned Activities 2017–2019 (as of December 2016). Table 2.2 (thematic activities) and Table 2.3 (horizontal activities) provide examples of planned activities and their relevance to the Water JPI Stakeholders.

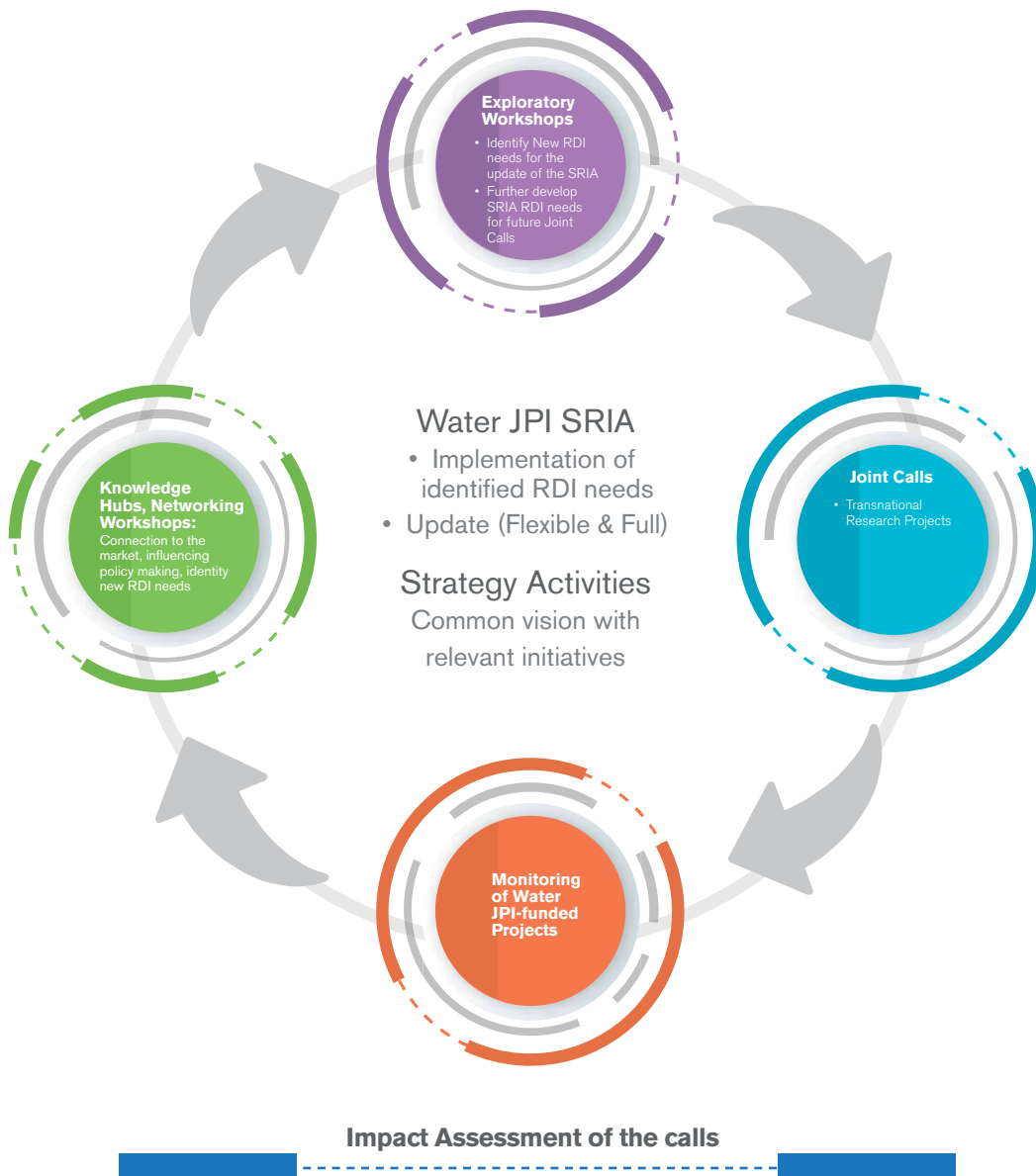


Figure 2.1. Temporal sequence of thematic activities

Table 2.1: Water JPI Planned Activities 2017–2019 (as of December 2016)

Year	Unique activity ID	Description
2017	Water-01	Theme 1: Exploratory workshop (on RDI needs 1.3.1. and 1.3.2.)
2019	Water-02	Theme 1: 2019 Water JPI joint call (on RDI needs 1.3.1. and 1.3.2.)
2019	Water-03	Theme 1: Strategy activities to develop a common vision between the Water JPI and the other relevant initiative in that specific area. This will, in turn, feed in to the preparation of the next implementation plan of the Water JPI (2020–2022)
2019	Water-04	Theme 1: Exploratory workshop (on RDI needs 1.1.1, 1.2.3 and 1.2.4)
2018	Water-05a	Theme 2: Monitoring of the seven 2013 pilot call projects (final review)
2018–2019	Water-05b	Theme 2: Impact assessment of the 2013 pilot call
2017	Water-06a	Theme 2: Knowledge hub: Workshop 1 (on RDI needs 2.1.1, 2.1.2 and 2.1.3)
2018	Water-06b	Theme 2: Knowledge hub: setting up of the knowledge hub (RDI needs 2.1.1, 2.1.2 and 2.1.3)
2018	Water-06c	Theme 2: Knowledge hub: Workshop 2 (on RDI needs 2.1.1, 2.1.2 and 2.1.3)
2018	Water-07	Theme 2: Exploratory workshop (on RDI need 2.1.2)
2017–2018	Water-08a	Theme 3: Monitoring of the 16 2015 joint call projects (mid-term review)
2019	Water-08b	Theme 3: Monitoring of the 16 2015 joint call projects (final review)
2019	Water-08c	Theme 3: Impact assessment of the 2015 joint call projects
2018	Water-09	Theme 3: Networking workshop between 16 2015 joint call projects and other relevant EU projects/ initiatives
2017	Water-10a	Theme 4: Strategy activities relating to a common vision with the FACCE JPI – Workshop 1
2019	Water-10b	Theme 4: Strategy activities relating to a common vision with the FACCE JPI – Workshop 2
2017–2019	Water-11a	Theme 4: Monitoring of the 2016 joint call projects (kick-off)
2017–2019	Water-11b	Theme 4: Monitoring of the 2016 joint call projects (mid-term review)
2019	Water-12	Theme 4: Networking workshop between 2016 joint call projects and other relevant EU projects/ initiatives
2018	Water-13	Theme 5: 2018 Water JPI joint call on “Closing the Water Cycle Gap”
2019	Water-14	Theme 5: Monitoring of projects funded under 2018 joint call (kick-off)
2019	Water-15	Theme 5: Strategy activities relating to a common vision with the Climate JPI and Belmont Forum – this would feed into the full update of the Water JPI SRJA, as well as preparation of the next Implementation Plan 2020–2022
2018–2019	Water-16	Theme 5: Investigation of the TAP instrument as a possible joint call without EC top-up

Table 2.1: Water JPI Planned Activities 2017–2019 (as of December 2016)

Year	Unique activity ID	Description
2018–2019	Water-17	Vision: Preparation of the next Water JPI Vision Document up to 2030, setting up clear objectives and providing measurable indicators to assess the progress of the JPI in meeting these objectives
2017–2019	Water-18	Updating the SRIA: flexible update of the Water JPI SRIA
2019	Water-19	Updating the SRIA: full update of the Water JPI SRIA (v3.0) in 2019 to coincide with the publication of the next Water JPI 2030 Vision Document (Water-17)
2018–2019	Water-20	Updating the SRIA: building the SRIA 3.0: Stakeholder Experts' Consultative Workshop
2018–2019	Water-21	Updating the SRIA: building the SRIA 3.0: consultations
2017–2019	Water-22	Enlarge the membership
2017–2019	Water-23	Stakeholder involvement/engagement
2017-2019	Water-24	International cooperation: Sharing strategy on international cooperation with other JPIs, Article 185 initiatives
2017	Water-25	International cooperation: action plan for the valorisation of water research beyond Europe
2017–2018	Water-26	International cooperation: developing the international cooperation on water challenges beyond EU: strategy and geographical workshops
2018	Water-27	International cooperation: revision of the international cooperation mapping
2019	Water-28	International cooperation: definition of public–private partnership cooperation models with the water economic sector
2018	Water-29a	International cooperation: 2018 workshop: coordination with other JPIs, policymakers and European public RD initiatives (GPC, ERA LEARN 2020, EIP Water, etc.) to discuss joint and complementary actions, for sharing experiences, identifying success factors and proposing a common vision on international cooperation
2019	Water-29b	International cooperation: 2018/2019 workshop: coordination with other JPIs, policymakers and European public RD initiatives (GPC, ERA LEARN 2020, EIP Water, etc.) to discuss joint and complementary actions, for sharing experiences, identifying success factors and proposing a common vision on international cooperation
2017	Water-30	2017 Water JPI joint call on UN SDGs (multiple pressures)
2018–2020	Water-31	On-going monitoring of funded projects under the 2017 Water JPI joint call – 2018–2020
2017-2019	Water-32	Strategy activities in relation to the Water JPI SRIA and UN SDGs aiming at identifying RDI needs for implementing the UN SDGs in an efficient way in due time (2020 and 2030)
2019–2020	Water-33	UN SDGs: networking workshop between the funded projects under the 2017 Water JPI joint call and other relevant EU projects/initiatives

Table 2.1: Water JPI Planned Activities 2017–2019 (as of December 2016)

Year	Unique activity ID	Description
2017–2019	Water-34	Setting up of the second Water JPI knowledge hub (theme to be defined)
2017–2019	Water-35	A review of the methodology and update of the 2014 mapping exercise
2018	Water-36	Outreach and dissemination: improving our water-related project databases – ensuring interoperability with other initiatives
2017–2019	Water-37	Outreach and dissemination: continue to implement its communication and dissemination strategy and raise awareness about present and future water challenges
2018	Water-38	Outreach and dissemination: second Water JPI international conference in Helsinki in spring 2018
2017–2019	Water-39	Outreach and dissemination: developing knowledge and innovation
2017	Water-40a	2017 good practices workshop aiming to identify and share good practices for the Water JPI and for all involved programmes
2018	Water-40b	2018 good practices workshop aiming to identify and share good practices for the Water JPI and for all involved programmes
2019	Water-40c	2019 good practices workshop aiming to identify and share good practices for the Water JPI and for all involved programmes
2017	Water-41a	2017 alignment workshop aiming to further the Water JPI progress in alignment
2019	Water-41b	2019 alignment workshop aiming to further the Water JPI progress in alignment
2017	Water-42	Alignment case study on the efficiency of the national mirror/stakeholders groups as a tool to progress alignment
2017–2018	Water-43	Alignment case study on TAP as a means to achieve further alignment
2017	Water-44	Alignment case study: roadshow in Estonia to raise awareness of the Water JPI
2018	Water-45a	Mobility and infrastructure: 2018 mobility workshop aiming to facilitate the development of the interactive platform to facilitate access to mobility schemes and research infrastructures
2019	Water-45b	Mobility and infrastructure: 2019 infrastructures workshop aiming to facilitate the development of the interactive platform to facilitate access to mobility schemes and research infrastructures
2017–2019	Water-46	Mobility and infrastructure: development of the interactive platform to facilitate access to mobility schemes and research infrastructures (2019)
2017–2019	Water-47	Global impact assessment

2.3 How Will the Implementation Plan Be Put into Action?

Water JPI activities are based on the following three key principles:

- 1. Variable geometry:** Water JPI partners participate only in activities of their specific interest.
- 2. Flexibility:** The Water JPI supports the development of activities responding to partners' needs and opportunities.
- 3. Responsiveness:** The Water JPI provides an enabling environment, in which the challenge of providing sustainable water systems for a sustainable economy is tackled through specific and tailored activities.

To implement the RDI needs that are identified in its SRIA, the Water JPI has several instruments at its disposal. The Water JPI draws upon the instruments and methodologies of previous European water RDI coordination efforts, other JPIs and similar alignment and coordination initiatives, as deemed appropriate. Furthermore, attention is continuously paid to producing and communicating policy-relevant results. Some of these activities were already implemented by the Water JPI (see **Water JPI Implementation Plan 2014–2016**⁴ and the **2014 Water JPI Report on Instruments and Activities**⁵), while others will be trialled and refined for the first time by the Water JPI during this 3-year period, e.g. knowledge hub and the thematic annual programming (TAP). The Water JPI will build on lessons learned from other initiatives that have put these instruments in practice, for example the Agriculture, Food Security and Climate Change (FACCE) JPI, as well as on recommendations from the ongoing ERA-LEARN 2020 activities. The FACCE JPI (www.faccejpi.com) brings together 22 countries that are committed to building an integrated European Research Area addressing the interconnected challenges of sustainable agriculture, food security and impacts of climate change. ERA-LEARN 2020 (www.era-learn.eu) is a coordination and support action (CSA) funded by Horizon 2020. It started in January 2015 as a support platform for the public–public partnerships community.

Selected activities require commitments from the Water JPI partners (funding and in-kind contributions) as well as the governing board's endorsement.

2.3.1 Thematic activities



Exploratory workshops

Exploratory workshops are thematic workshops to gather relevant experts in a specific topic, who will present and discuss their findings to other experts and stakeholders (end-users, policymakers and industry) as well as identifying knowledge gaps in a particular theme. The expected outputs include planning of joint or co-funded joint calls for proposals in a specific topic, their focus and urgency (i.e. when the call should be launched) and further elaboration of RDI needs. These workshops would typically take place before the joint call activities.



Transnational joint calls⁶

Transnational joint calls are competitive calls. They can be funded with or without EC co-funding. Interested Water JPI members can take part as funding agencies in the call and so can other possible partners. The calls will result in the funding of transnational projects. To date, the type of projects funded can be described by:

- research spectrum: basic to applied research;
- indicative technology readiness levels (TRLs): up to TRL 4;
- indicative duration: 2–3 years; and
- indicative requested budget: up to €1.5 million.

These joint calls will promote multi-disciplinary work and encourage proposals with fundamental and/or applied approaches, stimulate the mobility of researchers and research infrastructure sharing within the consortia, and enhance collaborative research and innovation during the project's life and beyond.

⁴http://www.waterjpi.eu/images/documents/Implementation_Plan/Implementation_2014.pdf

⁵<http://www.waterjpi.eu/images/documents/WaterJPI-Activities%20instruments%20management%20and%20procedures.pdf>

⁶At the time of publication of this document, the Water JPI governing board has approved the topics of possible future joint calls up to 2021. However, the timing and type of calls (i.e. with or without EC co-funding) are still to be finalised.

Table 2.2 – Relevance of the proposed Water JPI thematic activities to its stakeholders – see Sections 3.1–3.5 for more details

Activities and water JPI activity identifiers	SRIA theme	Year	Researchers/experts	Policy	Economic sector	Other EU initiatives	International Initiatives	Water JPI/Funding organisations	Water JPI advisory boards
Exploratory workshops									
Water-01	Theme 1	2017	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Water-04	Theme 1	2019	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Water-07	Theme 2	2018	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Joint calls									
Water-02	Theme 1	2019	Yes ^a	Yes ^a	Yes ^a				Yes ^b
Water-13	Theme 5	2018	Yes ^a	Yes ^a	Yes ^a				Yes ^b
Water-30	UN SDGs ^c	2017	Yes ^a	Yes ^a	Yes ^a				Yes ^b
Monitoring of the Water JPI call projects									
Water-05	Theme 2	2017/2019	2013 pilot call projects Follow-up group experts					Governing board ^d Call steering committee	Yes ^d
Water-08	Theme 3	2017/2019	2015 joint call projects Follow-up group					Governing board ^d Call steering committee	Yes ^d
Water-11	Theme 4	2017/2019	2016 joint call projects Follow-up group					Governing board ^e Call steering committee	Yes ^d
Water-14	Theme 5	2019	2018 joint call projects Follow-up group					Governing board ^e Call steering committee	Yes ^d
Water-31	UN SDGs	2018/2019	2017 joint call projects Follow-up group					Governing board ^e Call steering committee	Yes ^e
Knowledge hub activities including associated workshops									
Water-06	Theme 2	2018/2019	Yes	Yes	Yes			Governing board	Yes
Water-34	To be decided	2018/2019	Yes	Yes	Yes			Governing board	Yes
Networking workshops									
Water-09	Theme 3	2018	Water JPI-funded projects; Other EU/national relevant projects; Follow-up group					Governing board	Yes
Water-12	Theme 4	2019	Water JPI-funded projects; Other EU/national relevant projects; Follow-up group					Governing board	Yes
Water-33	UN SDGs	2019/2020	Water JPI-funded projects; Other EU/national relevant projects; Follow-up group					Governing board	Yes

Activities and water JPI activity identifiers	SRIA theme	Year	Researchers/experts	Policy	Economic sector	Other EU initiatives	International Initiatives	Water JPI/Funding organisations	Water JPI advisory boards
Impact assessment of the Water JPI calls									
Water-05	Theme 2	2017/2019	2013 pilot call projects Follow-up group					Governing board Call steering committee	Yes
Water-08	Theme 3	2017/2019	2015 joint call projects Follow-up group					Governing board Call steering committee	Yes
Thematic annual programming									
Water-16	Theme 5	2018/2019	Yes	Yes				Governing board	Yes
Water-43^f	To be decided	2017	Yes	Yes				Governing board	Yes
Strategy activities to develop a common vision									
Water-03	Theme 1	2019		Yes	Yes	e.g. Climate JPI Urban Europe		Governing board	Yes
Water-10	Theme 4	2017	Yes	Yes	Yes	e.g. FACCE JPI		Governing board	Yes
Water-15	Theme 5	2018	Yes	Yes	Yes	e.g. Climate JPI	Belmont Forum	Governing board	Yes
Water-32	UN SDGs	2019/2017	Yes	Yes	Yes	Yes	Yes	Governing board	Yes

Water JPI activity identifiers are listed in the first column to facilitate cross-referencing with the activities described in this document. Activities that are "restricted", i.e. not open to all, are shaded in a darker grey.

^aAs per national eligibility rules of the participating funding organisations.

^bAs per Water JPI advisory boards Terms of Reference (Rules of participation).

^cProposed focus on multiple pressures on water resources.

^dOpen part of the review meetings only.

^eDue to the cross-cutting nature of the SDGs – this activity is described as part of the horizontal activities in the document.

^fDue to the fact that the focus of the Thematic Annual Programming (2017) is still to be decided – this activity is described as part of the horizontal activities in the document.

FACCE, Joint Programming Initiative on Agriculture, Food Security and Climate Change
SDGs, Sustainable Development Goals.

Table 2.3 – Relevance of the proposed Water JPI horizontal activities to its stakeholders – see Chapter 4 for more details

Activities and water JPI activity identifiers	Year	Researchers/experts	Policy	Economic sector	Other EU initiatives	International Initiatives	Water JPI/Funding organisations	Water JPI advisory boards
Water JPI vision								
Water-17	2018/2019	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Updating the SRIA								
Update of the Water JPI SRIA Water-18 and Water-19	2018/2019	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Consultations Water-20 and Water-21	2018/2019	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Enlarging the membership								
Water-22	2017/2019						Non-member EU countries	
Better stakeholders engagement								
Water-23	2017/2019	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
International cooperation								
Workshops on Strategy on International Cooperation Water-24 and Water-29	2017/2019		Yes		Yes ^a		Governing board	
Action plan for the valorization of water research beyond Europe Water-25	2017/2019			Yes	Yes	Yes	Non-EU countries	
Development of a strategy on Water challenges beyond EU including geographical workshops Water-26	2017/2019				Yes	Yes	Non-EU countries (Asian countries, African countries and Canada)	
Revision of the international-cooperation mapping Water-27	2017/2019				Yes	Yes	Non-EU countries (Asian countries, African countries and Canada)	
Definition of public-private partnership cooperation models with the water economic sector Water-28	2017/2019			Yes	Yes		Governing board	
Updating the RDI mapping								
Water-35	2018/2019	Yes	Yes	Yes	Yes	Yes	Governing board	Yes

Outreach and dissemination								
Improving our water-related project databases – ensuring interoperability with other initiatives Water-36	2017/2019	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Implementation of the Communication & Dissemination Strategy Water-37	2017/2019	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Second Water JPI International Conference Water-38	2018	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Developing knowledge and innovation Water-39	2017/2019	Yes	Yes	Yes	Yes	Yes	Governing board	Yes
Progressing alignment								
Good practices workshop Water-40	2017/2019						Governing board	
Alignment Activities including workshops Water-41	2017/2019				Other JPIs, GPC, EC		Governing board	
Alignment case study on national mirror/stakeholders groups Water-42	2017	Yes	Yes	Yes	Other JPIs, GPC, EC		Governing board	Yes
Alignment case study on the Thematic Annual Programming Water-43	2017	Yes	Yes				Governing board	Yes
Alignment case study: Roadshow in Estonia Water-44	2017	Yes	Yes	Yes	Yes			
Development of an interactive platform to facilitate access to mobility schemes and research infrastructures incl. associated workshops Water-45 and Water-46	2017/2019	Yes	Yes		Yes		Governing board	Yes
Measuring Impact								
Global impact assessment Water-47	2017/2019						Governing board	Yes

Water JPI activity identifiers are listed in the first column to facilitate cross-referencing with the activities described in this document.

*Other JPIs, Article 185 initiatives, policymakers and European public research and development initiatives (GPC, ERA-LEARN 2020, EIP Water, etc.).

GPC, High Level Group on Joint Programming.



Monitoring of Water JPI-funded projects

Water JPI-funded projects will be monitored following light management procedures. Research Project Consortia are required to attend the kick-off, mid-term review and final review meetings. Progress will be monitored by a follow-up group (composed of selected experts) on behalf of the call steering committee (national funding agencies involved in a specific call). In addition, Water JPI projects are encouraged to follow open data and open access guidelines. An impact assessment of the projects funded under a specific call will be carried out once the projects are completed.



Network workshops (alignment of ongoing transnational and national projects)

Networking workshops will be thematic one-day workshops to foster an exchange of information among the projects, finding synergies and means of collaboration, discussing how project outcomes can be targeted at stakeholders and exploring the formation of future consortia. These workshops typically follow joint call activities. They will also contribute to the strategy activities of the Water JPI.



Knowledge hubs (alignment of communities on dedicated areas)⁷

Knowledge hubs are thematic networks consisting of selected research groups within a defined area of research targeted at stakeholders. These knowledge hubs are typically set up following joint call activities. They also contribute to the strategy activities of the Water JPI. In addition to improved communication and networking with stakeholders and the scientific community, the added value of the knowledge hub instrument includes establishing a critical mass of research and technological

excellence, integration and sharing of knowledge, infrastructures, data and modelling tools, training and capacity building.



Thematic annual programming (alignment of new national projects)⁸

Thematic annual programming (TAP) consists of coordinated national calls. Each participating funding organisation would include the same topic in their own national calls. A percentage of the national project budget (7–10% of the total budget) would be dedicated to networking activities with the other projects funded under these coordinated calls in the participating countries; other relevant national projects that are already ongoing could also be included. Coordinators of the selected projects will have to participate in annual working meetings to exchange information on approaches, methods, data (exchange) and results. This instrument will also contribute to the strategy activities of the Water JPI. The added value includes developing synergies, international cooperation and coordination between the individual projects and this should lead to a greater impact at the European level as well as to creating critical mass, addressing research gaps and avoiding duplication.



Strategy activities

Strategy activities on a specific SRIA theme will aim to prepare a common vision between the Water JPI and other relevant initiative(s) in that specific area. Dedicated workshops will be organised.

⁷ At the time of publication of this document, it is anticipated that this instrument will continue to be used by developing an additional knowledge hub, building on the experience from the first knowledge hub. The themes of this second Water JPI knowledge hub will be discussed and agreed on in 2017/2018.

⁸ At the time of publication of this document, the Water JPI partners involved in the WaterWorks2015 project agreed that TAP would be trialled as a case study in 2017. The theme to be covered by this first action will be identified in early 2017.

2.3.2 Horizontal activities



Strategy activities

The strategy activities will include, for example:

Foresight exercises:

- to support the updates of the Water JPI SRIA (i.e. identification of RDI needs and objectives); this will feed into the next Implementation Plan of the Water JPI (2020–2022).



Stakeholder Experts Consultative Workshop on the SRIA:

- to discuss the RDI themes and needs of the SRIA and identify new ones; and
- to support the preparation of the next version of the Water JPI SRIA (3.0 – full update).

Consultations (public,⁹ advisory boards and governing board):

- to discuss the Water JPI RDI themes and needs, and identify new opportunities for joint RDI activities; and
- to support the preparation of the next version of the Water JPI SRIA (3.0 – full update).



Mobility and infrastructures

Current planned activities for the period 2017–2019 include setting up an interactive platform to facilitate access to mobility schemes and research infrastructures.



Horizontal activities workshops

These workshops will be dedicated to the preparation/review of some of the Water JPI activities. In contrast with the exploratory and networking workshops detailed previously, these workshops are not theme specific (i.e. not specific to one particular Water JPI SRIA theme). These may include, for example:

- international cooperation workshops focused on sharing strategy on international cooperation;
- good practices workshops focused on specific aspects of project funding and management. Workshops will permit the identification and sharing of good practices for the Water JPI and for all the involved programmes (e.g. the Mutual Learning Exercise); and
- alignment workshops focused on the overall Water JPI progress on alignment.



⁹To be confirmed.

3 Implementation of the Water Joint Programming Initiative Strategic Research and Innovation Agenda: Thematic Activities

The SRIA version 2.0 was published in 2016; it is a document that presents and prioritises RDI needs. 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.

The Water JPI SRIA 2.0 has been conceived and generated to guide future water-related RDI actions in Europe, including, but not limited to, the Water JPI actions. To this end, it sets out specific RDI priorities and actions and identifies areas where RDI actions are required (needs/gaps).



Figure 3.1. Added Value of the Water JPI Strategic Research and Innovation Agenda

The Water JPI covers the full range of RDI, including the broad range of activities from academic research to innovation, contributing to the 2020 vision for the European Research Area. The SRIA has been used to develop the Water JPI joint calls and as a basis for making recommendations to EU funding programmes including Horizon 2020. The SRIA is:

- a guide to what water-related RDI funding should be focused on at EU and national level, it is a commonly agreed agenda and a reference for all of the Water JPI activities;
- a reference document for decision making, which is aligned and responsive to key policy directives and strategies related to water use and management; and

- an instrument for co-design and co-development of knowledge and solutions, which helps to identify potential research outputs that could support or enable innovation and competitiveness.

While the SRIA 2.0 is the key behind the Implementation Plan, the relevance of the Water JPI activities to the United Nations (UN) Sustainable Development Goals (SDGs) implementation is also worthwhile noting.

SUSTAINABLE DEVELOPMENT GOALS



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

T1



3.1 Water JPI Planned Activities Under Theme 1: Improving Ecosystem Sustainability and Human Well-being

The overall goal of the Water JPI SRIA Theme 1 is to maintain the essential functions, processes and services of water bodies and associated ecosystems over the long term through integrated and interdisciplinary RDI actions.

Theme 1 is composed of:

- **Subtheme 1.1.** Developing Approaches for Assessing and Optimising the Value of Ecosystem Services;
- **Subtheme 1.2.** Developing and Applying Ecological Engineering and Ecohydrology; and
- **Subtheme 1.3.** Managing the Effects of Hydro-climatic Extreme Events.


Relevance to SDGs: 2, 6, 14 and 15





During the previous implementation period, 2014–2016, due to priority setting, Theme 1 was not covered by specific activities of the Water JPI. Over the period 2017–2019, the Water JPI will address the RDI needs of Theme 1, especially in regard to the following needs:


- **1.1.1.** developing approaches for assessing the ecological functioning of ecosystems;
- **1.2.3.** understanding and managing ecological flows;
- **1.2.4.** integrated eco-technological solutions for the remediation and mitigation of degraded water bodies and aquatic ecosystems;
- **1.3.1.** understanding the causes of drought/scarcity, predicting drought events and water scarcity and developing adaptation measures; and
- **1.3.2.** developing innovative (or improved) tools for adaptation to hydro-climatic extreme events, especially floods.

The following activities¹⁰ are envisaged:

 **Water-01:** Exploratory workshop (tentatively planned for the end of 2017) to prepare the initial scoping document regarding the proposed 2019 Water JPI joint call on RDI needs 1.3.1. and 1.3.2.

 **Water-02:** Water JPI joint call (tentatively planned for 2019) on the proposed topics of 1.3.1 and 1.3.2.

 **Water-03:** Strategy activities to develop a common vision between the Water JPI and the other relevant initiatives in that specific area. This will, in turn, feed in to the preparation of the next implementation plan of the Water JPI (2020 –2022).

 **Water-04:** Exploratory workshop (tentatively planned for the end of 2019) to prepare the initial scoping document regarding the proposed 2021 Water JPI joint call on RDI needs 1.1.1, 1.2.3 and 1.2.4.

 **Synergies with other initiatives and opportunities for possible strategic and co-funding activities will be explored. These would include, for example:**

- **BiodivERsA** (www.biodiversa.org): “a network of national and regional funding organisations promoting pan-European research on biodiversity and ecosystem services, offering innovative opportunities for the conservation and sustainable management of biodiversity”.
- The **FACCE JPI** (www.faccejpi.com): “the Joint Programming Initiative on Agriculture, Food Security and Climate Change ... brings together 22 countries that are committed to building an integrated European Research Area addressing the interconnected challenges of sustainable agriculture, food security and impacts of climate change.”

¹⁰Activities agreed by the Water JPI governing board but for which the means of implementation are to be confirmed [via in-kind and/or future EC-funded supported projects (ERA-NET Cofund, Coordination and Support Actions)].

- **Climate JPI** (www.jpi-climate.eu/home): “a Joint Programming Initiative ‘Connecting Climate Knowledge for Europe’ ... is a pan-European intergovernmental initiative gathering European countries to jointly coordinate climate research and fund new transnational research initiatives that provides useful climate knowledge and services for post-COP21 Climate Action.”

These activities will be relevant to policy, especially to:

- ✓ **EU Regulations and Policies**, in particular to the Seventh Environment Action Programme, EU Water Blueprint, Water Framework Directive, Marine Strategy Framework Directive, Floods Directive, Water Scarcity and Drought Strategy, EC Guidance on Ecological Flows

(Eflow), EU Climate Change Adaptation Strategy, the Habitats and Birds Directives, EU Biodiversity Strategy, International Convention on Biodiversity and Natura 2000.

- ✓ **UN SDGs**, especially SDG 6, “Ensure availability and sustainable management of water and sanitation for all”; SDG 2, “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”; SDG 14, “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”; and SDG 15, “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”.



**3.2 Theme 2:
Developing Safe
Water for Citizens**

T2



3.2 Water JPI Planned Activities Under Theme 2: Developing Safe Water Systems for Citizens

The main goal of RDI actions under the Water JPI SRIA Theme 2 is to protect the health of European citizens through the provision of safe water. Attention is particularly paid to the impacts of (1) emerging pollutants and (2) natural hazards and water infrastructures on water and human health.

Theme 2 is composed of:

- **Subtheme 2.1.** Emerging Pollutants and Emerging Risks of Established Pollutants: Assessing their Effects on Nature and Humans and their Behaviour and Opportunities for their Treatment;
- **Subtheme 2.2.** Developing and Applying Ecological Engineering and Ecohydrology

Relevance to SDGs: 3, 6, 11, 12 and 14



During the previous implementation period, 2014–2016, activities under Theme 2 included the **2013 Water JPI Pilot Call**¹¹ on the topic “Emerging water contaminants – anthropogenic pollutants and pathogens”, as well as the ongoing monitoring and a networking workshop relating to the **seven projects** funded under the 2013 call.

Over the period 2017–2019, the Water JPI will address the following RDI needs of Theme 2, especially in regard to subtheme 2.1:

- **2.1.1.** developing analytical techniques for groups of substances;
- **2.1.2.** understanding and predicting the environmental behaviour of by-products, pollutants and pathogens, including their environmental effects; and
- **2.1.3.** remediation of pollutants: developing strategies to reduce pollutants [disinfection by-products (DBPs), emerging pollutants, pathogens], including their environmental effects.

The proposed activities will build on the previous and ongoing Water JPI activities under the relevant subtheme. These include:



Water-05: ongoing monitoring of the seven projects funded under the 2013 Water JPI joint call.



Water-06: setting up the first Water JPI knowledge hub (on RDI needs 2.1.1, 2.1.2 and 2.1.3) (2018) with two associated workshops.



Water-07: exploratory workshop (tentatively planned for the end of 2018) – to prepare the initial scoping document regarding the proposed 2020 Water JPI joint call on the topic related to RDI need 2.1.2.



Synergies with other initiatives and opportunities for possible strategic and co-funding activities will be explored. These would include synergies with, for example, the Joint Programming Initiative on Antimicrobial Resistance (**JPI AMR**; www.jpiamr.eu), which coordinates national funding and supports collaborative action to fill knowledge gaps in this field.

These activities will be relevant to policy, especially to:

- ✓ **EU Regulations and Policies**, in particular to the Seventh Environment Action Programme, Water Blueprints, Water Framework Directive, Drinking Water Directive, Floods Directive, Water Scarcity and Drought Strategy, the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation, Environmental Quality Standards Directive, Priority Substances Directive, Urban Wastewater Treatment Directive, EU Climate Change Adaptation Strategy, and Common Agricultural Policy (CAP).
- ✓ **UN SDGs**, especially SDG 6, “Ensure availability and sustainable management of water and sanitation for all”.

¹¹http://www.waterjpi.eu/index.php?option=com_content&view=article&id=182&Itemid=701

3.3 Theme 3: Promoting Competitiveness in the Water Industry



3.3 Water JPI Planned Activities Under Theme 3: Promoting Competitiveness in the Water Industry

RDI actions under the Water JPI SRIA Theme 3 will aim at developing products, processes and services that promote the competitiveness of the European water industry, thereby contributing to fuelling the European economy.

Theme 3 is composed of:

- **Subtheme 3.1.** Developing Market-Oriented Solutions for the Water Industry;
- **Subtheme 3.2.** Enhancing the Regulatory Framework Relevance

Relevance to SDGs: 6, 9 and 12



During the previous implementation period, 2014–2016, activities under Theme 3 included the **2015 Water JPI Call**¹² on the topic “Research and Innovation for Developing Technological Solutions and Services: (i) for Water Treatment, Reuse, Recycling and Desalination; (ii) for Water Resources Management; and (iii) to Mitigate Impacts of Extreme Events (Floods and Droughts) at Catchment Scale”, as well as on the ongoing monitoring of the 16 projects funded under the 2015 call.

Over the period 2017–2019, the Water JPI will address the RDI needs of Theme 3, building on the previous and ongoing Water JPI activities under that theme. The

proposed activities include:



Water-08: ongoing monitoring of the 16 2015 joint call projects.



Water-09: networking workshop between the 16 2015 joint call projects and other relevant EU projects/initiatives in 2017.

These activities will be relevant to policy, especially to:

- ✓ **EU Regulations and Policies**, in particular to the Seventh Environment Action Programme, Water Blueprint, Water Framework Directive, Drinking Water Directive, Floods Directive, Water Scarcity and Drought Strategy, “Towards a Circular Economy” Communication, Roadmap to a Resource Efficient Europe, Thematic Strategy on the Urban Environment, Green Infrastructure Strategy, “For a European Industrial Renaissance” Communication, the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation, Environmental Quality Standards Directive, Priority Substances Directive, Urban Wastewater Treatment Directive, Water Reuse Roadmap, EU Climate Change Adaptation Strategy, and Common Agricultural Policy (CAP).
- ✓ **UN SDGs**, especially SDG 6, “Ensure availability and sustainable management of water and sanitation for all”, and SDG 9, “Build resilient infrastructure, promote sustainable industrialisation and foster innovation”.

¹²Activities agreed by the Water JPI governing board but for which the means of implementation are to be confirmed [via in-kind and/or future EC-funded supported projects (ERA-NET Cofund, Coordination and Support Actions)].

3.4 Theme 4: Implementing a Water – Wise Bio-Based Economy

T4



3.4 Water JPI Planned Activities Under Theme 4: Implementing a Water-wise Bio-based Economy

The growth of the bio-economy in Europe is expected to increase pressure on natural resources. The overall goals of the RDI actions under the Water JPI SRIA Theme 4 are (1) to encourage the sustainable use of water resources; and (2) to safeguard water resources by reducing and limiting pollution.

Theme 4 is composed of:


- **Subtheme 4.1.** Improving Water Use Efficiency for a Sustainable Bio-economy Sector;
- **Subtheme 4.2.** Reducing Soil and Water Pollution


Relevance to SDGs: 2, 6, 9 and 12





During the previous implementation period 2014–2016, activities under Theme 4 included the **2016 Water JPI joint call**¹³ on the topic “Sustainable management of water resources in agriculture, forestry and freshwater aquaculture sectors”.

Over the period 2017–2019, the Water JPI will address the RDI needs of Theme 4, building on the previous and ongoing Water JPI activities under that theme. These proposed activities¹⁴ will include:

 **Water-10:** strategy activities relating to a common vision with the FACCE JPI – these will feed into the full update of the Water JPI SRIA, as well as into the preparation of the next Implementation Plan 2020–2022.

 **Water-11:** ongoing monitoring of the 2016 joint call projects.

 **Water-12:** networking workshop (Alignment of ongoing projects) – planned for 2019.

 **Synergies with other initiatives and opportunities for possible strategic and co-funding activities will be explored. These would include synergies with, for example, the FACCE JPI.**

These activities will be relevant to policy, especially to:

- ✓ **EU Regulations and Policies**, in particular to the Seventh Environment Action Programme, Water Blueprints, Water Framework Directive, Nitrates Directive, “Towards a Circular Economy” Communication, Roadmap to a Resource Efficient Europe, Bio-economy Strategy, Priority Recommendations from the EC Lead Market Initiative for Bio-based Products, “Maximisation of water reuse in the EU (a new EU instrument)” Roadmap, Common Agricultural Policy (CAP), EU Climate Change Adaptation Strategy, and Soil Thematic Strategy.
- ✓ **UN SDGs**, especially SDG 2, “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”; SDG 6, “Ensure availability and sustainable management of water and sanitation for all”; SDG 9, “Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation”; and SDG 12, “Ensure sustainable consumption and production patterns”.

¹³http://www.waterjpi.eu/index.php?option=com_content&view=article&id=440&Itemid=1008

¹⁴Activities agreed by the Water JPI governing board but for which the means of implementation are to be confirmed [via in-kind and/or future EC-funded supported projects (ERA-NET Cofund, Coordination and Support Actions)].

**3.5 Theme 5:
Closing the Water Cycle Gap
– Improving Sustainable
Water Resource Management**

T5



3.5 Water JPI Planned Activities Under Theme 5: Closing the Water Cycle Gap – Improving Sustainable Water Resources Management

In many regions of Europe, it may be difficult to reconcile water supply and demand in terms of both quantity and quality. The aim of the RDI actions under the Water JPI SRIA Theme 5 is, therefore, to bridge the gap in “supply–demand” by enabling the sustainable management of water resources. Innovative strategies and approaches will be developed where appropriate.

Theme 5 is composed of:

- **Subtheme 5.1.** Enabling Sustainable Management of Water Resources;
- **Subtheme 5.2.** Strengthening Socio-economic Approaches to Water Management

Relevance to SDGs: 6, 11 and 13



During the previous implementation period, 2014–2016, activities under Theme 5 included the 2016 Water JPI Exploratory Workshop in preparation of the **2017 Water JPI joint call**.

Over the period 2017–2019, the Water JPI will address the RDI needs of Theme 5, building on the previous and ongoing Water JPI activities under that theme. These activities will include:



Water-13: proposed 2018 Water JPI joint call on closing the water cycle gap.



Water-14: ongoing monitoring of the 2018 joint call projects (kick-off) – 2019.



Water-15: strategy activities relating to a common vision with other relevant initiatives, such as the World Water Council, Climate JPI and Belmont Forum; this would feed into the

full update of the Water JPI SRIA, as well as preparation of the next Implementation Plan 2020–2022.



Water-16: investigation of the TAP instrument as a possible joint call without EC top-up (2018–2019).



Synergies with other initiatives and opportunities for possible strategic and co-funding activities will be explored. These would include synergies with, for example:

- **Climate JPI.**
- **World Water Council and Forum** (www.worldwatercouncil.org): “The World Water Council is an international multi-stakeholder platform. It was established in 1996 on the initiative of renowned water specialists and international organisations, in response to an increasing concern about world water issues from the global community. The World Water Council’s mission is to promote awareness, build political commitment and trigger action on critical water issues at all levels, including the highest decision-making level, to facilitate the efficient conservation, protection, development, planning, management and use of water in all its dimensions on an environmentally sustainable basis for the benefit of all life on earth.” The World Water Council’s major event is the World Water Forum.
- **Belmont Forum** (www.belmontforum.org): “the Belmont Forum is a group of the world’s major and emerging funders of global environmental change research. It aims to accelerate delivery of the environmental research needed to remove critical barriers to sustainability by aligning and mobilising international resources. It pursues the goals set in the Belmont Challenge by adding value to existing national investments and supporting international partnerships in interdisciplinary and transdisciplinary scientific endeavours.”

These activities will be relevant to policy, especially to:

✓ **EU Regulations and Policies**, in particular to the Seventh Environment Action Programme, Water Blueprints, Water Framework Directive, Groundwater Directive, Marine Strategy Framework Directive, Floods Directive, Water Scarcity and Drought Strategy, “Towards a Circular Economy” Communication, Roadmap to a Resource Efficient Europe, “Maximisation of water reuse in the EU (a new EU instrument)” Roadmap, and Common Agricultural Policy (CAP).

✓ **UN SDGs**, especially SDG 6, “Ensure availability and sustainable management of water and sanitation for all”; SDG 11, “Make cities inclusive, safe, resilient and sustainable”; and SDG 13, “Take urgent action to combat climate change and its impacts”.



3.6 Recommendations for Other EU Funding Programmes

3.6 Recommendations for Other EU Funding Programmes

As part of this implementation plan, recommendations are made for some of the Water JPI RDI needs that are to be implemented via these other funding programmes. These recommendations are based on the outcomes of a consultation with the Water JPI advisory boards¹⁵ in early 2016.



3.6.1 Recommendations for Horizon 2020

The Water JPI Implementation Plan runs parallel to a number of Horizon 2020 Work Programmes (in particular, the Work Programme of Societal Challenge 5, “Climate Action, Environment, Resource Efficiency and Raw Materials”). The Water JPI does not aim to duplicate the strategic work carried out by all these neighbouring initiatives. On the contrary, it seeks to coordinate and find synergies with them, so that the Water JPI SRIA will be a comprehensive and integrated document that (1) identifies the research gaps and RDI needs that are documented in the strategic documents of other European initiatives; (2) identifies complementarities; and (3) sheds some light on potential opportunities for collaboration (through, for example, project co-funding). Horizon 2020 is similar to the Water JPI, as it also covers the full RDI chain. However, the current push towards innovation places it closer to it.

The following Water JPI SRIA RDI needs were identified as being more suitable for implementation via the EC Horizon 2020 calls. These were included in a series of position papers¹⁶ prepared by the Water JPI in the context of the preparation of the upcoming Horizon 2020 Societal Challenge 5 Work Programme 2018–2020.

Water–climate–biodiversity

- **1.1.2.** developing and testing methodologies for the valuation of ecosystems services;
- **1.1.3.** establishing multiple pressure–impact–response relationships in aquatic, riparian and groundwater-dependent ecosystems; and
- **1.2.1.** restoring morphology continuity and hydraulic connectivity.

Water in the context of innovative cities

- **1.3.3.** improving water management to mitigate the harmful impacts of extreme events (extreme weather events, impaired water quality).

Water in the context of environment and health (cross-cutting issue)

- **2.1.1.** developing analytical techniques for groups of substances; and
- **2.1.3.** remediation of pollutants: developing strategies to reduce pollutants (DBPs, emerging pollutants and pathogens, including their environmental effect).

Water in the context of the circular economy

- **3.1.1.** developing smart water technologies (sensor networks and real-time information systems in water distribution and wastewater networks);
- **3.1.2.** delivering technological solutions for water and wastewater treatment;¹⁷
- **3.1.3.** promoting innovative approaches to asset management; and
- **3.2.1.** removing barriers to innovation.

Water–food –energy nexus

- **3.1.4.** supporting the energy–water nexus (namely regarding efficiency and sustainability);
- **3.1.5.** mitigating the impact of obtaining energy from the ground and the sea;
- **3.1.7.** developing and demonstrating water reuse and recycling concepts; recovering products and energy from treatment plants;

¹⁵ http://www.waterjpi.eu/index.php?option=com_content&view=article&id=388&Itemid=951

¹⁶ <http://www.waterjpi.eu/images/documents/Consultation%20on%20H2020%20SC5%20WP18-20.pdf>

¹⁷ Complementary to the WaterWorks2014 funded projects – possible links with the SPIRE public–private partnership.

- **4.1.1.** implementing efficient water use systems and practices for the European and overseas markets;¹⁸
- **4.1.2.** developing integrated water-conserving farming and forestry practices and varieties;¹⁹ and
- **4.2.2.** designing measures underpinning water and land use policies.

3.6.2 Recommendations for other EU funding programmes

Other EU funding programmes include, for example:



✓ **The European Cooperation in Science and Technology (COST)²⁰ programme.** This programme is closer to research; its objective is to support activities at the outset of research projects.



✓ **LIFE²¹** (the EU's funding instrument for projects on the environment and climate change). This programme focuses on demonstration and piloting.



✓ **Public-private partnerships [SPIRE (Sustainable Process Industry through Resource and Energy Efficiency) for the water domain].** These mainly deal with innovation and are funded by public (EC) and private (industry) funds.

✓ **Joint technology initiatives.** These are similar to public-private partnerships, covering the whole RDI chain.



✓ **INTERREG.²²** This programme supports cooperation between partners across borders. The aim is to tackle common challenges together and find shared solutions – whether in the field of health, research and education, transport or sustainable energy.



✓ **The European Institute of Innovation and Technology.²³** This organisation is a key driver of sustainable European economic growth and competitiveness. It integrates the entrepreneurship-driven “knowledge triangle” of higher education, research and business in order to deliver disruptive innovation. To further enhance its impact and to incentivise the innovations needed to meet new societal challenges, the European Institute of Innovation and Technology has set up knowledge and innovation communities. The knowledge and innovation communities offer a genuine opportunity for leading innovation players to be part of a highly integrated and collaborative community, based on principles of excellence and commitment, which will achieve pan-European impact.

The following Water JPI SRIA RDI needs were identified as being more suitable for implementation via these other funding programmes:

- **1.1.4.** integrating ecosystem services into management of water resources (LIFE and/or COST Action);
- **1.3.2.** developing innovative (or improved) tools for adaptation to hydroclimatic extreme events, especially floods (INTERREG);
- **2.1.1.** developing analytical techniques for groups of substances (COST Action);
- **2.1.3.** remediation of pollutants by developing strategies to reduce pollutants (DBPs, emerging pollutants, pathogens, including their environmental effect) (COST Action);
- **3.1.2.** delivering technological solutions for water and wastewater treatment (COST Action – link to the SPIRE public-private partnership);
- **3.1.4.** supporting the energy-water nexus (namely on efficiency and sustainability) (COST Action);
- **3.1.7.** developing and demonstrating water reuse and recycling concepts; recovering products and

¹⁸Complementary to the WaterWorks2015 projects when selected – possible links also with PRIMA.

¹⁹Complementary to the WaterWorks2015 projects when selected.

²⁰<http://www.cost.eu/>

²¹<http://ec.europa.eu/environment/life/>

²²http://ec.europa.eu/regional_policy/en/policy/cooperation/european-territorial/

²³<https://eit.europa.eu/activities/innovation-communities>

energy from treatment plants (link to the knowledge and innovation communities on raw materials);

- **4.1.1.** implementing efficient water use systems and practices for the European and overseas markets [link to European Union External Action (EEAS)];²⁴
- **4.2.1.** developing sustainable production systems (LIFE and/or INTERREG);
- **4.2.2.** designing measures underpinning water and land use policies (LIFE and/or INTERREG);
- **5.1.1.** promoting water RDI infrastructures for a better understanding of hydrological processes on different scales (LIFE and/or COST Action);²⁵
- **5.1.2.** promoting adaptive water management for global change (INTERREG);
- **5.1.3.** implementing managed aquifer recharge and other natural water retention measures (INTERREG and/or LIFE); and
- **5.2.1.** integrating economic and social analyses into decision-making processes²⁶ (INTERREG and/or LIFE).



²⁴http://eeas.europa.eu/headquarters/headquarters-homepage_en

²⁵Link to ESFRI Roadmap.

²⁶Especially regarding the following: (1) promoting integrated management of water resources and water rights in the development of sustainable water management plans; and (2) fostering transboundary cooperation on sound legal and institutional arrangements.


4 Progressing the Joint Programming Process: Horizontal Activities

Horizontal activities (i.e. activities that are not specific to one of the Water JPI SRIA 2.0) are also planned by the Water JPI. These activities are essential to the overall running and implementation of the Water JPI. This section provides a snapshot of the planned Water JPI activities over the period 2017–2019. 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 because it also supports the realisation of the European Research Area. For more information on work carried out to date, please refer to the **2016 Water Joint Programming Initiative: Key Achievements 2011–2016**²⁷ document.

4.1 Towards a Common Vision

A common vision for the Water JPI is a major achievement, as 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, the short document “What is it about?”²⁸ was published, summarising the **2011 Vision Document**²⁹. As of 2016, the Water JPI membership had grown to account 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 than by working independently.

Over the period 2017–2019, the proposed activities will include:

 ✓ **Strategy activities** planned under Themes 1, 4 and 5, relating to a common vision with the FACCE JPI (**Water-10**) and possibly with BiodivERsA (**Water-03**), the Climate JPI and the Belmont Forum (**Water-15**). These activities will feed into the full update of the Water JPI SRIA, as well as preparation of the next Implementation Plan 2020–2022.



✓ **Water-17:** Preparation of the next Water JPI Vision document up to 2030, setting out clear objectives and providing measurable indicators to assess the progress of the JPI in meeting these objectives.

4.2 Updating the SRIA

The 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 policymakers, regulatory agencies, researchers, end-users (such as water enterprises and water managers) and the public. 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.

Over the period 2017–2019, the proposed activities include:



✓ **Water-18:** Continuous flexible update of the SRIA to ensure that emerging needs are included in the SRIA in a timely manner. This will be done with the support of the Water JPI advisory boards over the period 2017–2019. This will also be supported by the activities carried out under the knowledge hubs (**Water-06**, **Water-34**), as well as by those carried out during the networking (**Water-09** and **Water-12**) and exploratory workshops (**Water-01**, **Water-04** and **Water-07**).

✓ **Water-19:** Full update of the Water JPI SRIA (version 3.0) starting in 2019, which is to coincide with the preparation of the next Water JPI 2030 Vision Document (**Water-17**). This will involve a comprehensive review of foresight documents, as well as:

✓ **Water-20:** stakeholder experts consultative workshop (2018–2019); and

²⁷ http://www.waterjpi.eu/images/documents/WATER_JPI_Key_Achievements.pdf

²⁸ <http://www.waterjpi.eu/images/documents/Summary%20of%20the%20Vision%20Document.pdf>

²⁹ http://www.waterjpi.eu/images/documents/Vision_Document.pdf



✓ **Water-21:** consultations (public, advisory boards and governing board) (2018–2019).

4.3 Enlarging the Water JPI Membership

The Water JPI has initiated contact with the non-Water JPI EU Member States, informing them about recent developments and results. Without being partners or observers, some non-EU countries are involved in Water JPI activities (e.g. South Africa in the 2015 joint call; Canada, Egypt, South Africa, Taiwan and Tunisia in the 2016 joint call and WaterWorks2015 additional activities). Any Member State of the EU or any associated country of the European Framework Programme can be a partner of this JPI. All JPI partners will be represented at the governing board. Third countries (neither Member States nor associated countries) can participate in joint research calls without being partners or observers. Non-EU countries may join the Water JPI as a JPI observer initially.

Over the period 2017–2019, the proposed activities³⁰ include:



✓ **Water-22:** Spread the JPI process to the rest of the EU countries and beyond (see section 4.5), to build a greater critical mass, which is required to provide an effective response to major societal challenges.

4.4 Engaging Stakeholders

The water sector in Europe is diverse and a significant number of individuals and organisations is involved. The Water JPI has worked to operate openly and transparently. It has engaged with 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.

Over the period 2017–2019, planned activities³¹ include:



✓ **Water-23:** Continued stakeholder involvement/engagement actions via:

- the ongoing engagement of the Water JPI advisory boards;
- the mirror/support groups created in some Member

States, enlarging exchanges to national, regional and local stakeholders;

- specific activities with some key stakeholders (Water Supply and Sanitation Technology Platform³², European Innovation Partnership on Water³³, COST Actions, etc.);
- the LinkedIn Water JPI researchers' forum (www.linkedin.com/groups/8455262); and



- the development of the Water knowledge hub (**Water-06, Water-34**, thematic workshops, process workshops) and training actions.

Other possible activities to be developed include:

- ✓ cooperation in the implementation of the synergy areas regarding mobility and infrastructures;
- ✓ collaboration with the knowledge and innovation communities of the European Institute of Innovation and Technology, particularly with the climate knowledge and innovation communities, through its land and water theme;
- ✓ collaboration with joint technology initiatives and public–private partnerships;
- ✓ cooperation with the European scientific, technological and industrial organisations in the water domain, which are for the most part represented in the Water JPI Stakeholders Advisory Group;
- ✓ synergies with the Joint Research Centre to further develop the European Research Area;
- ✓ 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; and
- ✓ developing a sustainable way forward for supporting the implementation of the JPIs.

³⁰Activities agreed on by the Water JPI governing board, but for which the means of implementation are to be confirmed [via in-kind and/or future EC-funded supported projects (ERA-NET Cofund, Coordination and Support Actions)].

³¹Activities agreed on by the Water JPI governing board, but for which the means of implementation are to be confirmed [via in-kind and/or future EC-funded supported projects (ERA-NET Cofund, Coordination and Support Actions)].

³² <http://wsstp.eu/>

³³ <http://www.eip-water.eu/>

4.5 International Cooperation

Water crises have been identified in 2015 by the World Economic Forum in their Global Risks 2015 Report³⁴ as the Top 1 risk in terms of impacts to economies and societies in forthcoming years. Global water requirements are projected to be pushed beyond sustainable water supplies by 40% by 2030. Therefore, a more coordinated and consistent approach in international water RDI cooperation will help to build the greater critical mass needed to provide an effective response to major societal challenges. It also enables Europe to participate more effectively in agenda setting in international water forums and to convey consistent messages.

International cooperation is already producing positive results with respect to the Water JPI activities, as well as extending the geographical scope of any impacts. With increased international awareness on water challenges (such as the recent adoption of the UN 2030 Agenda for Sustainable Development by world leaders), the Water JPI will 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 forums.



Synergies with other initiatives and opportunities for sharing strategy on international cooperation will be explored. These would include synergies with, for example:

- **BONUS** (www.bonusportal.org), which aims at an “economically and ecologically prosperous Baltic Sea region where resources and goods are used sustainably and where the long-term management of the region is based on sound knowledge derived from multi-disciplinary research. BONUS brings together the research communities of marine, maritime, economical and societal research to address the major challenges faced by the Baltic Sea region.”
- **PRIMA** (<https://ec.europa.eu/research/environment/index.cfm?pg=prima>), which is a joint research and innovation programme focused on the development and application of innovative solutions for food systems and water resources in the Mediterranean basin.

Over the period 2017–2019, the Water JPI activities will include:



✓ **Water-24:** Sharing strategy on international cooperation with other JPIs and Article 185 initiatives (e.g. BONUS, PRIMA).



✓ **Water 25:** Action plan for the valorisation of water research beyond Europe.



✓ **Water-26:** Developing the international cooperation on water challenges beyond the EU in 2018, including memoranda of understanding with third countries, proposals for cooperation models and three geographical workshops (Asia, Canada and Africa) in 2017.



✓ **Water-27:** Revision of the international cooperation mapping in 2018, building on the 2014 Report³⁵.



✓ **Water-28:** Definition of public-private partnership cooperation models with the water economic sector in 2019.



✓ **Water-29:** Workshops on coordination with other JPIs, policymakers and European public research and development initiatives [High Level Group on Joint Programming (GPC), ERA-LEARN, European Innovation Partnership on Water, etc.] for sharing experiences, identifying success factors and proposing a common vision on international cooperation.

4.5.1 UN SDGs – RDI needs for implementation by the Water JPI

Since the adoption of the United Nations (UN) 2030 Agenda for Sustainable Development in September 2015, the EC has defended the necessity for the EU to play a leading role at the global scale by fully integrating the SDGs (<https://sustainabledevelopment.un.org/>) into the framework of its internal and external policies. Within the new post-2015 development agenda, the position 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.

³⁴<http://reports.weforum.org/global-risks-2015/part-1-global-risks-2015/introduction/>

³⁵<http://www.waterjpi.eu/images/documents/2016/WP%205%201%20Final%20Report%20-%2030-04-2014%20without%20SWOT.pdf>

The following SDGs are particularly relevant to water challenges:



Within SDG 6, 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.”

Over the period 2017–2019, the following activities³⁶ are planned:



✓ **Water-30:** Launch of the 2017 Water JPI joint call on UN SDGs.



✓ **Water-31:** Ongoing monitoring of funded projects under the 2017 Water JPI joint call – 2018–2020.



✓ **Water-32:** Strategy activities in relation to the Water JPI SRIA and UN SDGs aimed at identifying RDI needs for efficiently implementing the UN SDGs in due course (2020 and 2030).



✓ **Water-33:** Networking workshop in 2019–2020 for the funded projects under the 2017 Water JPI joint call.



✓ **Water-34:** Setting up of the second Water JPI knowledge hub.

4.6 Updating the Mapping of Water RDI in Europe

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 a key activity in progressing the concept of alignment. The first Water JPI RDI Mapping Report³⁷ was published in 2014.

Over the period 2017–2019, the following activity³⁸ is proposed:



✓ **Water-35:** A review of the methodology and update of the 2014 mapping exercise. New mechanisms may be required to increase the number of participating organisations and countries involved.

The JPI is currently expanding its **project database**³⁹ beyond the 21 countries listed in the database 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:



✓ **Water-36**⁴⁰: An update of the Water JPI database, ensuring interoperability with other initiatives' databases.

4.7 Outreach and Dissemination

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.

³⁶Activities agreed by the Water JPI governing board, but for which the means of implementation are to be confirmed [via in-kind and/or future EC-funded supported projects (ERA-NET Cofund, Coordination and Support Actions)].


³⁷ <http://www.waterjpi.eu/images/WatEU-%20Mapping%20Report/Mapping%20Report.pdf>


³⁸Activities agreed by the Water JPI governing board, but for which the means of implementation are to be confirmed [via in-kind and/or future EC-funded


³⁹http://www.waterjpi.eu/index.php?option=com_wrapper&view=wrapper&Itemid=714

⁴⁰Activities agreed by the Water JPI governing board, but for which the means of implementation are to be confirmed [via in-kind and/or future EC-funded supported projects (ERA-NET Cofund, Coordination and Support Actions)].

Over the period 2017–2019, the Water JPI will:

 **Water-37:** Continue to implement its communication and dissemination strategy, including integrating open data/access in all our activities and raise awareness about present and future water challenges. It will provide user-friendly and reliable information and knowledge to citizens, policymakers and the European and international water research community.

 **Water-38:** Host its second international conference in 2018.

 **Water-39:** Develop knowledge and innovation – this is one of the goals of the Water JPI. Several of its ongoing and planned activities facilitate this concept. Additional activities to those previously listed include, for example:


- discussing intellectual property rights issues with the relevant stakeholders and proposing rules for any project with innovation issues, in order to facilitate the knowledge and innovation transfer to the market, while preserving the interests of the innovators;
- creating a demonstration platform in cooperation with interested parties (e.g. economic sector, countries under development), considering the required adaptation of the identified technologies in order to ease their replication and uptake by local markets.

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


4.8 Progressing Alignment


Alignment of national water RDI agendas and activities is one of the main aims of the JPIs. 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). Using the ERA-learn typology along the research cycle, the different forms of alignment include alignment of:

- ✓ national/regional programmes (e.g. common vision; joint calls; SRIA);
- ✓ national/regional/EC programmes (e.g. discussion with the EC on the Horizon 2020 Work Programme);
- ✓ funding (e.g. synchronisation of national calls – TAP instrument);
- ✓ procedures (e.g. good practices workshops on implementation, on evaluation, on reporting, on post evaluation, on impact assessment, on joining JPI);
- ✓ training (e.g. Joint European Innovation Partnership on Water/JPI webinars); and
- ✓ mobility and infrastructures (e.g. development of the interactive platform to facilitate access to mobility schemes and research infrastructures).

 A series of workshops on good practices (**Water-40 below**) and exploratory workshops (**Water-01, Water-04** and **Water-07**), as well as networking workshops (alignment of ongoing projects) (**Water-01, Water-12** and **Water-33**) 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 an interactive mobility and infrastructures platform, knowledge hubs and dedicated workshops and case studies on alignment are also planned for the coming years.

Over the period 2017–2019, the Water JPI will create and carry out the following:

 **Water-40:** Good practices workshops aimed at identifying and sharing good practices for the Water JPI and for all the involved programmes.

 **Water-41:** Two alignment workshops aimed at furthering the Water JPI progress in alignment.



✓ **Water-42:** An alignment case study on the efficiency of the national mirror/ stakeholders groups as a tool to progress alignment.



✓ **Water-43:** An alignment case study on the TAP as a means to further alignment.



✓ **Water-44:** An alignment roadshow in Estonia to raise awareness of the Water JPI.



✓ **Water-45:** Mobility and infrastructures workshops aimed at facilitating the development of the interactive platform to facilitate access to mobility schemes and research infrastructures.



✓ **Water-46:** The development of the interactive platform to facilitate access to mobility schemes and research infrastructures (2019).⁴¹



⁴¹Not expected to be completed before 2020.

5 Measuring Impact

For each type of activity, the Water JPI will identify and define indicators of success, allowing for measuring the success and impacts of its activities. This will allow refining activities, where required, to ensure maximum impact. The underlying basis for all Water JPI activities is the set of internal performance indicators in the **Water JPI 2011 Vision Document**⁴². A key objective of the Water JPI activities is to support water resources management policies, in particular the post-2015 sustainable development agenda with the UN SDGs' implementation.

From 2016 onwards, EC funding via the various supporting projects [ERA-NET Cofund WaterWorks2014, WaterWorks2015 and Coordination and Support Action IC4Water (see Figure 5.1)] and any future successful applications under Horizon 2020 will only partially cover the overall costs of the Water JPI activities. The success of these activities, therefore, depends on the long-term commitments of the Water JPI members.

The Water JPI is one of the 10 JPIs being implemented as part of a strategy to enhance the coherence and effectiveness of the European research and innovation system. JPIs set out to increase the efficiency of national research and innovation investments by enhancing and improving cross-border collaboration, coordination and integration of national activities. This is a long-term process, with strategic and system-wide objectives intended to change the European research and innovation policy and funding landscape in selected knowledge areas, and therefore making it better able to tackle

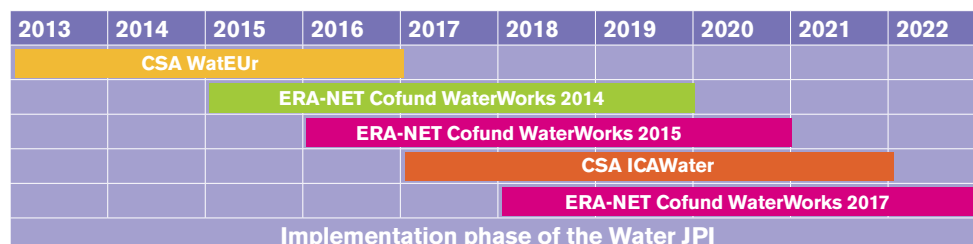
grand societal challenges. Impact assessment has been implemented by the EU as a way to verify the existence of problems, identify the underlying causes, assess the actions needed and analyse the advantages and disadvantages of available solutions.

In order to achieve these goals in the Water JPI, the first step is to assess its current state in relation to:

- its initial objectives (Vision Document);
- its SRIA; and
- its Implementation Plan.

Water JPI activities started to be monitored within the framework of the WatEUr CSA and its impact assessment is being further developed in the framework of WaterWorks2014 and WaterWorks2015. In WaterWorks2014 and WaterWorks2015 the focus will be set on the impact assessment of the joint call instrument (**Water-05 and Water-08**). In IC4WATER, the focus of impact assessment (**Water-47**) will move from the instrument to the rest of the Water JPI activities, with special attention given to international cooperation activities developed in this CSA.

Figure 5.1. Supporting EC projects – implementation of the Water JPI



⁴² http://www.waterjpi.eu/images/documents/Vision_Document.pdf





www.facebook.com/Water-JPI-517792798284596/



[@WaterJPI](https://twitter.com/WaterJPI)



Water JPI - Researchers Forum www.linkedin.com/groups/8455262

www.waterjpi.eu

