

Water

A large graphic featuring the word "Water" in a bold, dark blue sans-serif font. Below the text are two stylized blue waves. To the right of the waves is a 3D globe of the Earth, showing continents in light blue and oceans in dark blue.

International Cooperation

Proceedings from the Workshop on International Cooperation

Towards a Common Strategy on International Cooperation
Paris, France – 25th June 2019

www.waterjpi.eu/international-cooperation/international-cooperation-workshop/

Prepared by the Environmental Protection Agency (Alice Wemaere)
Further information: Waterjpisecretariat@agencerecherche.fr

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 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, as part of its supporting Coordination and Support Action [IC4Water](#),² is looking at opportunities to develop a common strategy for international cooperation with other European initiatives. IC4Water was launched in January 2017 and is funded by the European Commission under Horizon 2020. IC4Water aims to implement joint activities in a dedicated effort to reinforce international cooperation in research, development and innovation to address global water challenges.

This report contains the proceedings of the [2019 Water Joint Programming Initiative Workshop on “Towards a Common Strategy on International Cooperation”](#), which took place on 25 June 2019 in Paris, France.

A total of 38 people attended the workshop, including researchers from 19 countries and representatives from several initiatives, including the Water JPI.

This was the second workshop in a series of three workshops designed to elaborate a common strategy with other relevant EU and international initiatives on international cooperation in the context of research, development and innovation activities. This workshop was primarily targeted at researchers.

All presentations are available from the Water JPI website: <http://www.waterjpi.eu/international-cooperation/international-cooperation-workshop>.

¹ [Council conclusions](#) on the launching of the joint programming initiatives 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/implementation/supporting-projects/csa-ic4water>

Table of Contents

Executive Summary	1
Table of Contents	2
List of Abbreviations/Acronyms	3
Acknowledgments	3
Disclaimer	3
1. Introduction	4
2. Methodology	7
2.1. Workshop Aims and Objectives	7
2.2. Audience	7
2.3. Workshop Programme	10
Speakers' Biographies	11
Chairs' Biographies	14
3. Proceedings	16
3.1. Welcome and Introduction	16
3.2. Plenary Session: Sharing Experiences of International Cooperation	17
Horizon 2020 WATERSPOUTT Project	18
Horizon 2020/India PANI-WATER Project	19
BONUS Projects: HYPER & COCOA	21
China-EU Water Platform R&D Projects	23
NEREUS COST Action	23
2016 Water JPI LEAP Project	25
2017 Water JPI IDOUM Project	27
3.3. Discussion	28
3.4. Breakout Session	31
Advantages of participating in/coordinating RDI Projects involving International Cooperation ...	32
Common Issues encountered when participating in/coordinating RDI Projects involving International Cooperation	34
Common Issues encountered when participating in/coordinating RDI projects involving international cooperation	36
4. Next Steps	38
Annex 1: List of Attendees	39
Annex 2: Programme	40

List of Abbreviations/Acronyms

BONUS	Joint Baltic Sea research and development programme
CEWP	China–EU Water Platform
COST	European Cooperation in Science and Technology
EC	European Commission
EPA	Environmental Protection Agency
JPI	Joint Programming Initiative
RDI	research, development and innovation
PRIMA	Partnership for Research and Innovation in the Mediterranean Area
SDG	Sustainable Development Goal
WssTP	Water Supply and Sanitation Technology Platform

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. 730264 (IC4Water). We also wish to acknowledge the invaluable contribution from the invited workshop speakers, chairs, attendees, rapporteurs and the Water JPI Secretariat and Coordinator, 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 which may be made of the information contained therein.

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 benefit the economic prosperity of Europe.

Beyond Europe, water crises were identified in 2015 by the World Economic Forum³ (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 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 2030.⁴

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).

The Water JPI, as part of its supporting Coordination and Support Action IC4Water, is looking at opportunities to develop a common strategy for international cooperation with other European Initiatives. IC4Water was launched in January 2017 and is funded by the EC under Horizon 2020. IC4Water aims to implement joint activities in a dedicated effort to reinforce international cooperation in research, development and innovation to address water challenges. To date, the Water JPI has set up contacts and initiated Joint Actions, including Joint Transnational Calls, with several international partners, as outlined in **Figure 1**. There have been several Water JPI activities on international cooperation, including two mapping exercises on international activities (further details are available from the [Water JPI website](http://www.waterjpi.eu)⁵).

Two workshops to develop “International cooperation in RDI for tackling global water challenges” were organised in 2017 to discuss regional specificities and cooperation opportunities:

- a workshop dedicated to Africa and the Mediterranean area; and
- a workshop dedicated to the American area.

³ <http://reports.weforum.org/global-risks-2015/part-1-global-risks-2015/introduction/>

⁴ 2030 Water Resources Group, 2009.

⁵ <http://www.waterjpi.eu/international-cooperation>

Global Partnership

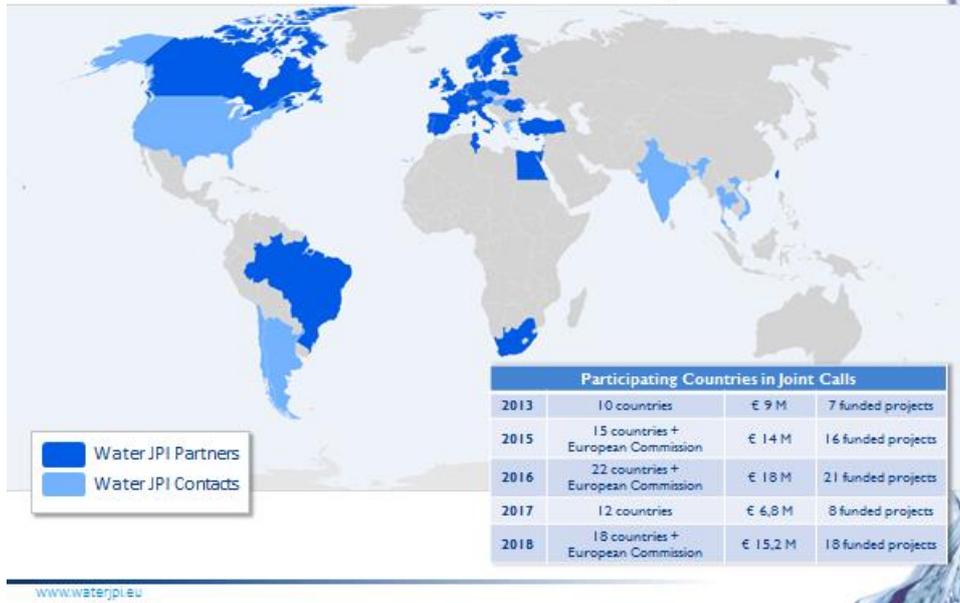


Figure 1. Water JPI current Joint Calls, partners and contacts

To progress this work, the Water JPI has planned three dedicated workshops (**Figure 2**) in cooperation with relevant European peer initiatives to share experiences, identify success factors and propose a common vision on international cooperation. As the European initiatives are targeting the same countries/funding organisations, for international cooperation development it was considered important to share experiences and discuss, if possible and relevant, how to define a common vision on international RDI programmes cooperation development.



2018 Water JPI Workshop (19/09/2018) in Vienna, Austria

The Water JPI organised the first workshop, hosted by the Irish Environmental Protection Agency (EPA), on **“Towards a Common Strategy on International Cooperation”**, which was held on 19 September 2018 in Vienna, Austria

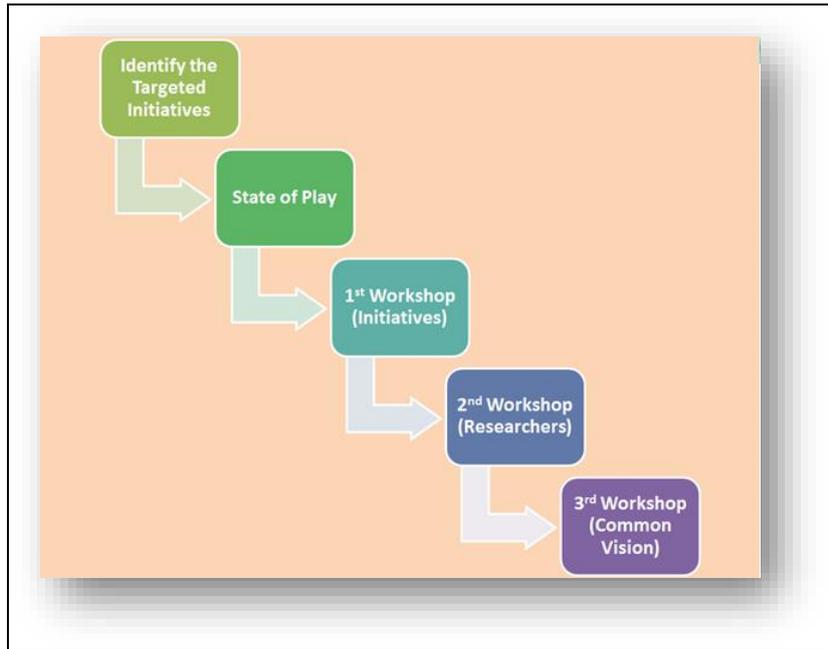


Figure 2. Proposed work plan of the activities intended under IC4Water, working towards establishing a common vision on international cooperation

This second workshop was targeted at the research community engaging in the Joint Actions implemented by these initiatives involving international cooperation. The third workshop will be targeted at defining a common vision on international cooperation.

All presentations are available from the Water JPI website: <http://www.waterjpi.eu/international-cooperation/international-cooperation-workshop>.

This report was prepared based on the presentations and notes provided by the rapporteurs, as well as the feedback received from the attendees on the draft version of this document.

2. Methodology

The workshop was organised by the Environmental Protection Agency (Ireland), with the support of the IC4Water partners and the Water JPI Secretariat and Coordinator.

2.1. Workshop Aims and Objectives

This second workshop was targeted at researchers from EU Member States, Associated Countries and third countries to discuss and share their experience of international cooperation in the context of research, development and innovation. It aimed to facilitate the exchange of views and sharing of experiences to identify common barriers/challenges, as well as good practices.

2.2. Audience

There were 38 attendees at the workshop. The attendees represented:

- **researchers** funded under Horizon 2020, European Cooperation in Science and Technology (COST) and the Water JPI, from France, Ireland, Germany, Moldova, Cyprus, Spain, Italy, Finland, Romania, Denmark, India, Vietnam, Brazil, Canada, South Africa and China;
- **initiatives**, such as PRIMA, the Belmont Forum, Water JPI, the Water Supply and Sanitation Technology Platform (WssTP), the China–EU Water Platform (CEWP), the Joint Baltic Sea research and development programme (BONUS) and AfriAlliance (see **Table 1**);
- **RDI projects** with Africa, India, China, Russia, Brazil and Canada (see **Table 2**);
- **the NEREUS COST Network** in which countries beyond Europe are involved, e.g. Australia, Pakistan, Republic of Korea, Singapore, USA, Georgia, Jordan, Tunisia, Ukraine, Israel.

[Annex 1](#) provides a list of all attendees. **Tables 1** and **2** provide additional information on the initiatives, projects and networks included in the workshop, while **Figure 3** illustrates the geographical spread of the attendees.

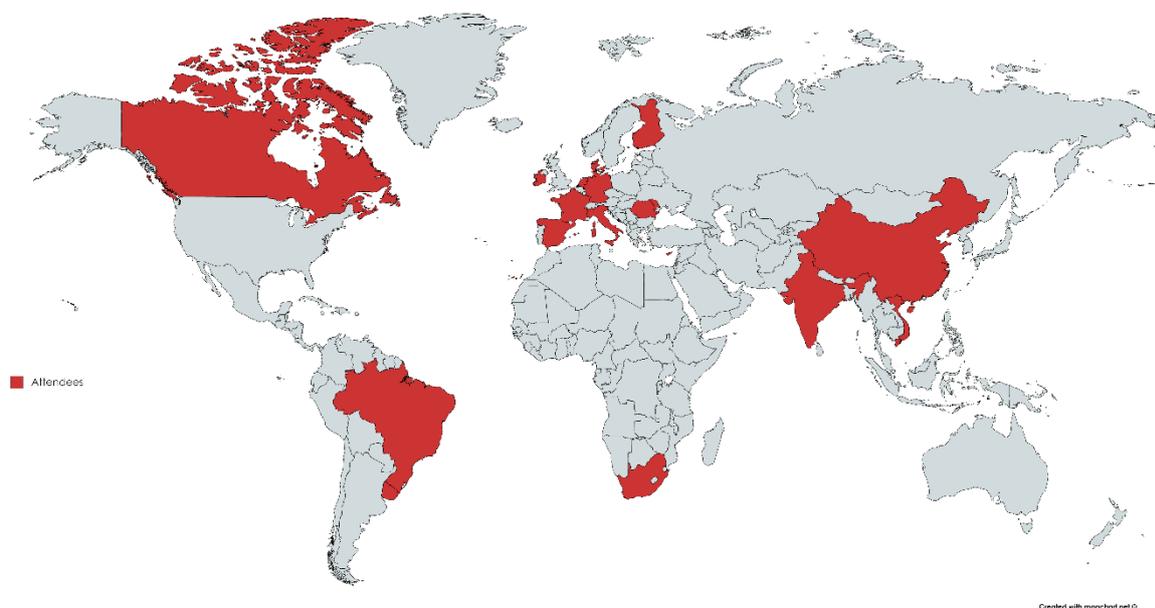


Figure 3. Visualisation – countries represented

Table 1. Initiatives represented

Name of Initiative	Acronym	Website
Africa-EU Innovation Alliance for Water and Climate	 AfriAlliance	https://afrialliance.org/
Belmont Forum	 Belmont	www.belmontforum.org
China–EU Water Platform	 CEWP	https://cewp.eu/
Joint Baltic sea research and development programme	 BONUS	www.bonusportal.org
Partnership for Research and Innovation in the Mediterranean Area	 PRIMA	http://prima-med.org/
Water JPI	 Water JPI	www.waterjpi.eu
Water Supply and Sanitation Technology Platform	 WsSTP	http://wsstp.eu/

Table 2. Research projects represented

Name of RDI project	Acronym	Website
Water Sustainable Point Of Use Treatment Technologies	 WATERSPOUTT (Horizon 2020)	www.waterspoutt.eu/
Photo-irradiation and Adsorption based Novel Innovations for Water treatment	 PANIWATER (Horizon 2020)	www.nireas-iwrc.org/?link=PANI%20WATER
Hypoxia mitigation for Baltic Sea ecosystem restoration (2009–2011)	 HYPER (BONUS)	www.bonusportal.org/about_us/history/bonus_2009-2011/bonus_projects/hyper
Nutrient cocktails in the coastal zone of the Baltic Sea (2014–2017)	 COCOA (BONUS)	www.bonusportal.org/projects/viable_ecosystem_2014-2018/cocoa

Name of RDI project		
Legacies of Agricultural Pollutants (LEAP): Integrated Assessment of Biophysical and Socioeconomic Controls on Water Quality in Agroecosystems		LEAP (Water JPI) www.uwaterloo.ca/leap
New and emerging challenges and opportunities in wastewater reuse		NEREUS COST Action www.nereus-cost.eu
Innovative Decentralized and low-cost treatment systems for Optimal Urban wastewater Management		IDOUM (Water JPI) www.waterjpi.eu/joint-calls/joint-call-2017
Danubius-PP - the International Centre for Advanced Studies on River-Sea Systems, Preparatory Phase		Horizon2020 http://www.danubius-ri.eu/ https://danubius-pp.eu/



2019 Water JPI Workshop (25/06/2019) in Paris, France

Figure 4 illustrates the geographical spread of the countries involved in the RDI projects and network presented at the workshop.

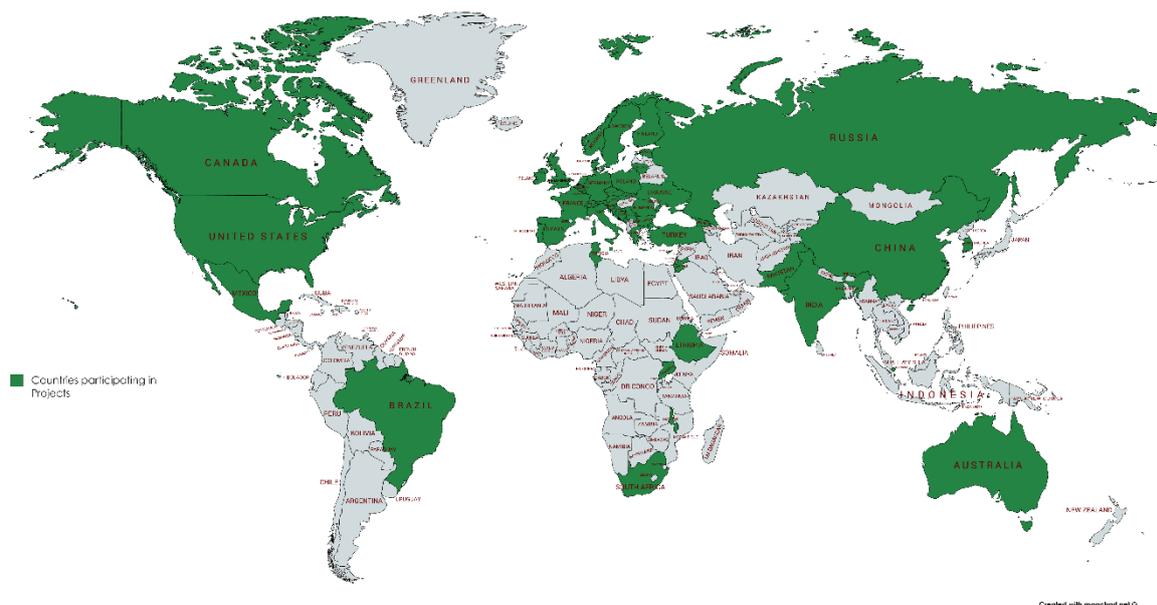


Figure 4. Visualisation – countries involved in the RDI projects and network presented at the workshop

2.3. Workshop Programme

The workshop programme is available in [Annex 2](#). The workshop included one plenary session, as well as three breakout sessions.

The plenary session was chaired by [Octavi Quintana](#) (PRIMA), with an opening introduction given by [Dominique Darmendrail](#) (ANR), Water JPI Coordinator. The aims of the workshop were then presented by [Alice Wemaere](#) (EPA). Presentations were then given by researchers from Horizon 2020, BONUS, Water JPI and COST-funded projects and the COST network, as well as on the China–EU Water Platform.

The question and answer session and panel discussion were led by [Bettina Genthe](#) (South African CSIR – AfriAlliance) and covered the topic of “What should the funders of projects involving international cooperation keep in mind/address when preparing/launching Joint Transnational Calls?”.

During the afternoon’s breakout session, the attendees were divided into four groups and asked to discuss the following topics:

- advantages of participating in/coordinating RDI projects involving international cooperation;
- common issues encountered when participating in/coordinating RDI projects involving international cooperation;
- possible solutions for overcoming identified barriers/challenges.

A link to the [Proceedings from the first workshop](#)⁶ (2018) was circulated to the attendees in advance of the workshop.

⁶ <http://www.waterjpi.eu/international-cooperation/international-cooperation-workshops/proceedings-water-jpi-workshop-on-international-cooperation-vienna-2018.pdf>

Speakers' Biographies

Dominique Darmendrail

Since November 2014, **Dominique Darmendrail** has been the coordinator of the EU Water Joint Programming Initiative (www.waterjpi.eu), which aims to increase coordination in European research, development and innovation (RDI), and address issues such as user participation, attaining targets in the coordinated use of funds and progress in the integration of RDI agendas and activities. She also coordinates the IC4Water CSA (Coordination and Support Action instrument) for the Water JPI. In July 2014, she became programme manager on environmental technologies at the French Research Agency (ANR). She holds a Doctorate in Hydrogeology and Hydrogeochemistry from the University of Bordeaux (France). She was Head of BRGM's (Bureau de Recherches Géologiques et Minières) Environment and Process Division from 1998 to 2007 and, from May 2010 to July 2014, European Affairs representative within BRGM while being the secretary general of the Common Forum on Contaminated Land in Europe (www.commonforum.eu), the European network of contaminated land policy experts, as well as of the International Committee on Contaminated Land (www.iccl.ch).

Alice Wemaere

Alice Wemaere has a BSc and MSc in Chemical Engineering and a MSc in Environmental Sciences. She holds a PhD and her thesis was on lake eutrophication and GIS modelling of nutrient loadings from a catchment into surface waters. Alice has been working with the EPA Research Programme since 2004. Until recently, she was responsible for the EPA Water Research Pillar and, in the past, she has managed the EPA research publications and website. In December 2016, Alice was appointed EPA Research Manager, with responsibility for the full EPA Research Programme. She is the national contact point for the Water JPI, Climate JPI, BiodivERsA and Horizon2020 Societal Challenge 5 (Climate Action, Environment, Resource Efficiency & Raw Materials) and in 2017 also became the National Delegate for Societal Challenge 5.

Kevin McGuigan

Kevin McGuigan is the director of the Royal College of Surgeons in Ireland (RCSI) Solar Disinfection Research Group, which develops appropriate solar-based technologies for water treatment in resource-poor rural environments. He has previously coordinated successful field studies of these technologies in Uganda, Kenya, Zimbabwe, South Africa and Cambodia and currently coordinates the following EU Horizon 2020 projects:

1. WATERSPOUTT (Grant No. 688928, €3.6m budget, 18 partner organisations; see www.waterspoutt.eu), which is developing new solar water treatment technologies which are currently being piloted in Malawi, Ethiopia, Uganda and South Africa;
2. PANIWATER (Grant No. 820718, €4.9m budget co-funded by the EU and India, 18 partner organisations; see www.paniwater.eu), which is developing new drinking water and wastewater treatment technologies.

Professor McGuigan is a Fellow of the Institute of Physics (FInstP) and a Fellow of the Royal Society of Chemistry (FRSC). He has supervised to completion six PhD and three MSc projects and has published over 70 refereed articles in peer-reviewed journals. In parallel with his research activities, he is an Associate Professor in the RCSI Department of Physiology & Medical Physics, where he teaches physics on the medicine, pharmacy and physiotherapy programmes.

Rita Dhodapkar

Rita S Dhodapkar has been with CSIR – National Environmental Engineering Research Institute (NEER) for the past 30 years. She is Researcher cum Faculty at the CSIR–NEERI and Academy–SIR, Delhi, respectively and Technical Manager for National Accreditation Bureau-related activities. She is a Member of the Bureau of Indian Standards Technical Committee Environmental Protection Sectional Committee, and a Member of the Technical Monitoring Committee for the pilot project National Mission for Clean Ganga. She serves as an External Advisory Board Member for the European Union Horizon 2020 project WATERSPOUTT and is currently the Indian Coordinator for the Indo-EU Horizon 2020 project on Photolytic and Adsorption based Novel Innovations for India (PANIWATER). She is a recipient of the Commonwealth Science Council Fellowship for training in Australia and of an Honorary Diploma-Seche Environment Award for Excellence in Research in Wastes Valorization in Greece. She participates in a number of national and international collaborations, including 12 EU PANIWATER collaborations, and an international collaborative project with Ulster University funded by The Royal Society, UK, and an EPSRC–GCRF joint project with the University of Liverpool. She is part of the project team Namami Gange and worked extensively at the Prayagraj Kumbh Mela in 2019. Her area of interest is water and wastewater management and she is currently involved in the application of advanced oxidation processes for water and wastewater purification with respect to emerging pollutants in urban wastewaters. Her research has been in the area of solar and UV photocatalysis, and adsorption processes for water and wastewater treatment, the application of advanced treatment technologies, the application of novel molecularly imprinted polymers for SPE and sample clean-up methods from environmental matrices. She has two patents and three design registrations and has contributed to more than 60 publications in international and national peer-reviewed journals. She has vast experience in solving water and wastewater management and treatment related problems and has provided consultancy to, among others, the oil refining, paper, textile, tanning and metals industries.

Jacob Carstensen

Jacob Carstensen holds an MSc (1990) and a PhD (1994) from the Technical University of Denmark, where he studied mathematics and statistics with a focus on environmental problems. He is the Danish manager for the Baltic Nest Institute, a collaboration between Aarhus University, Stockholm University and the Finnish Environment Institute, providing scientific input to HELCOM (the Baltic Marine Environment Protection Commission) and national agencies as support for environmental policies in the Baltic Sea. His research has focused on assessing human impacts on marine ecosystems and identifying management responses to maintain good ecosystem functioning. Much of his research has been applied for the European Water Framework Directive, Marine Strategy Framework Directive and HELCOM Baltic Sea Action Plan as well as national regulations. Jacob has published more than 130 papers in peer-reviewed journals, which have been cited approximately 9000 times, yielding an H-index of 46. He is currently a specialty editor for *Frontiers in Marine Science* and has served as associate editor for *Estuaries and Coasts* for 10 years. Jacob has been involved in the scientific committees of several international conferences, and he has given plenary lectures on several occasions.

Seppo Rekolainen

Seppo Rekolainen's present position is Director, International Water Cooperation, at the Finnish Ministry of Agriculture and Forestry, and he was the lead of the China–EU Water Platform Secretariat in 2018–2019. Before that he worked for a long time at the Finnish Environment Institute as Research Scientist and also later as Director of the Freshwater Centre. His main interests lie in integrated water resources management, transboundary water cooperation, water diplomacy, impact assessments, system analysis and global water problems. He has a PhD in limnology (1993) from the University of Helsinki.

Despo Fatta-Kassinou

Despo Fatta-Kassinou is an Associate Professor in the Department of Civil and Environmental Engineering and the Director of Nireas-International Water Research Center of the University of Cyprus. Her research centres on the understanding of the fate and behaviour of contaminants of emerging concern during wastewater treatment and reuse applications. She has made many contributions to the field, as evidenced by her peer-reviewed papers [more than 142 (H-index 51, >12,500 citations; Google Scholar, May 2019)], and leadership in the research area (38 projects as principal investigator and/or coordinator). Amongst her other roles, she is the Coordinator of the ANSWER project (H2020-MSCA-ITN-2015/675530) and she was the Chair of the COST Action NEREUS ES1403 (2014–2018). She is a recipient of the distinguished national research award “Nikos Symeonides” from the Cyprus Research and Innovation Foundation (2012), and she was ranked among the top 1% of Cited Scientists in Cross-field research, by Clarivate Analytics in 2018. She served as the Chair of the Scientific and Technological Board of the Water JPI between 2015 and 2019 and she is currently the Chair of the Advisory Board of the African Center of Excellence in Water and Environment Research based in Nigeria, the leader of the “Wastewater reuse” working group of the NORMAN network, and Editor of the *Journal of Environmental Chemical Engineering*, published by Elsevier. She had an advisory role to the European Commission as a member of the five-member Committee for the DG RTD for Projects for Policy (P4P) in 2017, and she serves on numerous scientific evaluation panels for various countries, organisations and the European Commission.

Philippe Van Cappellen

Philippe Van Cappellen is a professor of Earth and Environmental Sciences at the University of Waterloo in Ontario, Canada. He is an internationally recognised leader in biogeochemistry. His research combines detailed micro- and mesocosm studies with field observations and theoretical modelling to better understand and predict how natural processes and human activity control water quality and the environmental flows of nutrients and contaminants from the local to global scale. Dr Van Cappellen is a Fellow of the Royal Society of Canada, a Fellow of the Geochemical Society and an Honorary Professor at Tianjin University, China. In 2015, he was awarded the Werner Stumm Medal for Scientific Innovation from the European Association of Geochemistry. He received his BSc and MSc degrees from the University of Brussels and his PhD degree from Yale University. He was a Professor and Eminent Scholar at the Georgia Institute of Technology in Atlanta, USA, and the Chair of Geochemistry at Utrecht University in The Netherlands, before joining the University of Waterloo in 2011 as the Canada Excellence Research Chair in Ecohydrology.

Raquel Nogueira

Raquel Nogueira graduated in Chemistry. She holds a Master's degree in Organic Chemistry from the State University of Campinas (UNICAMP) in Brazil (Synthesis and Biodegradation of Lignin Model Compounds by Chrysonila Sitophila). She is a Doctor (PhD) in Chemistry at the State University of Campinas (UNICAMP) in the area of Analytical Chemistry (Photodegradation of potentially toxic compounds using TiO₂ and solar light) and has been an Associate Professor at São Paulo State University (UNESP) since 1998. The focus of her research is advanced oxidation processes, primarily use of the photo-Fenton process in homogeneous and heterogeneous media for the degradation of organic contaminants such as dyes and pharmaceutical compounds under solar and LED irradiation. Recent activities focus on the study and evaluation of alternative catalyst materials for the heterogeneous Fenton reaction, such as modified iron minerals, iron mining residues, natural clays and layered double hydroxides. The properties of these materials are correlated with their catalytic activity in Fenton reactions and the viability of their larger-scale application can be evaluated. She has supervised 16 Master's and 12 PhD students. Her main projects include:

1. Projects for the National Institute for Alternative Technologies of Detection, Toxicological Evaluation and Removal of Micropollutants and Radioactives (Brazil);
2. degradation of emerging contaminants by heterogeneous Fenton process mediated by modified magnetites and iron mining residues;
3. evaluation of the occurrence, toxicity/genotoxicity and processes for dye degradation in effluents and surface waters.

Chairs' Biographies

Octavi Quintana

Octavi Quintana is a physician by training, a specialist in intensive medicine, and holds a Master's degree in Public Health. Octavi is the:

- Director of the Regional Hospital of Malaga;
- Deputy Director of the Spanish network of public hospitals and primary care institutions, responsible for the devolution to the regions of all the health care institutions, their relationship with universities and research in public health care institutions;
- member and President of the Steering Committee on Bioethics of the Council of Europe and member of the Steering Committee on Public Health, Council of Europe;
- Director of International Affairs, Ministry of Health, Spain;
- President of the Spanish Society of Quality of Health Care;
- member and Vice President of the European Group of Ethics advising the President of the EC;
- Coordinator on Health for a non-governmental organisation providing humanitarian aid during the Great Lakes crisis in Africa, as well as in Kosovo and Bosnia;
- Director of Health Research, EURATOM and European Research Area of the EC; and
- Director of PRIMA.

Bettina Genthe

Bettina Genthe is a senior researcher in the Council for Scientific and Industrial Research (CSIR), South Africa. She has over 35 years' experience in the field of environmental health aspects and water quality and more than 25 years' experience in health risk assessments. Bettina has a Master's degree in microbiology and completed the Harvard University Risk Assessment for Decision Making course in 1996. Bettina joined CSIR first as a bursar in 1982 and then as a permanent staff member in 1983 and has been leading research on water quality and health, focusing on water-related health issues. Bettina has been involved in many EU-funded projects since 1999 as the organisational lead. She has been a temporary advisor to World Health Organization and the US Environmental Protection Agency (US EPA) on exposure assessment. She is the chair of the International Water Association (IWA) specialist group that administers the Willie Grabow Young Researcher Award, and was also a board member on the IWA specialist group on Health-Related Water Microbiology (HRWM). Her key areas of expertise include health risk assessment, water quality, microbiology and molecular biology. She has led research on water quality and health since 1988, focusing on water quality issues. She is currently leading the revision of South African Recreational Water Quality Guidelines and is also involved in the revision for each of the other water uses, namely domestic, recreational, agricultural and industrial water use.

3. Proceedings

3.1. Welcome and Introduction



Dominique Darmendrail

Dominique Darmendrail, Water JPI Coordinator, gave a general introduction to the Water JPI’s current set-up and activities, focusing on its experience with international cooperation and the cross-cutting relation that water has with the Sustainable Development Goals (SDGs).



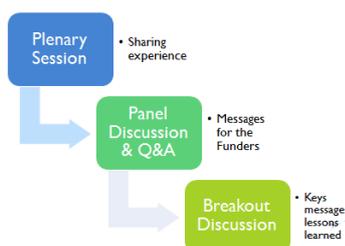
She also highlighted the Water JPI mapping of research, development and innovation activities in seven targeted countries (Brazil, Canada, China, India, South Africa, USA and Vietnam) and first contacts with and invitations made to research funding organisations to participate in European Research Networks (ERA-NETs), in, for example, South Africa, Brazil, Canada, Egypt and Tunisia.



Alice Wemaere

Alice Wemaere, EPA, introduced the aims and objectives of the workshop and what she hoped the participants would achieve by the end of the day. She also provided a brief overview of the outcomes from the first workshop, which took place in 2018.

Format



3.2. Plenary Session: Sharing Experiences of International Cooperation

The Plenary Session was chaired by **Octavi Quintana**, PRIMA. The speakers were asked to consider the following three questions:

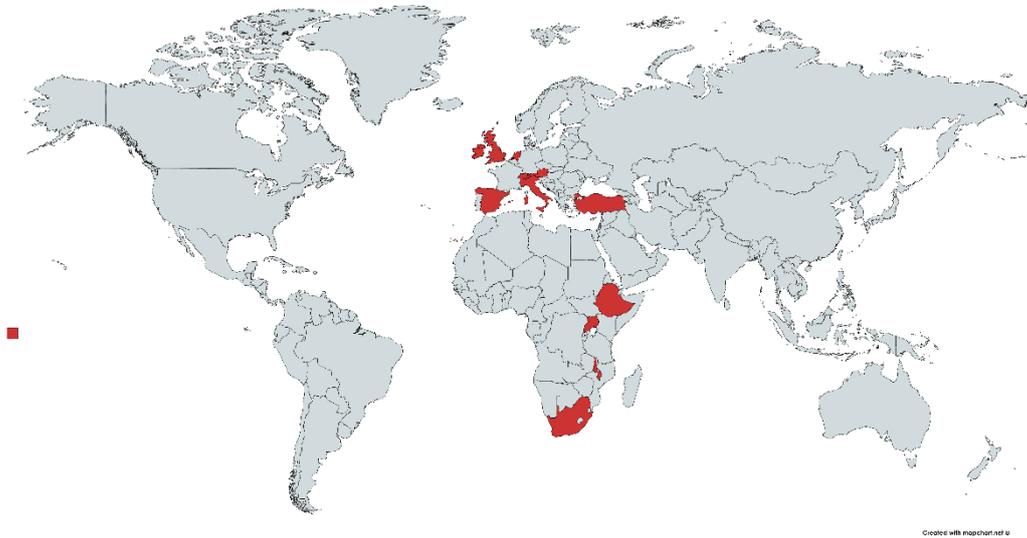
- Why have a consortium involving international cooperation?
- What were the challenges?
- What should the funders keep in mind?



2019 Water JPI Workshop (25/06/2019) in Paris, France

Horizon 2020 WATERSPOUTT project

Kevin McGuigan, RCSI, presented on the Horizon 2020 WATERSPOUTT project (*Water Sustainable Point Of Use Treatment Technologies*), which he is coordinating. The consortium is made up of 18 partners, from Ireland, Spain, UK, Netherlands, Italy, Switzerland, Austria, Turkey, Ethiopia, Uganda, Malawi and South Africa.



The WATERSPOUTT project aims to develop, field test and pilot large-volume solar water treatment technologies.



Kevin McGuigan

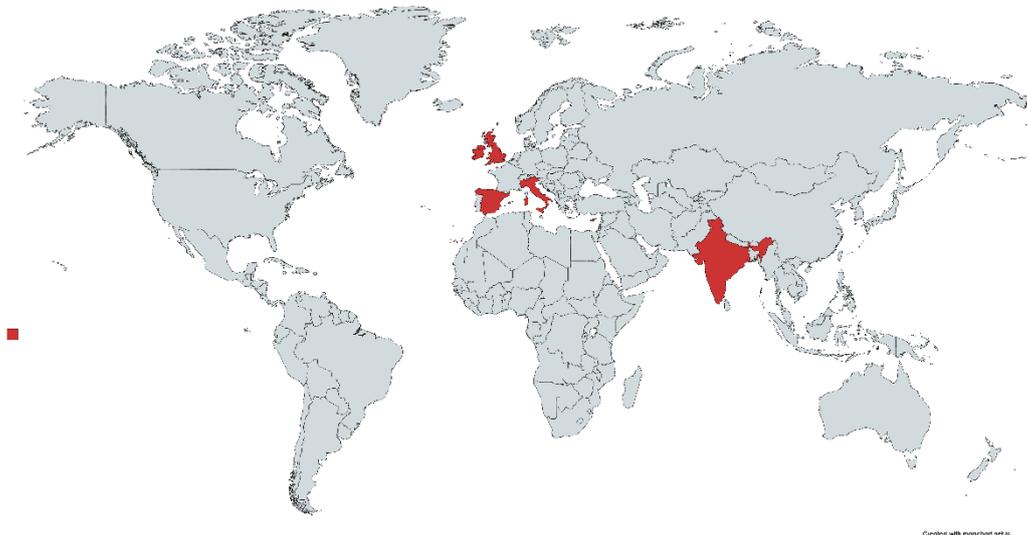
Why have a consortium involving international cooperation?

- No single partner can provide all relevant expertise.
- Calls targeted to specific regions of globe – local expertise strategically indispensable.
- Opportunity to collaborate with other expert groups.
- Knowledge/culture transfer/capacity building.
- This was a requirement of the Horizon 2020 Work Programme Call WATER-5-2014/2015: Strengthening international R&I co-operation in the field of water (i.e. “international cooperation is encouraged, in particular with non-EU Mediterranean countries and/or Africa”).

<p>What were the challenges?</p>	<ul style="list-style-type: none"> • Proposal preparation was not problematic. • Natural disasters (earthquakes, floods, drought, etc.). • Electronic communication can be intermittent. • National elections (resulting in suspension of operations). • Cultural sensitivity, e.g. misinterpretation of verbal/written communications, firmly held cultural beliefs may impact project.
<p>Conclusions</p>	<ul style="list-style-type: none"> • Co-funders need to fully agree the review and grant preparation processes before the submission deadline and communicate this to applicants. • EU partners need to be shielded from the processes of non-EU co-funders (e.g. post-contract renegotiation). • Non-EU partners need to be shielded from EC processes (e.g. partner validation processes). • Small revisions to the European Commission Authentication Service (ECAS) Participant Portal (PP) could help EU coordinators greatly (e.g. Ethics Work Package).

Horizon 2020/India PANIWATER project

Rita Dhodapkar, National Environmental Engineering Research Institute (NEERI), India, presented the Horizon 2020/India PANIWATER project (*Photo-irradiation and Adsorption based Novel Innovations for Water treatment*), in which she is participating. The consortium is made up of 18 partners from Ireland, UK, Spain, Italy, Cyprus and India.



The PANIWATER project aims to develop, deploy and validate in the field six prototypes for the removal of contaminants, including contaminants of emerging concern (CEC), from wastewater and drinking water.



Rita Dhodapkar

<p>Why have a consortium involving international cooperation?</p>	<ul style="list-style-type: none"> • Attractive calls for the scientists. • Contributing to India’s national missions. • Collaborations between India and the EU can bring about radical changes in scientific understanding of problems in the water sector as well as other environment sectors • Funding: the total budget was of about € 30m (€15m from Europe and €15m from India) and therefore the funding of at least five or six projects with a request between €3m and €5m was expected. • Emphasis on technology demonstration (TRL-3-6). • Relevant and wide research areas in water sector.
<p>What were the challenges?</p>	<ul style="list-style-type: none"> • Long and detailed format (it took four months to finalise objectives and formulate seven work packages with 18 collaborators). • Delays between call results (mid-2018) and kick-off of the projects for the Indian partners (1 April 2019). • Inordinate delay in the start of the project did not coincide with start date for EU. • EU partners were equipped with full grant and Indians have faced 50–60% budget cuts and delayed release of funds. • Many Indian partners have not yet received their funding. • Unmatched expectations (e.g. capacity for water and wastewater treatment plants and the number of beneficiaries) and budget. • Lots of emphasis on scale of technology demonstration rather than scientific merit and possible success.
<p>Conclusions</p>	<ul style="list-style-type: none"> • Many Indian partners have no manpower and travel budgets/work package leaders have no international travel budget. • Steering committee and general assembly meetings were chosen such that the EC partners could demonstrate/train research staff.

	<ul style="list-style-type: none"> • EC and DST, India could better establish the terms of the cooperation. • Reviewers (DST and EC) workshop to be organised for harmonisation and Evaluation decisions should cover Indian as well as EC. • DST website should also provide the Evaluation Criteria (e.g. Excellence, impact, quality and efficiency of implementation, gender balance, etc.). • Essential to avoid re-evaluation, re-reviews and budget cuts after the proposal has been approved by the EC. • Recognition of Indian Legal Entities by the EC: DST confirmation should be sufficient.
--	---

BONUS projects: HYPER and COCOA

Jacob Carstensen, Aarhus University, gave a presentation on two BONUS projects, entitled:

- HYPER: Hypoxia mitigation for Baltic Sea ecosystem restoration (2009–2011). The HYPER consortium comprised 10 partners from Denmark, Finland, Sweden, Russia, Netherlands, Germany and Poland; and



- COCOA: Nutrient cocktails in the coastal zone of the Baltic Sea (2014–2017). The COCOA consortium comprised 14 partners from Denmark, Finland, Germany, Lithuania, Netherlands, Poland, Russia, Sweden.



The HYPER project looked at the trends in and drivers of hypoxia in the open Baltic Sea while the COCOA project looked at the effectiveness of the coastal zone for removing nutrients.



Jacob Carstensen

<p>Why have a consortium involving international cooperation?</p>	<ul style="list-style-type: none"> • Specialised scientific knowledge (benthos) of the partners. • Contribution with scientific products (papers). • Access to data and important ecosystem.
<p>What were the challenges?</p>	<ul style="list-style-type: none"> • Issue with language proficiency in the context of scientific discussions. • No participation in common sampling campaigns. • Problems with permissions for EU scientists to take samples in Eastern Gulf of Finland.
<p>Conclusions</p>	<ul style="list-style-type: none"> • Russian partners were specialists with a minor budget. • Their contribution to project governance and the overarching project objectives was limited. • They gave access to data from important areas. The performance was as expected and not different from that of the EU partners.

China–EU Water Platform R&D projects

Seppo Rekolainen, Finnish Ministry of Agriculture and Forestry, gave a presentation on the China–EU Water Platform (CEWP).

The CEWP was established in 2012 along with the World Water Forum in Marseilles, France. It is based on a multilateral cooperation between EU Member States, the European Commission and China and has three pillars: Policy, Research and Business. The CEWP organises its own policy dialogue (e.g. annual high-level meetings) and proposes policy developments for the China–EU Policy Dialogue.



Under its Research & Innovation Partnership Instrument, there is funding from the EU for four years (2018–2021) (i.e. €6m). It is governed by an EU Delegation in Beijing and consists of four thematic lots, namely:

- **Lot 1:** Water Management and Ecological Security;
- **Lot 2:** Rural Water and Food Security;
- **Lot 3:** Water and Urbanisation; and
- **Lot 4:** Water and Energy Security.

There is also one horizontal activity (**Lot 5**) regarding the Coordination, Support to the EU Secretariat, Business & Innovation, Cross-cutting issues (SDG, Circular economy, Source2Sea).



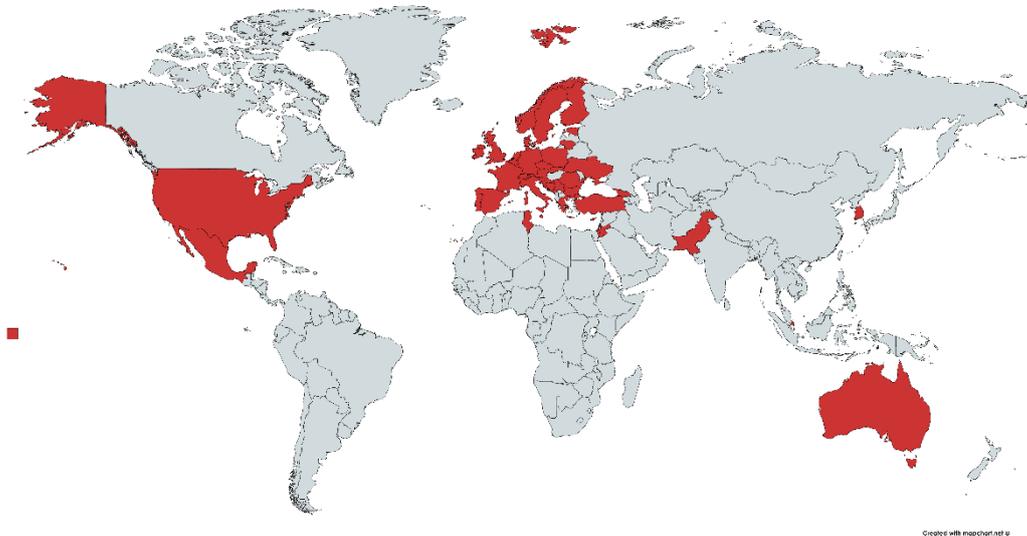
Seppo Rekolainen

One of the conclusions from the presentation was that, in the context of joint EU–China RDI projects, an agreement between the EC and China on a joint Evaluation Process was required. Water was accepted by the Chinese Ministry of Science and Technology as a priority for the China–EU Science Cooperation to be further discussed in November 2019 at the upcoming annual high-level CEWP conference.

NEREUS COST Action ES1403

Despo Fatta-Kassinou, University of Cyprus, presented the NEREUS COST Action ES1403 (*New and emerging challenges and opportunities in wastewater reuse*). NEREUS is a multidisciplinary network set up to determine which of the current challenges related to wastewater reuse are the most concerning in relation to (i) public health and (ii) environmental protection and how these can be overcome. The NEREUS COST Action is composed of 380 members, spread across 33 COST countries (Austria, Belgium, Bosnia & Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Israel, Italy, Lithuania, Luxembourg, Malta, Montenegro, Netherlands,

Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, UK), four Near Neighbour countries (Jordan, Georgia, Ukraine, Tunisia) and six International Partner countries (Australia, USA, South Korea, Singapore, Mexico, Pakistan).



Despo Fatta-Kassinou

Why have a consortium involving international cooperation?

The COST Action:

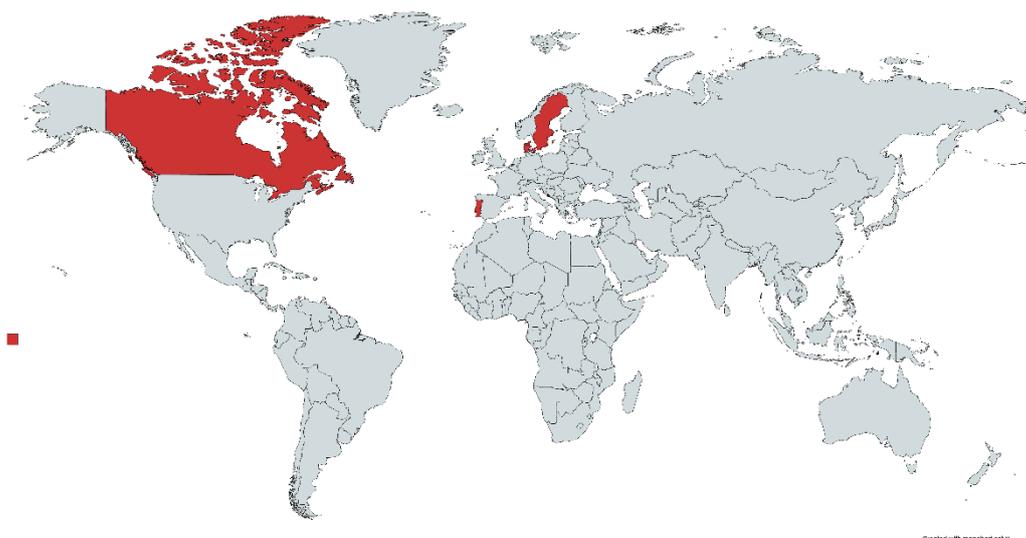
- Helps connect research initiatives across Europe and beyond.
- Enables researchers and innovators to grow their ideas in any science and technology field by sharing them with their peers.
- Does not fund research but does fund networking trips (travel and accommodation) within the Action (i.e. trainings, summer schools, workshops/conferences, short-term scientific missions, etc.).
- Resulted in more than 10 successful collaborative research grants, more than 40 scientific publications and contributions towards various EU policy initiatives.

<p>What were the challenges?</p>	<ul style="list-style-type: none"> • New countries joining during the course of implementation (relates to the problem of varying starting dates in other projects) • New people during the course of implementation (repeat discussions) • Funding was not enough. • Funding to be returned if not used after each granting period.
<p>Conclusions</p>	<ul style="list-style-type: none"> • All projects should be required to produce a brief document on how each project can contribute to/inform policy development. This should be made initially on a voluntary basis as a pilot and then compulsory.

2016 Water JPI LEAP project

Philippe Van Cappellen, University of Waterloo, gave a presentation on the project LEAP – Legacies of Agricultural Pollutants: *Integrated Assessment of Biophysical and Socioeconomic Controls on Water Quality in Agroecosystems*. The LEAP consortium is composed of four partners (Canada, Portugal, Denmark and Sweden). The project looks at the distribution and fate of nitrogen and phosphorus legacies in agricultural landscapes; and at their impact on water quality. Philippe indicated that the project team is currently responding to the following questionnaire:

- What is the added value to your research of participating in an international consortium?
- What are the main challenges and/or obstacles facing international research cooperation?
- Is there enough time, interest and funding to fully develop the international dimension of your research within LEAP?
- How can LEAP partners continue collaborating beyond the current funding cycle?
- How can local stakeholders benefit from international research initiatives and programmes?
- How can the diversity of local conditions in the partner countries advance your research?



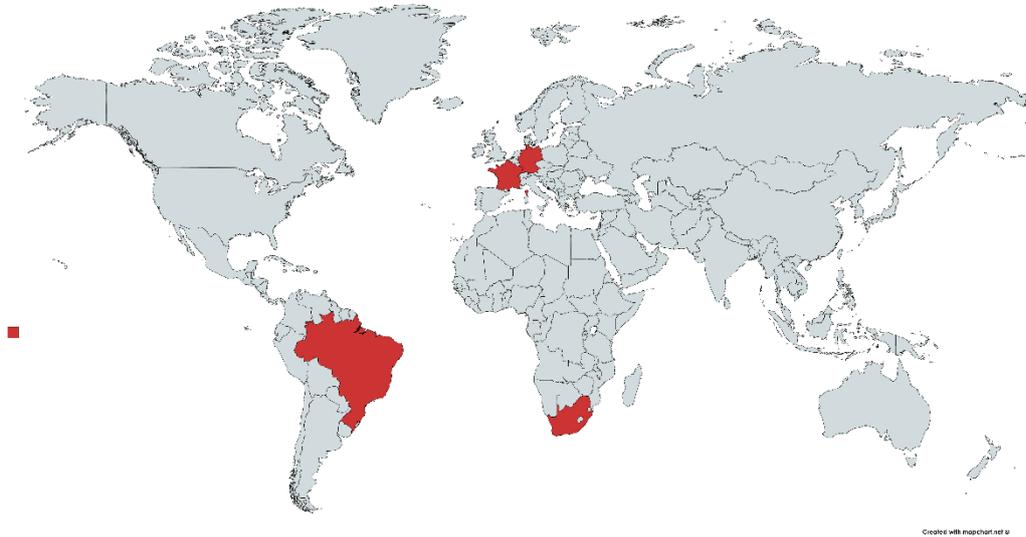


Philippe Van Cappellen

<p>Why have a consortium involving international cooperation?</p>	<ul style="list-style-type: none"> • Shared (global) issue, i.e. water quality impacts of agriculture (focus on eutrophication). • Shared hypothesis, i.e. agricultural nutrient legacies delay water quality improvements. • Shared end-goal, i.e. inform adaptive Best Management Practices portfolios that account for legacies. • Shared toolbox, i.e. data acquisition and analytics, models, comparative analyses. • Communication and student/staff exchanges. • Experience with the research exchange was highly productive and inspired more creative approaches to the research (direct result of different cultures coming together to address larger problems). • In general, the more diversity can be captured by the research, the more impactful it is.
<p>What were the challenges?</p>	<ul style="list-style-type: none"> • Maintaining long-term international collaborations requires time and financing, both which are in short supply.
<p>Conclusions</p>	<ul style="list-style-type: none"> • It is crucial, however, for the project researchers to cultivate local connections with stakeholders and to contextualise the collaborative research knowledge so that it addresses the stakeholders' (local) needs. • Funding agencies should clearly formulate their expectations for international cooperation. • It is important that the time and effort devoted to joint international research yield tangible added value for the researchers involved.

2017 Water JPI IDOUM project

Raquel Nogueira, Sao Paulo State University Institute of Chemistry, gave a presentation on the project: *Innovative, Decentralized and low-cost treatment system for Optimal Urban wastewater Management* (IDOUM). The IDOUM project aims at developing hybrid systems for wastewater treatment technologies to provide water of optimum quality for non-potable reuse. The IDOUM consortium is composed of four partners in Brazil, France, Germany and South Africa.



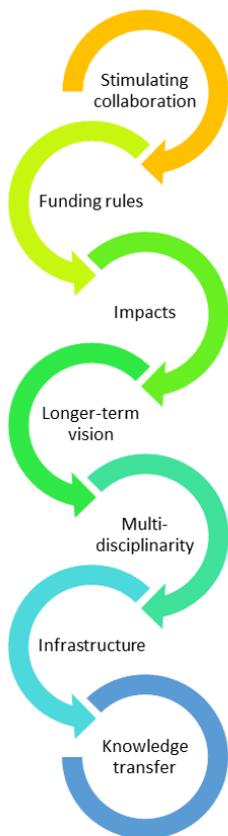
Raquel Nogueira

<p>Why have a consortium involving international cooperation?</p>	<ul style="list-style-type: none"> • Exchange of research experience. • Exchange of new ideas. • Improved cooperation for solution of global challenges. • Integration of complementary expertise. • Broadened scientific knowledge. • Decreased inequalities among different countries.
<p>What were the challenges?</p>	<ul style="list-style-type: none"> • Integration of specific methodologies and techniques. • Standardisation of analytical protocols. • Difficulties in long-distance communication. • Financial and environmental impact of travelling. • Writing the proposal: <ul style="list-style-type: none"> • Find common goals and complementary expertise.

	<ul style="list-style-type: none"> • Synchronise the editing of the proposal. • Budget restrictions. • Delay in implementation (consortium agreement signature).
Conclusions	<ul style="list-style-type: none"> • Delay in proposal evaluation by national funding agency (i.e. Brazil).

3.3. Discussion

A general discussion was facilitated by **Bettina Genthe**, South African CSIR – AfriAlliance. Some of the key points of the discussion are summarised below.



Bettina Genthe



2019 Water JPI Workshop: Discussion

Collaboration can be stimulated by having funding available to collaborate and share common challenges and research priorities. To identify possible collaboration, there is a need to know the key players. This can be facilitated by leveraging networks. COST meetings could be used as a partnering tool for the elaboration of future projects. The highest incentive for researchers participating in such projects is the generation of new ideas and science; the largest drawback is the issue related to funding/payments/budget cuts.

Research should have common rules. There is a need for a better alignment of the national funding rules, as well as increased communication between funding agencies during the pre-award and post-award periods. Budget cuts should be avoided, as should delays in issuing contracts and payments to researchers. Funding agencies should also consider **funding bottom-up research to simulate multilateral collaboration** and the generation of new research ideas. There is a need to provide seed funding to facilitate network meetings to discuss ideas. These could then result in joint applications for research projects. Funding agencies should consider providing funding more towards small grants to start such networks. In addition, having a strategy which fosters leadership skills and capacity building would be very useful, in particular for young researchers.

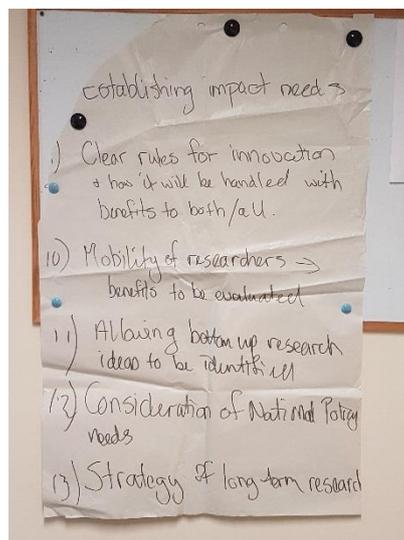
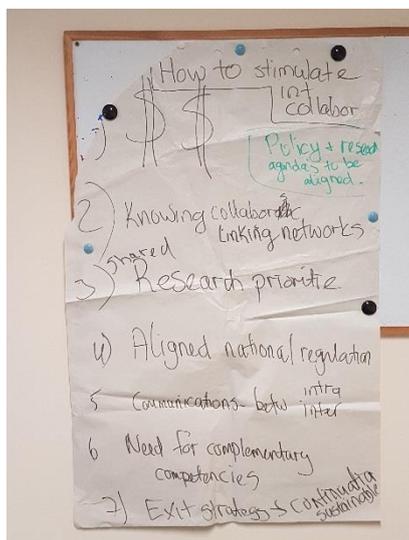
Handling innovation is more complex due to the competition aspect. There should be clear rules for innovation and how it is handled with benefits to all parties, in the context of international collaborations. It should be acknowledged that the exchange of knowledge/samples across countries may not always be possible.

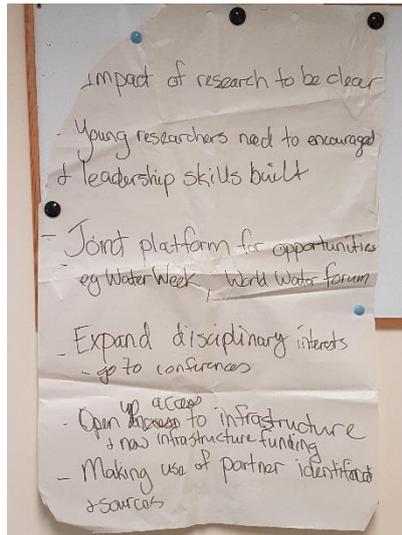
Complementarity of expertise and competencies is also a key component of any collaboration. Communication at all levels, i.e. across disciplines and sectors and within and between agencies, is needed. There is a need for a common strategy. Researchers and funding organisations/networks should attend/present at events/conferences outside their own areas ("**expand the disciplinarity**"). A joint platform or forum showcasing RDI funding opportunities could be considered. The benefits of the mobility of researchers (e.g. training) should be weighed against the environmental impacts of travelling. The co-benefits of working together need to be highlighted.

Research calls should have **clear expectations of impacts**. Expectations are tied to stakeholders' engagement. Each country should have a **longer-term strategy for international cooperation** research and innovation. Longer-term research programmes are required. There is a need to engage the decision-makers from the **beginning** and to translate the outputs of the research into **policy-maker-usable materials**. Policy needs at **local level** should be taken into consideration. How a research project fits in the wider context is important, e.g. is its aim to strengthen the agenda on international cooperation or policy development, or both? To ensure the commitment of key stakeholders, there is a need to understand who/what is driving the research priorities. It is important that the priorities and timelines of the research and policy agendas are better aligned. Projects should have concrete outputs such as a one-page summary, linking to the implementation of SDGs.

Research projects should have **an exit strategy** – what is the 'afterlife' of the projects, i.e. maintaining the project outputs (tools, website, etc.) once the project has completed. This is part of the Exploitation Plan of Horizon2020 projects but often Partners are not fully aware of the need from the Programme and desire from the research community to have a lasting legacy.

Access to infrastructure is also an opportunity for scientists when entering into a collaboration noting that access and International collaboration are criteria for all projects on the ESFRI (European Strategy Forum on Research Infrastructures) Roadmap and is key to the success of Environmental projects. The use of funds to develop local research infrastructure in countries where this is missing was also discussed. Ensuring that research data are transferred/maintained post project completion and transferred to the key people was mentioned in the context of a data observatory. A possible link with the COPERNICUS programme was also suggested.





3.4. Breakout Session

During the breakout session, the attendees were divided into four groups and asked to consider the following three questions:

- the advantages of participating in/coordinating RDI projects involving international cooperation;
- common issues encountered when participating in/coordinating RDI projects involving international cooperation;
- possible solutions.

Advantages of participating in/coordinating RDI projects involving international cooperation

The following provides a summary of the breakout group discussions:

- **International cooperation is good for innovation.** Benchmarking, sharing of infrastructure, generalisation of the research results, complementarity, encouraging the trans/multi-disciplinarity of the research and innovation.
- **International cooperation provides access to funding and a critical mass of researchers.** For funders, international cooperation allows for maximising the use of funding and institutional capacity.
- **International cooperation is needed for solving global issues. It allows for testing the transferability, robustness through collaboration.** International cooperation is needed for testing and demonstrating in relevant geographical and climate areas (i.e. solutions are fit for purpose in the local context). This will ensure that the solutions being developed are adopted and are relevant to the local area/region. It also provides success stories at local level for convincing/encouraging the adoption of a solution.
- **International cooperation is based on mutual benefits, trust and knowledge exchange: “twinning of experience”.** International cooperation allows for common problems to be addressed with mutual benefits. There is a feel-good factor in participating in such collaboration. It encourages diversity, knowledge, experience and idea development. It facilitates freedom of choice and technologies; and the sharing of experience and data and culture. International cooperation should be co-producing.
- **International cooperation provides mobility and career development (i.e. education to become senior researchers) opportunities for young researchers.** It also provides the opportunity to widen the networking opportunities.



① Solving global issues require R&I

- Generalisation of research results
- Critical Mass, funding/pop
- Complementarity
- appealing for recruiting research
- testing or demonstrating in relevant geographical areas
 - climate areas
- Success stories for convincing
 - learning curve (young career development researchers ...)
 - capacity building & entrepreneurship
- Sharing infrastructures
- Developing internal (EU) policies require R&I in diverse forms or cultural contexts

②

① Advantages

KNOWLEDGE / EXPERIENCE / REAL TRANSFER RESEARCH RESULTS

DATA → "CRASH-TESTING" THROUGH CO-COOPERATION
DISCOVER MORE IN A DIFF. CONTEXT

DIFF. CONDITIONS AN ADVANTAGE

BEYOND "POLITICS"

CO-PRODUCING - NOT JUST "SHARING"

YOUNG RESEARCHERS ESP. OPPORTUNITIES
→ Education to become senior researchers

MORE FUND-RAISING OPPORTUNITIES

③

① Advantages

From Fundamentals → Program → Innovation too!

MAX. funding

Institutional capacity

② Integration of areas / region
Common Problems → MUTUAL BENEFITS

③ Need to be fit for purpose

④ Adaptation of developing solutions relevant to region

⑤ Research / Innovation Differences per region / countries

⑥ Mutual Benefit → Knowledge Exchange
"Technical competence"
China + other areas

⑦ Good for INNOVATION

⑧ More time for LONG TERM Exchange
of young researchers + PART OF THE ESSC

④

"Feel-good" Factor

Diversity

Students widen the networking opportunities

Better context

Trans / Multi-disciplinary

Local expertise in a topic does not know the local conditions elsewhere

Access to funding

Sharing experience and data

Sharing culture

Solving problems of a global importance

Optimising of frameworks / resources

Common issues encountered when participating in/coordinating RDI projects involving international cooperation

The following provides a summary of the breakout group discussions:

- **Communication.** Issues of direct communication: different languages; different time zones; idiomatic use of language.
- **Funding models and grant awards.** Inconsistencies of grants/grant agreements; different timing in terms of national regulations and processes, funding confirmation and payment and reporting; funding of non-EU partners (specific different national thresholds); partner distribution; need common evaluation criteria between EU Member States and third countries; funding models (common/virtual pot); harmonisation of the procedures from the funders (e.g. evaluation, open access requirements, data sharing agreements, etc.); different starting dates; budget cuts of third country partners, renegotiation after evaluation; alignment of personnel costs (person-months/daily rates).
- **Competition between different funding programmes** (i.e. the largest? the easiest? the more successful?).
- **Greater time demands associated with international research projects.** Harmonisation of working schedules; Time management between national/international projects.
- **Greater risks associated with projects:** Commitments from the partners; carbon footprint of travelling for international cooperation; understanding the local cultural context and beliefs.
- **Different contexts.** Legacies issues in some African (and most probably other beyond Europe) countries, political context, local administrative practices, different cultures.
- **International property rights (IPR) issues and how to handle new IPRs in an international context.** Managing IPRs and SMEs' participation; need for common processes and procedures; demand-driven for transferring innovation/trade-offs between competition and cooperation; required greater balance between private and public cooperation; competition between companies and research institutions in China; Technology Readiness Levels of 6–7. Demonstration sites scales – clearer impact and upscaling required as part of calls.



Carbon Footprint of travelling to Jaf Gap

Direct Communication
 → Time zone is an issue
 → Time zones

Electronic use of language
 → Project Risk is greater (people moving to delivery)

Harmonize working schedules (incl. family life)

Harmonize procedures from the funders
 e.g. Evaluation
 Open Access for EU / not for India
 Data Sharing Agreements
 IIP issues and how to handle new IIP
 at starting dates (clerk countries)
 Home / JIPs

Commitment from partners

Understanding Cultural Context/beliefs
 the local

Political context
 Local Administrative practices

Budget cuts / Re-orientation after Evaluation

(2) COMMON ISSUES

TIMING → NATIONAL RESS. → ALSO AFFECTS FUNDING
 → REPORTING

FUNDING - NON - EU PARTNERS
 - PARTNER DISTRIBUTIONS → shared resources

FUNDING - PRIVATE SECTOR PARTICIPANTS

STILL A NEED TO CLARIFY SHARED PRIORITIES - HOW TO ALIGN...

How to engage with Policy Makers

2] Common issues

EU vs. Beyond Europe Cooperation
 ⇒ common pot or
 1 funder funding/recovering from the others "

Evaluation criteria:
 Common Evaluate vs. Evaluation

IIP / S/ES in IC
 # Common process / procedures.
 + Demand driven for transferring model
 + trade-offs between competition / control
 + Van. Youth / established CSIs
 # mixed → subgr. of costs!

in language a culture have consuming l. to be funded

(2)

time management between
 - National projects
 - international projects

Competition between funding programmes:
 ⇒ the largest? the easiest?
 ⇒ the more successful?

Advantages ISSUES

1) Greater BALANCE
 Private + Public
 COOP Chinese equipment / involve / include / see

2) COMMITMENT

3) Don't set the same
 PPP
 Inconsistent with grants
 see PPP in diff. countries
 e.g. ZA + India alliance

4) Legacy issues in Africa

5) China - Company v Research
 RELEVANT Inst. PLEASE

6) TIC NOT? Demonstration from S/ES
 Scale Not Defined + Depends on
 Call + Needs to tally with call size
 → W20 Supply v W20E
 IMPACT + UPDATE → see CCC/PAN/BE/10

Common issues encountered when participating in/coordinating RDI projects involving international cooperation

The following provides a summary of the breakout group discussions:

- **Having a shared global research & innovation agenda.** Connection to the UN SDGs and UN agencies; connecting climate change and water challenges.
- **Better communicating research & innovation results.** Exchange of people – innovation mobility: have a community of innovators, addressing gaps between innovation communities in different places (business hubs?); Policy-makers: “Show-me” approach – considering the Smart Specialisation Strategy, translation of the research outputs; project deliverables to include specific contribution to policy (consider including a policy analyst in projects for guidance/advisory function); provide access to science to policy translation).
- **Mapping the existing knowledge for concentrating on the knowledge gaps.** Creation of synthesis/interface – knowledge hubs with knowledge brokers.
- **RDI funding.** Learning from past experience, i.e. funders to consult with researchers funded on relevant past calls to learn from their experience; dealing with unforeseen expenses and delays – more flexibility required in terms of reporting back these expenses; discussion of the proposed funding instruments with the non-EU countries; more flexibility is required in relation to the national regulations); learning from experience and updating the national regulations.
- **Management of risks/contingencies.** Share experience of “possible delays/extra budgets” and build these into the contingencies; be aware that some partners may not be able to deliver and that the grant agreement may need to be amended (management of risks/contingencies).
- **Local trust.** Have a trusted local partner; use networking grants to build trust at local level; be aware of the language you are using and avoid idioms.
- **Find a funding instrument that bridges the gap between basic/applied research and demonstration.** Planning on how to scale up the solutions being developed (built into a sustainability plan, exit strategy – funding sustainability).



③ POSSIBLE SOLUTIONS

INNOVATION MOBILITY

A COMMUNITY OF INNOVATORS
↳ address ^{specific} innovation communities in diff. places - Sweden & Africa - Business Hubs?

POLICY MAKERS: "show me"

- SMART SPECIALISATION STRATEGY
- COMMUNICATIONS - Source: lot in translation

FUNDING:

- ARE THE FINANCIAL INSTRUMENTS DISCUSSED IN NON-EU COUNTRIES?
- MORE FLEXIBILITY IN FUNDING (NOT RESS.)

Limitations of NATIONAL REGULATIONS

- ↳ DELIVERABLE TO INCLUDE - CONTRIBUTION TO POLICY
- ↳ INCLUDE POLICY/IMPACT IN PROJECTS? / GUIDANCE
- ↳ ACCESS TO POLICY TRANSLATION

③ POSSIBLE SOLUTIONS

① Find an instrument to bridge between Basic R&D + Policy/Innovation

② Plan on how to 'scale up'

- (a) Build into sustainability PLAN
- (b) What does this mean PPP?
- (c) Funding Sust. PLAN

③ People Exchange

③

Solutions:

Get the researchers funded in previous calls to talk to the funders of next call and funders to listen.

Local → Have a trusted local partner network to build the trust

(Networking grants are great opportunities)

Share experience of

- possible delays/extra handouts - contingencies so that it can be taken on board
- unforeseen expenses/delays
- explaining to the EC/funders when claiming back these expenses

Use of idiomatics: be aware of it

Kick-off - along finger

Push-back - putting things

Commitments:

Awareness that some partner may not be able to deliver and contract may need to be changed

(Project Risks) and how they can be handled

③ Solutions

① Money = Your taxes!

② Having a Global R&I Agenda ⇒ "Water" Panel (vs. Climate). "Water architecture"

- Connect to UN SDGs
- UN agencies

③ Communicating in a proper way

R&I reality

connect C.C. & water challenges

⇒ mapping the existing knowledge? for concentrating on apps ⇒ synthesis knowledge hubs ⇒ interface

④ "Knowledge brokers"

how to institutionalise this?

4. Next Steps

As for the first 2018 Water JPI workshop, it is hoped that knowledge exchange and the experiences of those already participating in international cooperation projects or funding initiatives will educate and inform others to do so, by answering the following questions:

- What are the benefits?
- How best to go about it?
- What to do differently?
- What are the pitfalls to avoid?

This second workshop was particularly worthwhile in terms of providing inputs from another perspective, i.e. research performers, as well as in terms of providing the perspective from both EU Member States/Associated Countries and third countries.

The outcomes from the workshop will feed into the development of a common strategy for international cooperation with other European initiatives.

The third and final workshop will be targeted at members of the research community involved in international cooperation initiatives (both from EU Member States and from third countries) as well as representatives of the EC engaged in activities involving international cooperation. It will take place in late 2020 and will be used to finalise the draft common strategy and vision on international cooperation.



Annex 1: List of Attendees

First Name	Surname	Organisation	Country
Ione	Anderson	Inter-American Institute for Global Change Research (IAI) (Belmont Forum)	UY
Viorica	Boaghi	NARD	MD
Jacob	Carstensen	Bioscience, Aarhus University	DK
Gaetano	Casale	IHE Delft Institute for Water Education; WssTP	NL
Nguyen Xuan Quang	Chau	Institute of Environment and Resources, Vietnam National University – Ho Chi Min	VN
Serge	Chiron	IRD-Montpellier University	FR
Dominique	Darmendrail	ANR	FR
Rita	Dhodapkar	CSIR-NEERI	IN
Siobhan	Egan	Environmental Protection Agency	IE
Jeremy	Gault	MaREI Centre – Environmental Research Institute – University College Cork	IE
Bettina	Genthe	CSIR	ZA
Prisca	Haemers	IENW	NL
Juliane	Huth	German Aerospace Center (DLR)	DE
Eleanor	Jennings	Dundalk Institute of Technology	IE
Bjørn Kaare	Jensen	GEUS	DK
Despo	Kassinis	University of Cyprus	CY
Batkupar	Kharkongor	IPAG Business School	FR
Antonio	Lo Porto	Water Research Institute (IRSA-CNR)	IT
Xueqiang	Lu	Nankai University	CN
Kevin	McGuigan	RCSI	IE
Ludmila	Minchevici	NARD	MD
Marco	Orlando	PRIMA	ES
Konstantinos	Panagiotou	University of Cyprus	CY
Marie	Pettenati	BRGM	FR
Raquel	Pupo Nogueira	UNESP (São Paulo State University)	BR
Octavi	Quintana Trias	PRIMA Foundation	ES
Maria-Helena	Ramos	Irstea	FR
Seppo	Rekolainen	Finnish Environment Institute	FI
Ali	Rhouma	PRIMA	SP
Nuria	Ruiz	Agence Nationale de la Recherche (ANR)	FR
Peter	Schröder	Helmholtz Zentrum Muenchen GmbH	DE
Lisa	Sheils	Environmental Protection Agency	IE
Gabriela	Soreanu	Gheorghe Asachi Technical University of Iasi	RO
Andrew	Thatcher	University of the Witwatersrand	ZA
Stephanie	Thiebault	CNRS (Belmont Forum)	FR
Kata-Riina	Valosaari	Academy of Finland	FI
Philippe	Van Cappellen	University of Waterloo	CA
Alice	Wemaere	Environmental Protection Agency	IE

Annex 2: Programme

2019 Water JPI Workshop on International Cooperation Towards a Common Strategy – Workshop 2 Programme

Date: Tuesday 25 June 2019

Venue: Espace Vocation, 22, Rue René Boulanger 75010 PARIS (France) ([link to map](#))

9.30 am–10 am: Registration

10 am–10.10 am: Welcome by the Water JPI Coordinator
Dominique Darmendrail, Agence Nationale de la Recherche, France

10.10 am–10.15 am: Introduction to the Workshop
Alice Wemaere, Environmental Protection Agency, Ireland

Plenary Session: Sharing Experiences of International Cooperation

Chaired by **Octavi Quintana**, PRIMA Foundation Director/Director of the Secretariat

10.15 am–10.30 am: Experience from coordinating the Horizon 2020 **WATERSPOUTT** project with **Africa**
Kevin McGuigan, RCSI, Ireland

10.30 am –10.45 am: Experience from **India** (Horizon 2020 **PANIWATER** project)
Rita Dhodapkar, National Environmental Engineering Research Institute (NEERI), India

10.45 am–11 am: Experience of participating in a **BONUS** project with **Russia**
Jacob Carstensen, Aarhus University, Denmark

11 am – 11.15 am: Experience of the **China–EU** Platform R&D projects
Seppo Rekolainen, Finnish Ministry of Agriculture and Forestry, Finland

11.15 am–11.45 am: Coffee Break & Networking

11.45 am – 12 pm: Experience from the **NEREUS COST Action**
Despo Fatta-Kassinou, University of Cyprus, Cyprus

12 pm–12.15 pm: Experience from **Canada** (2016 **Water JPI LEAP** project)
Philippe Van Cappellen, University of Waterloo, Canada

12.15 pm–12.30 pm: Experience from **Brazil** (2017 **Water JPI IDOUM** project)
Raquel Nogueira, Sao Paulo State University Institute of Chemistry, Brazil

12.30 pm–1.15 pm: Q &A Session & Panel Discussion

What should the funders of projects involving international cooperation keep in mind/address when preparing/launching Joint Transnational Calls?

1.15 pm – 2.15 pm: Lunch Break

Breakout Sessions

Chaired by **Bettina Genthe**, South African CSIR – AfriAlliance, South Africa

2.15 pm–3.45 pm: Breakout sessions (30 minutes per question):

- **Question-1:** Advantages
- **Question-2:** Common issues encountered when participating in/coordinating RDI projects involving international cooperation

3.15 pm – 3.30 pm: Coffee Break

- **Question-3:** Possible solutions

4 pm: Rapporteurs from breakout sessions and wrap-up