



**Water Works 2015-2020 in Support of the Water JPI  
ERA-NET Cofund Action**



**H2020-WATER-3-2015: Stepping up EU research and  
innovation cooperation in the water area**

**International Cooperation - America Workshop Report**

(WVP6)

July 2017

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## List of Abbreviations

|                       |   |
|-----------------------|---|
| As:                   | Arsenic   |
| ANR:                  | Agence Nationale de la Recherche (France)   |
| BRIC:                 | Brazil, Russia, India and China   |
| CARICOM:              | Canada-CARICOM Leadership Scholarships for the Caribbean Community                        |
| CONFAP:               | National Council of State Funding Agencies (Brazil)                                       |
| CONICYT:              | Comisión Nacional de Investigación Científica y Tecnológica (Chile)                       |
| COST:                 | European Cooperation in Science and Technology  |
| CSA:                  | Coordination & Support Action   |
| Cu:                   | Copper  |
| EPA:                  | Environmental Protection Agency   |
| ELAP:                 | Emerging Leaders in the Americas Program (Canada)   |
| EU:                   | European Union  |
| FAO:                  | Food and Agriculture Organisation of the United Nations                                   |
| FP7:                  | Seventh Framework Programme   |
| GWRC:                 | Global Water Research Coalition   |
| H2020:                | Horizon 2020  |
| IDRC:                 | International Development Research Centre (Canada)  |
| IISD-ELA:<br>(Canada) | International Institute for Sustainable Development - Experimental Lakes Area<br>(Canada) |
| IPCC:                 | Intergovernmental Panel on Climate Change   |
| IPR:                  | Intellectual Property Rights  |
| JPI:                  | Joint Programming Initiative  |
| LAC:                  | Latin America and Caribbean   |
| MINCYT:               | Ministry of Science, Technology and Productive Innovation (Argentina)                     |
| MoU:                  | Memorandum of Understanding   |
| NSERC:                | Natural Sciences and Engineering Research Council (Canada)                                |
| Pb:                   | Lead  |
| RCN:                  | Research Council Norway   |
| RDI:                  | Research, Development and Innovation  |
| SFIC:                 | Strategic Forum for International Science and Technology Cooperation                      |
| SRIA:                 | Strategic Research and Innovation Agenda  |
| S&T:                  | Science and Technology  |
| SWAQ:                 | Subcommittee on Water Availability and Quality  |
| UN SDGs:              | UN Sustainable Development Goals  |
| UNESCO:               | United Nations Educational, Scientific and Cultural Organization                          |
| UNU-INWEH:            | United Nations University - Institute for Water, Environment and Health                   |
| US-DA:                | United States Department of Agriculture   |
| WP:                   | Work Package  |

## Executive Summary

The Joint Programming Initiative “Water Challenges for a Changing World”, Water JPI ([www.waterjpi.eu](http://www.waterjpi.eu)), 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 countries and 4 Observer countries, which collectively represent 88% of European public Research, Development and Innovation 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.

Since the creation of the Water JPI, alliances have been sought with RDI programmes of countries outside Europe, in close coordination with the Strategic Forum for International Science and Technology Cooperation, in particular for:

- Fostering integration into - or alignment with - the European Research Area, including through their possible association to the Water JPI activities;
- Jointly tackling global challenges through common innovative solutions;
- Developing enabling technologies by accessing new sources of knowledge;
- Developing knowledge-transfer platforms; and
- Promoting products / methodologies / protocols developed by European Research programmes.

This report contains the proceedings of the America workshop on “RDI International Cooperation development for tackling global water challenges” that took place in Montréal (Canada) on the 26<sup>th</sup> & 27<sup>th</sup> of April 2017. The workshop was organised in cooperation with the Natural Sciences and Engineering Research Council of Canada (NSERC). Twenty-four people, Water JPI Governing Board members, Water JPI partners, representatives of research funding agencies from American countries, representatives of the Canadian researcher communities and key International Institutions in the water sector participated in this workshop.

The main objectives were to identify the challenges and opportunities for international cooperation, focusing on: (i) challenges for multilateral cooperation and (ii) solutions for better cooperation for jointly tackling global challenges through common innovative solutions and new sources of knowledge.

Attendees exchanged on main challenges for collaborating with Europe, and the JPIs in particular; research gaps and prioritisation of the research needs; aligning national programmes: a major challenge; engaging with the research communities; joining forces on structural challenges; and cooperation models to be explored.

It was stressed that the Water JPI should remain open and flexible in the establishment of its priorities to allow the involvement of international partners. Activities of common interest and tools for multilateral cooperation were proposed, as a roadmap for future collaboration. To become the “privileged and attractive partner for global cooperation” in Water challenges RDI, the Water JPI will have to prepare communication materials and improve its visibility. Broadening the partnership of the JPI should also generate more impacts of its activities. Developing specific indicators measuring impacts of this international cooperation should therefore be planned.

## 1. Introduction

### 1.1. Water Joint Programming Initiative

The Joint Programming Initiative<sup>1</sup> (JPI) on “Water Challenges for a Changing World”, Water JPI<sup>2</sup>, 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 countries and 4 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 European water sector has a wide diversity of stakeholders and is highly fragmented; water resources, water supply and wastewater being often locally managed. The Water JPI provides an opportunity for broader cross-border cooperation, greater collaboration and a more unified focus on water RDI across Europe.

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

- ✓ Aligning the national RDI agendas, optimising their scope and the resulting funding efficiency; 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 co-operatively 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 aims to 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<sup>3</sup>.

### 1.2. International Cooperation within the Water JPI and WaterWorks2015

Actions on International Cooperation have been covered under the Water JPI Coordinating and Support Action (CSA) [WatEUr](#) (2011-2016) and the ERA-NET Cofund [WaterWorks2015](#) (2015-2020), and are now the core of the CSA [IC4WATER](#) launched in January 2017 dedicated to the development of international cooperation in the water area.

Two geographical workshops to develop “RDI International Cooperation for tackling global water challenges” were organised as part of the activities to be conducted within the Work Package (WP) 6 of the ERA-NET Cofund WaterWorks2015, and the related Task 6.2 on International Cooperation (see Table 1).

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<sup>1</sup> Joint Programming Initiatives, brochure 2016  
[http://www.waterjpi.eu/images/documents/2016/JPIs\\_brochure.pdf](http://www.waterjpi.eu/images/documents/2016/JPIs_brochure.pdf)

<sup>2</sup> Water Joint Programming Initiative website available at [www.waterjpi.eu](http://www.waterjpi.eu)

<sup>3</sup> [http://www.waterjpi.eu/images/welcome/WATER\\_JPI\\_Key\\_Achievements%202011-2016.pdf](http://www.waterjpi.eu/images/welcome/WATER_JPI_Key_Achievements%202011-2016.pdf)

**Table 1 – Description of work in the CSA WatEur and ERA-NET Cofund WaterWorks2015 proposals**

| Description of Work     |   |
|-------------------------|---|
| <b>WatEur - FP7 CSA</b> | <p><b>Task 5.1. Mapping water RDI initiatives run by JPI partners outside Europe.</b></p> <p>European countries and the European Commission have a longstanding tradition in water RDI cooperation with countries outside Europe. In a first step, WP5 will identify the most relevant Water JPI players outside Europe, gathering information about their RDI programmes, agendas, activities, instruments, investments, target countries and the impact of such activities. In a second step, relevant RDI programmes of selected non-European countries will be mapped following the same criteria. This mapping exercise will use a similar framework as the mapping produced in WP2, although its intensity will be lower. Analysis of the gathered information will permit determination of gaps and overlaps highlighting missed opportunities. Analysis will also lead to the identification of a list of potential countries for interaction with the Water JPI.</p> <p>For more information, see the Mapping<sup>4</sup> of water RDI activities run by partners outside Europe done on seven targeted countries and published in 2014.</p>   |
| <b>WatEur - FP7 CSA</b> | <p><b>Task 5.2. Develop and sustain strategic alliances outside Europe</b></p> <p>Alliances will be sought with RDI programmes of countries outside Europe, in close coordination with the Strategic Forum for International Science and Technology Cooperation (SFIC).</p> <p>Alliances will progress towards the signature of specific Memoranda of Understanding (MoU) oriented towards the participation of third Countries in specific Water JPI activities. Therefore, the process of Joint Programming will be expanded to selected countries and for specific activities.</p> <p>Target countries for the Task 5.2 will be selected following a number of criteria, based on mutual interest and mutual benefit:</p> <ul style="list-style-type: none"> <li>• Synergies in the production of scientific and technological breakthroughs;</li> <li>• Information exchanges on specific research and development needs;</li> <li>• Technology adaptation to local conditions;</li> <li>• Pilot testing European technology; and</li> <li>• Internationalization of policy developments in water management.</li> </ul> <p>Following these criteria, target countries may include developed countries (e.g. USA and Japan), emerging countries (such as the BRIC countries), neighbourhood countries or developing countries. The international dimension of the Water JPI started with SFIC in India. The Europe-India link is expected to lead developments in this WP. In addition to India, three additional target countries will be explored, based on the mapping performed in the Task 5.1. The Water JPI Governing Board will decide the final list of countries. At least one country outside Europe will take part in the Joint Activities under the Task 4.4. In order to facilitate fruitful development of RDI cooperation, specific framework conditions will also have to be addressed in this WP. In particular, funding arrangements and Intellectual Property Rights (IPR) agreements will be adapted to satisfy both European and non-European partners.</p> |

<sup>4</sup> Mapping water RDI activities run by partners outside Europe, 2014  
<http://www.waterjpi.eu/images/documents/2016/WVP%205%201%20Final%20Report%20-%2030-04-2014%20without%20SWOT.pdf>

## Description of Work

### WaterWorks2015 - H2020 ERA-NET Cofund

#### **Task 6.2. Developing the International cooperation on Water challenges beyond Europe (EU)**

**Task start date:** M1 (January 2016); **Task End date:** M24 (December 2018)

Since the launch of WatEur, alliances have been sought with RDI programmes of countries outside Europe, in close coordination with the Strategic Forum for International Science and Technology Cooperation (SFIC), in particular for:

- Fostering integration into – or alignment with – the European Research Area, including through their possible association;
- Jointly tackling global challenges through common innovative solutions;
- Developing enabling technologies by accessing new sources of knowledge;
- Developing Knowledge-transfer platforms; and
- Promoting Products / Methodologies / protocols developed by European Research programmes.

At this stage, the target countries include developed countries (the USA and Canada), emerging countries (such as the BRIC countries), neighbouring or third developing countries (Vietnam). The Water JPI has launched a special Task Force in March 2015 for identifying priorities and models of cooperation with the different classes of third countries (Industrialised countries, emerging economies and developing countries). The Task 6.2 will build on the results of the Task Force discussions, with the objectives of:

- Continuing the discussions with the countries already contacted under WatEur in order to develop long term partnerships
- Developing cooperation with existing international initiatives (e.g. geographical ERA-NETs);
- Identifying possible cooperation models with funding agencies / programme owners.

This task will focus its activities on the so called “geographical ERA-NETs”, such as:

- Around the Mediterranean Sea, the ERA-NET Med, ARIMNET and the newly approved Article 185 PRIMA (Partnership for Research and Innovation in the Mediterranean Area);
- In the High Level Policy Dialogue EU-Africa, water scarcity and quality, food security and agriculture are named as specific challenges; and
- In Asia, the FP7 EU-India ERA-NET (Inno Indigo) which has launched a call on water-related research, or the ERA-NET with South-East Asia, SEA-EU NET which has identified water research as a priority.

An assessment of the above-mentioned initiatives will be used to consider the possible integration of new prospective international partners in the Water JPI. Workshops with the geographical groups will be organised to develop discussions (one per area, three areas foreseen – Mediterranean sea, Asia, America). The alliances built through these different contacts will progress towards the signature of specific MoU oriented towards the participation of third Countries in specific JPI activities. A report will present the status of the discussion with the different countries and of the MoUs (signed/under progress). For these purposes, the following criteria, based on mutual interest and mutual benefit, will be used: Synergies in the production of scientific and technological breakthroughs; Information exchanges on specific research and development needs; Technology adaptation to local conditions; Pilot testing European and other technologies; and Internationalisation of policy developments in water management.

In addition to the mapping, an Introduction to [Water JPI International Cooperation](#) was produced for launching contacts with international partners.

### 1.3. Aims of this Report

This document contains the Proceedings of the International Cooperation - America Workshop, which took place in Montréal (Canada) on the 26 and 27<sup>th</sup> April 2017. All presentations, as well as the workshop documentation, are available from the Water JPI [website](#).

This report is organised as follows:

- **Section 2** provides the workshop methodology;
- **Section 3** provides the proceedings of the workshop; and
- **Section 4** provides the key conclusions arising from the workshop and key lessons learnt.

The report was prepared based on the presentations of all speakers and notes provided by the round table Chairs and Rapporteurs, as well as the feedback received from the attendees on the draft version of the document.

## 2. Methodology

Since the creation of the Water JPI, alliances have been sought with RDI programmes of countries outside Europe, in close coordination with the Strategic Forum for International Science and Technology Cooperation (SFIC), in particular for:

- Fostering integration into – or alignment with – the European Research Area, including through their possible association to the Water JPI activities;
- Jointly tackling global challenges through common innovative solutions;
- Developing enabling technologies by accessing new sources of knowledge;
- Developing Knowledge-transfer platforms<sup>5</sup>; and
- Promoting Products / Methodologies / protocols developed by European Research programmes.

Following the mapping in seven targeted countries and initial contacts, and before the launch of the CSA dedicated to International Cooperation, it was proposed to:

- ⇒ Continue contacts with agencies engaged in a great variety of multi- and bilateral cooperation across the EU and beyond European countries;
- ⇒ Have a regional approach to benefit from existing regional cooperation; and
- ⇒ Engage discussions with the international RDI organisations (such as the Belmont Forum or the Bill and Melinda Gates foundation) to define priorities and implementation actions (joint or complementary).

### 2.1. Workshop Aims

The geographical workshops on “RDI International Cooperation development for tackling global water challenges” organised in the framework of the WaterWorks2015 Task 6.1 provided the occasion for participants to:

- Continue the discussions with the countries already contacted under previous activities since the Water JPI was established in order to develop long term partnerships;
- Develop cooperation with existing international initiatives (e.g. geographical ERA-NETs);
- Identify possible cooperation models with funding agencies / programme owners.

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<sup>5</sup> A Knowledge Hub is a network consisting of selected research groups within a defined area of research. The added value of the Water JPI Knowledge Hub instrument include establishing a critical mass of research and technological excellence, integration and sharing of knowledge, infrastructures, data and modelling tools, training and capacity building, in addition to improved communication and networking with stakeholders and the scientific community.

The main objectives of the America workshop were to identify the challenges for cooperation and opportunities for international cooperation, focusing on: (i) challenges for multilateral cooperation and (ii) solutions for better cooperation for jointly tackling global challenges through common innovative solutions and new sources of knowledge.

## 2.2. Workshop Attendees

This America Workshop was open to all Water JPI members, as well as to the WaterWorks2015 partners. The **Annex 1** provides the list of all attendees and their affiliations.

The America workshop gathered four types of attendees from eight countries:

- Water JPI members: the Water JPI Coordination team from France, and Water JPI Governing Board members from Norway and Spain, who are all partners of the ERA-NET Cofund WaterWorks2015;
- International partners already associated to Water JPI activities: Canada – NSERC (involved in WaterWorks2015), and Brazil – CONFAP (involved in the [Water JPI 2017 Joint Call](#) and in the future ERA-NET Cofund WaterWorks2017)
- Other American funding agencies: Argentina – MINCYT, Chile – CONICYT, USA – US-DA and US-EPA and representatives of the Canadian researcher communities;
- International initiatives with possible synergic activities on water challenges: Belmont Forum, Bill and Melinda Gates foundation, Convention on Biological Diversity, Future Earth, International Development Research Centre (IDRC), and United Nations University - Institute for Water, Environment and Health (UNU-INWEH).

## 2.3. Workshop Programme

The programme of the workshop is presented in **Annex 2**. During the morning plenary session, the different funding agencies from American countries (Argentina, Brazil, Canada, Chile, and USA) gave a brief presentation on the RDI landscape in their country and interests in multi-lateral cooperation, focusing on: (i) Water Priorities / Challenges in their RDI programme; (ii) Funding programme model and existing International cooperation agreements; and (iii) Barriers for international cooperation.

All representatives of international initiatives presented their priorities for actions in the water domain and gave an overview of the existing RDI cooperation agreements to illustrate specific challenges / opportunities of cooperation with Europe, developing countries and/or other international initiatives.

Two breakout sessions were then organised for discussing (i) challenges for multilateral cooperation and (ii) solutions for better cooperation for jointly tackling global challenges through common innovative solutions and new sources of knowledge.

## 2.4. Workshop Materials

A document compiling the Water JPI documents related to International Cooperation, as well as links to the Water JPI SRIA and the 2016 Introduction to the Water JPI SRIA 2.0 were circulated to all attendees in advance of the workshop. Speakers were provided with template slides to be used to prepare their presentations, while all attendees received the list of questions to be explored during the breakout sessions.

The [master presentation](#) of the America workshop is made available on the Water JPI website via a dedicated webpage.

### 3. Workshop Proceedings

#### 3.1. Plenary Session

**Dominique Darmendrail**, Water JPI coordinator and ANR representative, explained:

- The aims and objectives of the International Cooperation - America Workshop;
- Its connection to the Water JPI activities and global objectives to address the ambitious economy, technical and societal water issues;
- The breakout sessions, which were tasked with identifying international cooperation challenges between RDI programme owners and managers and elaborating solutions for improving this cooperation.

Each national programme owner, international initiative or research institution was asked to develop: (i) Water Priorities / Challenges in their RDI programme; (ii) Funding programme model and existing International cooperation agreements; and (iii) Barriers for international cooperation. See Master presentation for further details.

#### Summaries of each presentation

##### COUNTRIES

##### Canada

**Anne-Marie Thompson** welcomed the participants on behalf of the **Natural Sciences, Engineering Research Council (NSERC)** and introduced the RDI landscape in the field of water in Canada. NSERC, one of the federal research funding organisations, has a budget of about CAN \$ 1.1 Billion distributed between discovery (69% of the budget) and Innovation (31%). NSERC has bilateral strategic cooperation including with the EU (H2020) and European Member State agencies (France, Germany or United Kingdom).

After a short introduction about some key research projects, infrastructures and networks, Anne-Marie developed the international dimension of the NSERC programme "Go Global" and her feedbacks on the NSERC participation in the WaterWorks2015 ERA-NET Cofund of the Water JPI. With six funded projects (of which three coordinated by Canadian researchers), NSERC achieved most of its initial objectives (creating opportunities for Canadian researchers, leveraging investments and expertise in areas of international importance, enhancing national collaboration, etc.). As NSERC had limited experience in participating in ERA-NETs Cofund, there were significant efforts required internally to understand and navigate the ERA-NET Cofund governance structure and its specific language, to provide guidance to Canadian applicants and in identifying and balancing the financial commitment with the strength of national research community.

**Jacqueline Jorge**, from the Science, Technology and Innovation Division of **Global Affairs Canada**, is in charge of the implementation of the Canada-EU Science & Technology Agreement. This treaty, renewed in 1996, covers the high level dialogue which determines priorities of focus for bilateral ST&I cooperation. The Canada-EU Joint Science and Technology Cooperation Committee which oversees the ST&I cooperation meets regularly and provides a dynamic forum to discuss ST&I activities, review results and explore potential new areas for collaboration. To date, nine priority areas have been identified between Canada and EU, including health, agriculture and agri-food, research infrastructure and, more recently, security research.

The Canada-EU Administrative Arrangement signed in June 2016 seeks to encourage International Cooperation under the European Framework Programme, Horizon 2020, as well as to streamline the framework conditions for Canada's federal engagement. Moreover, new simplification measures announced by the European Commission (e.g. a focus on performance and scientific-technical content of the projects, co-funding mechanisms, a new form of involvement with the "International Partner"

status) combined with a multi-years planning and further discussion on some key issues (i.e. IPR) will enable a greater participation of Third Countries, like Canada, in EU-led research projects.

**Nicole Genereux** introduced the **International Development Research Centre (IDRC)** and gave an overview of regional programmes in climate change research, and related portfolio of 83 projects. With a total investment of more than 108 M\$, most of the funding is going to research projects, helping researchers to develop projects on UN Sustainable Development Goals (UN SDGs). She presented the programme investments by themes. With around 30% of funding, “Adaptation” is the main theme on climate change, “Water Management” representing nearly 7% of the funding. From a thematic perspective, in Latin America and Caribbean (LAC), the “Water Management” programme represents 12% of investments.

The IDRC collaborated with the Water JPI by funding Agricultural Innovations in the tropics and allocating grants to Brazil and Costa Rica. This involvement of the IDRC in the Water JPI 2016 Joint Call was done by cofounding with the NSERC to (i) avoid duplication of work efforts and administrative burden, and (ii) foster equity among research team.

### Argentina

**Lucas Luchilo**, representing the **Ministry of Science, Technology and Productive Innovation (MINCYT)**, presented their main water related challenges (Table 2) and their involvement in international cooperation, and in particular their collaboration with the European Union (ERA-NETs, CSA, Joint calls with the Belmont, EU projects and bilateral cooperation funded projects). Considering this experience, the main remaining challenges are related to the integration of the international dimension in the national research agendas and the national research priorities in the international cooperation strategy.

### Brazil

The **CONFAP**, a non-profit organisation represents all Brazilian State Funding Agencies, was introduced by **Maria Zaira Turchi**, chair of the confederation. To strengthen the cooperation with the EU, CONFAP recently published guidelines for the preparation of research proposals in collaboration with proposals submitted to EU Horizon 2020, signed an MoU with the European Research Council and agreements with several European Countries (United Kingdom, France, Ireland, Switzerland, Italy) or at the international level (USA, BRICS). With numerous water related challenges (Table 2), Brazilian funding agencies are also facing barriers to international cooperation, the major being: increasing its financial contribution in a co-funding mechanism and therefore opportunities of cooperation while targeting calls for a more focussed involvement and developing networking and capacity building of RDI programme managers and researcher communities.

### Chile

**Khaled Awad**, **Comisión Nacional de Investigación Científica y Tecnológica (CONICYT)**, introduced the national RDI priority in the water domain (Table 2), their requirement for cooperating at the international level (via a simple letter of commitment) and their participation in previous collaboration with the EU (Chile is part of the ERANET-LAC, EU-LAC Health and ERAMIN2). The match-making between the international call timeline, and the fiscal and academic years in Chile is the main obstacle for this international cooperation.

### USA

**Luis Tupas**, from the **US Department of Agriculture (US-DA)**, introduced:

- The Water challenges in the agriculture sector in USA (balancing irrigation demand vs. weather forecasting, genetically modified organisms in livestock for less water consumption, fertilisers control, water reuse, plastics degradation);

- The Subcommittee on Water Availability and Quality (SWAQ) has identified two main priority RDI areas: water challenges in relation with climate change, the water – food – energy nexus.
- The main science challenges in this area which are related to the alignment of JPI activities with the fiscal time line in USA (budget set in October with low flexibility) and to the needs to put science into practice at country level.

From the Environment Protection side, **Sally C. Gutierrez** highlighted her vision of:

- The global water challenges (such as Lead and copper control in drinking water distribution systems and its modeling, new concepts for small communities drinking water systems or the management of combined sewer overflows/green infrastructure/water reuse); and
- Some additional barriers for international cooperation (differences in alignment of research priorities and goals between USA and Europe, but also in alignment of timelines).

The US-EU Science and Technology Agreement could provide the legal framework for future cooperation, if the implementation plan could cover the water priorities, which is not the case so far.

### RESEARCHER COMMUNITIES REPRESENTATIVES

#### **International Institute for Sustainable Development - Experimental Lakes Area**

**Matthew McCandless** presented the **International Institute for Sustainable Development - Experimental Lakes Area (IISD-ELA)**. Founded in 1968, this natural laboratory comprises 58 small lakes and their watersheds. It conducts ecosystem-based research that improves our understanding of human impacts on the environment and provides science-based solutions for clean water and healthy ecosystems and therefore an evidence-based approach to the development of policy recommendations and tools. Funded through NSERC, other government research funds, private funding, philanthropy, mainly from Canada (98% of the current funding), it has research agreements with international institutions, in particular in Norway, Switzerland and Chad.

For such research infrastructure, the main challenges and barriers are related to long-term funding (across borders, or through new opportunities through networking with European infrastructures or European researcher communities) and to connections development (marketing and Effort required in developing projects).

#### **Ryerson University**

**Nicholas Reid**, representing the **Ryerson Urban Water (RUW)** from Ryerson University, introduced:

- The main Water-related priorities and challenges in RDI programme at RUW include: water policy and ethics, society and communications; watersheds, water quality and data analysis; green infrastructure and resilient cities; and public health and contaminants;
- Existing international cooperation on water related challenges relates mostly to student exchange with academic institutions and some researchers working internationally.
- The main challenge for international RDI cooperation has been limited federal support. The current federal government has indicated efforts to improve the outlook for international cooperation and lack of national vision for water. Moreover, because of its vast size, Canada has many regionalized water issues that relate to water sources (marine, glacial, groundwater, freshwater) with problems ranging from overabundance to scarcity.

#### **Global Institute for Water Security**

From the University of Saskatchewan, representing the **Global Institute for Water Security**, **Howard Wheeler** introduced:

- The main Water – Climate Change related RDI priorities and challenges of Global Institute for Water Security at both country and global levels to best prepare for and manage water futures in the face of dramatically increasing risk (new transdisciplinary science, new modelling and monitoring systems, more effective translation of scientific knowledge into societal action);

- Important water-related supporting funding model and international cooperation (significant resources to water related RDI programmes from Federal Government at regional and national level, as well as at international level with active cooperation with three key global partners: UNESCO, World Climate Research Programme and Future Earth), as well as aiming to consider other international funding opportunities;
- The main challenges for international RDI cooperation (theme-based joint funding programmes for RDI; joint funding for short-term exchange programmes; NSERC scholarship/fellowships for international scholars; joint theme-based workshops; knowledge Hub; and visa and immigration constraints).

## INTERNATIONAL INSTITUTIONS / NETWORKS REPRESENTATIVES

### **Belmont Forum**

Established in 2009, the **Belmont Forum** is a partnership of funding organizations, international science councils, and regional consortia committed to the advancement of interdisciplinary and transdisciplinary science. **Mao Takeuchi** illustrated its internal procedures and in particular the Collaborative Research Actions (CRAs), of which the 2012 one is dedicated to Freshwater Security and Coastal Vulnerability. Thirteen projects were funded for a global budget of 20 M€. The most important challenges faced by the Belmont Forum are: i) the necessity to keep a shared vision during the entire process, ii) the coordination of such joint actions with different national procedures, and iii) the distribution of tasks within the Members for balancing the work load.

### **Bill and Melinda Gates foundation**

The **Bill & Melinda Gates foundation** has a specific strategic programme on water, sanitation and hygiene (one of the 28 strategic programmes with an annual budget of around 100 M\$). **Carl E. Hensman** introduced the reasons of this focus (the scale of the problem, the health and economic impacts and its relevance for population dignity). The key objectives are: i) projects with an exit strategy and possibilities to be self-sustainable when the grant ends; ii) partnerships with the relevant public and private stakeholders along the RDI value chain; iii) expansion of the industrial sector to productise and bring technologies to the market; and iv) some duplication activities in USA for fulfilling foundation's obligations.

### **Convention on Biological Diversity**

**David Coates**, from the Secretariat of the **Convention on Biological Diversity**, reported on water challenges within the Convention on Biological Diversity activities that are mainly dedicated to Science – Policy interface in order to support the implementation of this international convention. Recently the approaches to biodiversity/ecosystems and water in policy forums changed to water resources management goals based on sustained ecosystems benefits. This switch is accompanied by an important increase in scientific publications in this field. The future work, in an international cooperation context, will focus on creating the right enabling environment for uptake of ecosystem based approaches for water resources management.

### **Future Earth**

**Anne-Hélène Prieur-Richard** presented **Future Earth**, an international research platform providing the knowledge and support to accelerate transformations to a sustainable world through Knowledge Action networks (i.e. natural assets, water – food – energy nexus, emerging risks and disasters, etc.) and capacity building in this rapidly expanding area of research. By providing synthesis work and cases studies, knowledge and tools gaps are identified and solutions proposed for further implementation. Future Earth identified some remaining challenges around means for facilitating joint programmes and fundraising.

### United Nations University - Institute for Water, Environment and Health

Established in 1996 the **United Nations University - Institute for Water, Environment and Health (UNU-INWEH)** is part of the UNU (an academic arm of UN) and a member of UN-Water. The UNU-INWEH priority themes include information and policy support of UN SDGs process and other global agreements related to water; unconventional water sources; water security of countries and “water and security” links; water-related health risks; and water-related disaster management through ecosystem-based solutions at global and developing countries levels. The UNU-INWEH activities are particularly focused on achieving UN-SDG 6 “Clean water and sanitation” and on policy. In this sense, it is currently involved in several emerging international water initiatives, including the Alleviating Water Scarcity in Agriculture (coordinated by the FAO), the Groundwater Solutions Initiative for Policy and Practice (with the International Water Management Institute), the *Panta Rei* – “everything flows” (by the International Association of Hydrological Sciences) or the Water Decade 2018-2028 (UN).

**Vladimir Smakhtin**, representing the UNU-INWEH, nevertheless highlighted some challenges for cooperation in water that are equally relevant to North and South, and therefore an opportunity for collaboration. Namely, the lack of common goals; continuing lack of data on a range of water-related issues and processes; old water-related problems have never been resolved; supply-driven vs demand driven research; complexity of rules of engagement; and continuing disconnect between research and policy.

### Synthesis of feedbacks received by all attendees

Tables 2 and 3 present the main water-related scientific challenges and the most important barriers to international cooperation between RDI funders within the context of Joint Programming.

*Table 2 – Compilation of Water challenges – Research needs as expressed by America Workshop funding agencies participants (National programmes)*

|   | Argentina | Brazil | Canada            | Chile | USA  |
|---|-----------|--------|-------------------|-------|--|
| <b>Hydrogeology</b>                               | X         |        |                   |       |  |
| <b>Safe water supply / Desalinisation</b>         | X         | X      | Small communities | X     | Small Communities                              |
| <b>Water and Agriculture, Forests</b>             | X         | X      |                   |       | X  |
| <b>Natural Hazards: Floods</b>                    | X         | X      |                   |       |  |
| <b>Droughts and water shortages</b>               | X         |        |                   |       |  |
| <b>Pollutants in Water</b>                        | As        |        | X                 |       | Pb & Cu in drinking water distribution systems |
| <b>Water resource management / governance</b>     | X         | X      | X                 |       |  |
| <b>Early Warning Systems</b>                      |           |        | X                 | X     |  |
| <b>Urban Centres (sanitation and water reuse)</b> |           | X      |                   |       |  |
| <b>Resilient cities and green infrastructures</b> |           |        | X                 |       |  |
| <b>Water and Climate Change</b>                   |           | X      | X                 |       |  |
| <b>Water policy and Ethics</b>                    |           |        | X                 |       |  |

*Table 3 – Most important barriers for cooperation with partners beyond Europe*

| Cooperation with partners beyond Europe | Benefits  | Identified barriers   |
|---|---|---|
| <b>Industrialised countries</b>         | <ul style="list-style-type: none"> <li>* Leverage research funding and trigger greater cost-efficiency</li> <li>* Creation of opportunities for national researchers to partner on a global scale</li> <li>* Enhance strategic positions of the involved partners</li> <li>* Co-design and co-production of inter- and trans- disciplinary RDI</li> <li>* Maximise research excellence on a global scale through peer review process</li> <li>* Exchange on research methodologies and funding for possible harmonisation of protocols</li> </ul> | <ul style="list-style-type: none"> <li>* Different mechanisms of funding research and innovation</li> <li>* Existing protocols of contracting and evaluation of research projects</li> <li>* Disparities in time scales for making cases through to funding</li> <li>* Variety of interest groups and agendas</li> </ul>  |
| <b>Emerging economies</b>               | <ul style="list-style-type: none"> <li>* Increasing possibilities of mutual priority setting strengthening commitment and cooperation</li> <li>* Networking, match-making and capacity building activities</li> <li>* Extension of markets for developed innovation in a shorter time line</li> <li>* Access to existing knowledge, expertise and additional research infrastructure</li> </ul>   | <ul style="list-style-type: none"> <li>* Complexity of cooperation (different existing funding models, different evaluation criteria, different funding rates, different Science and Technology (S&amp;T) competences, ...)</li> <li>* Possible lack of mechanisms of funding joint research actions in a “Cofund” mode promoted by JPIs</li> <li>* Intellectual property rights, to be addressed and implemented</li> </ul>  |
| <b>Developing countries</b>             | <ul style="list-style-type: none"> <li>* Alliances with centres of excellence</li> <li>* Development of competences on specific challenges and on established international standards</li> <li>* Market opportunities for innovative technologies and methodologies</li> <li>* Contribution to local development</li> </ul>   | <ul style="list-style-type: none"> <li>* Complexity of cooperation (different existing funding models, different evaluation criteria, different funding rates, different S&amp;T competences...)</li> <li>* Lack of mechanisms of funding joint research actions in a “Cofund” model even if supported by the European Commission</li> <li>* Lack of inclusiveness</li> </ul>   |
| <b>All countries</b>                    | <ul style="list-style-type: none"> <li>* Finding new opportunities of collaboration</li> <li>* Better structuring of the existing research at the international level</li> <li>* Reaching critical mass</li> <li>* Increased dissemination of national RDI outputs</li> </ul>   | <ul style="list-style-type: none"> <li>* Managing IC activities vs. national programmes activities</li> <li>* Lack of flexibility of current instruments</li> <li>* No Intellectual Property protection</li> <li>* Time consuming (decreasing with the level of development of RDI programme funding)</li> <li>* Cultural barriers to cooperation</li> <li>* Different expectations between the European teams and these countries</li> <li>* Expenses (travel and accommodation) for following all activities of interest</li> </ul> |

These preliminary presentations gave the background and fostered better exchanges in the breakout sessions.

### 3.2. Breakout Sessions

Based on preliminary exchanges between the Water JPI coordination and some international partners, in particular those involved in WaterWorks2015, two breakout sessions were proposed for discussing interactively the questions listed hereafter. The attendees were divided into three sub-groups each with the same questions to discuss, giving each participant an occasion to present his/her views and exchange (Table 4).

#### *Interactive Session 1 – Challenges for multilateral cooperation?*

- Moving from a bi-lateral to a multilateral cooperation
- Challenges linked to the current cooperation instruments
- Working with institutions with different profiles
- How to define common water priorities between America and EU? Specific issues for the region: data collection / validation and harmonization, Open data, any other suggestions

#### *Interactive Session 2 – How to cooperate together?*

- What are the cooperation challenges with Europe?
- Which activities are of common interest? e.g. shared RDI agenda, mapping, joint calls, knowledge hubs, mobility, or alignment of national programmes...
- Which tools for this cooperation?
  - Is the ERA-NET Cofund a good model for American countries?
- How to simplify the current complexity? e.g. different funding models, different evaluation criteria, different funding rate and different S&T competencies...

*Table 4- Breakout Sessions (Rapporteur in bold)*

| Name             | Surname            | Institution  | Round table |
|------------------|--------------------|--|-------------|
| Per              | BACKE-HANSEN       | Water JPI partner / RCN, Norway                          | 1           |
| Sally            | GUTIERREZ          | US-EPA, USA  | 1           |
| <b>Matthew</b>   | <b>MCCANDLESS</b>  | <b>IISD-ELA, Canada</b>                                  | <b>1</b>    |
| Anne-Hélène      | PRIEUR-RICHARD     | Future Earth   | 1           |
| Vladimir         | SMAKHTIN           | UNU-INWEH, Canada  | 1           |
| Nadia            | ZAMAN              | Water JPI partner / NSERC, Canada                        | 1           |
| Maria Zaira      | TURCHI             | Water JPI partner / CONFAP, Brazil                       | 1           |
| <b>Dominique</b> | <b>DARMENDRAIL</b> | <b>Water JPI Coordinator / ANR, France</b>               | <b>2</b>    |
| Carl             | HENSMAN            | Bill & Melinda Gates Foundation                          | 2           |
| Lucas            | LUCHILO            | MINCYT, Argentina  | 2           |
| Nicholas         | REID               | Ryerson Urban Water, Canada                              | 2           |
| Catalina         | SANTAMARIA         | Convention on Biological Diversity                       | 2           |
| Luis             | TUPAS              | US-DA, USA   | 2           |
| Howard           | WHEATER            | Global Institute for Water Security, Canada              | 2           |
| Juliette         | ARABI              | Water JPI Secretariat / ANR, France                      | 3           |
| Khaled           | AWAD               | CONICYT, Chile   | 3           |
| David            | COATES             | Convention on Biological Diversity                       | 3           |
| Nicole           | GENEREUX           | International Development Research Centre (IDRC), Canada | 3           |
| Jacqueline       | JORGE              | Global Affairs Canada                                    | 3           |

| Name       | Surname  | Institution                       | Round table |
|------------|----------|-----------------------------------|-------------|
| Mao        | TAKEUCHI | Belmont Forum                     | 3           |
| Anne-Marie | THOMPSON | Water JPI partner / NSERC, Canada | 3           |
| David      | VELASCO  | Water JPI partner / CDTI, Spain   | 3           |

### 3.3. Feedback from all sessions

Following the presentation from each sub-group, the discussion points were made on challenges for collaborating with EU and JPis; research gaps and prioritisation of the research needs; challenges for aligning national programmes; engaging with the research communities; joining forces on structural challenges; and on existing cooperation models.

#### i. Main challenges for collaborating with Europe and the JPis in particular

Challenges for this collaboration are multiple, of which:

- Complex EU RDI system: How to simplify the current complexity?
  - The JPI could be seen as a portal for the entry of countries beyond Europe
- Multiple demands from different initiatives:
  - Show how they complement
  - What is the added-value of the Water JPI?
- Necessary financial contributions: Not all research bodies have funds for international cooperation
- Unclear Status of cooperating members
  - Their interest on contributing on specific matters,
  - Governance process to be adapted for considering them, such as the incapacity to pay fees
    - Act on operational level or be sponsored by another country?
- The need for special capacity building
  - The JPI could assist them at no charge for accessing to this cooperation

#### ii. Research gaps and prioritisation of the research needs

The Water JPI SRIA themes are relevant. There was agreement that the JPI SRIA can be used for setting national strategy and programmes when absent.

The different groups discussed the need to adapt it to global dimension, highlighting when relevant to regional challenges. A consensus developed to present the research needs in a multi-disciplinary way from a broad goal to more focused regional or local perspective. Addressing the different scales and demonstrating the added value to society are of most importance.

Some topics were found insufficiently represented in the current version of the SRIA.

Connecting with the previous completed science, considered as “our treasure” will be of most importance.

Setting priorities could be regional. Having more focus in proposed activities should allow an easier involvement of developing countries. For this, the America workshop attendees suggested to work with an international advisory board with stakeholders, from the different world regions, a kind of “International Panel on Water Challenges” (as the IPCC - Intergovernmental Panel on Climate Change).

| To be highlighted?  | To be added?  |
|---|---|
| <ul style="list-style-type: none"> <li>• Small community cycle approach (solving water challenges in small systems)</li> <li>• Eutrophication</li> <li>• Ecosystems – “right enabling environment for uptake of ecosystems based approaches for water resources management”</li> <li>• Early warning systems for rapid responses capabilities to preserve habitats / ecosystems</li> <li>• Water security and water – security links</li> </ul> | <ul style="list-style-type: none"> <li>• Adaptation of behavior to global challenges</li> <li>• Managing changes</li> <li>• Water pricing (in different international contexts)</li> <li>• Emerging challenges vs. Emerging pollutants               <ul style="list-style-type: none"> <li>○ Invasive species</li> </ul> </li> <li>• Water policy and Ethics</li> <li>• Science communication / translation into societal actions</li> </ul> |

### iii. Aligning national programmes: a major challenge

For reaching the necessary leverage effect and greater impact, alignment of national programmes has been identified as a major instrument. Nevertheless, the group identified some specific challenges:

- How to align research priorities and goals at the global scale?
- How to work with countries without national water RDI vision and agenda?

To ease the alignment process, several solutions were proposed to facilitate the national participation in the multilateral activities:

- i) Mapping the programme planning in all countries in order to see what are the bandwidths for joint activities (aligning call time vs. fiscal year, vs. academic year)
- ii) Show the added value of a shift in practices, of priorities settings for addressing the global challenge
- iii) Present the activities on the long term for allowing a move from annual budget decision to multiannual planning
- iv) Simplify the procedures, the administrative burdens.

### iv. Engaging with the research communities

Despite the important efforts undertaken (directly or via some European networking initiatives) since its creation, the JPI activities and possibilities for cooperation are unknown and extra effort is needed to convince foreign parties on the benefits of the JPI.

The group recommended the followings:

- Present the opportunities to:
  - Mobility schemes, for staff and students – see tools such as ELAP, CARICOM (NSERC scholarship)
  - RDI infrastructures (such as the experimental lake area)
  - Research centers of excellence
  - Knowledge hubs, seen as a way to harness intellectual potential through problem-based learning
- Reduce the administrative requirements due to the different jurisdictions involved
- Clarify the IPR rules, a key issue for the American Workshop attendees (see the Bill & Melinda Gates foundation “[Global Access Strategy](#)”)
- Show that JPI is the easier programme to fund multidisciplinary research with high impact
- Facilitate the connection to EU partner communities, via different tools (i.e. the LinkedIn Water JPI research forum group, participation to exploratory workshops, access to projects database, and cooperation via COST Action or Marie Skłodowska Curie fellowship).

## v. Joining forces on structural challenges

It was noted that actions on those structural challenges could improve the efficiency of research programmes.

- **Data collection**
  - The challenges are mainly: do we need more data? A Better use of the existing data? How to deal with big data issues?
  - Going beyond the current data repositories. A mapping of access conditions, background information, and expertise in the field of application will be appreciated
  - Proposed actions:
    - Facilitate collaboration and sharing data,
    - Make Interoperable databases
    - Provide under QA/QC permanent process
  - This could be a topic for a global “research Infrastructure” (from Earth observation to local monitoring).
- **Uptake of research results**
  - Should be strengthened or different end-users: Market (through IP – patent commercialization) or Policy-making (Connecting research and policy); for this, the participation of all stakeholder communities in research and innovation projects should at least be highly recommended, if not mandatory.
  - Could be the occasion of an Open Conference for data exchanges
- **Open data / open access**
  - Detail the expectations, the rules for IPR, considering national policies (e.g. 18 month Embargo)
  - Promote / fulfil Data Management Plan (to be applied during the awarded project and after the end)
  - See how concretely this can be put into practice, in particular for partners from beyond Europe.

## vi. Cooperation models

To be able to find the critical mass required by the Societal Challenge to be tackled, the group suggested exploring various cooperation models:

- **Between public institutions**
  - Bilateral vs. multilateral cooperation models:
    - Both models have merits: Bi-lateral for building strong relations between countries, start scientific diplomacy; multilateral for coordination in an international context and optimization of dissemination of outputs;
    - Use the right model / tool for addressing the right challenge
  - Working with different countries (different experiences, mandates) is possible if there are common objectives. Countries can have specific and complementary roles.
  - The interested countries need to be aware that their financial commitment should be balanced with the strength of their national RDI communities.
  - Individual agencies should not lose identity / visibility in the multilateral network communication.
- **With industry / economic sector**
  - To be further detailed, vs. their needs and their willingness to contribute
  - Investments in commercialisation?

- **With foundation(s)**
  - Explore further means of cooperation (topics, countries of interest, types of joint activities, bridging activities).
- In cooperation with **all existing institutions / networks** (Belmont Forum, Future Earth, Global Water Research Coalition (GWRC), United Nations Educational, Scientific and Cultural Organization (UNESCO), UN Water, ...)
  - Explore in particular the exchanges of information, the interoperability of projects databases for providing a more exhaustive panorama of the existing treasure and of the research in progress.

It is worth noting that any cooperation model should cover all proposed activities (calls, access to infrastructures, mobility schemes, data collection on the long-term, project databases, etc.) and be flexible and open. The preferred option would be to have a continuous, dynamic and adaptive tool box for enhancing the availability of funds for the different actions.

Some attendees also suggested to explore Brokering model (partners offering opportunities to JPI, for co-implementing various activities) for next developments. This could apply to Data sharing or Technologies transfer.

Engaging on a Joint Programming scheme (with joint funding) is challenging for developing countries, especially if there is no immediate and large return on investments. Ways of supporting financially the participation of these countries via programmes, such as the IDRC, the World Bank or development funds should be explored. This kind of mentorship could also be investigated for the researchers.

## 4. Conclusions

This section is based on all workshop discussion time slots.

### 4.1. Discussion session on Follow-up Actions / Roadmap for future cooperation

#### ***Activities of common interest***

- All proposed activities are of interest: aligning, networking, clustering, foresight, capacity building
- Particular interest in Knowledge Hubs (access to outputs)
  - Set-up a way to access, rules of use, third party validation?
  - Standardise Knowledge Hub (ISO standard for storing and sharing knowledge)
  - A solution to develop Knowledge Hub should precede investments in new research
- Missing: Technical guidances and national / international standards for the different water challenges

#### ***Tools for this multilateral cooperation***

- The ERA-NET Cofund instrument is not the best tool for International Cooperation
  - Access to Common Pot is not directly correlated to what is put in
  - Training countries / agencies (Webinar) for supporting their participation is needed
  - If used, propose to go for the “international partner” status negotiated by some countries (such as Canada)

- A MoU (such as the Belmont Forum one) is considered as a better model if associated with:
  - A global strategy to be published
  - Activities to be extended to more than 1 year
  - Clear rules for facilitating the financial support involvement
- Any simplification of the current model (i.e. testing lump sum project funding) would be appreciated in order to:
  - Reduce the administrative burden
  - Minimize financial reporting and contracting errors
  - Focus on performance and scientific and technical innovation / solutions.
- The Thematic Annual Programming instrument could also fit. Therefore, it was proposed to do a pilot case with the interested agencies
  - The attendees mentioned two residual concerns: Who should follow the work done in different countries? Who should pay for the coordination work?
- The brokering model (partners offering opportunities to JPI, opportunities ready to implement at various levels), as possible alternative or complementary tool? To be further explored.

#### ***Role for the Water JPI***

- Connecting and integrating national, European and International agendas, while associating stakeholders
- Connecting to all initiatives with a clear distribution of roles and tasks / Supporting to connection:
  - ERANET-LAC, EU LAC-Health, Future Earth, GWRC, UNESCO, UN Water
- Keeping a shared visions during the entire process
- Connect research and policy, putting research into practice
- Raising funds?

#### ***Specific cooperation challenge***

- **Future Earth** - Cooperation on the Knowledge hub development – Online platform
- **Latin American Regional Challenges**
  - Need of regional mapping (priorities, overlaps, interactions, motivations of the different partners)
  - Connect with the Inter-American Institute for Global Change research
  - Connect with World Bank, European Investment Bank
  - Follow the Organisation for Economic Cooperation and Development (OECD) recommendations in some areas
- **Bill & Melinda Gates foundation**
  - Interested in some activities on sanitation and on countries of interest
  - Developing activities with defined outputs
    - Joint exploratory workshop
    - Commitment for solutions
  - Uptake of results for multiplying effects
    - Licensing results
    - Decentralisation of results in countries
    - Supporting experts for influencing policy-making

#### 4.2. Document for supporting these follow-up actions

To become the “privileged and attractive partner for global cooperation” in Water challenges RDI, the Water JPI will have to:

- a) Demonstrate the benefits that the Water JPI can bring to the water research communities (funders, researchers, economic sector and policy-makers)
- b) Finding solutions to overcome these barriers will need to be explored in the upcoming months, including i) Presentations on the JPI instrument in its European and International context; ii) Specific dissemination materials, and iii) Future regional workshops with peers to present activities and discuss cooperation

Therefore, a couple of documents should be prepared and made available:

- **Leaflets on “Engaging with the Water JPI”**
  - One for funding organisations, including the membership conditions
  - One for researchers & research communities
- **Presentation of the Water JPI, detailing**
  - The position of the JPI in the RDI chain (European Research Council vs. strategic programmes)
  - The JPI objectives, i.e. connecting / integrating national and international agendas, Solving domestic challenges when developing international cooperation, accelerating technologies development and uptake, enforcing policies, ...
  - Show the added-value of such cooperation
- **An accessible glossary supporting common understanding** (currently under preparation on line)
- **Simple documents for helping agencies participation**
  - Propose guidance documents at national level on how to engage with Europe, and with the JPI (e.g. in Brazil). These guidance documents to newcomers throughout the process will serve for their own support to national applicants.

#### 4.3. Measuring impacts of this international cooperation

Broadening the partnership of the Water JPI should also generate more impacts of its activities to the research programmes, the research communities and to society as such when addressing in a more integrated and comprehensive way the RDI gaps related to the global Water challenges. Developing specific International Cooperation indicators for the impact assessment should be planned in order to be able to report back and to quantify, when possible, these impacts.

## Annex 1: List of Attendees

| Name        | Surname        | Institution                                 |
|-------------|----------------|---|
| Juliette    | ARABI          | Water JPI Secretariat / ANR, France         |
| Khaled      | AWAD           | CONICYT, Chile                              |
| Per         | BACKE-HANSEN   | Water JPI partner / RCN, Norway             |
| David       | COATES         | Convention on Biological Diversity          |
| Dominique   | DARMENDRAIL    | Water JPI Coordinator / ANR, France         |
| Nicole      | GENEREUX       | IDRC, Canada                                |
| Sally       | GUTIERREZ      | US-EPA, USA                                 |
| Carl        | HENSMAN        | Bill & Melinda Gates foundation             |
| Jacqueline  | JORGE          | Global Affairs Canada                       |
| Lucas       | LUCHILO        | MINCYT, Argentina                           |
| Matthew     | MCCANDLESS     | IISD-ELA, Canada                            |
| Anne-Hélène | PRIEUR-RICHARD | Future Earth                                |
| Nicholas    | REID           | Ryerson Urban Water, Canada                 |
| Catalina    | SANTAMARIA     | Convention on Biological Diversity          |
| Vladimir    | SMAKHTIN       | UNU-INWEH, Canada                           |
| Alyson      | SURVEYER       | Future Earth                                |
| Mao         | TAKEUCHI       | Belmont Forum                               |
| Anne-Marie  | THOMPSON       | Water JPI partner / NSERC, Canada           |
| Luis        | TUPAS          | US-DA, USA                                  |
| Maria Zaïra | TURCHI         | Water JPI partner / CONFAP, Brazil          |
| David       | VELASCO        | Water JPI partner / CDTI, Spain             |
| Howard      | WHEATER        | Global Institute for Water Security, Canada |
| Nadia       | ZAMAN          | Water JPI partner / NSERC, Canada           |

## Annex 2: Workshop Programme

### Programme

Wednesday 26<sup>th</sup> of April 2017

|              |  |   |
|--------------|--|---|
| 8:30-8:45    | Participant Registration and Welcome coffee  |   |
| 8:45-9:00    | Welcome address  | Anne-Marie Thompson, NSERC                    |
| 9:00-9:10    | Welcome address & Aims of the Workshop   | Dominique Darmendrail – Water JPI coordinator |
| 9:10-9:45    | The Water related RDI landscape in Canada, the NSERC experience in Water JPI activities  | Anne-Marie Thompson, NSERC                    |
| 9:45-10:45   | Short introduction from other American countries presented at the workshop: the RDI landscape, interests in multi-lateral cooperation  | All American attendees                        |
| 10:45-11:15  | Coffee break   |   |
| 11:15-12:35- | Water JPI activities and modalities of cooperation   | Dominique Darmendrail – Water JPI coordinator |
| 12:35-13:00  | Other RDI cooperation agreements, and with Europe <ul style="list-style-type: none"> <li>• Belmont Forum, Bill &amp; Melinda Gates foundation, Convention on Biological Diversity, Future Earth, and United Nations University</li> </ul>  | International initiatives                     |
| 13:00-13:45  | Lunch  |   |
| 13:45-14:00  | Presentation of the interactive sessions   | Dominique Darmendrail – Water JPI coordinator |
| 14:00-16:00  | Interactive Session I – Challenges for Multilateral cooperation? <ul style="list-style-type: none"> <li>• Moving from a bi-lateral to a multilateral cooperation?</li> <li>• Challenges linked to the current cooperation instruments</li> <li>• Working with institutions with different profiles</li> <li>• How to define common water priorities between America and EU?</li> <li>• Specific issues for the region: data collection / validation and harmonization, Open data, any other suggestions</li> </ul> | All participants                              |
| 16:00-16:30  | Coffee Break   |   |
| 16:30-17:00  | Wrap-up of the first interactive session and conclusion of the day   | Table chairs and Dominique Darmendrail        |

Thursday 27<sup>th</sup> of April

|             |   |   |
|-------------|---|---|
| 9:00-9:30   | Welcome coffee  |   |
| 9:30-10:30  | <p>Interactive Session 2 – How to cooperate together?</p> <ul style="list-style-type: none"> <li>• What are the cooperation challenges with Europe?</li> <li>• Which activities of common interest (shared RDI agenda, mapping, joint calls, knowledge hubs, mobility, or alignment of national programmes...)?</li> <li>• Which tools for this cooperation? Is the ERA-NET Cofund a good model for American countries?</li> <li>• How to simplify the current complexity (different funding models, different evaluation criteria, different funding rate and different Science &amp; Technology competencies)?</li> </ul> | All participants                              |
| 10:30-11:00 | Coffee break  |   |
| 11:00-11:30 | Wrap-up of the 2 <sup>nd</sup> interactive session  | Table chairs and Dominique Darmendrail        |
| 11:30-12:30 | <p>Follow-up Actions / Roadmap for future cooperation:</p> <ul style="list-style-type: none"> <li>• Identification of potential interests</li> <li>• Special needs / documents / actions for developing the cooperation with the Water JPI</li> </ul>   | All participants                              |
| 12:30-13:00 | Closure of the workshop and outlook to next Water JPI activities  | Dominique Darmendrail – Water JPI coordinator |
| 13:00-14:00 | Lunch   |   |