**2016 Joint Call**

**Final Progress Report**

Sustainable management of water resources in agriculture, forestry and freshwater aquaculture sectors

**Project Title & Acronym**

This document must be filled in by the project coordinator with the help of its project partners and must be sent to the WaterWorks2015 Follow-up Secretariat by **xxxxxxx** (for Consortium XXX)**.**

The WaterWorks2015 Follow-Up Secretariat will ensure distribution to the concerned national funding agencies. The project coordinator is responsible for sending a copy of the report to its partners.

**PROJECT ACRONYM AND TITLE**

Author(s) of this report (Coordinator): Date of submission:

E-mail:

Project Website:

Project code: WaterWorks2015- CONSORTIUM ACRONYM

Duration of project:

Start date: End date:

Period covered by this report:

Title of the Final Technical Report:

Authors of the Final Technical Report:

Please ensure that you do enclose the Final Technical Report as an Appendix to this report. If this report cannot be made available publicly in reason to IPR considerations, please provide also a version of the Final Technical Report for dissemination (Public Report).

### Publishable Summary

*Maximum 1 page*

|  |
| --- |
| The content of this section is intended for communication by the Water JPI on the project, mainly through its website. The style should be adapted to communicate to a wide audience (**non-technical** English) and the quality of the data must enable direct publication.The authors authorise the publication of information about this project by the Water JPI. The publishable summary should provide the following information:* *The project context and objectives;*
* *The approaches used, methods and the work performed since the beginning of the project;*
* *The* ***results*** *and their scientific and socio-economic* ***impact*** *and use; and*
* *The address of the project’s public website, if applicable.*
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### Work Performed and the Results achieved within the Project

  *Maximum 10 pages*

#### Scientific and technological progress

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| --- |
| * *Please describe the work performed and the results obtained during the lifetime of the project, and the conformity of work progress within the initial schedule. You can use the Executive Summary from your Final Technical Report here.*
* *Did the project achieve its main objectives, milestones and deliverables?*
* *All deliverables MUST be included as Annexes to this Report.*
* *How did the project promote a multidisciplinary approach during its lifetime?*
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#### Collaboration, coordination and mobility

* *Please indicate clearly who performed the work.*
* *Describe how effective was the collaboration between partners (incl. in-kind partners).*
* *Were the coordination and organisation of the project effective? Please explain*
* *Please, describe the mobility of the researchers within the Consortium.*
* *How did the project and/or researchers’ careers benefit from the mobility within the Consortium?*
* *Please indicate coordination with other projects funded in the 2016 Joint Call or national and international projects funded by other instruments.*

#### Impact and knowledge output

* *Are the main impacts achieved?*
* *Where do the results of the project impact (e.g. industry, end users, policy, etc.)?*
* *Have the partners identified exploitable results?*
* *Has intellectual property protection been considered?*

#### Which 2016 Joint Call theme/themes were addressed by the project? How did the project cover the main aims & objectives of the Call?

**Challenge 1: Increasing the efficiency and resilience of water uses**

Sub-topic-1.a. Efficiency issues include the development of:

i. Innovative water use systems and practices, including precision irrigation technologies (e.g. models, sensors, ICT);

ii. Water-efficient and/or drought-tolerant and/or salinity-tolerant crops and forestry species/ varieties, including an analysis of the effects of such crops and species on the environment;

iii. Water reuse and water recycling technologies in the agriculture and aquaculture sectors;

iv. Optimisation of the Water – Energy nexus in these sectors (e.g. improving energy efficiency).

Sub-topic-1.b. Resilience to climatic variability includes:

i. Development of water-conserving agriculture and forestry practices as a way to improve the management of water and to improve soil properties related to water;

ii. Increasing the resilience of agriculture and forestry systems and landscape management in a context of highly variable water availability due to climate trends, climate variability and extreme events (floods and droughts);

iii. Implementation of innovative technologies for the monitoring of surface and groundwater bodies for effective integrated water management (including water abstraction) in agriculture, forestry and freshwater aquaculture sectors.

**Challenge-2: Monitoring and reducing soil and water pollution**

Sub-topic-2.a. Optimising fertiliser application to reduce over fertilisation to better accommodate crop requirements while avoiding nitrogen and phosphorus losses to surface water and groundwater;

Sub-topic-2.b. Assessment and development of monitoring schemes and indicators, for agricultural catchments to identify, quantify and minimize pollution sources and to reduce impacts on water quality, caused by agrochemicals, mineral fertilizers, crops residues, manure and digestates;

Sub-topic-2.c. Modelling and assessing the nitrate and phosphorus loads from agriculture, forestry and aquaculture sectors to avoid risks of eutrophication of rivers and lakes, and propose management approaches for reducing impacts on ecosystem biodiversity and economic sectors;

Sub-topic-2.d. Understanding and decreasing the combined environmental risks from agriculture, forestry and aquaculture to human health (environmental exposure from water uses and food).

**Challenge-3: Integrating social and economic dimensions into the sustainable management and governance of water resources**

Sub-topic-3.a. In the context of increased risks (droughts and floods) and competition for water uses, development of new approaches and models for integrated management and governance of land, soil and water targeting the optimum use of resources (water quantity and quality issues at catchment or river basin scales);

Sub-topic-3.b. Set-up of water-valuing schemes based upon the establishment of new criteria for water valuation in agriculture, forestry or freshwater fisheries and the estimation of associated costs with a sustainability perspective including social, economic and ecological pillars;

Sub-topic-3.c. Developing participatory approaches and assessing barriers (social, cultural, psychological and economic barriers) at catchment level for better implementation of policies and uptake of existing and breakthrough knowledge (e.g. ICT technologies).

#### Is the collaboration between Consortium partners expected to continue after the funding period? If yes, please describe how.

### Table of Deliverables

Please indicate whether the planned deliverables were completed, delayed or readjusted. Please explain any changes, difficulties encountered and new solutions adopted. Please add/suppress fields, if necessary, in the table below.

| **Deliverable name** | **Lead partner (country)** | **Date delivered****(dd/mm/yyyy)** | **Comments** |
| --- | --- | --- | --- |
| **WP1** |  |  |  |
|  |  |  |  |
|   |  |  |  |
| **WP2** |  |  |  |
|  |  |  |  |
|  |  |  |   |
| **WPX** |  |  |  |
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|   |  |  |  |

### Consortium Meetings

 Please fill in the table below, add/suppress fields as necessary in the table below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N° | Date | Location | Attending partners | Purpose |
| **1** |  |  |  |  |
| **2** |  |  |  |  |
| **3** |  |  |  |  |
| **.** |  |  |  |  |
|  |  |  |  |  |
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### Stakeholder Engagement

On the basis of sentences below (from the Call Announcement), please describe how stakeholders have been involved in the project.

*“Participation of stakeholders (i.e. small and medium enterprises (SMEs), industries, authorities, public administrations, associations, as well as civil society organizations) is encouraged.”*

*“Proposals should build on on-going research activities at EU level and in the participating member states. They should describe opportunities and initiatives for cooperation with these activities.”*

What has been the added value of the stakeholders’ engagement to the project’s results?

### Impact Statement

On the basis of sentences below (from the Call Announcement), please, describe the impacts resulting from your work:

*“Cross-cutting issues such as socio-economic and/or capacity developing aspects (contributions to standards and norms) constitute an added value to RDI in this field.”*

Please, describe any other (unexpected?) impact the project has made.

### Knowledge Output Transfer

For each of the Knowledge Output arising from the project, please complete the following table.

|  |  |
| --- | --- |
| Short Title*Please provide a short and concise title to describe the Knowledge Output* |   |
| Knowledge Output Description*Please only include generated Knowledge Outputs, not those that are expected. Note: Knowledge Outputs can be non-deliverables, milestones or ‘grey knowledge’. Also, multiple Knowledge Outputs could exist within one deliverable, and should be separated.**Try to give a comprehensive description, making the Knowledge Output fully understandable to a non-expert.**If relevant please provide detail of where the Knowledge Output differs from its equivalent, e.g. What are the key characteristics of the Knowledge Output? What research is it adding to and what is innovative about the Knowledge Output? (Max 500 characters).* |   |
| Knowledge Type | Please choose one option – delete the rest:\* exploitable scientific result\* scientific publication\* report\* book/review\* RTD protocol/technical manual\* guidelines/standards\* training activity/learning module\* software/modelling tools\* product\* prototype\* services/tools\* multimedia\* data\* other |
| Link to Knowledge Output*If you can provide a link to the Knowledge Output then please do so, e.g. digital object identifier (DOI), web address, download, research paper.**If the Knowledge Output is not publicly available currently but will be in the future, please provide details. Also, if it is available but only upon request, please state this.**If the Knowledge Output is not planned to be publicly available, please state "Not available for public".* |   |
| Sectors & Subsectors*Choose as many options as required from the list. Pick those sectors that you think would benefit from the application of this Knowledge Output.*  | * Basin Management
* Flood Risk Management
* Water Scarcity and Droughts
* Drinking Water
* Bathing Water
* Emissions and Water Reuse
* Adaptation to Global Change
* Others
	+ Other General
	+ Agriculture
	+ Governance
	+ Consumer Health & Welfare
	+ Finance
	+ Modelling & Prediction
	+ Socio-Economics
	+ Stakeholder Involvement

  |
| End User*Choose as many options as required**Per identified End User, please identify possible applications of the Knowledge Output.*  | o Education & Trainingo Environmental Managers & Monitoringo Industryo Policy Makers / Decision Makerso Scientific Communityo Civil Societyo Other  |
| IPR*Please indicate whether IPR has been applied to this Knowledge Output (applied for a patent, copyright etc), or not.**Please insert "n/a" if no IPR has been applied.* |   |
| Policy-RelevanceIf the Knowledge Output is relevant to the WFD or any other related Directives, please list and explain why |   |
| Status*Please identify whether the Knowledge Output is finalised, is still being generated or whose status/future is unknown. Consider:**• Is your knowledge conclusive enough that it provides sufficient evidence to make an impact on, or be applied by, an End User?**• Is there a corroborating body of evidence, or are contradictory results, available?**• Does your knowledge progress beyond the current state-of-the-art / evidence base?**• Is more research or demonstration needed to validate the results?* |   |

### Open Data

In relation to Open Data, the funded projects will be requested to submit metadata on all the resources directly generated by the project, as well as additional information on how these data will be exploited, if and how data will be made accessible for verification and re-use, and how it will be curated and preserved.

Metadata on all project resources are required to be submitted as part of the final reporting. This will be done via the **OpenWaterJPI** Interface, which will be available on the Water JPI website.

### List of Publications produced by the Project - Open Access

* Please list all oral presentations, posters, and publications in scientific, peer reviewed journals listed in Web of Science derived from this project, separating those in preparation, those in review and those accepted or in press.
* You can provide web sites and/or electronic copies of the key ones.
* Please indicate all the co-authors for each publication.
* Please order publications per date (chronologically) and for each year by alphabetical order

Metadata on all project publications are required to be submitted as part of the final reporting. This will be done via the **OpenWaterJPI** Interface, which will be available on the Water JPI website.

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| --- | --- | --- |
| International | Peer-reviewed journals | 1.2.3. |
| Books or chapters in books | 1.2.3. |
| Communications (presentations, posters) | 1.2.3. |
| National(separate lists for each nationality) | Peer-reviewed journals | 1.2.3. |
| Books or chapters in books | 1.2.3. |
| Communications (presentations, posters) | 1.2.3. |
| Dissemination initiatives | Popularization articles | 1.2.3. |
| Popularization conferences | 1.2.3. |
| Others  | 1.2.3. |

### Personnel

List all staff and students supported by or affiliated with this project

Please provide the following details for each staff member/student supported by this project:

\_\_\_\_ Please indicate the number of students involved

1. Student Name:
2. Major/Degree field:
3. Degree (Ph.D., M.S., M.A., B.S., B.A., etc):
4. Dissertation/Thesis title:
5. Country:

### Problems Encountered during Project Implementation