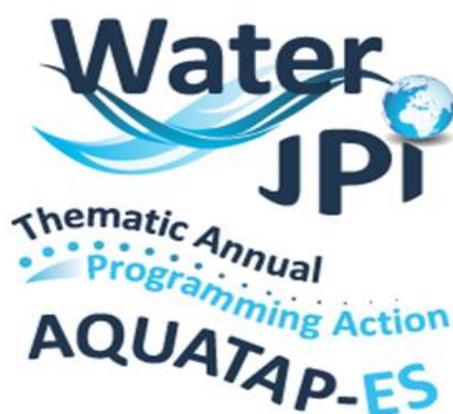




**WaterWorks 2015–2020 in Support of the Water JPI
ERA-Net Cofund Action**



**Proceedings from the 4th
Thematic Annual Programming (TAP) AQUATAP-ES Workshop**

**“Developing Approaches for Assessing and Optimising the Value of
Ecosystem Services”**

(WP7, Task 7.3)

29th March 2021



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
Contract Number:	689271
Starting Date:	01/01/2016
End Date:	31/12/2021
Website Address:	http://www.waterjpi.eu/
Coordinator:	Maurice Heral
Management Team:	Simon Coulet, Dominique Darmendrail, Armelle Montrose, Elcin Sarikaya
E-mail:	WW2015secretariat@agencerecherche.fr
Telephone Number:	+33 1 80 48 83 72/+33 1 78 09 81 20
Deliverable Title:	TAP AQUATAP-ES Workshop #42021
Deliverable Number:	Internal deliverable
Work Package:	WP7
WP Leader:	Lisa Sheils (EPA) and Armelle Montrose (WW2015 Secretariat ANR)
Nature:	Proceedings
Dissemination:	Public
Editor(s):	Lisa Sheils (EPA)
E-Mail(s):	l.sheils@epa.ie
Telephone Number:	+353 (0) 1 206 6947
Date of Delivery:	31/04/2021

Disclaimer

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

Acknowledgments

The Water Joint Programming Initiative (JPI) has received funding from the European Union's Horizon 2020 programme for research, technological development and demonstration under Grant Agreement No. 689271 (**WaterWorks2015**). We wish to acknowledge the invaluable contribution from the invited workshop speakers, moderators, chair, attendees, rapporteurs and Water JPI Secretariat and Coordinator, the **WaterWorks2015** ERA-Net Cofund partners and the Water JPI Governing Board (GB), and funding from the European Commission.



All images in report © Water JPI

Table of Contents

Abbreviations.....	4
Executive Summary.....	5
1. Introduction	5
1.1. Water Joint Programming Initiative.....	5
1.2. ERA-Net Cofund Programme WaterWorks2015.....	6
1.3. Aims of this Report.....	8
2.1. Workshop Aims and Objectives	8
2.2. Workshop Attendees	9
2.3. Workshop Programme.....	9
3. Proceedings.....	10
3.1. Welcome and Part I: Plenary Session.....	10
Water JPI AQUATAP-ES Mid-term Results	10
3.2 Part II: Workshop (s) Session	11
4. Part III: Next Steps.....	12
Annex 1. List of Attendees	14
Annex 2. Programme	15

Abbreviations

AEI	Agencia Estatal de Investigación
AKA	Academy of Finland (AKA)
ANR	French National Research Agency
DSS	Decision support system
EC	European Commission
ES	Ecosystem services
ESP	Ecosystem Services Partnership
EU	European Union
JPI	Joint Programming Initiative
MARS	Managing Aquatic Ecosystems and Water Resources under Multiple Stress
RDI	Research, development and innovation
SRIA	Strategic Research and Innovation Agenda
TAP	Thematic Annual Programming
UCD	University College Dublin

Executive Summary

The Water Joint Programming Initiative (JPI), “[Water Challenges for a Changing World](#)” (www.waterjpi.eu), was launched following a decision of the Competitiveness Council of the European Union (EU) on 6 December 2011.¹ In June 2020, the Water JPI membership included 23 member countries and three observer countries, which collectively represented 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](#)”.

This report contains the proceedings of a brief update workshop, fourth in the series of the Water JPI Thematic Annual Programming (TAP) AQUATAP-ES Workshop on “**Developing Approaches for Assessing and Optimising the Value of Ecosystem Services**”. The establishment of a TAP action is one of the additional activities of the ERA-Net Cofund programme WaterWorks2015.

The aim of the Water JPI TAP is to build a **network of national projects** focused on a network or cluster of excellence of **selected research groups** that is targeted at stakeholders. The network will, within a specific research area, establish a critical mass of research and technological excellence, the integration and sharing of knowledge, infrastructures, data and modelling tools, training and capacity building, in addition to improved communication and networking with stakeholders and the scientific community. This cluster will allow coordination between the individual projects and lead to a greater impact at the European level, addressing research gaps and avoiding duplication.

The virtual workshop was held on 29th March 2021 with updates on mid-term to long term outputs. Sixteen people from seven countries attended the workshop, made up of the existing AQUATAP-ES network group, members of the steering committee and the wider community of the Water JPI. All of the presentations are available on the Water JPI website: [Water JPI AQUATAP ES](#). The discussion focussed on the finalising the drafting the publication paper on Ecosystem Services data needs and models catalogue, finalising a brief guidance document on decision-support tools, the AQUATAP-ES network hosting ESP session in June 2021 and the final showcase event planned for June 2021. This workshop demonstrated the increase in outputs achieved by the network participants as they work together and further develop the activities in the AQUATAP-ES implementation plan, as they are nearing the end of the activity (June 2021).

1. Introduction

1.1. Water Joint Programming Initiative

Over the past 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.

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

Guaranteeing a sustainable supply of good-quality water should be a priority for European society. Both policies and RDI activities should therefore contribute to this aim. Water supply for the development of various activities (agriculture, energy production, public services, etc.) also needs to be ensured to benefit the economic prosperity of the European Union (EU).

The Water Joint Programming Initiative (JPI), “[Water Challenges for a Changing World](#)” (www.waterjpi.eu), has recently published its new Water JPI Vision 2030 and Strategic Research and Innovation Agenda (SRIA) 2025. *Water JPI Vision 2030: Together for a Water-secure World* outlines what the Water JPI aims to achieve during the next 10-year period (to 2030) and sets out the roadmap for all Water JPI activities, taking into account the main trends, key drivers and challenges in relation to our water resources (**Figure 1**).

The *Water JPI Strategic Research and Innovation Agenda 2025* is the 5-year reference base, highlighting the range and direction of all Water JPI activities for that period, which will be delivered through the Water JPI implementation plan. The SRIA 2025 has been developed to guide future water-related RDI actions. It sets out specific research themes, sub-themes and priorities. These research priorities can then be considered by various stakeholders, such as researchers, regulatory agencies, policymakers, industry and the public. Four core themes will drive this agenda: (1) ecosystems, (2) health and wellbeing, (3) water value and usage and (4) sustainable water management.

Identifying research gaps and topics, as well as the means of implementation (e.g. joint actions, via calls or networks), will be prioritised and an agreed implementation plan will be developed, detailing joint actions. The Water JPI will act as a facilitator of cooperation between countries on water research, supporting European and international water and environmental policy by coordinating and funding research on existing and emerging problems to come up with feasible solutions.

By June 2020, this initiative had brought together 23 partner countries, the European Commission (EC) and three observer countries. The international cooperation dimension of the first Water JPI implementation actions included Israel, Norway, the Republic of Moldova, South Africa and Turkey (full Water JPI members), as well as two additional Horizon 2020-associated countries (Egypt and Tunisia) and three international partners (Brazil, Canada and Taiwan).

1.2. ERA-Net Cofund Programme WaterWorks2015

Within the ERA-Net Cofund programme [WaterWorks2015](#), Work Package 7 focuses on Water JPI alignment activities. Alignment should enable the optimal use of national research funds. WaterWorks2015 is an EC-funded ERA-Net Cofund action supporting the development of the first Water JPI Thematic Annual Programming (TAP) (Work Package 7, Task 7.3). The TAP is one of the tools of alignment. It is being developed by the Water JPI for further alignment, particularly of national RDI programmes and projects related to water challenges.

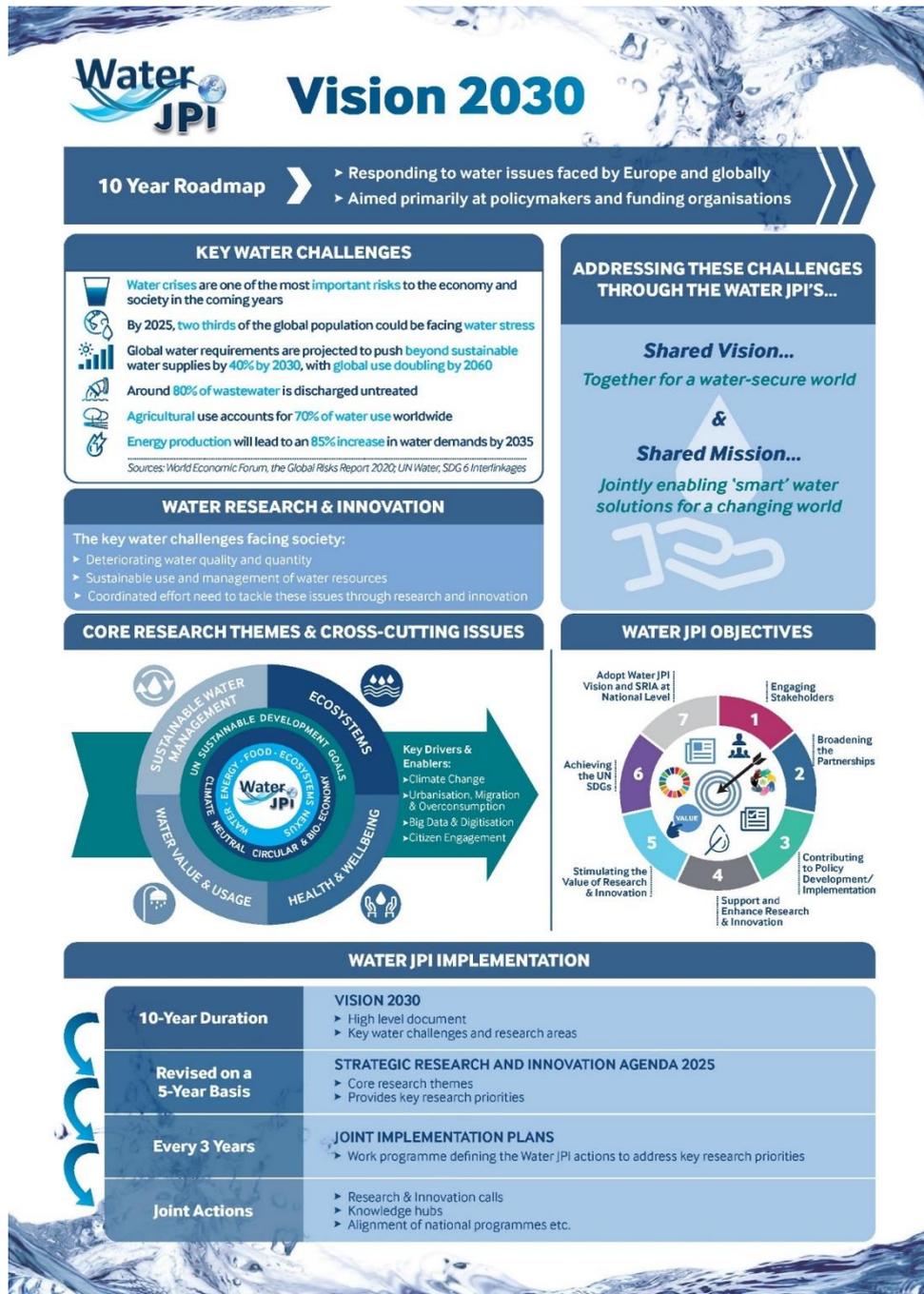


Figure 1: Water JPI Vision 2030 – infographic

To achieve the appropriate implementation of all relevant policies and protect the health of citizens, the Water JPI elaborates on further RDI actions that should be undertaken in the area of ecosystem services (ES). The topic of the first Water JPI TAP action is SRIA subtheme 1.1, “Developing Approaches for Assessing and Optimising the Value of Ecosystem Services”. Participation in the TAP action is not limited to WaterWorks2015 partners but is open to all funders of the Water JPI community and is voluntary. Along with Knowledge Hubs, it is part of the clustering/networking activities of the Water JPI and its related SRIA themes. This action will run for 24 months, i.e. from June 2019 until June 2021. The national research funding agencies participating in this action are from Finland, Ireland, the Netherlands and Spain. The TAP, now referred to as AQUATAP-ES, is

overseen by a steering committee consisting of the Water JPI coordination and the funding partners of the projects involved.

The first workshop of the Water JPI AQUATAP-ES TAP on ecosystem services took place on 12 June 2019 in Dublin, Ireland. Attendees at the workshop included the first TAP researchers, funding partners, members of TAP actions from other JPIs and the wider Water JPI community. This provided an opportunity for participants to meet each other and discuss the purpose of the Water JPI, to gain an understanding of the projects and teams involved in the AQUATAP-ES TAP, and to identify synergies and outputs that would inform the TAP Implementation Plan [1st Water JPI AQUATAP-ES workshop](#) .

The second workshop of the AQUATAP-ES TAP [2nd Water JPI AQUATAP-ES workshop](#) aimed to define relevant stakeholders and appropriate indicators to measure the impact of the AQUATAP-ES. The network also worked on drafting a policy brief. This was held in Brussels on November 19th 2019.

Part I of the 3rd workshop took place virtually on June 16th, 2020 centred around initiating work on the medium-term goals around data and modelling needs. DSS developments were discussed briefly in the context of “setting the scene” for the follow-up half-day virtual workshop, which took place 8th October 2020. [Part I 3rd Water JPI AQUATAP-ES workshop](#)

Part II of the 3rd workshop took place virtually on October 8th 2020 centred around finalising the policy brief, agreement of drafting the next publication, updates to hosting the a session in the ESP event in June 2021 and agreement on the best output from the group with regard DSS guidance, within the limited time and resource available to the network. [Part II 3rd Water JPI Water AQUATAP-ES workshop](#).

1.3. Aims of this Report

This report contains the proceedings of the fourth TAP AQUATAP-ES Workshop held online on 29th March 2021. This report was prepared based workshop discussions, advance feedback received, on the presentations and notes provided by the facilitators and WaterWorks2015 Secretariat and includes feedback received from the attendees on the draft version of this document. All presentations, as well as the workshop documentation, are available from the Water JPI website [Water JPI AQUATAP ES](#).

2. Methodology

The workshop was organised by the Environmental Protection Agency (EPA) Ireland, with the support of the AQUATAP-ES Scientific Coordinator Prof. José María Bodoque del Pozo, University of Castilla-La Mancha, Spain.

2.1. Workshop Aims and Objectives

The fourth workshop focussed on the finalising a number of the mid to long-term objectives as set out in the implementation plan. The drafting the publication paper on Ecosystem Services data needs and models catalogue, finalising brief guidance document on decision-support tools, the AQUATAP-ES network hosting ESP session in June 2021 and the final showcase event planned for June 2021. This workshop demonstrated the increase in outputs achieved by the network participants as they work together and further develop the activities in the AQUATAP-ES implementation plan, as they are nearing the end of the activity (June 2021).

The objectives of this workshop were as follows:

- Update on progress made related to the article on data needs and the model catalogue concerning the characterisation of ecosystem services.
- Update the state of progress of the guidance document on decision support tools.
- Update on ESP hosting session.
- Update on final showcase event.
- Final stages for the AQUATAP-ES network.

The workshop was opened with a welcome from the Water JPI AQUATAP-ES facilitator, followed by two sessions focusing on the mid- to long-term publications, DDS brief guidance and up and coming workshop/ sessions/ events; with a closing session that included a brief summary and an outline of next steps.

2.2. Workshop Attendees

A total of 16 people attended the workshop, including representatives from the six TAP projects from seven different countries. The AQUATAP-ES steering committee members from two countries also attended. [Annex 1](#) provides a list of all attendees.

2.3. Workshop Programme

The workshop programme is available in [Annex 2](#). The workshop included one plenary session as well as two discussion sessions. It was designed to stimulate open discussions and further development of outputs among the participants, the members of the expert group within the network.

2.3.1. Part I: Plenary Session – Water JPI AQUATAP-ES Mid-term deliverables

The plenary session was chaired by **Miguel Ángel Gilarranz Redondo (Water JPI Vice Chair)** who provided an opening welcome. **José María Bodoque del Pozo (AQUATAP-ES Scientific Coordinator and University of Castilla-La Mancha, Spain)** outlined the aims of the workshop and reflected on the network's final deliverables and midterm achievements to date. **Micheal Bruen (University College Dublin, Ireland)**, discussed the draft modelling catalogue developed by Michael that will feed into the draft publication on ecosystem services data gaps and needs.

2.3.1 Part I: Update on Water JPI AQUATAP-ES Final deliverables

- **Draft publication/ paper** on Ecosystem Services data needs (José María Bodoque del Pozo, UCLaM).
- **Modelling:** Finalising the Catalogue of Ecosystem Services models (Michael Bruen, UCD)
- **Setting out brief guidance on Decision Support Tools Guidance** for Ecosystems services (Christian Feld, University of Duisberg-Essen, Germany).

2.3.2. Part II: Workshop (s) Session

- **Update on ESP Hosting session** - José María Bodoque del Pozo
- **Planning for the Final Stakeholder Workshop** (including feedback from Steering Committee; Water JPI Secretariat) - Lisa Sheils EPA 2.3.3.

Next step: submitting the manuscript to a Q1 journal

To be submitted by the end of April or early May 2021



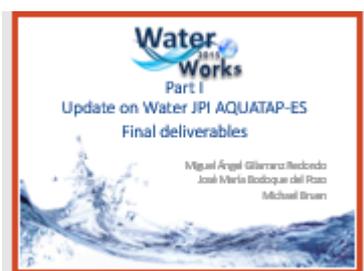
2.3.3 Part III: Next Steps

Lisa Sheils (AQUATAP-ES Steering Committee Chair and EPA) facilitated Part III of the workshop. Lisa closed the workshop with a discussion on the next steps and “who leads on what actions”.

3. Proceedings

3.1. Welcome and Part I: Plenary Session

Water JPI AQUATAP-ES Mid-term Results



Miguel Ángel Gilarranz Redondo (Water JPI Vice Chair) opened the plenary session, welcoming attendees to the workshop. Miguel commended the network on their work and outputs to date, as well as their close collaborative work.

José María Bodoque del Pozo from University of Castilla-La Mancha, Spain, gave a brief update on the status of deliverables to date. He then summarised the main aims of the workshop as:

- Update on progress made related to the article on data needs and the model catalogue concerning the characterisation of ecosystem service.
- Update the state of progress of the guidance document on decision support tools.
- Update on ESP hosting session.
- Next steps for the AQUATAP-ES network.

3.1.1 Progress made related to the article on data needs and the model catalogue concerning the characterisation of ecosystem service.

José presented the main results of the survey on data needs circulated to the ecosystem

Next step: submitting the manuscript to a Q1 journal

To be submitted by the end of April or early May 2021



services and highlighted what he was including in the draft paper for publication, which included feedback received from the network on the draft skeleton that was circulated previously. It was agreed by the paper ‘sub team’ (Jose, Mary, Michael, Kate and Mike), to finalise a draft paper by the end of April, this will include the data survey results, as well as the model catalogue findings, from Michael’s work. Marieke confirmed she will act as a reviewer, once drafted.

Michael gave a brief update on the status of the model catalogue that is near finished. Michael requested the network to provide any fish and/ or cultural services models known to the group to him by April 12th. This was seen as a gap to date. Craig also agreed to provide input by April 12th on

cultural services gaps. Michael will incorporate any further information received on April 12th and send to Jose to include in draft paper for publication.

3.1.2. Update the state of progress of the guidance document on decision support tools.

Michael gave a brief update on how he planned to draft this brief guidance document, on the basis of other on-going research he is undertaking in Ireland with Land2Sea project. In principle, the network agreed with the approach and Michael agreed to circulate 1-page draft framework on DSS brief by April 9th for the network to review and highlight what would be good to include or remove.

Michael will collate all feedback and finalise the briefing document on DSS by end of April 2021. Christian recommended taking two points into consideration: 1: Section on ecosystem services and 2. how DSS could assist in ES management, as a support tool for decision makers.

3.2 Part II: Workshop (s) Session

3.2.1. Update on ESP hosting session.

Mary gave an update on the session the network were planning to host with network at the [Ecosystem Services Partnership](#) (ESP) third ESP Europe Regional conference on “[Ecosystem Services Science, Policy and Practice in the face of Global Changes](#)”. The conference will take place in Tartu, Estonia from 7-10 June 2021.

The network will host the special Sectoral Session 5 on “**Progress and challenges in the operationalisation of the ecosystem services approach into policy & practice for aquatic resources management**”. Although the concept of ecosystem services has been the focus of a considerable body of research for more than a decade, there is little evidence that this science has become streamlined within policy or practice or used in decisions to restore natural capital and use it sustainably. It is hoped the network will produce a special paper/edition from this session discussion. Both Marieke and Mike are considering attending in person, whereas both Mary and Jose will attend remotely, all of course pending on COVID 19 requirements that may be in place. Members will liaise with Mary and Mike with regard to attending virtually or physically at this event nearer the time. This decision is entirely up to members themselves.



3.2.2. Final Stakeholder Workshop

Lisa brought the network up to date on the June 22 final showcase event. The Water JPI Secretariat is in the logistics etc. for the network’s final stakeholders showcase event on “*Aquatic ecosystem services on the science-policy-practice connection: challenges and opportunities*”. This online event will take place on Tuesday 22 June 2021 from 10.30 to 12.00 (CEST).



The event will bring together researchers, water and catchment managers and policy-makers from European and International institutions and stakeholders, Member States, universities and research institutes. Its aim is to identify common challenges and solutions to integrating the Ecosystem Services Approach into everyday management of our waters.

Panel members confirmed to date are

- Mr. Panagiotis Balabanis, Head of Sector water, EC DG RTD;
- Dr. Ronald de Bruin, Director, COST Association;
- Dr. Mostafa Panahi, Environmental and Energy Economics Expert, IPBES;
- Prof. Mary Kelly Quinn UCD, AQUATAP-ES Scientific Coordinator;
- Dr. Nihat Zal, Water Resources, Water Scarcity and Droughts Expert, EEA;

Lisa requested the network provide key stakeholders that they would like to invite to the event and Lisa will collate a list as part of the invites to be issued in April. Lisa also confirmed the Water JPI Communication team will be in contact with each member/project with regard 2-minute video requirements etc in early April. This is important for each project to contribute as there will be three key questions in relation to their projects/ research and also their participation in the network.

4. Part III: Next Steps

Lisa closed the workshop with a discussion on next steps and “who leads on what actions” – see “Summary of Actions” below. She thanked the group for its efforts to date and engagement in the workshop.

Mary added the SEFS12 will be hosted by Ireland in July 2021 (virtual meeting) and there will be an opportunity for a special session on ecosystem services. More information will be circulated.

Throughout the workshop a number of papers and useful websites and approaches were discussed and have been circulated following the workshop Also click on link: [Papers circulated by network members.](#)

Summary of Actions:

1. Publication of paper on ES data needs and models. Lead Jose - Draft due end of April 2021

- Jose to draft of paper for publication for submission to peer reviewed journal (s) by **end of April 2021**
- Sub-group (Mary, Michael, Kate, Mike) – to provide input based on draft – other members are still welcome to do so.
- Marieke to act as a reviewer – once draft is ready for her review.

2. Modelling catalogue Lead Micheal

- All to provide any fish and/ or cultural services models known to the group to Michael by **April 12th**
- Craig to provide input by April 12th on cultural services gaps

3. Guidance / brief on DSS

Michael to lead out on developing DSS brief guidance - with support from subgroup - **volunteers requested from network** to support Michael, Christian.

- Michael to circulate 1-page draft framework on DSS brief by April **9th**.
- All to provide feedback to Michael as to what should be in or out of framework by **April 16th**.
- Michael to finalise briefing document on DSS by **end of April 2021**.

4. Workshops/Events

Mary – Lead on ESP Conference – AQUATAP-ES hosting session (co-host Mike) June 7th -10th to register and for more detail <https://www.espconference.org/europe2020>

- Members will liaise with Mary and Mike with regard to attending virtually or physically at this event nearer the time. This decision is entirely up to members themselves.

Lisa - Lead on Showcase event June 22nd

- All to provide Lisa with a **list of relevant national (or international) stakeholders/contacts** that you think should be included in invite to this event, by **April 16th**.
- The Water JPI Secretariat will be hosting this event and will issue invites in April.
- The Water JPI Communication team will be in contact with each member/project with regard 2-minute video requirements etc in early April.

Other: | Symposium for European Freshwater Sciences will take place virtually on the 25-30 July (in Dublin) to register and for more detail <https://www.sefs12.com/>

Annex 1. List of Attendees

TAP membership	First name	Surname	Organisation
Seed group	José María	Bodoque del Pozo	University of Castilla-La Mancha, Spain
Seed group	Mary	Kelly-Quinn	University College Dublin/Coordinator, Ireland
Seed group	Michael	Bruen	University College Dublin, Ireland
Seed group	Michael	Christie	Aberystwyth University, UK
Seed group	Marieke	de Lange	Rijkswaterstaat, the Netherlands
Seed group	Vicenç	Acuña	Catalan Institute for Water Research, Spain
Seed group	Anna	Kuparinen	University of Jyväskylä, Finland
Water JPI	Véronique	Briquet-Laugier	French National Research Agency (ANR)/Water JPI Coordinator
Water JPI	Juliette	Bettus	French National Research Agency (ANR)/Ww2015 Coordinator
Seed group	Christian K.	Feld	University of Duisburg-Essen, Germany
Seed group	Craig	Bullock	University College Dublin, Ireland
Seed group	Marcin	Penk	Trinity College Dublin
Steering committee	Lisa	Sheils	EPA, Ireland
Steering committee	Harri	Hautala	Academy of Finland (AKA)
Steering committee	Miguel Ángel	Gilarranz Redondo	AEI, Spain
Steering committee	Esther	Chacon	AEI, Spain
Apologies			
Seed group	Joost	Backx	Rijkswaterstaat, the Netherlands
Seed group	Anne Marie	Power	National University of Ireland Galway
Seed group	Kathryn	Schoenrock-Rossiter'	National University of Ireland Galway

Annex 2. Programme

Water JPI Thematic Annual Programming (TAP) Action AQUATAP-ES 4th network workshop 10.30 -12.30 (CET)

Date: 29th March 2021

Virtual Meeting: MS Teams Virtual Meeting

Attendees: AQUATAP-ES network researchers, AQUATAP-ES steering committee
(optional: Water JPI members)

All attendees on mute apart from Speakers and Chair

Q&A via TEAMS Chat facility (visible to all – no private messaging)

Part I Update on Water JPI AQUATAP-ES Final deliverables

10.30 – 10.35: Welcome: Miguel Ángel Gilarranz Redondo (Water JPI Vice Chair)

10.35– 11.55: Aim of the workshop José María Bodoque del Pozo (AQUATAP-ES Coordinator)
Update on our progress:

- Sign off on Publication Paper on Ecosystem Services data needs and models catalogue
 - José María Bodoque del Pozo
- Finalise brief guidance document on decision-support tools
 - Michael Bruen

5 min break

Part II Workshop (s) Session:

12.00 – 12.25 Lisa Sheils (AQUATAP-ES facilitator)

- Update on ESP Hosting session - José María Bodoque del Pozo
- Discussion on plan for the Final Stakeholder Workshop (*including feedback from Steering Committee; Water JPI Secretariat*) Lisa Sheils

Part III Next Steps

12.25– 12:30: Lisa Sheils (AQUATAP-ES facilitator)

- Recap to the audience by TAP Action members on session.
- Next steps.