**Annex 5**

**Templates for Mid-Term Evaluation Report**

**(Individual and Consensus)**

**Water Joint Programming Initiative**

**2018 Joint Call**

*Closing the water cycle gap - Sustainable management of water resources*

These Project Management Guidelines will be effective from the date of the National funding decisions and shall remain in force until the last final project report is approved in 2022.

**The Mid-Term Consensus Report will be made available to the Consortium as well as CSC and JPI Water GB.**

**MID-TERM INDIVIDUAL EVALUATION REPORT**

**PROJECT TITLE AND ACRONYM**

Tools and criteria for URBAN groundWATer management”“URBANWAT”

Name of Coordinator: Carlos Ayora Ibañez, **Enric Vázquez** **Sune**, Laura Scheiber and Rotman Criollo

Project code: WaterWorks2017-URBANWAT

Duration of project: 30 months

Start date: 01/09/2019End date: 01/03/2022

**DETAILS OF THE EVALUATOR**

Name: Olga Covaliova

Organisation: Institute of Chemistry, Republic of Moldova

Date of review: 10/04/2021

### **Scientific and technological progress** (*Maximum 250 words)*

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| *During the Reporting period work has been performed under the WPs 1-5.* *WP1: Inorganic chemical, pollutants of emerging concern sampling and groundwater analyses. Task 1.1. During the field campaign, groundwater samples were taken in 50 points throughout Barcelona, and 5 samples of wastewater. The results will have to come. Protocol for groundwater sampling was elaborated. Existing platform was expanded and improved to integrate geo-spatial data. Task 1.2. Development of new analytical methodologies. Extraction methodology under evaluation. Task 1.3. Transformation of polar compounds – to be started later.**WP2: Microbiological sampling and analyses. Task 2.1. Optimization of viral concentration and detection methods – done. Task 2.2. Analyses of samples for classical fecal indicators. 8 wastewater samples and 8 groundwater samples were collected at 4 sites in Barcelona. Adenoviruses, pathogens and indicators of human fecal pollution were quantified at mean value.* *WP3: Identification of origin and behavior of contaminants in hydrological cycle – to be started later, after analytical results are ready.* *WP4: DNA-tagged nanoparticles for measuring mobility of pollutants. Two new types of DNA-encapsulated nanoparticles were designed and produced. These microparticles have new type of iron-core with higher magnetic moment ensuring their easier separation.* *WP5: Proposed remediation of runoff water contamination and evaluation of risk. Column experiments were delayed due to Covid19 pandemic. Soil samples have been collected in Barcelona.* *WP6: Testing real-scale facility at Delft University of technology – has been postponed.* *Multi-disciplinary work was ensured to the variety of tasks performed and a complex nature of Project works.* *Dissemination: 4 scientific papers published in journals with high impact index, 1 book chapter, 1 project report in open access journal (under review) and 2 poster communications at international congresses.*  |

### **Collaboration, coordination and mobility within the Consortium** (*Maximum 250 words)*

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| *Two Consortium Meetings were held – one in Barcelona, and another one was held online. Due to the Covid 19 pandemic, the mobility was affected. Online meetings between CNRS and CSIC chemists, as well as between CNRS and Delft University have been organized in order to plan and manage the water chemistry data and protocol for column experiments. There was a direct coordination between groundwater group (IDAEA), environmental chemistry group (IDAEA) and microbiology group (UB) to coordinate and perform a sampling campaign. The project meets transnational nature and its added value.*  |

### **Coordination with other international project funded by WaterWorks2017, or other instruments** (*Maximum 250 words)*

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| *CNRS partner as well as the CSIC are part of another JPI project funded in the 2018 joint call named MARAdentro. In addition, CNRS team is in charge of different national* (ANR AWARE, ANR IMAP, ANR ANSES, AERMC) and European projects (SUDOE-4KET4Reuse, UNESCO-sida). *TUD team is involved in DOMINO Project (JPI-funded). CSIC team is coordinating the Water JPI “AWARE” Project. UB team participates in VIROCLIME Project (EU-funded).*  |

### **Coverage of the themes and sub-themes of the call** (Maximum *250 words)*

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| *The project results are related to the following themes and the sub-themes of the call:**Theme 1. Enabling sustainable management of water resources. Sub-theme 1.1. Promoting adaptive water management for global change;* *Theme 3. Supporting tools for sustainable integrative management of water resources.* |

1. **Stakeholder/industry engagement** (*Maximum 250 words)*

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| *Different stakeholders have been involved in project activities. Stakeholders from Barcelona City Council are involved in design and performance of field campaign. BCASA (a company created by Barcelona City Council, in charge of managing of an entire water cycle in the city) participated in planning the sampling campaign. They played important role in assisting in field campaign and further activities to complete the common conceptual model of of subsurface behaviour in the city.*  |

### **Recommendations for improvements/amendments of the report** (Please complete Table below)

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1. **Recommendations/ problems and risks** (Maximum *250 words)*

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| *The main problem that essentially delayed implementation of scheduled Project activities was Covid 19 pandemic. Therefore, it could be recommended to request for the Project period extension, to be able to finalize completely all the planned activities.*  |

**MID-TERM EVALUATION CONSENSUS REPORT**

**This Consensus Report will be made available to the Consortium as well as CSC and JPI Water GB.**

**PROJECT TITLE AND ACRONYM**

Name of Coordinator:

Project code: WaterWorks2017-CONSORTIUM ACRONYM

Duration of project:

Start date: End date:

**FOLLOW-UP GROUP**

Please include the data of the FG members reviewing the report

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| Name | Organisation |
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### **Scientific and technological progress** (Maximum *250 words)*

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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. Take into account the following aspects:** *Has progress been achieved towards reaching the project objectives according to the original description and milestones?*
* *Detailed update on methodology & results*
* *How has the progress of the project promoted a multi-disciplinary work?*
* *Dissemination of the results (publications, patents, other)*
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### **Collaboration, coordination and mobility within the Consortium** (Maximum *250 words)*

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| *Please evaluate the collaboration, coordination and mobility within the Consortium**Take into account the following aspects:** *Efficiency on the coordination and organization of the projects*
* *Collaboration effective between the partners*
* *Mobility of the research between the consortia*
* *Does the project meet the transnational nature and its added value?*
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### **Coordination with other international project funded by WaterWorks2017, or other instruments** (Maximum 250 *words)*

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| *Please evaluate the external collaboration of the Consortium**Take into account the following aspects:** *Collaboration effective with other projects funded under the 2018 Joint Call:*
* *Collaboration effective with other projects or consortia.*
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### **Coverage of the themes and sub-themes of the call** (Maximum 250 words*)*

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| *Please evaluate relation within the project results and the themes and the sub-themes of the call.**Theme 1. Enabling sustainable management of water resources.*The overall aim for this theme is to develop new governance and knowledge management approaches.* *Sub-theme 1.1. Promoting adaptive water management for global change:*

The aim of sub-theme 1.1 is to increase knowledge and to develop evidence-based methodologies and technologies for monitoring the cumulative impacts of human activities and climate change on the water cycle, but also to develop management options on the water cycle (considering all cycle compartments) and water / ecosystem services. This knowledge must be applicable for the adaptive management of water resources on a regional scale, while enabling downscaling to address local or catchment situations.* *Sub-theme 1.2. Integrative management by implementing Natural Water Retention Measures (NWRM) such as Managed Aquifer Recharge (MAR):*

The aim is to increase the knowledge and develop NWRMs such as MAR in a multidisciplinary way, to protect, prolong, sustain and augment freshwater supplies. Evidence of their effectiveness and on the multiple benefits they deliver should be demonstrated.* *Sub-theme 1.3. Mitigating water stress in coastal zones and urbanized areas:*

The aim is to develop and demonstrate a comprehensive coastal zone management system based on monitoring and modelling to ensure the provision of freshwater security under a range of conditions including saline intrusion, sediment management, storms, floods and droughts, but also specific coastal water uses. Please, refer to H2020 calls on nature-based solutions to propose complementary actions.*Theme 2. Strengthening socio-economic approaches to water management.*The overall aim of this theme is envisaging education and communication initiatives to raise social awareness of consumption habits and water scarcity and to increase the levels of social acceptance and use of recycled water.* *Sub-theme 2.1. Integrating economic and social analyses into decision-making processes:*

The aim is to increase the knowledge the effectiveness and efficiency of existing economic mechanisms and policy instruments related to water management, with a special emphasis on implementation of water policies (such as the EU Water Framework Directive) and development of a circular and green economy. The approach should aim to break boundaries between services valuation including more flexible pricing and charging mechanisms, management tools and institutions, and the employment of economic and social sciences to develop best practice management guidelines for efficient water uses, including under extreme events such as droughts and floods.* *Sub-theme 2.2. The reuse of water:*

The aim is to develop integrative methods and cost-effective technologies for the implementation of acceptable and sustainable solutions on a large scale for different reuse cycles, spanning from irrigation, via livestock drinking water, to human consumption. Furthermore, goals include assessments of social acceptance for the use of recycled water and the development of integrated approaches combining technological solutions with social-psychological acceptability, economic viability and appropriate governance approaches. Research into the removal of emerging contaminants must consider the cost of the technology vs yield and realistic options for reuse of the recovered water. Please refer to projects funded under previous Water JPI Joint Calls (2013, 2015 and 2016) to avoid any duplication. See Joint Calls on Water JPI website.* *Sub-theme 2.3. Connecting science to society:*

The aim is to increase understanding of the role of socio-economic approaches to water uses in hydrological cycles. Knowledge building should address stakeholders' and public awareness of water challenges and values, and how perception of policy measures and technological solutions are formed and how stakeholders can be steered towards desirable behaviour. Local and/or regional context (attitude, social norms, cultural context, etc.) should be taken into consideration. The value of improved water stewardship overall should be considered by developing sustainable business models.* *Sub-theme 2.4. Promoting new governance and knowledge management approaches:*

The aim is to develop innovative water management tools and approaches suitable for decision-making based on an analysis of the limitations of current practices. These approaches should involve the broad participation of stakeholders (including public monitoring, communication and education), multidisciplinary research, and short and long-term water cycle scenarios to support decision-making and the integration of water policy into other policy fields. In effect, governance capacities for implementation of water policies at the local and regional levels should be enhanced.*Theme 3. Supporting tools for sustainable integrative management of water resources.*This theme aims to complement the actions developed under the European Strategy Forum for Research Infrastructures (ESFRI) and other European initiatives. Emphasis should be on establishing networks and information sharing among existing research facilities/field labs, analytical methods, monitoring tools and programmes, access to databases and platforms, exploring the use of big data solutions and establishing reliable hydrological standards. Across the globe, there is a large body of knowledge, methodology and data related to hydrology and the water cycle that has the potential of being beneficial for a wide range of the world's regions. The alignment of water-related research and sharing of data and results will serve to avoid duplication of research, support progress based on previous finding, and thus facilitate the establishment of water management policies addressing rapid climatic changes. |

1. **Stakeholder/industry engagement** (*Maximum 250 words)*

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| *Please evaluate the participation of stakeholders/industry on the project and the added value of this participation.* |

### **Recommendations for improvements/amendments of the report** (Please complete Table below)

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1. **General Assessment Comments** (*Maximum 250 words)*

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| *Please include a summary of the key points of this evaluation.* *Problems identified or specific risks to the projects. As well recommendations/feedback, which could be relevant to the Consortium.*  |