

Water challenges for a changing world

Newsletter 04 May-June 2019

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Water JPI governing board - latest development

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The Water JPI hold its 14th Governing Board meeting in Berlin on 23rd May 2019. The meeting was hosted by the German Federal Ministry of Education and Research (BMBF) with the support of Project Management Jülich (PtJ). The Governing Board meeting facilitated discussion on the sustainability of the Initiative, including exchanges on the budget for future years, and potential impacts on planned activities and membership criteria. The role of Joint Programming Initiatives within the context of the next European Framework Programme, Horizon Europe, was also addressed during the meeting. A detailed discussion on the Water JPI position with respect to the shaping of Partnerships and a Mission on water was facilitated. This discussion on Horizon Europe was held with contributions from a representative from the European Commission, Panagiotis Balabanis, DG Research and Innovation.

The meeting was also an opportunity to update Governing Board members on on-going activities. In particular, the Governing Board approved the new Policy Brief produced by the 23 experts involved in the Water JPI Knowledge Hub on Contaminants of Emerging Concerns (CECs) and entitled "*Contaminants of Emerging Concern - an emerging risk in our waters*". This second Water JPI Policy Brief will be soon available for download on our website. A second International Knowledge Hub on Global Water Challenges in the context of the UN SDGs is currently under development in the frame of the CSA IC4WATER. Following the results of a workshop for the development and setting-up of this second Knowledge Hub, the Governing Board selected the topic on "*New water under water scarcity: new sources, treatment, recycling, reuse, water-health-food-energy nexus*". Furthermore, the Governing Board welcomed and approved the German proposal to organise the Water JPI 2020 Conference in the context of the German Presidency of the European Union.

Progress on water JPI**Revision of the Water JPI SRIA & Vision: consultative workshop for Governing Board and Advisory Board members - Berlin, Germany, 22 May 2019**

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The EPA (Ireland) led a consultative workshop in Berlin on 22nd May 2019 for the members of the Water JPI Governing Board, Scientific Advisory Group and Scientific and Technological Board . There were 34 participants representing 19 countries and the aim of the workshop was to collect feedback and recommendations from the group regarding the new Water JPI Vision 2030 and the structure of the next Strategic Research Innovation Agenda (SRIA). Session one included a presentation by Noreen Layden (EPA) where she provided an overview of the SRIA consultation process completed to date. This included a review of the recommendations and resolutions from previous Governing Board and Advisory Board meetings and a summary of the joint meeting between Water JPI and FACCE-JPI (Bonn, 2017). The latter sought to identify potential synergies between both SRIAs. She also provided an update on the public consultation process that included some preliminary results from the online survey and the key messages from the National Consultation Workshops. The Governing Board and Advisory Board were asked to review and comment on the list of Foresight documents to ensure the EPA had a full list of relevant documentation.

Session two was composed of three breakout discussion groups where each group was asked to respond to four key questions: (1) Vision 2030: What is the Grand Challenge?; (2) Vision 2030: Devising SMART Indicators; (3) SRIA 3.0: Identify the key scientific Themes and (4) Recommendations for semi-structured interviews. There was a lively discussion between the groups/ participants that culminated in agreement on a draft Vision and new themes that were presented to the Governing Board for consideration at their meeting the next day. The participants were also asked to identify potential candidates for the forthcoming semi-structured interviews. The latter will target sectors and regions that were under represented by the online survey and/or national workshops. The EPA will follow-up with participants in June to identify the candidates and arrange the interviews. EPA Ireland requested assistance from the Governing Board and Advisory Board should they encounter any translation/ language challenges.

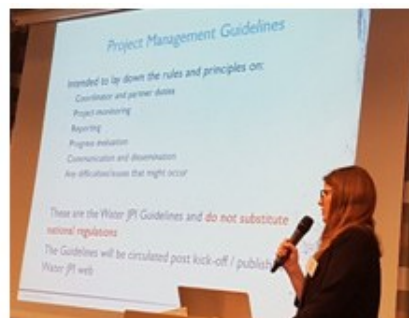
Progress on water JPI



Kick-off meeting of the 18 projects funded under the 2018 Water JPI Joint Call - Closing the Water Cycle Gap – 12th April, Stockholm

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On April 12th the funded projects under the 2018 Water JPI Joint Call – Closing the Water Cycle Gap were presented by their coordinators in Stockholm at the Kick-Off meeting. Eighteen transnational projects are funded with a budget of €15.2million including €4.9 million cofunded by the European Commission between 2019 and 2022. The projects were evaluated by an independent Evaluation Panel of experts. An independent observer followed the evaluation process. The eighteen projects were evaluated as scientifically excellent, covering a wide range of disciplines (from social and economic sciences to natural sciences), and addressing all challenges presented in the call announcement. 55 researchers, Water JPI partners and experts from the Follow-up Group, attended the Kick-Off meeting in Stockholm.



Progress on water JPI

1ST Wasag International Forum about " Water Scarcity in Agriculture" - Praia, Cabo Verde, 19 - 22 March 2019

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Under the patronage of Cabo Verde, in collaboration with Italy and the FAO, the 1st WASAG International Forum on "Water Scarcity in Agriculture was held in Praia, Cabo Verde March 19th -22nd 2019. The forum aimed at identifying concrete, practical, innovative and collaborative solutions to address water scarcity in agriculture in a changing climate. With a focus on Cabo Verde, Small Island Developing States (SIDS) and West African countries, the forum highlighted how water scarcity in agriculture can be addressed and turned into an opportunity for sustainable development, food and nutrition security.



The forum was structured around six thematic areas: Water and Migration, Drought Preparedness, Financing Mechanisms, Water and Nutrition, Sustainable Agriculture Water Use and Saline Agriculture. Over 200 people participated in the conference: decision-makers, professionals, scientists and experts from WASAG partners and stakeholders, regional organizations, public and private sectors from different regions of the world with an interest in water scarcity in agriculture.

WASAG has been designed to bring together key players across the globe and across sectors to tackle the collective challenge of using water better in agriculture to ensure food security for all. It is an initiative for partners from all fields and backgrounds to collaborate by supporting countries and stakeholders in their commitments and plans related to the 2030 Sustainable Development Agenda, the Paris Climate Agreement and other relevant plans and programmes.

The collaboration between Water JPI and FACCE-JPI (Joint Programming Initiative on Agriculture, Food Security and Climate Change) through the WaterWorks 2015 ERA-NET was presented by Heather McKhann, Coordinator of FACCE-JPI, in the session on "Financing mechanisms for sustainable management of water resources". In this presentation, the concept of joint programming was presented as well as the 2016 call and a sample of funded projects, was given. It offered an opportunity for the two JPIs to increase their visibility on the global scale and to showcase their work.

The Forum also represented an opportunity to foster robust relationships among participants, presenters and institutions for future collaborations on addressing water scarcity in various parts of the planet.

Progress on water JPI

Water JPI Stare Project present the first Trans-Europe surveillance on antibiotic resistance in wastewater treatment plants

In a recent study published on Science Advances the team of the Water JPI project - StARE, led by the coordinator Célia Manaia, presented the results of a pioneering European study on the antibiotic resistance prevalence in urban wastewater treatment plants (UWTPs) in seven European countries (Portugal, Spain, Ireland, Cyprus, Germany, Finland and Norway) and 12 municipal WWTPs.

In a recent study published on Science Advances the team of the Water JPI project - StARE, led by the coordinator Célia Manaia, presented the results of a pioneering European study on the antibiotic resistance prevalence in urban wastewater treatment plants (UWTPs) in seven European countries (Portugal, Spain, Ireland, Cyprus, Germany, Finland and Norway) and 12 municipal WWTPs.

According to the World Health Organization (WHO) resistance to antibiotics is considered one of the greatest threats to public health worldwide. In Europe, levels of antibiotic resistance in clinical settings, particularly in hospitals, have been monitored for more than a decade and have shown that southern European countries have higher prevalence values than those in the North. Over the last decades, antibiotic-resistant bacteria have also become an important environmental contaminant, being the potential transmission to humans, for example through recreational activities or food, which has serious potential implications. In urban areas, domestic sewage treatment plants, including hospital sewage, are a major source of antibiotic-resistant bacteria for the environment.

StARE aimed to understand whether the scenario of European distribution of antibiotic resistance in the clinical environment was also observed in raw sewage and in such cases if wastewater treatment would attenuate any differences. Although wastewater treatment was efficient in the reduction of antibiotic resistance prevalence, the load of resistance was higher in southern countries in comparison to northern countries. The results illustrated that observations in clinical settings, environmental antibiotic resistance follows an increasing north-to-south gradient of antibiotic resistance prevalence. This was observed in raw sewage not attenuated by wastewater treatment. Factors such as the temperature, precipitation, and dimensions of the UWTP may contribute to the persistence and dissemination of antibiotic resistance to the receptor environment. Another important outcome from this study is the proposed design and implementation of simplified and low-cost surveillance protocols, based on high-

throughput data as the quantification of antibiotic resistance genes instead of the traditional faecal indicators detection. In any case, the surveillance programmes should always consider and be adapted to the different geographical regions.

Global implementation of integrated environmental resistance monitoring programs will be crucial if control measures are to be implemented, if appropriate, adapted in accordance to the different geographic regions.

Progress on water JPI

Microplastic pollution in the sight of the EC's Group of Chief Scientific Advisors

Broadening existing policy; Ensuring net benefit to society of microplastic pollution preventative measures; and Developing a co-ordinated science-based international response to microplastic pollution, are some of the key points in the scientific opinion of the Chief Scientific Advisors 'Environment and Health Risks of Microplastic Pollution.'

Broadening existing policy; Ensuring net benefit to society of microplastic pollution preventative measures; and Developing a co-ordinated science-based international response to microplastic pollution, are some of the key points in the scientific opinion of the Chief Scientific Advisors 'Environment and Health Risks of Microplastic Pollution'. This scientific opinion was informed by the review report undertaken by the Scientific Advice for Policy by European Academies (SAPEA) consortium, and makes a number of policy recommendations aimed at pre-empting future health and environment risks of microplastic pollution.

The event took place Tuesday 30th April 2019 , during the inauguration of the 'Zooplastics' photo exhibition in the European Commission's Berlaymont building. The exhibition features photos by Filipa Bessa, one of the members of the SAPEA microplastics working group. For more information about microplastic pollution click on topic web page.

Droplets

Horizon Europe partnership preparation process speeding up

A new list prepared by the European Commission highlighting 44 potential topics for new partnerships in the upcoming Horizon Europe Framework Programme, is now available.

A new list prepared by the European Commission highlighting 44 potential topics for new partnerships in the upcoming Horizon Europe Framework Programme, is now available. The eight suggested partnership topics come under Food, Bioeconomy, Natural resources, Agriculture & Environment, are:

1. Accelerating farming systems transition: agro-ecology living lab and research infrastructures;
2. Animal health: fighting infectious diseases;
3. Environmental observations for a sustainable EU agriculture;
4. Rescuing biodiversity to safeguard life on Earth;
5. Safe and sustainable food system for people, planet and climate;
6. A climate neutral, sustainable and productive blue economy;
7. Circular bio-based Europe: sustainable innovation for new local value from waste and biomass, successor to Bio-Based Industries;
8. Water4All: Water security for the planet.

Each topic includes suggestions for funding modalities and already exist in a number of current initiatives. The main aims with regard the new partnerships is simplification of the European Public-to-Public (P2P) and Public-Private-Partnerships (PPP) landscapes. This list may recommend merging existing initiatives. The partnership preparation process appears to be getting more traction with the strategic planning process between the Commission and a Committee of Member States ('Shadow Programme Committee') will continuing its work over the coming months. All Member States have been given the opportunity to respond to a first draft list of partnerships and it is expected that a public draft will soon become available.

You can download the list with proposed topics following this link.

Opportunities

Next Generation Science for Oceans call now open

JPI Climate and JPI Oceans' joint transnational call focuses on Oceans and Climate interactions.

JPI Climate and JPI Oceans' joint transnational call focuses on Oceans and Climate interactions. It is expected that this collaborative approach, will shed new light on the climate related stressors impacting marine life and consequently the marine bio-economy. The joint call aims to inform adaptation policy by bringing key knowledge and science to build up resilience and come up with adaptation measures for vulnerable areas, especially in coastal and low island areas. The application process is a one-stage procedure, and the deadline for submission of proposals is 14th of June 2019.

More information, including the call text, can be found on the JPI Climate or JPI Oceans websites.

Opportunities**Euraqua 25th Anniversary Celebration - Brussels 11 June 2019**

The European Network of Freshwater Research Organisations (EurAqua) holds its 25th anniversary in an event that will take place in Brussels on the 11th June (14:30- 19:30) at the BluePoint building (address: 80 Bd A. Reyers Ln).

The *European Network of Freshwater Research Organisations* (EurAqua) holds its 25th anniversary in an event that will take place in Brussels on the **11th June** (14:30-19:30) at the BluePoint building (address: 80 Bd A. Reyers Ln). During the event, that will count with the confirmed attendance of Mr Pavel Misiga (DG RTD) and Ms Bettina Doeser (DG ENV), the main activities developed by EurAqua since its foundation as well as its future scientific and political roadmap will be presented. Experts from EurAqua's member institutes will be invited to talk about latest developments and research recommendations regarding four strategic scientific themes (natural capital, plastics, droughts and the implementation of the Water Framework Directive). The last part of the event will be devoted to a roundtable made up of representatives of key European funding initiatives in water.

The event is open and free of charge. More information and registration to the event.

Events**10th IWA International Symposium Waste Management Problems in Agro-Industries 19 - 21 June 2019 - Rhode, Greece**

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The increasing complexity of environmental problems generated by many major industries, such as textile, leather, pulp and paper, food, brewery, pesticide and other agri-industries necessitates urgent and effective solutions based upon robust evidence based scientific information. Sewage treatment in rural area and flush-out of pollutants from agricultural land has also been attracting attention. Management of wastes from agri-industries was first addressed at the international forum in the "1st International Symposium on Waste Management Problems in Agro-Industries" held in Istanbul, Turkey in 1989. The success of event, resulted in follow up IAWQ symposiums, through the years. The tenth symposium (AGRO'2019) in the series will be take place in Rhodes, Greece, in 26-28 June 2019. The purpose of AGRO'2019 is to provide a forum for

discussion on waste water management and the agroindustry - "International Symposium on Waste Management Problems in Agro-Industries" . These symposiums have been held with the continued support from the IWA. It will be 30th year of the symposium with the 10th AGRO'2019.

Events



We-Need - Water Needs, Availability, Quality and Sustainability Final workshop

The final workshop for the WaterWorks 2014 project "WE-NEED - WatEr NEEDs, Availability, Quality and Sustainability", will be held in Milano, June 12th 2019.



WE-NEED

WatEr NEEDs, Availability, Quality and Sustainability

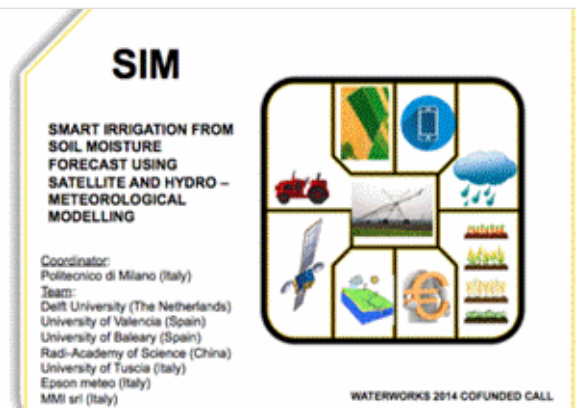


The final workshop for the WaterWorks 2014 project "WE-NEED - WatEr NEEDs, Availability, Quality and Sustainability", will be held in Milano, June 12th 2019.

The goal of the 'WE-NEED' project was to develop new management strategies to assist in the sustainable use of two key components of the groundwater resource: pumping wells, used to obtain water for drinking purposes, and natural springs, typically employed for crop irrigation as well as for recreational use.

The academic institutions involved in the project are Politecnico di Milano (Dept. of Civil and Environmental Engineering), Weizmann Institute of Science (Dept. of Earth and Planetary Sciences), Universidade de Aveiro (Dept. of Biology) and Universitat Politècnica De Catalunya (Dept. of Geotechnical Engineering and Geo-Sciences). In the final workshop, all project partners will report about the results of their research in the context of WE-NEED. The program of the event also includes invited speakers on topics related to the project research issues and a poster session in which PhD students working in the area of "Flow and Transport Processes in Porous/Fractured Media" are encouraged to present and discuss their current research.

Events



SIM - Smart irrigation from soil moisture forecast using satellite and hydro-meteorological modelling

The SIM WaterWorks 2014 research project - Smart irrigation from soil moisture forecast using satellite and hydro-meteorological modelling - is organizing the final workshop on "Water savings in agriculture at farm and irrigation consortium scales" on 12th June 2019, Rome in Italy.

The SIM WaterWorks 2014 research project - Smart irrigation from soil moisture forecast using satellite and hydro-meteorological modelling - is organizing the final workshop on "Water savings in agriculture at farm and irrigation consortium scales" on 12th June 2019, Rome in Italy at the Italian Ministry of Agricultural, Food and Forestry Policies. The morning session will have the project partners presenting on the different results on water and economic savings, satellite data use and meteorological forecasts; The afternoon session will be a round table discussion on the experience of Irrigation Consortia on parsimonious water use. See the program of the event and click here for registration.

Events