



Water JPI Summary Position on the Horizon 2020 Societal Challenge 5 2016-2017 draft Work Programme

April 2015

At the recent Water Joint Programming Initiative Governing Board meeting (12th March 2015, Brussels), the Water JPI was asked by the European Commission (EC) to provide specific comments on the draft Horizon 2020 Societal Challenge 5 draft Work Programme (WP) 2016/17, currently in preparation. The aim of this Paper is to provide the EC with a **Summary of the Water JPI Position** in relation to its draft WP. It is important to note that this document builds on previous submissions made to the EC and summarises key points reflecting the position of the Water JPI.

In June 2013, the Water Joint Programming Initiative (JPI) released the strategic document entitled "**Towards Partnership & Complementarities with Horizon 2020**"¹. In this document, the basic traits of Horizon 2020 and the Water JPI were outlined, mapping the areas of thematic synergies and the differences in conception and implementation.

In June 2014, in response to the EC Public Consultation on the Horizon 2020 Societal Challenge 5, the Water JPI also submitted a **Position Paper**².

In February 2015, in response to the EC Call for Ideas on Large-Scale demonstration Projects, the Water JPI submitted a Response document³

In March 2015, in response to the Horizon 2020 SC5 draft WP2016/17 (version 09/08/2015), the Water JPI also submitted a **Preliminary Position Paper**⁴.

In all the above submissions, topics for inclusion in Horizon 2020 SC5 WP were suggested for both:

- ⇒ Topics of common interest to Horizon 2020 and the Water JPI, i.e. "Mainstream" H2020 funding (Research & Innovation and Innovation Actions); and
- ⇒ Topics for the Support of the implementation of the Water JPI (i.e. Coordination Support Action & ERANet COFUND)

¹ <http://www.waterjpi.eu/images/documents/Water%20JPI%20Position%20to%20H2020.pdf>

²

<http://www.waterjpi.eu/images/documents/Water%20JPI%20Position%20on%20the%20H2020%20%20SC5%202016-2017%20Work%20Programme.pdf>

³ http://epa.smartsimple.ie/files/347278/102712/2015_Preliminary_Papers/

⁴ http://epa.smartsimple.ie/files/347278/102712/2015_Preliminary_Papers/

1. Water Focus Area

The Water JPI recommends maintaining the Focus Area on Water, as in the first Horizon 2020 Societal Challenge 5 Work Programme (2014/15).

We believe that a Water Focus Area shows coherence with the Water Challenges identified by both the Water JPI and the European Innovation Partnership (EIP) on Water. We recognise the cross-cutting aspect of Water RDI and welcome the addition of water-related topics, as part of the proposed draft WP2016/17. In addition, we also welcome that, in the latest draft WP (version of 01/04/2015), water has been given a stronger emphasis in some of the proposed topics.

In the current structure of the draft WP, the Water Section, under the Call entitled: *“call on specific priority areas within societal challenge climate action, environment, resource efficiency and raw materials”*, has the proposed objectives: *“The objective of this part of the call is to harness water's strong potential for European industry (including SMEs) to become global market leader by continuing the efforts undertaken in the 2014-2015 Focus Area call ‘Water Innovation: Boosting its value for Europe’, i.e. bringing innovative water solutions to the market and supporting the implementation of the objectives of the European Innovation Partnership (EIP) and of the Joint Programming Initiative on Water.”*. However, only three (as of version of 09/02/2015) and now two topics (as of version of 01/04/2015) have been included in this Water section (with the proposed 2017 ERAnet COFUND moved to the specific section called *“4. Specific Grant Agreements (SGAs) for ERA-NET Cofund actions supporting Joint Actions towards sustainable green economy in Europe and beyond”*). These topics are specifically dedicated to the support of the Water JPI and PRIMA Joint Programming Process, with no dedicated Water RDI topics (i.e. Research & Innovation and/or Innovation Actions). The Water JPI feels that this may in fact result in the loss of the momentum generated by the inclusion of the Water Focus Area in the previous WP (i.e. 2014/15). **The Water JPI would therefore strongly recommend that Research & Innovation and/or Innovation Water topics be also included in this section of the call.**

In our view, a Focus Area on water is synergic with the priorities discussed at the Advisory Group for this Societal Challenge (i.e. Systemic Eco-Innovation, Climate Services; Nature-Based Solutions and Sustainable Supply of Raw Materials). Water research and innovation actions are cross-cutting to all four priorities listed above. A specific Focus Area dedicated to Water adds visibility to, and reduces fragmentation of Research, Development & Innovation (RDI) actions on water. It also establishes a contact point in Horizon 2020, which has facilitated our interactions with Horizon 2020 and our own development.



2. Inclusion of more “basic and applied” research

While we acknowledge that the focus of the Horizon 2020 Programme is targeted at the innovation/demonstration/commercialisation part of the research spectrum, we do feel that some of the proposed large-scale projects, will require a furthering of the more basic knowledge-base, in order to meet the requirements & needs of the proposed projects, as well as the objectives described in the [Nature-Base Solution Paper](#).

Therefore, the Water JPI recommends that that more topics on research as basis for innovation and policy-making be included in the Work Programme.

While we acknowledge that the EC took into consideration the proposed CSA (2016) and ERAnet COFUND (2017), other water RDI needs for “mainstream” Horizon 2020 funding were also recommended in the [2014 Water JPI Position Paper](#), and a descriptive Fiche was provided (see [Table 1](#) below).

Table 1: Extract from the [2014 Water JPI Position Paper](#) (June 2014 – Annex 1)

Instrument	Ref.	Title
Collaborative Projects	A	Approaches for Assessing and Optimizing Ecosystem Services and the Ecological Functioning of Ecosystems
Collaborative Projects	B	Hydromorphology: Restoring Continuity, Sediment Transport and Fish Migration Within River Systems
Collaborative Projects	C	Understanding the Implications of Ecological Flows
Collaborative Projects	D	Assessing the Impacts of Unconventional Gas Exploration and Extraction on Water resources
Collaborative Projects	E	Systemic Reuse and Recycling Technologies in the Water Sector
Collaborative Projects	F	Towards Urban Flood Proof Cities
Coordination and Support Action	G	Measures to Achieve Water Framework Directive Objectives in Heavily Modified Water Bodies
Infrastructure	H	Infrastructure for Water Research and Innovation

The Water JPI welcomes the integration of a topic on “*Demonstrating the potential of efficient nutrient recovery from water*” and “*Towards the next generation of water systems and services—large scale demonstration projects*” (See **Topic E**). The current Draft Work Programme is focusing on “Large-scale demonstrators” and innovation instruments. Nevertheless, for achieving the proposed objectives within the expected deadlines, basic and applied research will be needed. For some topics, dedicated RTDI infrastructures will be necessary: for example, the foreseen Large-scale demonstrator on *Demonstrating innovative nature-based solutions for climate and water resilience in cities* (2017) does not consider so far the associated hydraulic challenges. We would also like to highlight the necessity of considering:

- **Topic F:** Research infrastructure can be physical infrastructure (e.g. experimental catchments or field labs) or virtual databases / exchange platforms (to guarantee long term records)
- **Topic B:** Hydromorphology and related issues, such as sediment transport and management, are fundamental in order to meet the current targets of the WP 2016-2017 (e.g. topic on [Large-scale demonstrators on nature-based solutions for hydrometeorological risk reduction](#)).
- **Topic C:** Assessing and operationalizing the concept of insurance value of ecosystems will request a better understanding of the ecological flows and the development of new innovative Decision support systems considering the inter-linkages between the different natural resources and the appropriate scales (including up-scaling and downscaling appraisal).

3. Towards Sustainable Interactions between the EC and JPIs

It is important to note that, arising from this interaction with Horizon 2020 (and its predecessor Framework Program 7 (FP7)); the Water JPI is currently carrying out the following projects, which aim at supporting the overall Water JPI implementation:

- FP7 Coordination Support Action (CSA) **WatEUR** (2011-2016)
- Horizon 2020 ERAnet COFUND **WaterWorks2014** (2015-2019)
- *In preparation for submission by the 21/04/2015:* Horizon 2020 ERAnet COFUND **WaterWorks2015** (2016-2020)

Currently, the Water JPI is allocating important resources to prepare and submit proposals on an annual basis. The Water JPI would welcome additional information & clarification on the different instruments available for supporting the JPIs (i.e. MSCA COFUND, COST, ERAnet COFUND, CSA, EJPs and FPAs) (e.g. what does these instruments mean concretely for the Water JPI community in terms of alleviating the administrative burden of applying under an H2020 call topic on a yearly basis?). **Section 5** in this document details the common position from the JPI Water, JPI Urban Europe and JPI Climate, in relation to the proposed topic **SC5 2016 FPA** (version of 01/04/2015).

The Water JPI strongly recommends that a more sustainable approach to the EC support provided towards the JPIs Implementation is developed.



4. Topics supporting the overall Water JPI Implementation

4.1. 2016 Coordination Support Action: *Supporting international cooperation activities on water*

This topic, which relates to the proposed **Topic I** in the **Annex II** of the *Water JPI 2014 Position Paper*, is currently included in the draft Horizon 2020 WP2016/17 (version of 01/04/2015), as topic: *SC5-13-2016: Supporting international cooperation activities on water*.

The Water JPI would recommend that the scope for this Coordination Support Action (CSA) covers the following:

- **Task 1:** International Cooperation (building on the FP7 WatEUR Work Package 5 and the Horizon 2020 WaterWorks2015 proposed Work Package 6) – It is proposed to continue the discussions with the countries, which have been targeted by the Water JPI for the last five years.
- **Task 2:** Support to the implementation of the UN Millennium Sustainable Development Goal on Water (to be approved in 2015).
- **Task 3:** Alignment (building on the FP7 WatEUR Work Package 4, Horizon 2020 WaterWorks2014 Work Package 6 and the proposed Horizon 2020 WaterWorks2015 Work Package 7).
- **Task 4:** Knowledge Transfer from Water-related RDI at national, EU and International levels.

In relation to the type of funding/instrument required to achieve these objectives, we would recommend:

- **Timeframe:** 5 years (esp. relevant in the context of Task 1 above)
- **EC Requested Budget:** suggested to be > € 2 million (broader actions, number of partners to contact and invite to cooperation)

In relation to the current draft text included in the WP2016/17 (version of 01/04/2015), we would suggest making the following amendments:

SC5-13-2016: Supporting international cooperation activities on water

Specific challenge:

The outreach and opening of the Water Joint Programming Initiative (JPI) to third country partners is increasingly raising interest among the latter. Building on this momentum, the challenge is to further enhance the opening of the Water JPI to international cooperation and thus contribute to creating a coherent European Research Area in the area of water – a global R&I challenge par excellence. In addition, it is foreseen that this topic would consolidate the alignment of national, EU and International Water RDI programmes, which is one of the key objectives of Joint Programming Initiatives. The UN-Water (2014) proposed global goal for water “Securing Sustainable Water for All” builds on and extends existing commitments. A global goal for water is fundamental to all other development goals and the proposed framework applies to all countries. The UN-Water paper ([A Post-2015 Global Goal for Water: Synthesis of Key Findings and](#)

Recommendations from UN-Water⁵) demonstrates the magnitude and urgency of the task that needs to be accomplished at the global scale.

Scope:

Proposals should aim to create a framework and permanent dialogue to encourage the opening in a structured and strategic manner of the Water JPI to international cooperation with key international water research and innovation programmes and funding and investment institutions. Proposals should also investigate activities to align with and support the post-2015 sustainable development agenda, in particular the Sustainable Development Goal on water, and its impact on other Goals, such as nutrition, education, health etc. Flagship actions for possible joint funding between the members of the JPI Water, international cooperation partners and international programmes of strategic importance for the EU should be identified and prepared for.

This action should also organise and develop the knowledge-base required to address water challenges and EU policy priorities within a global perspective. This can be accomplished through access to an integrated analysis of research results and recommendations arising from national and EU funded research and innovation projects in the area of Water RDI.

The ultimate result would be a more efficient knowledge transfer, wider dissemination and take-up of research findings both in terms of policy and innovation; in addition, it would strengthen linkages, for example, with the EC DG Research, DG Environment, as well as Water supply & sanitation Technology Platform and relevant water sector.

The Commission considers that proposals requesting a contribution from the EU in the range of EUR 5 million would allow for this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected impact:

Projects are expected to:

- Increase the scale and ambition of water research and innovation activities beyond the level that would be otherwise sustainable, increasing overall the coherence and efficiency in the use of European resources and valorise European know-how on water solutions at global level in the context of the post-2015 sustainable development agenda;
- Contribute to making the Water JPI, in collaboration with the EC, a privileged and attractive partner for global cooperation in research and innovation;
- Strengthen the role of the Water JPI in underpinning knowledge and evidence for supporting the implementation of related EU policies and for fostering the EU's position in global water-related negotiations and fora.

Type of action:

Coordination and support action (duration of at least 5 years)

⁵ <http://www.unwater.org/publications/publications-detail/en/c/216087/>



4.2. 2017 ERAnet COFUND: *Closing the water cycle gap*

This topic, which relates to the proposed **Topic J** in the **Annex II** of the **Water JPI 2014 Position Paper**, was included in the draft Horizon 2020 WP2016/17 (version of 09/02/2015), as topic: *Topic 2: ERA-NET Cofund on Water (2017)**. This topic is now included in the latest draft of the WP2016/17 (version of 01/04/2015), as part of a Framework Partnership Agreement (FPA)⁶ to be established in an early phase in 2016 (Section 4 of the draft WP2016/17: *Specific Grant Agreements (SGAs) for ERA-NET Cofund actions supporting Joint Actions towards sustainable green economy in Europe and beyond – Topic e) Closing the water cycle gap*).

In relation to the current draft text included in the WP2016/17 (version of 01/04/2015), we would suggest making the following amendments (based on the **Fiche J** of **Annex II** in the **Water JPI 2014 Position Paper**):

Section 4 of the draft WP2016/17: Specific Grant Agreements (SGAs) for ERA-NET Cofund actions supporting Joint Actions towards sustainable green economy in Europe and beyond – Topic e) Closing the water cycle gap.

Specific Challenge:

Water demand, mismanagement and climate change inducing short- to long-term variations in water availability (including extreme events) have increased the stress on water bodies, associated ecosystems and existing infrastructures. Research needs to be deployed in a number of scientific fields to improve the knowledge base on water resources availability and use. Water resources observation and modelling will be required to better understand hydrological processes and to analyse and forecast the effect of management options. Research and Innovation could use GEOSS information/data in order to support improved decision-making to ensure the long-term viability of water resources and to enable the integrated management of water resources at the national, basin, and global scales.

These technological and environmental research and innovation activities must be systematically combined with a socio-economic approach investigating the questions of adaptation strategies, participation, behaviour and commitment of stakeholders. The concept of water foot-printing needs to be deepened, establishing practical methods and certifiable systems. Innovative concepts for water resources management need to be developed, with the aim of providing science-proof solutions to societal water challenges. There is a need for integrated and interdisciplinary research and innovation aimed at understanding and maintaining and safeguarding the essential functions and processes of ecosystems (i.e. “ecosystem sustainability”). Ecosystem Services approaches can be effectively applied to address the water cycle gap.

This topic is a pan-European challenge, which will require a concerted action. To be more effective and to increase the added value of related investments, the efforts and strategic research agendas of the many funding networks and organisations existing in Europe need to be integrated to establish transnational and trans-disciplinary research and innovation actions.

Scope:

Proposals should pool the necessary financial resources from the participating national (or regional) research programmes with a view to implementing a joint call for proposals resulting in

⁶ See **Section 5**.

grants to third parties with EU co-funding to support the priorities identified in the Strategic Research Agenda of the Water Joint Programming Initiative. In line with the EU's strategy for international cooperation in research and innovation, international cooperation with international partners is encouraged. The call should support research and innovation to support the implementation of EU water policy, in particular on closing the water cycle gap.

Expected Impact:

Better use of scarce human and financial resources in the area of water R&I. Reduced fragmentation of water research and innovation efforts across Europe. Improved synergy, coordination and coherence between national and EU funding in the relevant research fields through transnational collaboration. Improved implementation of research and innovation programmes in these fields through exchange of good practices. Contribution to the implementation of the JPI on Water.

Type of action:

ERAnet COFUND

4.3. Topic XX: Cross-challenge ERA-NET on applied geosciences (2016) – b) Groundwater

As indicated in the draft SC5 WP2016/17, this proposed ERAnet on applied geosciences (to appear in the SC3 Work Programme) addresses “*three specific challenges that are highly relevant to the sustainable use of the subsurface: Geo-energy, Groundwater and Raw Materials*”. The Water JPI would like to point out that groundwater considerations are very relevant to the Water JPI SRIA and would recommend that linkages between this ERAnet COFUND and the Water JPI be explicitly mentioned in the text. In addition, our understanding is that the instrument foreseen for this topic will be an “in-kind” ERAnet. Therefore, the modalities to work with will also have to be considered.



5. Common Position on the proposed SC5-31-2016 FPA from JPI Water, JPI Urban Europe and JPI Climate

SC5-31-2016: Framework Partnership Agreement, an opportunity to investigate jointly

Context

“In the area covered by Societal Challenge 5, a **Framework Partnership Agreement (FPA)** is foreseen with a view to **create research and innovation synergies** on a large scale, by organising **joint programming actions** between the entities responsible for public funding programmes at national, regional and European levels. This addresses **JPIs and ERANETs** that have a strong bearing on **environmental sustainability**.”

This proposed FPA instrument could eventually be an instrument to forge a **5-year vision between Member States (MS)** and to implement a **suite of ERANETs in a simplified manner**. However the present text is too vague in terms of the perimeter that could encompass eventually all SC5 issues related to “climate, environment and resource efficiency, except raw materials”.

Brief analysis

In practice, for 2016-2017, only 3 JPIs with their associated ERANETs are directly concerned by the SC5 FPA call: **JPI Urban Europe, JPI Water and JPI Climate**. Together, they could mobilize more than 60 different Research Funding Organisations (RFOs) and Research Performing Organisations (RPOs) in the EU, with many organisations involved in 2 or 3 JPIs at the same time. In a first phase (for a FPA in 2016), it seems unrealistic to include all existing JPIs and environment-related initiatives, such as FACCE, Oceans, HDHL, Cultural Heritage, BiodivERsA, due to the heavy load of negotiations with much more than 100 organisations.

Even, if there is on-going communication at JPI chairs' level (following the recent meeting of March 10th) or bilateral contact between several JPIs, it is **not possible** to consult all the three JPI's Governing Boards (GBs) to build a position in **so short notice** for April 14th. Thus, we suggest having a **minimal and coherent shared position of the 3 JPI Chairs at this stage**, with one common message to the EC and to MS representatives in the SC5 Program Committee stating our common interest:

Common statement of JPI Urban, JPI Water and JPI Climate Chairs

The FPA is considered by JPI Urban, JPI Water and JPI Climate Chairs as an instrument that could have a real potential to create research and innovation synergies for environmental sustainability by building up a common vision for 5 years with simplified ERANET implementation (SRA). This could be seen as a demonstration/feasibility pilot for such a tool. However, this hypothesis will **need time to be debated within the 3 respective GBs** of the 3 JPIs. At this stage, it is proposed to focus on an FPA in coherence with the 2016-2017 budget, considering the previous financial commitments. However, additional **budgets should be considered for the 2018-2020** period in order to create/ implement new synergies between JPIs. It is proposed to amend the present scope text in the draft Work Programme accordingly (see text in bold below). Finally, if negotiations within MS and JPIs fail to support an FPA for early 2016, it will be key to link the proposed Specific Grant Agreements (SGA) ERANETs back to the current ERANET call system.

PROPOSED CHANGES:

Scope:

*“The new possibilities foreseen in the H2020 Rules for Participation **target new synergies within and between Joint Programming Initiatives (JPIs) relevant for SC5 environment sustainability, by simplifying and accelerating** the implementation of **associated** ERA-NET Co-fund actions, to maximise their impact in addressing the climate, environment and resource efficiency societal challenge.*

*The purpose of this call is to create one Framework Partnership Agreement to strengthen and simplify cooperation between the European Commission, Member States' and other national/regional programme managers and owners in the fields of relevance of the Societal Challenge 5, **in particular those associated with JPI Urban Europe, JPI Water and JPI Climate. It also aims to propagate a shared vision to address long-term international partnerships with relevant countries.***

*The Framework Partnership Agreement will cover the remaining duration of Horizon 2020. Proposals submitted to this call should include a maximum number of organisations that intend to participate in future ERA-NET Co-fund actions, both in-kind and cash-based. Later changes to the legal entities participating **can** be made through amendments to the Framework Partnership Agreement, **in particular by potentially extending the FPA consortium to other relevant JPIs.**”*

*Maurice Héral
Chair JPI Water*

*Ingolf Schädler
Chair JPI Urban Europe*

*Patrick Monfray
Vice-Chair JPI Climate*