Water Works 2015-2020 in Support of the Water JPI ERA-NET Cofund Action
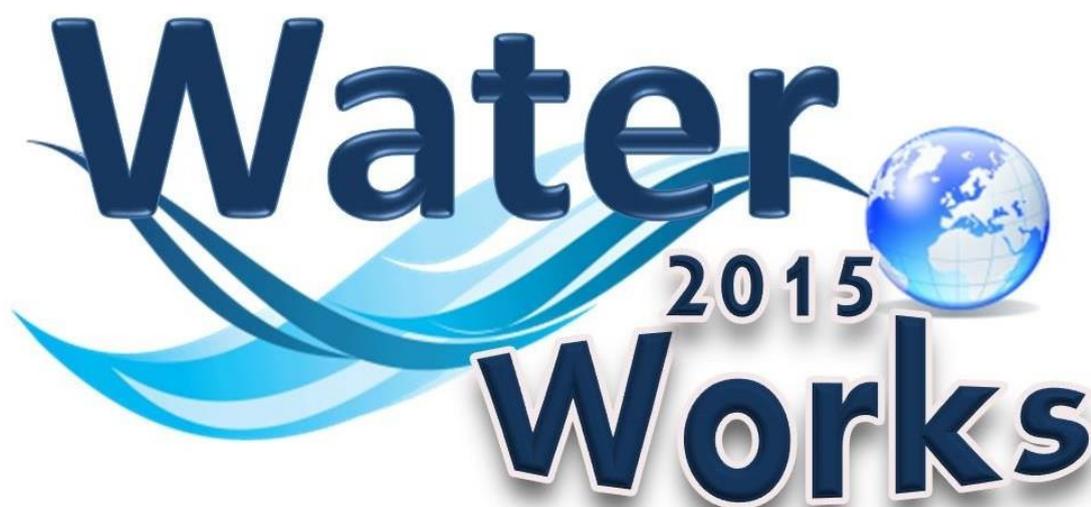
WATER-3-2015: Stepping up EU research and innovation cooperation in the water area

WaterWorks2015 – 1st Water JPI Mobility and Infrastructures Workshop - Proceedings

(WP7, Task 7.2)

June 2018

Table of Contents

OUTPUT SUMMARY	
Project Information	
Project Title:	Water Works 2016-2020 in Support of the Water JPI (WaterWorks2015) - Sustainable water use in agriculture, to increase water use efficiency and reduce soil and water pollution
Project Acronym:	WaterWorks2015
Call Identifier:	WATER-3-2015: Stepping up EU research and innovation cooperation in the water area
Starting Date:	01/01/2016
End Date:	31/12/2020
Web-Site Address:	http://www.waterjpi.eu/
Coordinator:	Maurice HERAL
Management Team:	Dominique DARMENDRAIL, Juliette ARABI, Richard TAVARES, Simon COULET, Nuria RUIZ, Elçin SARIKAYA
E-Mail:	WW2015secretariat@agencerecherche.fr
Deliverable Title:	WaterWorks2015 – 1st Water JPI Mobility and Infrastructures Workshop - Proceedings
Deliverable Number	D7.5
Work Package:	WP7: Additional Activities on Implementation
WP leader:	National Institute for Environmental Protection and Research (ISPRA)
Nature:	Workshop Proceedings
Dissemination:	Public
Editor(s):	Alessandro Lotti
E-Mail(s):	alessandro.lotti@isprambiente.it
Telephone Number:	+393289023288
Date of Delivery:	11 December 2018

Disclaimer

This publication [communication] 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.

Acknowledgments

List of abbreviation

- ANR – Agence Nationale de la Recherché
- APRE – Agenzia per la Protezione della Ricerca Europea
- CNR ISMAR – Consiglio Nazionale delle Ricerche Istituto Scienze MARine
- COST – COoperation in Science and Technology
- DAAD - Deutscher Akademischer Austauschdienst
- ERIC - European Research Infrastructure Consortium
- ERRIS – Engage in the Romanian Research Infrastructures System
- ESASTAP - Strengthening Technology, Research and Innovation Cooperation between Europeand South Africa
- ESFRI - European Strategic Forum for Research Infrastructures
- EWI - Economie, Wetenschap en Innovatie van de Vlaamse Overheid
- INRA - Institut national de la recherche agronomique
- ISPRA - Istituto Superiore per la Protezione e la Ricerca Ambientale
- ITN – Innovative Training Network
- JPI - Joint Program Initiziative
- JPI - Joint Program Initiziative
- LTER – Long Term Ecological Research Network
- MSCA - Marie Sklodowska-Curie Actions
- NATO – North Atlantic Treaty Organization
- NCP – National Contact Point
- OECD – Organisation for Economic Co-operation and Development
- RISE - Research and Innovation Staff Exchange
- SRIA – Strategic Research and Innovation Agenda
- SRIA – Strategic Research and Innovation Agenda
- UEFISCDI - Unitatea Executivă pentru Finanțarea Învățământului Superior, a Cercetării, Dezvoltării și Inovării
- WFD – Water Frame Directive
- WssTP - Water Supply and Sanitation Technology Platform

WaterWorks2015 – 1st Water JPI Mobility and Infrastructures Workshop - Proceedings

Rome, Italy 21 June 2018

Executive Summary

This report contains the proceedings of the first Mobility and Infrastructures Workshop Water Joint Programming Initiative (Water JPI). In its Implementation Plan, the Water JPI has identified Mobility and Infrastructure, as other relevant instruments, in order to support Water JPI community and its network within the additional activities of the ERA-NET Cofund program WaterWorks2015. Mobility actions can involve capacity transfer of individual persons working or visiting a place which is not the one they belong to (foreign Institutes, other sectors); or even the exchange of larger groups, e.g. among research infrastructures. The platform aims to be an important tool for supporting mobility and infrastructures actions within the entire water community.

The workshop took place in Rome on the 21nd of June 2018, This workshop provided the occasion for participants to discuss a number of issues, analyzing different example of mobility and research infrastructures actions and related platforms. In particular, the objectives of the workshop were:
- Developing the mobility and infrastructures activities within the context of the Water JPI
- Analysis of the results from surveys on mobility and infrastructures platforms
- Analysis of possible alignment of national and European tools through coordination between national and EU programmes s to facilitate researcher mobility
- Analysis of the possibilities to cooperate on mobility actions with other platforms such as the Euraxess Platform
- Exploring Infrastructure schemes promoting linkages between the Water JPI and European and national Infrastructures programmes (i.e. ESFRI) and platforms (i.e. MERIL)
- Brainstorming on the platform prototypes
- Develop synergies with existing programmes and existing platforms

During the workshop, a lot of input and contribution were collected and elaborated in order to identify next steps , in particular relating to the platform developing.

Introduction to the Water Joint Programming Initiative

The Competitiveness Council of the European Union agreed on the launch of Joint Programming Initiatives (JPIs) in 2008. JPIs were at the time conceived to support the new means of European cooperation in response to the perceived limitations of the policy instruments available at the time. Even though the Framework Programme had already achieved considerable success, as measured by the number of participations and collaborative projects, the lack of collaboration and coordination between national public Research, Development and Innovation (RDI) programmes had been reported within the RDI policy arena.

The Water JPI "Water Challenges for a Changing World" (http://www.waterjpi.eu/) was launched in 2011.

> **The mission of the Water JPI is to strengthen water RDI collaboration amongst Member States in order to spur Europe's leadership and competitiveness in the water sector. To this end, the Water JPI will seek opportunities to pool and mobilise appropriate skills, knowledge and resources to offer solutions that address the challenge of "Achieving Sustainable Water Systems for a Sustainable Economy in Europe and Abroad".**

For this purpose, the Water JPI looks at: a) aligning the national RDI agendas of member countries, reaching an effective and sustainable coordination of European water RDI and optimising their scope and the resulting funding efficiency; b) involving water end-users for effective RDI results uptake; c) increasing the critical mass of research programmes as a way to multiply the scientific impact of European research; d) increasing cooperation among European water actors; and e) developing a catalogue of jointly programmed activities whose global budget amounts to at least 20% of the total water RDI budget of partner programmes.

The Water JPI membership has grown in November 2017, with the integration of two new member countries: Latvia and South Africa. Currently with twenty-two partner countries and three observers, the membership accounts for 88 per cent of all European public RDI annual expenditure on water issues. One of the main key achievements of the Water JPI, since its approval by the European Member States in December 2011, is the high level of partner involvement in implementing joint transnational calls.

As a result of coordination activities, Water JPI member countries have approved as of June 2016, a common Strategic Research and Innovation Agenda (SRIA) that lays down RDI priorities for the following 5 scientific themes:

- Maintaining Ecosystem Sustainability;
- Developing Safe Water Systems for the Citizens;
- Promoting Competitiveness in the Water Industry;
- Implementing a Water-Wise Bio-Based Economy; and,
- Closing the Water Cycle Ga

Meeting Venue

The meeting was organised by ISPRA, Task 7.2 leader within WaterWorks2015 WP7 (JPI project supporting this activity of the Water JPI) and hosted in NH Collection Roma Centro Hotel (Ex NH Leonardo Da Vinci Hotel) - Via dei Gracchi, 324, 00192 Rome

Welcome and Opening

The Welcome address was delivered by the Water JPI Coordinator, *Dominique Darmendrail* (ANR).

Dominique Darmendrail introduced the Water JPI activities with a focus on the role of research infrastructures and mobility within the Water JPI as important issue for it. In particular Dominique highlighted the role of research infrastructures (RI) in relation to supporting projects that require access to infrastructures for demonstration, validation and integration for longer term studies. Furthermore, implementation of the SRIA requires access to research infrastructures for a transdisciplinary and cross-sectoral approach.

She continued with the steps already completed and to do in order to reach the objectives (review of existing RI, financial support mechanism, possible certification for RI etc.). Should the Water JPI play a role in oversight related to coordination / coherence and complementarity of existing major RI, facilitating contributions of existing infrastructures and observatories in Water JPI funded research projects and/or providing studies on key issues of general interest for research infrastructures**?**

In May 2018, the Internal Working Group was launched with the aim to support the internal discussion process, in cooperation with other JPIs and national contributors. The main aims of the working group is to discuss and identify possible supports for RI through the Water JPI activities, such as identifying gaps in research infrastructure availability, etc.

Giuseppina Monacelli (ISPRA) continued with a focus on work done and next steps. In particular illustrating the previous actions that include:

- A review of RI definitions (i.e. ESFRI definition) and review of existing RIs in relation with water challenges and platforms for research infrastructures;
- At national level, the Italian Roadmap for RI was illustrated;
- A review of mobility actions at national and international level and review of platforms for mobility actions, with a specific focus on Euraxess.

As next steps, the 2nd workshop of mobility and infrastructures in 2019 and the development of the Water JPI platforms were introduced.

European Strategic Forum for Research Infrastructures (ESFRI)

The next session focused on ESFRI and related RI. **Gert Verreet**, **policy advisor of Flanders Department of Economy, Science and Innovation (EWI)** and a member of ESFRI Strategic Working Group Environment for Belgium, introduced the new [ESFRI](#) Roadmap 2018 which is under discussion and, after an overview on what is ESFRI - a bottom-up process as participated by member states - the discussion continued on the ESFRI missions:

- Support a coherent and strategy-led approach to policy-making on RI
- Facilitate multilateral initiatives
- Establish a European Roadmap for RI
- Ensure the follow-up of implementation of already on-going ESFRI projects.

In the ESFRI Environmental domain, RIs are mostly 'distributed'. A distributed RI consists of a **Central Hub** and interlinked **National Nodes** and needs to:

- have a **unique specific name and legal status and governance structure** with clear responsibilities and reporting lines, including international supervisory and appropriate external advisory bodies;

- have **legally binding attributions** of coordination competences and resources to the Central Hub;
- have a **common access policy** and provide for a **single point of access** for all users with a support structure dedicated to optimise the access for the proposed research;
- have **a user programme** designed to absorb a considerable part of the total capacity of the RI;
- identify and agree upon relevant and measurable **Key Performance Indicators (KPI)** addressing both excellence of scientific services and sustainability of operation;
- have a human resources policy adequate (etc….) to encompass hiring, equal opportunities, secondments, **education and training**;
- define a **joint investment strategy** aimed at strengthening the RI through the Nodes and common/shared facilities.

Gert Verreet focused also on key criteria for the scientific cases as scientific excellence, pan-European relevance, socio-economic impact and e-need in terms of data management within ESFRI. What are the future gaps, challenges and needs? Europe needs a dense, highly instrumented super-sites network of freshwater sources monitoring, as well as simulation and experimental platforms. Lake, river and underground freshwater monitoring and experimental super-sites should serve as calibration, validation and development services for remote sensing applications as well as for ecosystem and for ecosystem service modelling. For the comprehensive analysis of the changes in the aquatic ecosystems an integrated basin approach is necessary to understand the impact of different drivers and to find measures for sustainable water resources management. Project DANUBIUS-RI, with its structure consisting of the four Nodes (Observation/measurements – Analysis – Modelling – Impact) is aiming to bridge the aforementioned gaps, at a basin-wide, river–to–sea approach. The Water JPI Strategic Research and Innovation Agenda and the WssTP Strategic Innovation and Research Agenda provide frameworks for collaborative research and innovation efforts. The Water JPI intends to increasingly play a role in facilitating use of relevant RIs, whereas for example WssTP advocates the use of "real life living labs" where innovative solutions can be tested hence facilitating the scaling up of solutions.

Research infrastructures

LifeWatch ERIC

Alberto Basset (University of Salento) brought the experience from ESFRI [LifeWatch ERIC](), a European and distributed Research Infrastructure, as Intergovernmental Consortium, operation through common central facilities and thematic centres. LifeWatch-ERIC is the European Infrastructure supplying e-Science research facilities for scientists increasing our knowledge and deepening understanding of biodiversity organization, ecosystem functions and services, with the goal of supporting civil society in addressing the key planetary challenges. LifeWatch – ERIC provides access to ICT resources, services & tools for all researchers, enhancing computational power through remote resources and improving data management and knowledge.

Some common facilities provided are:

- Distributed observatories/sensor networks;
- Interoperable databases or data-networks;
- High Performance Computing (HPC), Grid, Cloud and Big Data technologies;

- Apps for data visualization, analysis and modeling

In general, the aim of LifeWatch-ERIC is to connect with researchers and stakeholder communities creating a network and building new services, Vlab and VRE addressing RI and JPI needs.

Danubius-RI

Francesca De Pascalis (CNR – ISMAR) talked about the experience from Danubius-RI the international Centre for Advanced Studies on River-Sea Systems. It is a pan-European distributed research infrastructure dedicated to interdisciplinary studies of large river-sea systems. River-sea systems comprise whole river basins and coastal seas and can be understood only by considering them as complex but integrated systems.

Danubius-RI aims to understand better freshwater-marine systems and transitional environments (e.g. delta, estuary, lagoon), ensuring a comprehensive approach. In 2016 Danubius-RI was included into ESFRI Roadmap and into the EUSDR Flagship project (EU Strategy for the Danube Region).

Francesca De Pascalis showed the main topics of Danubius-RI agenda, and compared these to the Water JPI SRIA: Danubius-RI Science and Innovation Agenda is very well connected with Water JPI SRIA topics.

Danubius-RI is composed by:
- Supersites all over Europe
- Data Centre (Romania)
- Thematic Nodes (Italy, UK, the Netherlands, Germany)
- Technology transfer office (Ireland)
- Hub (Romania)

All thematic nodes as supersites will use the same kind of protocols, models, procedures in order to guarantee the quality of work done across all RI activities. Future strategy of Danubius-RI aims to develop mobility within Danubius-RI itself through Danubius-RI HRS4R. It will also include the analysis of the outcome of "Accelerate" project in order to share best practices.

Danubius-RI is also building a strong synergy with Water JPI and the first step has been the support letter by the Water JPI.

European LTER (eLTER)

Michael Mirtl introduced The **European LTER (eLTER)**, its components, status and perspectives of collaborative Research Infrastructure development. ILTER - Integrating and coordinating key elements of environmental systems research is a strategic cooperation at global scale which includes around 850 sites, of which the European ones, involved in eLTER.

Each site is a site at small scale highly distributed and producing a wide range of earth observation data.

The eLTER builds on national networks (26 countries, 450 LTER Sites and 35 LTSER Platforms), and H2020 projects involving 21 LTER countries and 28 partners. The current process for the ESFRI RI, eLTER, already involves 17 countries. eLTER has a special focus on societal Grand Challenges, Biodiversity and Ecosystem Services, scientific concepts, in-situ design, standards, tools & services will in the end look at the impact of the global level partnerships and process to European business.

Michael Mirtl introduced the different approach and models for systems based on cross disciplinarily. **eLTER provides** basic infrastructure, integrated baseline observation, user access to, in-situ sites and data to promote:

- Integration from local to global scales

- integration of natural and social science
- cross-sector stakeholder collaboration
- Relevant knowledge for decision-making

LTSER Platforms are "regional areas" where the whole system (atmosphere, biosphere, hydrosphere, geosphere) is integrated but also a scheme for collaboration and societal engagement (socio-economic sphere).

ERRIS Platform

Ioana Spanache (UEFISCDI) introduced the ERRIS Platform – Engage in the Romanian Research Infrastructures System the registry of Romanian Research Infrastructures, a very interesting example of national research infrastructures platform, developed by **UEFISCDI**.

The platform includes about 1622 infrastructures/facilities, more than 8300 research services and about 22300 equipment installations. Users are from universities, private companies, national institutes, entrepreneurs and the research world.

In general ERRIS platform provides information about equipment, services available, technical and scientific services. Ioana Spanache showed all the functionalities of the platforms, including different type of research (by list or by map) and the possibility of requesting access to some of services through the platform itself. A video tutorial showed all characteristics explained before. The ERRIS platform is a very interesting type of platform for Research Infrastructures with functionalities and services often not included in other platforms. One of these functionalities is the possibility to request access to services and facilities through the platform itself.

Eurocean Platform

Gert Verreet on behalf of **Jacqueline Kay Wood** for **the JPI Ocean**, introduced the **Eurocean Platform**. JPI Ocean is composed by 21 member countries with the mission of providing a strategic platform for a long-term approach to marine and maritime research and innovation to increase impact of investments. The issues of SRIA are linked to UN SDGs Goals.

The SRIA is composed by three different cross-cutting issues:

1. Science – policy interface
2. Human capacity building
3. Infrastructure: shared use and management

Gert Verreet showed some examples of ongoing actions showing different ways JPI oceans can work, as:

- Microplastics –Example of countries coming together without extra FP funding to address a real problem;
- Observations network – linking scientists, industry and metrology community to improved quality of measurements at sea;
- Munition in sea – example of shared issue, bringing the latest science and technology developments to the practitioners;
- MARTERA – example of where existing H2020 tools can be used such as ERA-NET cofunding to address shared issues;
- North Sea project – combining new environmental monitoring surveys on the back of existing regular ICES fisheries monitoring requirements;

There are different actions ongoing at JPI Ocean level, a workshop is being planned with Management Board and key infrastructures with the aim to discuss if the right RI are able to deliver the JPI Oceans Strategic Research and Innovation agenda; EOOS pilot actions; to consider at JPI Oceans level of inputs and priorities for ESFRI roadmap refresh and infrastructure needs in Horizon Europe.

In terms of platforms, the Eurocean RI platform database includes more than 300 research vessels and underwater vehicles, 160 aquaculture and biology research facilities, 135 in-situ observing systems, 130 land based facilities, 26 satellites and 76 marine data providers. It is the largest marine RI database in Europe.

In particular 14 infrastructures categories are included: Research Vessels, underwater vehicles and large equipment, fixed point open ocean observatories, mobile ocean observatories, coastal observatories, deep ocean drilling research facilities, satellites for seas and oceans observation, marine data providers, basins, flumes and test labs for ocean engineering, in situ test sites for ocean renewable energy, marine biology stations, aquaculture research facilities, marine facilities.

The RI database records that are online are easy accessible and RI owners themselves can directly contribute with information and keep it up to date. Moreover, Eurocean collaborates with a number of projects and initiatives, avoids duplication of efforts, puts information in one place, adding value to other initiatives. JPI Ocean decided to work with Euorocean because it is a platform, with the capacity to grow and the resources to maintain the databases. Furthermore, it is an independent European network of 12 member organisations, including comprehensive open databases of information on marine science and technology, marine research infrastructures, marine knowledge etc .

Mobility actions

Marie Sklodowska-Curie actions

Silvia Valentini (APRE) talked about the **Marie Sklodowska-Curie Actions** (MSCA) as part of the NCP team for the program itself, after a short introduction about APRE. The programme funds projects supporting training and mobility of researchers, contributing to excellent research, boosting jobs, growth and investment by equipping researchers with the new knowledge, skills and international and intersectoral exposure.

Introducing the different kinds of fellowship available with MSCA programme, Silvia Valentini focused on the Individual Fellowships (IF), which have the objective of enhancing the creative and innovative potential of experienced researchers, providing opportunities to acquire new knowledge, work on research projects in a European context or outside Europe, resume a career or return to Europe. Fellowships take the form of:

- European Fellowships: for mobility in EU Member States or Horizon2020 associated countries. They are subdivided into four panels: Standard European Fellowships, Career Restart, Reintegration, Society and Enterprise.
- Global Fellowships: for experience outside EU.

About MSCA - Research and Innovation Staff Exchange (RISE), the objective is to promote international and inter-sector collaboration through research and innovation staff exchanges and to foster a shared culture of research and innovation. A RISE partnership shall be composed of at least three independent participants established in three different countries and must respect one of the following two conditions:

- two organizations are located in two different Member State (MS)/Associated Country (AC) and one organization is located in a Third Country (TC), independently from the sector they belong to;
- if all three independent organizations are from MS/AC, at least one organization should be from the academic sector and one from the non-academic sector.

Coupled to the above minimum requirements additional organizations established in MS/AC and/or in other third countries can participate.

Therefore, the partnerships in RISE can be set up along either an international or an intersectoral dimension or a combination of both.

Secondments Duration of support: 1-12 months. Secondments may be split into several stays not exceeding 12 months in total and not going beyond the project duration. The splits must be justified and considered beneficial for the transfer of knowledge activities. The exchanged staff members should be guaranteed full reintegration into the sending institution thus maximizing the impact of the action for knowledge sharing and long-term collaboration.

MSCA - Innovative Training Networks (ITN) objectives are:
- Raise excellence and structure research and doctoral training,
- train a new generation of creative, entrepreneurial and innovative early-stage researchers.

The Training Networks are the following:

- **European Training Networks (ETN):** The most general mode, epitomizing the ITN policy objectives; these networks have the objective of training highly skilled early-stage researchers and stimulating entrepreneurship, creativity and innovation in Europe.

  ETN does not require mandatory doctoral training but it is strictly recommended.

- **European Industrial Doctorates (EID):** Focus on academic/non-academic collaboration; Widening fellows' career horizons. The enrollment in a doctoral programme is mandatory
- **European Joint Doctorates (EJD):** Promoting greater structural co-operation between universities; Offering more employment opportunities to fellows.

The duration of projects is maximum 4 years with support to **early-stage researchers only**. The fellowships of 3-36 months include maximum 540 researcher-months per consortium (180 for EID with 2 partners), separating multidisciplinary panels for EID and EJD.

Water JPI Surveys about research infrastructures and mobility schemes

Alessandro Lotti (ISPRA) presented the two surveys results on research infrastructures and Mobility completed in the beginning of 2018.

Starting from research infrastructures survey results, a statistics of countries and organizations that answered to the survey showed the following results:
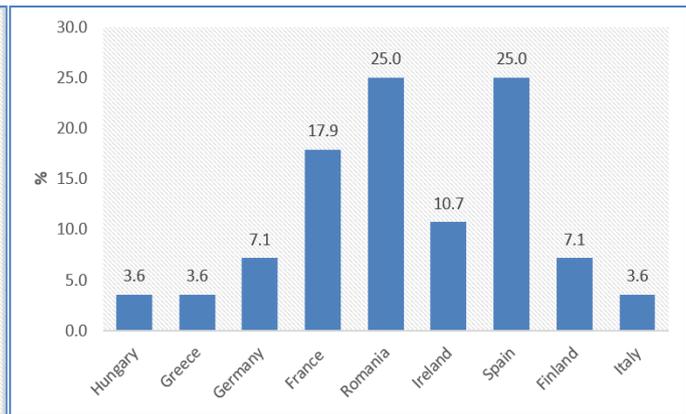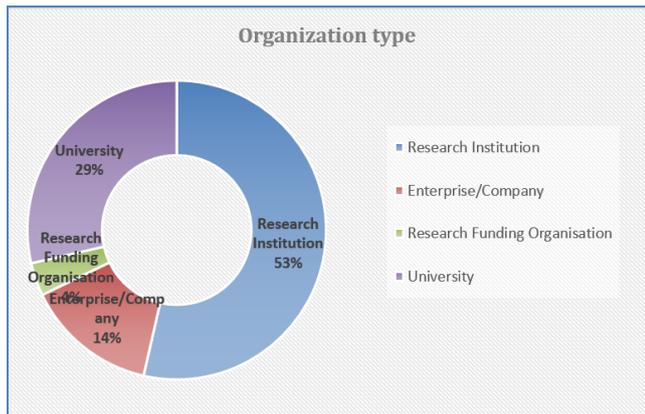
A 14% of private companies and enterprises answering the survey, shows a higher interest by industry and private companies in the research infrastructures as opportunity. This increasing interest is well-known at European level.

The survey aimed to map research infrastructures at national, European and international level, with related services provided.

The following table shows some of the RI listed, including research infrastructures linked to the European Strategic Forum for Research Infrastructures (AnaEE, Danubius, LifeWatch ERIC etc). The services provided by the RIs listed are mainly related to data management and access, numerical modelling, strategic collaboration and cooperation through a strong and increasing network.

Which infrastructures, related to ESFRI or not, do you know?	Services provided by RI
ICOS ERIC	Access to archive material
MetroFood	Access to sites
AnaEE	Numerical modeling
ACTRIS	Access to data and metadata
LifeWatch ERIC	Training
eLTER	Knowledge transfer
INTERACT	Strategic collaboration
Danubius	Joint programming
Elter	Multi-scale analysis
Ozcar	Networking of the scientific community
GEOSUD	Upstream processing of satellite data
Tereno	Data management
LTER	Remote-controlled computing capacity
EMBRC	Logistic, technical support

Which kind of information is useful in Research Infrastructures Platforms?	Very low priority	Low priority	Medium priority	High priority	Very high priority
Infrastructures type (e-infrastructure, distributed etc.)					
Services					

Equipment/facilities					🟩
Persons/Organization				🟧	
Funding (Horizon2020, Life etc.)			🟥		
Domain and topics				🟧	🟩
Location and Headquarters			🟥		
RI Keywords			🟥		
Description				🟧	
Accessibility information				🟧	🟩
Projects supported				🟧	

**What do you think is the aim and how could it be implemented?**

- A better understand of the processes, enabling researchers to develop management options against global warming.
- Access to advanced technology and data.
- Modernization and development of society
- Supporting excellence-driven science and facilitate use of scientific research results in policy making, technology development, and contributing to the sustainable development goals.
- Offering facilities, resources or services to conduct top-level research activities in a variety of scientific fields.
- Allow access to technology or infrastructure you have not
- To produce knowledge and to test solutions

What do you think is missing? Suggestions

- Interactions and linkages between ESFRIs working in observations of environment.
- Common development of services and harmonization of data and systems.
- Information on specific calls (Horizon 2020 or others) on research infrastructures for environmental research (both open or closed calls).

About Mobility survey, a statistics of countries and organizations that answered to the survey showed the following results:
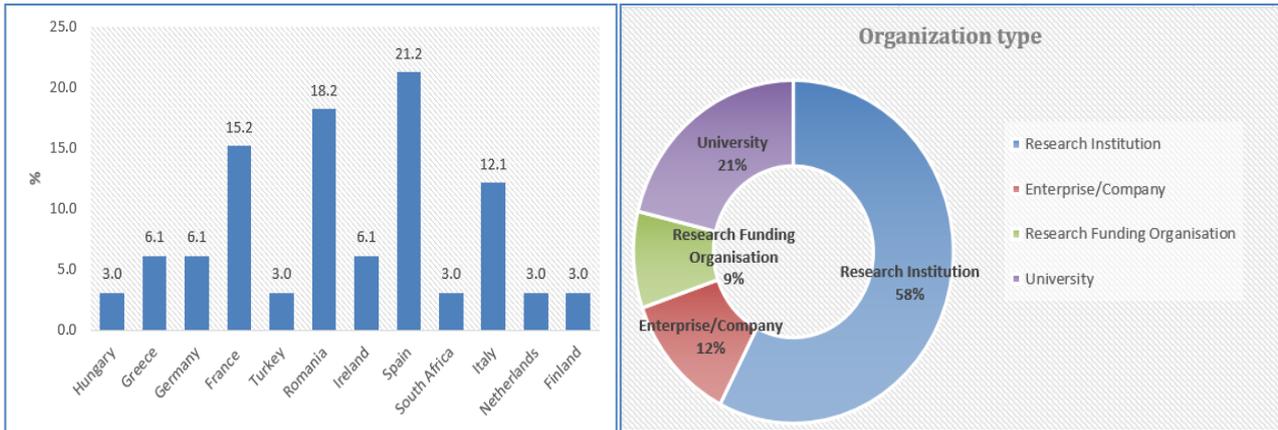
A 12% of private companies and enterprises answering the survey, shows an interest by industry and private companies in the mobility programmes as opportunity for development new skills. This increasing interest is well-known at European level.

Water JPI mobility actions has the aim to enlarge existing mobility actions in order to facilitate research networks, individual fellowships, research and innovation staff exchanges for **national, international and inter-sectoral cooperation** etc.

Through an interactive platform, it could be possible to access information about mobility actions and programs, as Marie Skłodowska-Curie.
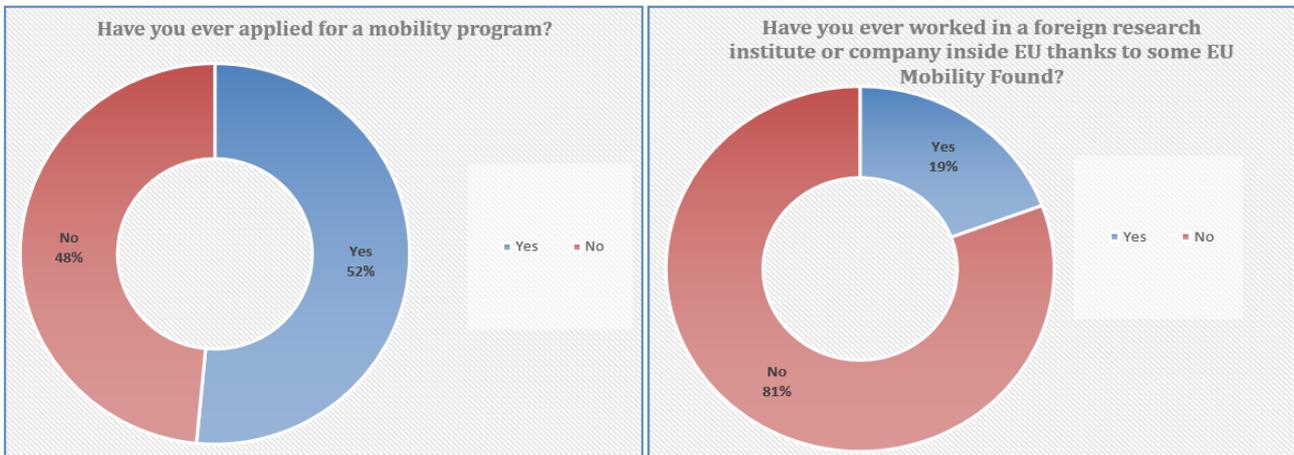
The possible inconsistency of previous diagrams can be explained by a divergence among the knowledge of mobility programmes and the effective application, especially during working period. This results can be caused by a gap of companies and institution related to application of mobility schemes aiming to work in a foreign company or institute. It could be an important point to be analyzed.

International actions	National actions
Marie Sklodowska Curie	"Partnership between research institutions ("associatura") - **Italy**
COST ACTIONS	Mobility for young researchers from UEFISCDI, under the Human Resources Program - **Romania**
DAAD SCHOLARSHIPS	SFI industry Fellowship Programme - **Irland**

ERASMUS+	Public actions from the Spanish RDI Programme - **Spain**
Bilateral projects	Mobility funds from the National Research foundation (NRF) – **South Africa**
ITN	Project funded by the Water Research Commission, Agricultural Research Council, technology Innovation Agency e.t.c – **South Africa**
OECD mobility actions	ESASTAP, SACCESS – **South Africa**
NATO mobility actions	Fundación Ramón Areces, BBVA, AEI- Madriaga and Jose Castillejo - **Spain**
LEONARDO	Eliasen-Uytenboogaart foundation (for entomological researchers) – **The Netherlands**
ACP S&T	CNR-NATO Grants - **Italy**
Erasmus Mundus	INRA Agreenskillss - **France**
ERC mobility opportunities	
ESASTAP	
H2020 Twinning	
H2020 International actions	
International Credit Mobility KA 107	

One of the most important platform for mobility in Europe is EURAXESS.
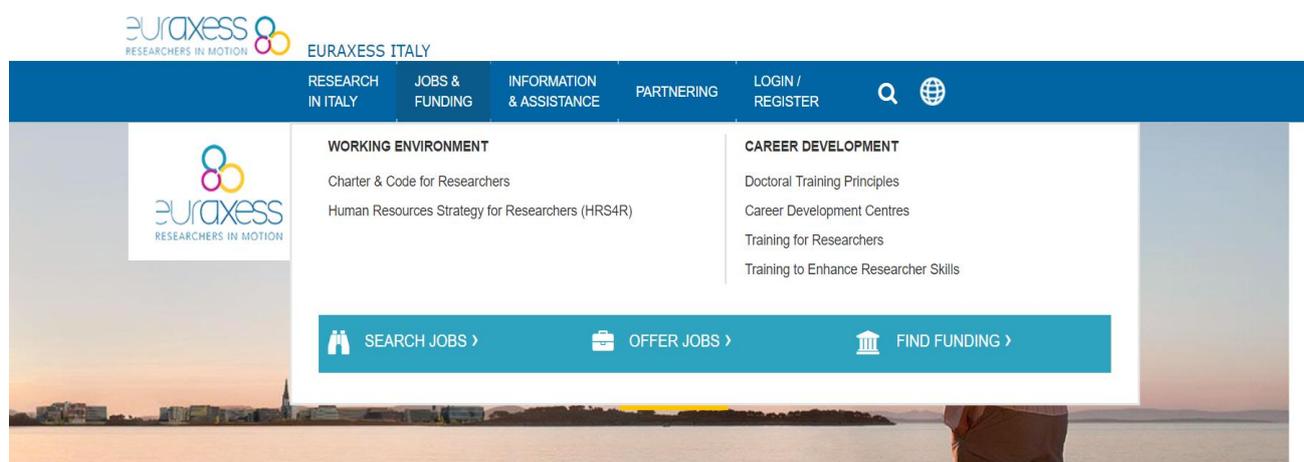
Euraxess is an interesting example of platforms with different functionalities included. EURAXESS "Researchers in Motion" is a unique pan-European initiative delivering information and support services to professional researchers. Backed by the European Union and its Member States, it supports researcher mobility and career development, while enhancing scientific collaboration between Europe and the world.

Within the platform it can be found thousands of job offers, funding opportunities, getting free assistance and practical information when it is needed to change countries for work.

Based on the analysis of platform tools, with the survey it was tried to identified a priority scale of the following tools:

Which tool of EURAXESS Platform should be integrated with WaterJPI?	Very low priority	Low priority	Medium priority	High priority	Very high priority
Jobs & Funding					
Job offers					🟩
Funding & Hosting Offers				🟧	
Working Environment			🟥		
Career development				🟧	

Which tool of EURAXESS Platform should be integrated with WaterJPI?	Very low priority	Low priority	Medium priority	High priority	Very high priority
Partnering					
Find members					🟩
Find Organizations					🟩
Profile			🟥		

Which tool of EURAXESS Platform should be integrated with WaterJPI?	Very low priority	Low priority	Medium priority	High priority	Very high priority
Information & Assistance					
Living in Europe			🟥		
Working in Europe			🟥		
Leaving Europe			🟥		
Find Information			🟥		
Find Assistance			🟥		

Which tool of EURAXESS Platform should be integrated with WaterJPI?	Very low priority	Low priority	Medium priority	High priority	Very high priority
Euraxess worldwide					
Asia			🟥		
Latin America			🟥		
China			🟥		
India			🟥		
Japan					🟩
North America					🟩

Discussion session

As starting point for the upcoming discussion on Research Infrastructure activities within the Water JPI, **Steffi Lehmann and Florian Selge (JUELICH)** detailed the aims of the Task force on Research Infrastructures launched in May 2018. The objective of the task force is to support RI in order to contribute strongly to a more strategic alignment, regarding the intended collaboration with other JPIs (e.g. JPI Oceans) especially the water-related ones; for further development of the SRIA it will also become important to include more cross-sectoral and transdisciplinary approaches.

The brainstorming discussion was set out under four different points:

1. Gaps/Needs vs. what is already existing
2. Relevant RI to covert
3. Water JPI support on
4. Actions and activities by Water JPI including Platforms

Outputs of the workshop

Research Infrastructures
Gaps/needs vs. what already exists:

- Mapping : national tools and new needs
- SRIA implementation VS existing infrastructures
- Find/Use comprehensive existing RI analysis instead of "re-inventing the wheel"
- Distributed networks VS common shared infrastructures (i.e. Climate Drone)
- Testing measures for WFD (Water Frame Directive)
- Temporary water resources
- Data, services, use cases application for IPR

Relevant RI:

- National, European and International
- At European level: Danubius RI, AquaCosm,
- eLTER (which includes national components such as Tereno, Enoah and Oscar)
- H2020 projects dealing with interlinkages between RIs, such as ENVRI-Plus or RISCAPE should be considered

Suggestion to add here Michael' slide showing all connections between European ESFRI RIs, with the current activities under ENVRI coordination.

Water JPI Support on RI:

- Be part of the design of the new structures
- Be in RI stakeholders boards (such as ENVRI-Plus, etc.)
- Facilitate access to RI
- Publish RI related scientific calls
- Connect to end users
- Long-term and continuous exchange with the RIs

Actions and activities by Water JPI:

- Use existing structures
- Training understanding RI's strategies on this topic, exchange, interact
- Connect with ERRIS and other existing platforms at national level
- Data standard (metadata, data dictionaries etc.)
- Data on RI level of RI accessibility and users feedbacks
- Link to national ongoing infrastructures
- EU – National – River basin Networks
- Avoid setting up another proprietary platform
- Establish bilateral MoU

Mapping national tools and new needs: a suggestion coming from discussion was not duplicate what is already done. There are several examples of reviews, mapping activities and studies for research infrastructures, observatories and platforms. The better thing should be to start from what is done 'State of the Art', and then updating it with new information in order to avoid fragmentation and duplication.

Water JPI SRIA implementation and existing infrastructures: all mapping activities should be done with a focus on the Water JPI SRIA priorities in order to maximize the impact.

Avoid fragmentation: in order to avoid fragmentation, the work should be focused, as explained before, on what is already in action. There are many examples of RI, platforms and actions, creating new platforms could increment the fragmentation itself. A connection among all facilities could manage complexity, reducing fragmentation in the water sector and finalizing all information, data RIs etc. through the JPI platform.

Use standards: the use of common standard dictionaries for data collection, data management etc, will simplify the standardization of tools and contents, helping to create a base for an interoperable platform, linking with other networks and existing platforms. The use of a common standard dictionary will help with search tool and browsing applications. Some work has already been done and should serve as starting point.

Intermediate scale: the main scales of RI are national, European and international. It is important to focus on cross-cutting scales for example RI at basin scale. Danubius-RI is an example of this approach and it is important to highlight this point.

Dialogue with stakeholders: the process must include stakeholders, from the water community, scientific experts etc. In order to involve them within the platform development maximizing dissemination of results.

Mobility
Gaps/Needs vs. what is already existing

- Summer schools
- Mobility actions with funding agencies to support alignment

Water JPI support to mobility actions

- Development of mobility actions for Young Researchers
- Incentives for low salaries to mobility in high cost housing - divergent cost between countries (cf. what is existing in H2020)

Role of the Water JPI

- Labelling COST action topics: Water JPI proposed label activities to COST in June 2017 and is waiting for their answer to continue to develop this proposal
- Criteria: support SRIAs, internal needs
- Evaluation mechanism

Mobility scheme platforms

- Collect info on COST/MSCA actions + national
- Accelerate on: finalising the efficiency of mobility schemes
- Funding as a step forward for mobility

Summer School: During the discussion group, it was proposed to organize summer schools, linked with existing actions and programmes and focused on Water JPI SRIA topics.

Mobility actions: The development of mobility actions should be planned targeting in particular young researchers, avoiding 'gap of life' costs among countries through incentives for low salaries. This is already considered in the MSCA and it should be taken as an example.

Evaluation mechanisms: The choice of criteria and evaluation mechanism is important in order maximize the impact of SRIA topics and internal needs.

Next steps

A first draft of the platform will be developed taking into consideration all outputs from the surveys and the workshop. The platform will designed following the new website style and Water JPI graphics standards in order to harmonize both the website and the platform itself.

The first draft will be sent for a review to the partners in order to have a first version before the 2nd workshop in June 2019. As planned within the Task 7.2, the online platform should be launch in 2020.

The 2nd Workshop on Mobility and Infrastructures will be focused on the following subjects:

- Investigating possible funding mechanisms for Infrastructure/Mobility
- Exchange among larger groups of stakeholders
- Presentation of "A la carte" options for Mobility / Infrastructure Actions"
- Exchange views on findings/recommendations resulting in the production of a "A La Carte" options document targeted at the Water JPI Community

Annex 1: Programme

1st Mobility and Infrastructures Workshop	
9:00 – 9:30	**Registration and Coffee**
9:30 – 10:00	**Welcome and opening** Water JPI Coordinator - *Dominique Darmendrail (ANR)* Water JPI Mobility and infrastructures task - *Giuseppina Monacelli (ISPRA)*
10:00 -10:45	**European Strategic Forum for Research Infrastructures (ESFRI)** ESFRI Roadmap – *Gert Verreet (EWI)* Experience from ESFRI LifeWatch ERIC – *Alberto Basset (UNISALENTO)* Experience from Danubius-RI – *Francesca De Pascalis (CNR-ISMAR)*
10:45 – 11:15	**Research infrastructures platforms** ERRIS Platform – *Nicoleta Dumitrache* JPI Ocean Eurocean Platform - *Jacqueline Kay Wood*
11:15 – 11:30	**How to support infrastructures by the JPI** Water JPI Task Force Infrastructures – *Steffi Lehmann, Florian Selge*
11:30– 11:45	**Coffee break**
11:45 – 12:00	**Marie Sklodowska-Curie mobility actions** NCP Support Team for Marie Sklodowska-Curie Actions – *Silvia Valentini (APRE)*
12:00– 12:30	**Presentation of surveys results and platforms review** *Alessandro Lotti (ISPRA)* *Questions and comments*
12:30 – 14:00	**Lunch break**
14:00 – 16:00	**Discussion in group** Group 1: Mobility – Chairs: *Antonio Lo Porto* Group 2: Research infrastructures – Chairs: The discussion topics: - Updating the mapping and identification of needs for the proposed platforms - How to support infrastructures by the JPI - Possible synergies with existing programmes (i.e. ESFRI – National pgs, MSCA / COST – national mobility schemes) and platforms (i.e. MERIL, EUROCEAN, EURAXESS) - Remaining needs of the JPI – what to integrate in our platforms? - Collection of suggestions and contributions for the creation of the Water JPI M&I platforms
16:00 – 16:15	**Coffee break**
16:15 – 16:30	wrap-up of group discussions
16:30 – 17:00	**Summary of the workshop, conclusions and next steps**