



2019 Water JPI Governing Board and Advisory Boards
Consultative Workshop on Updating the Water JPI Vision and
Strategic Research & Innovation Agenda

Berlin, Germany, 22 May 2019

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Executive Summary

The Water Joint Programming Initiative (Water JPI; www.waterjpi.eu), entitled “Water Challenges for a Changing World”, was launched following a decision of the Competitiveness Council on 6 December 2011.¹ As of June 2019, the Water JPI membership includes a total of 23 member countries and three 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 Vision document² provides **context (trends, drivers and challenges)** and outlines **the JPI objectives and research questions** in response to the issues and challenges facing the European water sector. It is an overarching forward-looking document that spans 10 years, outlining what needs to be achieved and providing the context for all other Water JPI activities.

Based on the Water JPI Vision document, the Strategic Research & Innovation Agenda (SRIA)³ 5-year roadmap was developed to guide future water-related RDI measures in Europe and beyond. This includes actions identified for the Water Implementation Plan. To this end, it sets out specific RDI priorities or areas where RDI measures are highly recommended.

Both documents are to be revised in 2019 to support the preparation of the upcoming Implementation Plans.

This report contains the proceedings of the [2019 Water JPI Governing Board and Advisory Boards Consultative Workshop on Updating the Water JPI Vision and Strategic Research & Innovation Agenda](#), which took place on 22 May 2019 in Berlin, Germany. This workshop was a key milestone in the Water JPI process for developing the new Water JPI Vision 2030 and SRIA 2025 documents.

A total of 34 people attended the workshop, including 20 members of the Governing Board (including Technical Advisers) and six members of the Water JPI Advisory Boards. In total, 19 countries were represented.

The presentation from this workshop is available at <https://epaireland.sharefile.com/d-sf23d426fbf34801a>.

¹ [Council conclusions](#) on the launching of the JPIs on “Healthy and Productive Seas and Oceans”, “Urban Europe – Global Urban Challenges, Joint European Solutions”, “Connecting Climate Knowledge for Europe”, “Water Challenges for a Changing World” and “The Microbial Challenge – An Emerging Threat to Human Health” – Adoption 17424/11 of 29 November 2011.

² <http://www.waterjpi.eu/resources/document-library/vision-document>

³ <http://www.waterjpi.eu/mapping-agenda/strategic-research-and-innovation-agenda-sria>

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List of Abbreviations

AB	Advisory Board
ANR	French National Research Agency
EC	European Commission
EPA	Environmental Protection Agency
EU	European Union
GB	Governing Board
JPI	Joint Programming Initiative
Q	Quarter
RDI	Research, development and innovation
SDG	Sustainable Development Goal
SRIA	Strategic Research & Innovation Agenda
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). The EPA wishes to acknowledge the invaluable contribution from all of the attendees and rapporteurs and the project management team at Forschungszentrum Jülich GmbH (Germany), the Water JPI Secretariat and Coordinator and the WaterWorks2014 Secretariat, as well as the European Commission funding.

Disclaimer

This publication reflects the views only of the author and the European Commission cannot be held responsible for any use that may be made of the information contained herein.

1. Introduction

Over the last few decades, several policies and research, development and innovation (RDI) activities have been put in place to protect water resources. Despite these efforts, many regions in Europe still face water scarcity and/or water quality problems. Climate change, groundwater over-abstraction and diffuse pollution are, among others, the main factors influencing water availability and quality. If no action is taken, their impact will be even greater in the years to come. Guaranteeing a sustainable supply of good-quality water should be a priority for European society. Both policy and RDI activities should therefore contribute to this aim. Water supply for the development of different activities (agriculture, energy production, public services, etc.) also needs to be ensured to further the economic prosperity of Europe.

Beyond Europe, water crises were identified in 2015 by the World Economic Forum⁴ (nearly 900 experts took part in the Global Risk Perception Survey) as one of the most important risks in terms of impacts to the economy and society in the upcoming years. Water crises, associated with the failure of climate change adaptation, are also perceived as being more likely to occur and more likely to have an impact than the average risk. Global water requirements are projected to be pushed beyond sustainable water supplies by 40% by 2030.⁵

It is in this context that the Water Joint Programming Initiative (JPI), “[Water Challenges for a Changing World](http://www.waterjpi.eu)” (www.waterjpi.eu), has defined its grand challenge as “achieving sustainable water systems for a sustainable economy in Europe and abroad”. JPIs are intergovernmental initiatives aimed at tackling societal challenges that cannot be addressed by single countries alone. To this end, JPIs foster cross-border collaboration and coordination. The Water JPI was launched following a decision of the Competitiveness Council on 6 December 2011. As of June 2019, this initiative has brought together 23 partner countries, the European Commission (EC) and three observer countries. Five other countries are also taking part in some joint activities (Brazil, Canada, Egypt, Taiwan and Tunisia).

Water JPI Vision 2030

The Water JPI Vision document is an overarching forward-looking document that outlines what the Water JPI aims to achieve by 2030. It sets out the roadmap for all Water JPI activities and provides the context for Water JPI initiatives (i.e. trends, drivers and challenges) in responding to the issues and challenges facing the European water sector. The Water JPI Vision document is revised and updated every 10 years. The current version is the 2011 Water JPI Vision 2020:⁶ “[achieving sustainable water systems for a sustainable economy in Europe and abroad](#)”.

Water JPI Strategic Research & Innovation Agenda⁷

The Water JPI Strategic Research & Innovation Agenda (SRIA) outlines the priorities for RDI needs. The purpose of the SRIA is to set out the 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, water managers) and the public. The SRIA is a 5-year roadmap for future water-related RDI actions in

⁴ <http://reports.weforum.org/global-risks-2015/part-1-global-risks-2015/introduction/>

⁵ 2030 Water Resources Group, 2009.

⁶ <http://www.waterjpi.eu/images/documents/Summary%20of%20the%20Vision%20Document.pdf>

⁷ <http://www.waterjpi.eu/images/documents/SRIA%202.0.pdf>

Europe, including, but not only limited to, the Water JPI actions. To this end, it identifies areas where RDI actions are required. The Water JPI covers the full range of RDI, including a broad range of activities from academic research to innovation. The SRIA is revised and updated every 5 years to ensure that it responds to existing and evolving water challenges and policy developments. The current version of the Water JPI SRIA is [v2.0](#), which was published in April 2016.

Towards SRIA 3.0 and Water JPI Vision 2030

The process for revising and preparing the new Water JPI Vision 2030 and SRIA (3.0) was devised in collaboration with the Water JPI Governing Board (GB) and Advisory Board (AB) members during 2018. **Figure 1** provides a summary of the agreed step-by-step process:

1. Literature/foresight review.
2. Public consultation (i.e. online survey).
3. Series of national workshops for key stakeholders, held in the first quarter (Q1) of 2019. These workshops ensured that the consultative process considered a wide range of stakeholders (and sectors) and captured national priorities. They provided a forum to collate information at a national level to assist in identifying common issues that require joint and coordinated actions at European Union (EU)/global level. A standard template was used to form the basis of the national workshop discussions.
4. Series of semi-structured interviews, which are planned for Q3 of 2019. Interviewees will include representatives from sectors and different geographical locations that were under-represented in the public consultation (online survey).
5. Consultative workshop with the Water JPI ABs and GB, which aimed to collate their feedback with regard to the next Water JPI Vision document (i.e. Vision 2030), SMART (Specific, Measurable, Achievable, Relevant, Time-bound) monitoring indicators, and new and/or amended RDI themes for the SRIA.
6. Experts stakeholders workshop planned for October 2019. This workshop will be targeted at the research community and key stakeholders. It will provide a forum to collate information and priorities regarding RDI needs under the new Vision 2030 and SRIA, and identify joint activities to achieve the Water JPI objectives, etc.

This report relates to step 5 outlined above and contains the proceedings of the consultative workshop. It was prepared based on the presentation and notes provided by the rapporteurs, as well as the feedback received from all of the workshop attendees.

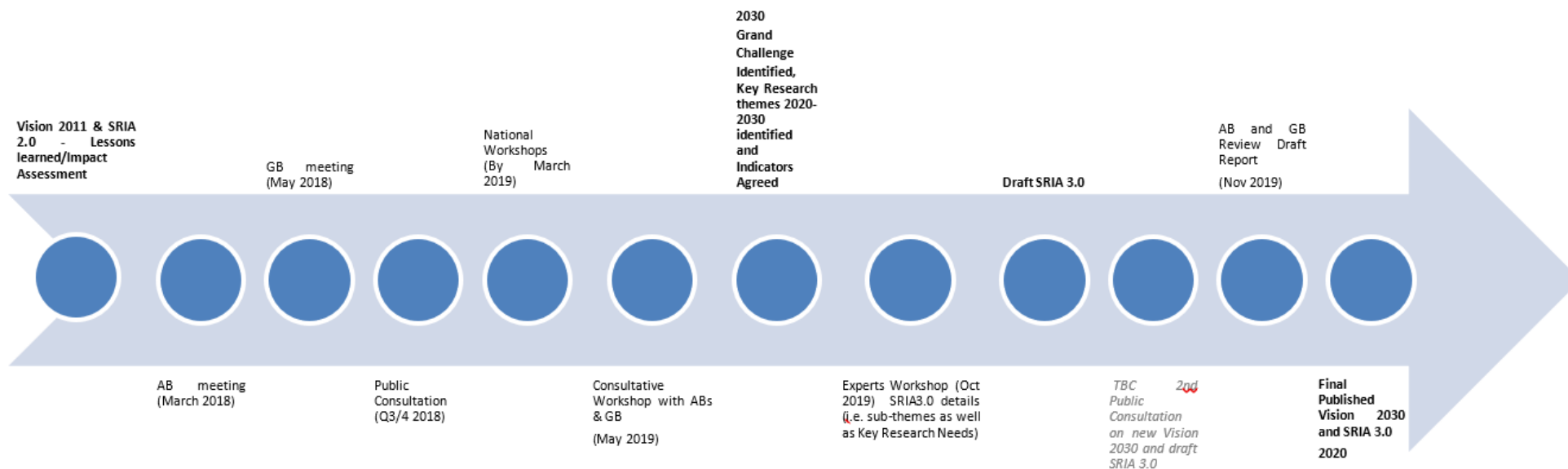


Figure 1. Summary of the agreed process and timeline.

2. Methodology

The workshop was organised by the Irish Environmental Protection Agency (EPA), with the support of the WaterWorks2014 Secretariat, the team at the Project Management Jülich GmbH (PtJ, Germany) and the Water JPI Secretariat and Coordinator, hosted by the French National Research Agency (ANR).

2.1. Workshop Aims and Objectives

This workshop was targeted at the members of the Water JPI GB and ABs [composed of the Stakeholder Advisory Group (SAG) and the Scientific Technical Board (STB)], to discuss and share their recommendations for updating the Water JPI Vision document and SRIA.

2.2. Attendance

The workshop was attended by 34 participants, including 20 members of the Water JPI GB (including Technical Advisers) and six members of the Water JPI ABs. In total, 19 countries were represented (of the 23 JPI member countries). A list of the attendees is included in [Annex 1](#).

2.3. Workshop Programme

The workshop programme is available in [Annex 2](#). The workshop included one plenary session and four breakout discussion group sessions. A final plenary session concluded the workshop, with a recap of the breakout discussion outputs, a general discussion and a presentation of the follow-up actions already planned.

The workshop was opened by [Alice Wemaere](#) (EPA). The plenary session was led by [Noreen Layden](#) (EPA), who presented a summary of the consultation completed to date (i.e. SRIA 3.0 and Vision 2030: overview of work completed to date). A copy of the presentation is available at <https://epaireland.sharefile.com/d-sf23d426fbf34801a>.

A copy of the *Introduction to the Strategic Research & Innovation Agenda 2.0*⁸ and a copy of the list of foresight documents to be considered for this revision were circulated to the attendees in advance of the workshop. The question and answer sessions were led by [Noreen Layden](#) (EPA) and supported by [Dominique Darmendrail](#) (ANR), Water JPI Coordinator.

⁸ http://www.waterjpi.eu/images/documents/Introduction%20to%20the%20WJPI_SRIA2%200.pdf

For the morning session of breakout discussion groups, the attendees were divided into three groups, with representatives from the EPA acting as group facilitators and rapporteurs. Each group was asked to discuss the following questions:

- **Question 1:** Vision 2030: What is the Grand Challenge (e.g. draft wording, identify keywords)?
- **Question 2:** Vision 2030: Devising SMART Indicators. For each indicator:
 - identify what is the target;
 - justify/clarify how the indicator will be measured; and
 - identify a timeline/potential due date.

The afternoon breakout discussion groups considered the following questions:

- **Question 3:** Vision 2030: Key Scientific Themes:
 - Review all of the themes/subthemes in the current SRIA 2.0 and discuss if they are still relevant.
 - Identify any potential changes/amendments to the themes for the new SRIA.
- **Question 4:** Recommendations for Semi-structured Interviews:
 - Identify potential candidates/organisations that were not represented or that were under-represented in the public consultation and/or national workshops.

3. Proceedings

3.1. Plenary Session

The first plenary session was led by **Noreen Layden** (EPA) and addressed the following:

- overview of the review process for updating the SRIA and Vision 2030;
- summary of GB/AB members' feedback and discussions to date;
- list of foresight documents collated (i.e. circulated prior to the meeting);
- lessons learned from SRIA 2.0 – 2016;
- summary of interim findings from the consultation process to date:
 - public consultation (i.e. online survey) – preliminary findings;
 - national workshops (i.e. feedback, key points);
 - semi-structured interviews.



3.2. General Discussion

The Q&A session was led by **Noreen Layden** (EPA) and supported by **Dominique Darmendrail** (ANR), Water JPI Coordinator.

Key points discussed during this session included:

- **Implementation Plan vs SRIA content:** Some of the recommendations/feedback collated to date, as presented during the presentation on the work carried out to date, were more relevant to the Implementation Plan, which is a 3-year work plan for the Water JPI.
- **Targeted message for different audiences:** The Water JPI should consider producing a number of related documents with the message tailored to different audiences (e.g. academics/researchers; policymakers; economic sectors).
- **Content of the SRIA:** The current themes are valid, but the subthemes should be amended. The SRIA needs to include clear objectives and a mapping of research gaps. There needs to be a clear link between the old and new themes in the SRIA.

- **Messaging:** It is important that the Water JPI clarifies its priorities in relation to water research and innovation. In the same manner, should the title be changed to SRIA 2025 instead of SRIA 3.0?
- **Policy:** The SRIA must clearly demonstrate a link to relevant thematic policies of the EU and beyond. A review of relevant current and emerging water-related EU policies needs to be included in the next SRIA. This may not be sufficiently highlighted in the preliminary findings of the consultation process to date. It was noted that the target audience for some of the national workshops varied widely, with some including more researchers and others focusing on policymakers (e.g. the Netherlands).
- **United Nations (UN) Sustainable Development Goals (SDGs):** Feedback from the UN SDGs workshop 2017 must be considered as part of the of revision process for Vision 2030 and the new SRIA. The proceedings from this workshop are included in foresight documents that are being reviewed.
- **Holistic approach:** The next revision of the SRIA needs to consider the different water systems (e.g. ecosystem services approach, biodiversity and society) and promote a more holistic approach, taking into consideration changing conditions, such as climate change and demographic evolution. In addition, a “One Health” approach, including ecosystems and human health, should be considered and there needs to be a clear link with big data/numerical modelling of systems to address the complexity of the systems. Furthermore, the SRIA should address the impact of other issues such as onshore wind and renewable energy impacts on lakes. There should be a link/connection with the Land2Sea approach (i.e. integrated modelling of the consequences of terrestrial activities and climate change for freshwater and coastal marine biodiversity and ecosystem services), including transportation of pollutants, plastics and sediments, etc.
- **Horizon Europe, the upcoming European Research Framework Programme:** The foresight review must include a discussion around the evolving Horizon Europe programme because none of the “mission areas” or intervention areas (“normal work programme”) specifically address freshwater challenges (i.e. the names of some of the missions may include “inland waters” but no specific text is included).
- **Additional documents for the foresight review:** Some additional documents should be included in the foresight review, e.g. the Common Agricultural Policy (CAP)⁹ the UN World Water Development Report *Leaving No One Behind*¹⁰; and relevant documents from the Balkan regions and the Czech Republic. In addition, the following Water JPI workshop proceedings will be considered: Improving Ecosystem Sustainability and Human Well-being¹¹ (2017); Closing the Water Cycle Gap¹² (2016); Alignment of On-going Projects on Emerging Pollutants¹³ (2016); and Common Vision and Adapting the Strategies of the Water and FACCE JPIs¹⁴ (2017).

⁹ https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en

¹⁰ <https://reliefweb.int/sites/reliefweb.int/files/resources/367306eng.pdf>

¹¹ http://www.waterjpi.eu/resources/document-library/2017_Exploratory_Workshop_Report.pdf

¹²

[http://www.waterjpi.eu/images/documents/2016/Exploratory_Workshop_14112016/Documents/Exploratory_Workshop_1_Report%20\(2\).pdf](http://www.waterjpi.eu/images/documents/2016/Exploratory_Workshop_14112016/Documents/Exploratory_Workshop_1_Report%20(2).pdf)

¹³ <http://www.waterjpi.eu/resources/networking-workshops/2016-water-jpi-workshop-for-the-alignment-of-on-going-projects-in-the-field-of-emerging-pollutants-30-11-2016-vienna>

¹⁴ <http://www.waterjpi.eu/resources/common-vision-workshops/2017-common-vision-workshop>

3.3. Breakout Sessions

This section provides a summary of the feedback from the group discussions. It is structured as follows:

- key points raised within each breakout group;
- outcomes and consensus reached by all attendees following general discussion.



Question 1: Vision 2030: What is the Grand Challenge?

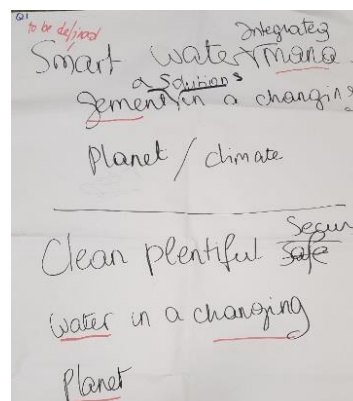
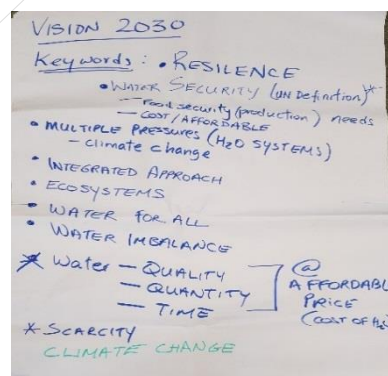
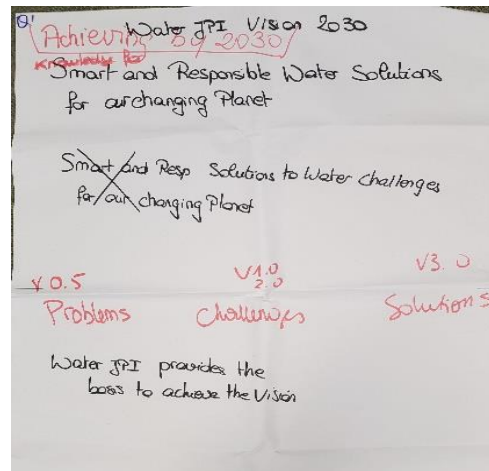
Question 1 was aimed at informing the development of the new Water JPI Vision document up to 2030 and drafting a new mission statement. Each group was asked to identify a number of **keywords** that they considered were important to be included in the vision statement. Each group then provided some suggestions for **potential new vision statements**. A summary of the feedback is provided below.

What should the Water JPI be about?

- What do we want to achieve; what is the role of the Water JPI? What is the Water JPI's unique selling point (i.e. what does the Water JPI do/contribute to)?
- Increased visibility of Water JPI is needed.
- The vision statement should focus on people; the current vision, "achieving sustainable water systems", is not a clear statement and does not explain what Water JPI does/is about?
- "Sustainable water" has different meanings and so it needs to be clarified in SRIA 3.0.
- The word "economy" should not be part of the vision; however, "Innovation" should be included in the language of the vision.
- The new vision needs to be "SMART" to allow the impact of the Water JPI to be measured.
- The vision should include:
 - A reference to the role of the Water JPI and the added value of the Water JPI.
 - It should be action focused (enabling; leading; driving).
 - Currently the contents of the 2011 Water JPI Vision document lack any reference to "we" or human involvement.
 - Considering that the context of the previous Water JPI SRIAs addressed problems, i.e. v0.5, and grand challenges, i.e. v1.0 and v2.0, should the new Water JPI SRIA 3.0 address solutions?

Keywords:

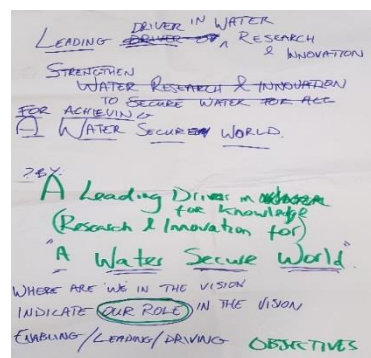
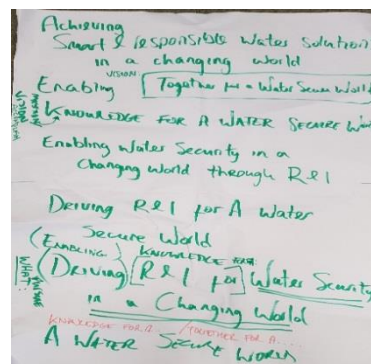
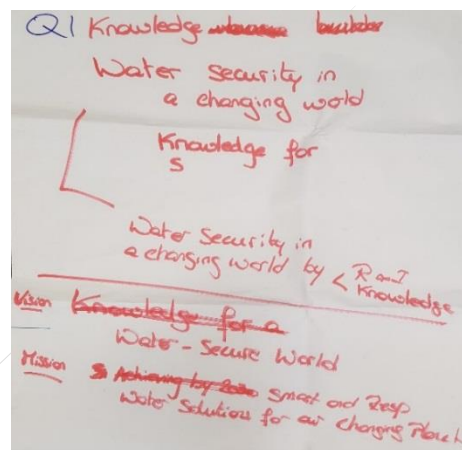
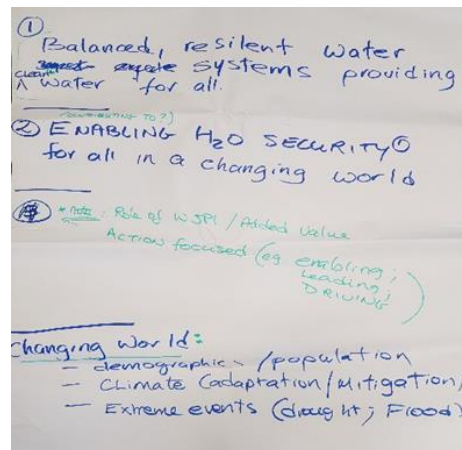
- Resilience; resilient water systems.
- Enabling/leading/driving.



- Water security (UN definition) includes food security (production) needs and cost/affordability.
- Multiple pressures on water systems (e.g. climate change).
- Integrated approach.
- Ecosystems; biodiversity.
- Water for all.
- Water imbalance: water quality/quantity/time – at an affordable price (cost of water).
- Water availability; scarcity.
- Population; behaviour change.
- Climate change.

Potential new vision statements:

- Balanced resilient water systems providing clean safe water for all.
- Enabling (contributing to) water security (UN definition) for all in a changing world.
- Changing world including (i) changing demographics/population migrations; (ii) climate (adaptation; mitigation); (iii) extreme events (drought; floods).
- Knowledge for water security in a changing world (including research and innovation).
- Water security in a changing world.
- Safe and secure water for all in Europe and beyond.
- Water JPI will be a leader/driver of water research and innovation for achieving a water-secure world.
- Achieving smart and responsible water solutions in a changing world.
- Together for a water-secure world.
- Working together for a water-secure world.
- Knowledge for a water-secure world.
- Enabling water security in a changing world through research and innovation.
- Driving research and innovation for a water-secure world.
- Enabling knowledge and research and innovation for water security in a changing world.



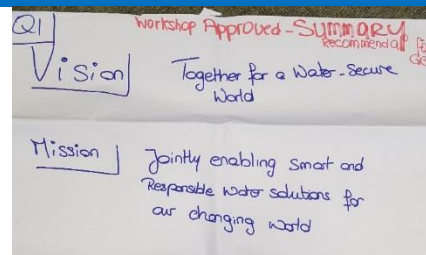
General Discussion and Consensus Recommendations

During the discussion between all attendees, it was agreed that Vision 2030 should include a reference to the UN definition of water security:¹⁵ *“The capacity of a population to safeguard sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability.”*

The proposed statements for the new Water JPI Vision 2030 and Mission were then discussed with all of the attendees and the following consensus was reached among the participants:

Vision: Together for a water-secure world.

Mission: Jointly enabling smart water solutions for a changing world.



¹⁵ <https://www.unwater.org/publications/water-security-infographic/>

Question 2: Devising SMART Indicators

Question 2 was aimed at identifying objectives and devising SMART indicators for the new Water JPI Vision 2030. For each indicator, the breakout groups:

- identified what could be the target;
- discussed how the indicator could be measured; and
- identified a timeline for achieving the objectives.

A summary of the feedback is provided below.

Objectives and indicators:

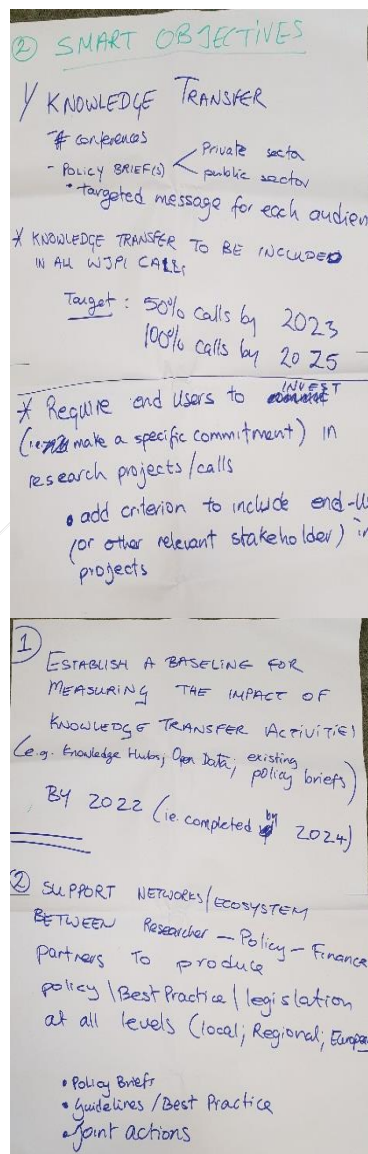
Knowledge transfer to be included in all Water JPI calls (e.g. 50% of calls by 2023; 100% of calls by 2025):

- specify type/number of conferences over the duration of the SRIA;
- specify number of policy briefs;
- produce targeted materials; public/private sectors require different, targeted messages;
- require end-users to invest (i.e. make a specific commitment) in research projects/calls.

Create a communication network to support/promote the transfer of science to policy (i.e. science-policy interface): policy briefs; collaboration between researchers and policymakers in the design of Water JPI-funded projects (recommendation for Implementation Plan and individual actions).

Align/harmonise the RDI programmes (i.e. the Water JPI SRIA should be referenced in national programmes of partner countries – recommendation for Implementation Plan and individual actions).

Strengthen innovation by promoting engagement with small and medium-sized enterprises/industry partners, water end-users, citizens non-governmental organisations.



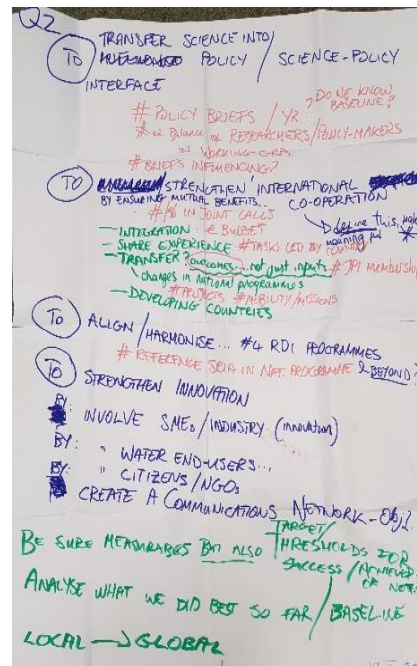
Objectives must be measurable but should also include targets and thresholds for success (i.e. achieved/not achieved). There is a need to analyse what we did best to date and to establish a baseline for measuring future success (i.e. local vs global issues/achievements).

Strengthen international cooperation by ensuring mutual benefits (i.e. international cooperation needs to be clearly defined to ensure meaningful engagement). Indicators for this objective could include measuring the number of joint calls or tasks led by each country, etc.:

- integrations/collaborations (i.e. tasks shared by each country);
- transfer from Water JPI to national programmes (number of projects; mobility/missions);
- promote further collaboration with developing countries.

Establish a baseline for measuring the impact of knowledge transfer activities (e.g. knowledge hugs; open data; existing policy briefs) by 2022 (i.e. completed by 2024).

Support networks/ecosystems between research–policy–finance partners to produce policy/best practices/legislation at all levels (e.g. local, regional, European) (recommendation for Implementation Plan and individual actions).



Specify requirements for outputs (e.g. policy briefs; Guidelines/ best practice; Joint Actions).

Use of language to ensure objectives are SMART, e.g.

- To influence policy development
- To build/lead/ drive knowledge development and innovation
- To join forces with others to build a critical mass of research and innovation
- To harmonise...

General Discussion and Consensus Recommendations

The proposed objectives and related indicators for the new Water JPI Vision 2030 were then discussed. It was agreed that, for selecting and refining the indicators, the following aspects should be considered:

1. Can we measure it?
2. Baseline for measuring.
3. Target for success.

The following consensus was reached among the participants:

Water JPI Vision 2030 objectives:

1. Involving stakeholders, including end-users, in co-designing and co-development to facilitate the effective uptake of the results of RDI
 - ✚ *Indicator:*
 - *Number/type of stakeholders involved in planning (scoping, calls, projects, joint actions)*
2. Widening the international partnership within and with relevant initiatives
 - ✚ *Indicators:*
 - *International partners (i.e. not only members)*
 - *Number of countries involved from the EU and beyond*
 - *Budget committed to joint actions*
 - *Joint publications – EU/international; mutual benefits*
3. To influence policy development/implementation in the EU and beyond
 - ✚ *Indicators:*
 - *Number of conferences, policy brief, publications*
 - *Number of guidelines, best practices*
4. To support and enhance the research and innovation community with developing research capacity, mobility actions and sharing research infrastructures
 - ✚ *Indicators:*
 - *Number of actions involving mobility/research and innovation sharing*
 - *Number of new partnerships formed in Water JPI consortia*
 - *Number of citations*
 - *Number of PhDs*
5. To stimulate innovation and valorisation
 - ✚ *Indicator:*
 - *Number of start-ups, patents, licences (from joint projects)*
6. To contribute to achieving the SDGs
 - ✚ *Indicators:*
 - *Number of projects funded addressing especially SDG 6*
 - *Number of workshops and outputs addressing SDG 6*
7. Uptake of the Water JPI vision and SRIA at national level
 - ✚ *Indicator:*
 - *Number of national research strategies aligned with the Water JPI SRIA*

Water JPI 2030 Vision Objectives + Indicators

Revisit our Key Achievs → what we do best → strive to do better

1/ Can we measure?
 2/ Baseline
 3/ TARGET for Success

- 1) Involving stakeholders including end users in co-designing and co-development to facilitate the effective uptake of the results of RDI
 - ④
 - ①_N
 - ②_N

No./Type stakeholders involved in scoping / call / projects / joint actions for all activities
 ↳ Action: Start baseline for all activities
 ↳ International
- 2) Widening the partnership within and with relevant joint publications EU/int - Mutual benefit.
 - ③

No. of countries involved from EU / ~~the~~ Countries and beyond
 Budget Committed to Joint Actions
- 3) To influence Policy development / implementation in EU and beyond
 - * ①
 - ⑤

No. of policy briefs / publications N. Guidelines
 ↳ enhance the ReI Community development by mobility actions and
 ↳ develop research capacity
- 4) To support ReI Community development by mobility actions and sharing research infrastructures
 - ③
 - ⑤

No. of Actions inv's mobility / res. infrastruct. sharing N. citations
 No. of new partnerships formed in Water JPI consortia 10 of this
- 5) To stimulate innovation and valorisation of research
 - ⑤
 - ⑤

Start ups / Patents / Licenses from joint projects
- 6) To contribute to achieving the SDGs esp SDG6
 - ⑤

No. of projects funded by JPI → addressing SDGs
 No. of waterpro
 No. of outputs
- 7) Uptake of the Water JPI Vision + SRIA at national level
 - ⑤

National Research strategies Aligned with Water JPI SRIA (N. Themes)

Question 3: Proposed Key Scientific Themes

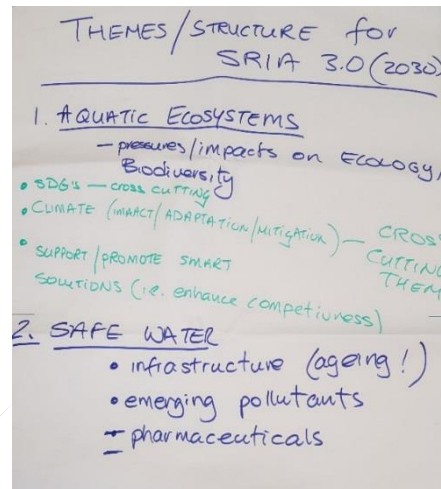
Question 3 was aimed at reviewing the themes/subthemes of the current Water JPI SRIA 2.0 and discussing their relevance in the current context. Recommendations and feedback from the previous consultation stages, including the reports from each of the national workshops (Q1, 2019), suggest that the current themes are still valid; however, the Water JPI should consider using clearer and more concise messaging.

A summary of the feedback from all of the breakout group discussions is provided below.

Proposed themes

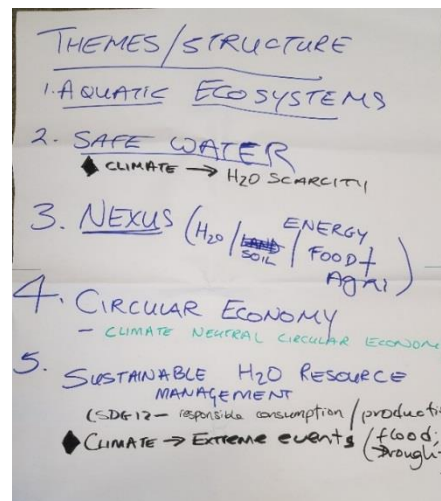
Ecosystems

- Pressures/impacts on ecology/biodiversity – aquatic ecosystems.
- Support/promote SMART solution (e.g. enhance competitiveness) and better policy implementation.
- To be presented in a more circular structure, as ecosystems are.
- Cross-cutting issues: SDGs (e.g. SDGs 14 and 15 (biodiversity/nature) and climate (impact/adaptation/mitigation (i.e. cross-cutting)).



Safe water/water safety and health (incl. extreme events, floods, climate and water scarcity)

- Infrastructure/ageing infrastructure urgently needs to be addressed across partner countries.
- Emerging pollutants; health; pharmaceuticals.



Nexus and governance

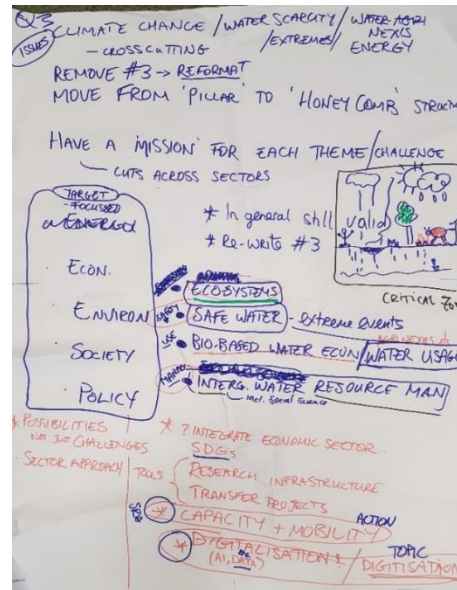
- Nexus: land–soil–food–energy–water.
- Water-based bioeconomy/bio-based water environment/water usage.
- Circular economy; urban areas; circular economy.
- Water – economic sector – big data.
- Contribution land to sea.
- Water diplomacy/water crises/water governance.
- Water behaviour changes.

Circular economy/water efficiency/SDGs (i.e. climate neutral circular economy)

- Water efficiency in economic sectors.
- Water footprinting.
- Efficiency/savings.
- Water fit for use.
- Water savings – economic users.

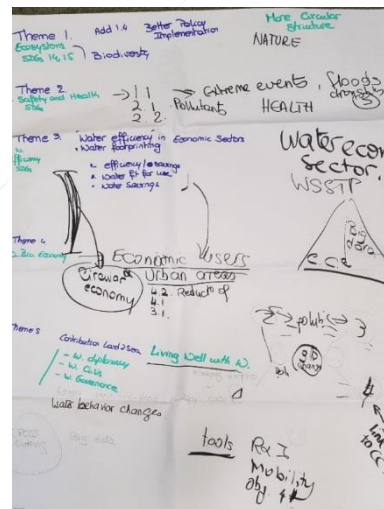
Sustainable water resource management/integrated water resource management

- Cross-cutting issues: SDG 12 – responsible consumption/production; climate – extreme events (flood/droughts); include societal/citizen science.



Cross-cutting issues/themes

- Big data.
- UN SDGs.
- Climate (action, adaptation, mitigation).
- Tools: research and innovation; mobility.



General Discussion and Consensus Recommendations

The proposed themes were discussed among all attendees. The feedback included the following key points:

- restructure the SRIA so that the pillars are more integrated (e.g. honeycomb structure);
- add/integrate cross-cutting themes (e.g. UN SDGs; climate-neutral society; nexus);
- consider adding a mission for each theme/challenge, with cross-cutting sectors/issues;
- the new labels for each theme should include keywords (e.g. climate change; water scarcity; water–agriculture–energy nexus; extreme events);
- a sectoral approach is needed;
- integrated cross-cutting themes: (i) economic sectors (water sector, economic sectors using water resources); (ii) UN SDGs; (iii) research infrastructure; (iv) transfer of knowledge; (v) capacity building and mobility; (vi) digitisation.
- The new themes should be focused/targeted on:

- the economy;
- the environment;
- society;
- policy.

A consensus was reached among the participants, as summarised below. The attendees agreed on a proposed circular structure that reflects a more integrated approach, with cross-cutting issues and drivers, resulting from the general discussion around this question during the workshop (see **Figure 2**).

Water JPI proposed new themes:

- Nature/ecosystems.
- Health and well-being.
- Sustainable water management.
- Water value and usage.

Drivers:

- Big data.
- Climate change.
- Digitisation.

Cross-cutting issues:

- SDGs.
- Climate-neutral circular economy.
- Nexus.

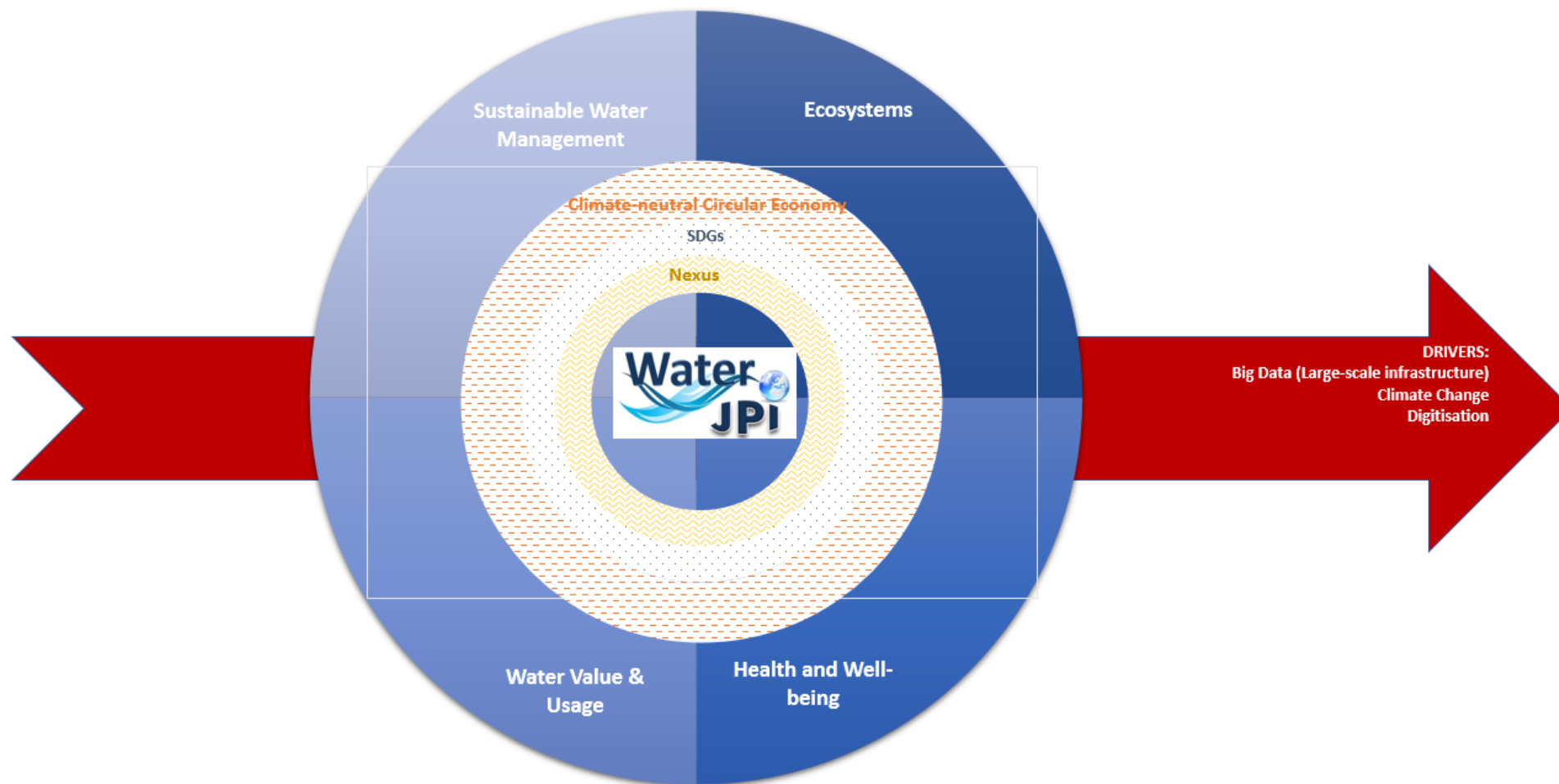


Figure 2: Proposed New Structure of the Water JPI SRIA 2025.

Question 4: Semi-structured Interviews

Question 4 was aimed at collating suggestions for possible candidates for the semi-structured interviews. **Table 1** provides a summary of potential candidates for the semi-structured interviews, as identified during the discussions in response to question 4. The EPA has collated the names and contact details for individuals, but those details are not included here to ensure compliance with the General Data Protection Regulation (GDPR), privacy policies, etc.

Table 1. Summary of potential candidates for the semi-structured interviews

Country	Potential candidate
Denmark	Public utility Department of the Environment Danish Water Forum DANVA (Danish Water and Wastewater Association)
Estonia	Water and Sanitation Enterprise Association Estonia Energy (Cooling Water)
Finland	Aalto University Ministry for Foreign Affairs Finland Environment Institute (SYKE)
France	French Ministry of Environment French Agency for Biodiversity (AFB) French Partnership for Water Head of Research Division, Suez Water Company Socio-economic – senior academic
Germany	DB Sediments GmbH
Israel	Professional body (water academic policy) National water company of Israel; head of innovation Innovation Authority of Israel
Moldova	Technical University of Moldova Ministry for Environmental Protection Institute of Chemistry of Moldova Institute of Zoology of Moldova
The Netherlands	Water Board Association Water Sanitation Association Heineken Company
South Africa	Department of Science and Technology (DST)
Spain	Aqualia River Basin Authority
Turkey	DSI – Director-General of State Hydraulics Works TEMA Foundation (dams; infrastructure) Dolsar Engineering Professional body – Chamber of Environmental Engineers Senior engineer (CENG) retired from DSI Regional environmental centre
Water Europe	EU Chemical Platform (SUSCHEM)

3.4. Conclusions

The consensus reached by all attendees during the meeting is summarised below.

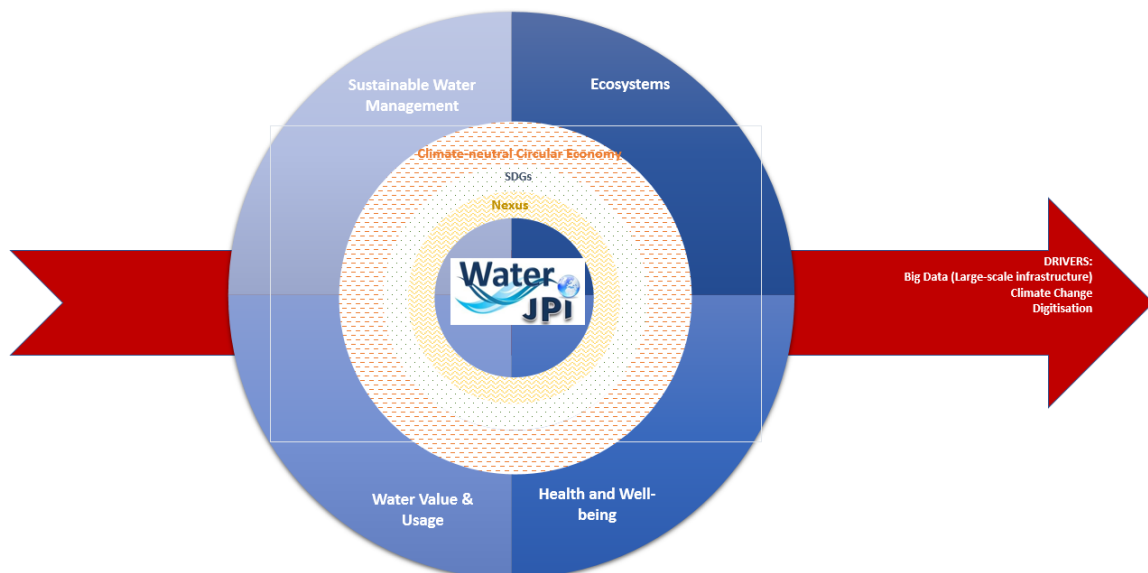
Water JPI Vision 2030: *Together for a water-secure world.*

Water JPI Mission 2030: *Jointly enabling smart water solutions for our changing world.*

Water JPI Vision 2030 Objectives

Objectives	Indicators
(1) Involving stakeholders including end-users in co-designing and co-development to facilitate the effective uptake of the results of RDI	<ul style="list-style-type: none"> Number/types of stakeholders involved in planning (scoping activities, joint transnational calls, funded projects, participation in other joint actions)
(2) Widening the international partnership within and with relevant initiatives	<ul style="list-style-type: none"> International partners (i.e. not only members) involved in JPI activities Number of countries involved from the EU and beyond Budget committed to joint actions Joint publications – EU/international – mutual benefits
(3) To influence policy development/implementation in the EU and beyond	<ul style="list-style-type: none"> Number of conferences, policy briefs, publications Number of guidelines/best practices published by projects of the Water JPI
(4) To support and enhance the research and innovation community with developing research capacity, mobility actions and sharing research infrastructures	<ul style="list-style-type: none"> Number of actions involving mobility/research and innovation sharing Number of new partnerships formed in Water JPI consortia Number of citations of publications from JPI projects Number of PhDs involved in Water JPI-funded projects
(5) To stimulate innovation and valorisation	<ul style="list-style-type: none"> Number of start-ups, patents, licences (from joint transnational projects funded by the Water JPI)
(6) To contribute to achieving the SDGs	<ul style="list-style-type: none"> Number of projects funded addressing especially SDG 6 Number of workshops and outputs addressing SDG 6
(7) Uptake of the Water JPI vision and SRIA at national level	<ul style="list-style-type: none"> Number of national research strategies and programmes aligned with the Water JPI SRIA

Water JPI SRIA 2025 Themes



4. Next Steps

The outcomes of the workshop were presented to the GB members the day after the workshop to prepare for formal approval in November 2019, after the final consultation phase.

The final consultation workshop (2019 Water JPI experts stakeholders workshop) will be targeted at members of the research community, WaterWorks2014 partners and other stakeholder, as well as the wider Water JPI community. This 2-day workshop will take place in Dublin (Ireland) on 22 and 23 October 2019. This last workshop will be used to further elaborate the contents of the new Water JPI SRIA 2025 and Vision 2030, based on the framework agreed during this workshop.

Annex 1: List of Attendees

First name	Last name	Organisation	Country
Governing Board members (incl. Technical Advisors)			
Juliette	Arabi	Water JPI Secretariat	France
Ivar	Berthling	RCN	Norway
Olga	Clevering	IenW	The Netherlands
Aldo	Covello	MIUR	Italy
Dominique	Darmendrail	Water JPI Coordinator	France
Nathalie	Dörfliger	AllEnvi (BRGM)	France
Miguel Angel	Gilarranz	Water JPI Vice-Chair	Spain
Bjørn	Jensen	IFD	Denmark
Kristina	Laurell	Formas	Sweden
Einat	Magal	MoE-IL	Israel
Rui	Munhá	FCT	Portugal
Mohamed	Naaim	AllEnvi (Irstea)	France
Stefanie	Pietsch	Jülich PtJ	Germany
Vinny	Pillay	DST	South Africa
Sabine	Sorge	Jülich PtJ	Germany
Irja	Truuma	MoE-EE	Estonia
Kata-Riina	Valosaari	AKA	Finland
Jan	Vašíček	MEYS	Czech Republic
Alice	Wemaere	EPA	Ireland
Saskia	Wohlgemuth	Jülich PtJ	Germany
Advisory Boards			
Olga	Covaliova	Institute of Chemistry	Republic of Moldova
Antonio	Lo Porto	EurAqua	Italy
Marina	Piria	EIFAAC	Croatia
Andrea	Rubini	Water Europe	Belgium
David	Schwesig	ARC	Germany
Ulku	Yetis	Middle East Technical University	Turkey
Other Water JPI representatives			
Gema	del Rio	CDTI	Spain
Anna	Di Noi	ISPRA	Italy
Prisca	Haemers	IenW	The Netherlands
Aslihan	Kerc	SUEN	Turkey
Maria Chiara	Sole	ISPRA	Italy
Osman	Tikansak	SUEN	Turkey
Workshop facilitators			
Siobhan	Egan	EPA	Ireland
Noreen	Layden	EPA	Ireland

Annex 2: Programme

Water JPI – Updating SRIA 3.0 and Vision 2030

GB and ABs Consultative Workshop

Day/date:	Wednesday 22 May 2019		
Time:	9.00am to 4.30pm (GMT +1)		
Location:	Berlin, Germany		
Venue:	217FT, Berlin City Centre	Website:	https://217ft.de/

AGENDA

Time	Item
9:00–9:20	Welcome, Tour de Table and Introduction to the Workshop
9:20–10:30	SESSION 1: SRIA 3.0 and Vision 2030: overview of work completed to date <ul style="list-style-type: none"> • Overview of the review process for SRIA 3.0 and Vision 2030 • Summary of GB/AB feedback and discussions to date • List of foresight documents collated (i.e. circulated prior to the meeting) • Lessons learned from SRIA 2.0 • Summary of interim findings from the consultation process to date: <ul style="list-style-type: none"> ✓ Public consultation (i.e. online survey) – preliminary findings ✓ National consultation workshops (i.e. feedback, key points) ✓ Semi-structured interviews
10:30–11:00	Q&A
11:00–11:15	<i>Break (tea/coffee)</i>
	SESSION 2: Breakout Discussion Groups
11:15–12:15	QUESTION 1: Vision 2030: What is the Grand Challenge (e.g. wording, keywords)?
12:15–13:00	QUESTION 2: Vision 2030: Devising SMART Indicators <ul style="list-style-type: none"> (a) Background material – six indicators included in Vision 2020 (b) For each indicator: (i) identify what is the target; (ii) justify/clarify how the indicator will be measured; (iii) due date
12:45–13:30	<i>Lunch</i>
	SESSION 2 continued: Breakout Discussion Groups
13:30–14:30	QUESTION 3: Vision 2030: Key Scientific Themes <ul style="list-style-type: none"> (a) Background material: summary slide on current SRIA structure, with five themes and 11 subthemes (b) Summary of the feedback received to date
14:30–15:15	QUESTION 4: Recommendations for Semi-structured Interviews <p>Identify potential candidates/organisations that were under-represented/not represented in the public consultation and/or national workshops</p>
15:15–15:30	<i>Break (tea/ coffee)</i>
15:15–16:30	General Discussion