

NEWSLETTER Water JPI News 01 | JAN-FEB 2017

PROGRESS ON WATER JPI

2016 WATER JPI EXPLORATORY WORKSHOP 14/11/2016 DUBLIN

The Exploratory Workshop took place in Dublin on the 14th November 2016. 62 people, members of the Governing Board, Water JPI partners and national experts, participated in this workshop in person, and by WebEx for four of the participants. READ MORE

DROPLETS

ANNUAL JOINT PROGRAMMING CONFERENCE 2016: BRUSSELS, 22-23 NOVEMBER 2016 The Annual Joint Programming Conference 2016 focused on "Impacts of Public-Public Partnerships - expectations and experiences".

OPPORTUNITIES HORIZON2020 OPEN CALLS 2016-2017

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FEBRUARY 1, 2017 BRUXELLES, BELGIUM WATER GOVERNANCE ACROSS EUROPE IN LIGHT OF THE REVIEW OF THE EU WATER FRAMEWORK DIRECTIVE

The Water Framework Directive (WFD) is EU's forefront legislative instrument to protect european water resources.

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2016 WATER JPI EXPLORATORY WORKSHOP DUBLIN

The Exploratory Workshop took place in Dublin on the 14th November 2016. 62 people, members of the Governing Board, Water JPI partners and national experts, participated in this workshop in person, and by WebEx for four of the participants. This workshop provided the occasion for participants to discuss and identify knowledge gaps and Research Development and Innovation needs, with respect to Theme 5 of the Strategic Research and Innovation Agenda (SRIA) entitled 'Closing the Water Cycle Gap – Sustainable management of water resources'.

The outputs from the workshop will be used as a source of information to further focus and identify the RDI needs under the Water JPI SRIA, in preparation of future Water JPI Joint Calls. It will be used for the preparation of the WaterWorks2017 ERA-NET cofund proposal (due for submission to the European Commission Horizon 2020 Call in March 2017), which would result in the 2018 Water JPI joint call, if successful.

2016WATER JPI ALIGNMENT WORKSHOP OF ON-GOING RDI PROJECTS, NOVEMBER 2016 VIENNA

The Water JPI held its first Workshop for the <u>Alignment of on-going RDI projects</u> on the 30th November 2016 in Vienna. The purpose of the workshop was to facilitate progression in the alignment of projects through exploring collaborations and synergies towards common objectives, identifying stakeholders and discussing how to target them better, identifying gaps in the Strategic Research and Innovation



Agenda (SRIA) of the Water JPI and identifying research needs and topics for work plans, or future calls.

The topic of the 2013 Water JPI Pilot Call "Emerging pollutants, including pathogens" was selected as the topic of the first workshop, providing an opportunity to encourage synergies between a variety of project researchers in this field. The topics of the invited projects included water treatment and reuse, water management, water quality analysis and monitoring, modelling, risk assessment, microplastics and nanomaterials in water. A total of 20 projects (5 from the 2013 Water JPI Pilot Call, 7 from the 2015 Water JPI Joint Call, 8 national funded projects) attended the workshop together with the Water JPI members. The workshop included keynote presentations, a poster session, break-out groups on different topics and plenary discussions.

IC4WATER Kick Off Meeting, 17 January 2017 PARIS

On 17th January 2017, the Water JPI launched the Coordination and Support Action IC4WATER dedicated to the development of international cooperation in the water area. IC4WATER plans to elaborate new principles of international transnational research and innovation cooperation through concrete joint programming. It will in particular focus on the theme of UN Sustainable Development Goals (UN SDGs) related to water challenges. Within the new post-2015 development agenda, the place of waterrelated issues has been further strengthened. Indeed, water is at stake not only in Goal 6 to "Ensure availability and sustainable management of water and sanitation for all", which is divided into seven specific targets, but in almost all of the 17 SDGs.

The action is pooling resources of 19 partners in total, including 18 participating research programme owners / managers of 17 European countries and the Water Supply and Sanitation Technology Platform (<u>WssTP</u>), and received the support of numerous European and international partners. More information is available <u>here</u>.



MANAGEMENT BOARD MEETING, 10 FEBRUARY 2017 MADRID

The Water JPI held its 10th Management Board meeting in Madrid with the main objective to prepare the upcoming Advisory Boards meeting that will take place in Dublin on 23rd March 2017 and the next Governing Board meeting to be hosted by our Swedish partners in Stockholm on 5th April 2017. The progress of the Working Group on the Operational Sustainability of the Water JPI was presented and the preparation of the proposal for the third ERA-NET Codund WaterWorks2017 on Closing the Water Cycle Gap was also addressed.

- increasing the efficiency and resilience of water uses;
- monitoring and reducing soil and water pollution;
- integrating social and economic dimensions into the sustainable management and governance of water resources.

The call WaterJPI2016 joint call for transnational collaborative research projects was a successful joint call between the water and Facce Joint Programming Initiatives (JPIs). The projects are funded by all the 25 funding partners from 22 countries and the european Commission. Read more about the call <u>here</u>.



The Kick-Off Meeting, hosted by the Swedish Research Council Formas, with the support of RPF, the call secretariat – FCT and the Water JPI will be the occasion to present the background and future activities for WaterWorks2015 and the funded projects (consortium, objectives, implementation plan, expected outputs). During the meeting there will also be a poster session for discussions and parallel meetings between researchers and stakeholders. The final cocktail party will support additional networking between the project teams and the Water JPI community.

The Kick-Off Meeting, which will take place at the

NEWS FROM WATER JPI PARTNERS

ENVIRONMENTAL PROTECTION AGENCY

The Water JPI wish to congratulate Dr. Alice Wemaere, who was successful in winning the recent Environmental Protection Agency (EPA), Research Manager competition. Alice has worked on the EPA research programme for



12 years, during which time she has managed an extensive and diverse portfolio of research activities at national and international levels.

ISPRA AND NEW NATIONAL SYSTEM FOR ENVIRONMENTAL PROTECTION

In June 2016 the National System for Environmental Protection (SNPA) was established which integrates the National Agency (ISPRA) with local Environmental Agencies (ARPA and APPA). It was an important event for italian environmental agencies because it established a federal system with a view to harmonious cooperation, and collaboration among national agencies and respect of local context.

WATERWORKS2015: <u>KICK</u> <u>OFF MEETING</u> OF FUNDED PROJECTS, 6 APRIL 2017 SWEDEN

21 funded projects under the 2016 joint transnational call will be presented in Stockholm the 6 April 2017, with a focus on sustainable management of water resources in agriculture, forestry and freshwater aquaculture sectors by at least one of the following three sub themes:



Folkets Hus Konferens in Stockholm, will be oper to WaterJPI Partners and invited Stakeholders and Experts.

For more information please, contact the WaterJPI secretariat Waterjpisecretariat@ agencerecherche.fr

Alice has also played a pivotal role as National Contact Point for Horizon 2020 Societal Challenge 5 and, through her support and guidance, has been instrumental in assisting Irish researchers drawdown significant funding for Ireland. Alice's

involvement has ensured Ireland's support for the Water JPI since its beginning (CSA WatEUr, WaterWorks2014 and WaterWorks2015 ERA-NETs, and IC4WATER CSA), within which Alice is participating as a work package leader, task force leader (H2020 and European Programmes) and in

general plays a huge role in the continued success of the Water JPI.

Moreover, ISPRA is enacting a deep reform of its organisational layout and Giuseppina Monacelli, responsible for ISPRA activities within the WaterJPI, has been appointed in charge of <u>SINAnet</u> (National Environmental Information System Network).



DROPLETS

ANNUAL JOINT PROGRAMMING CONFERENCE 2016: BRUSSELS, 22-23 NOVEMBER 2016

The Annual Joint Programming Conference 2016 focused on "Impacts of Public-Public Partnerships - expectations and experiences". The objective was to raise awareness and collect evidence of outcomes and impacts of P2Ps at european and national level. The 2-day conference attracted more almost 400 policy makers and research funders in Europe, together with related stakeholders (GPC members, JPI representatives, ERA-NET coordinators and participants, representatives from Art.185, ETP, JTI, etc.). Following the positive experiences from past events, the programme offered a mix of plenary sessions, including overview presentations, which provided a common forum for all participants. The conference also included interactive workshops around key issues and challenges surrounding public-to-public (P2P) partnerships and identified evidence of impacts, success factors, and good practices. The final report is now available.

WSSTP STRATEGIC INNOVATION AND RESEARCH AGENDA

WssTP Strategic Innovation and Research Agenda (WssTP SRIA) is now available online and in print! After the release of the new WssTP Water Vision 2030 'The value of water: towards a future proof model for a european water-smart society' in 2016, WssTP is now excited to publish its new SIRA, demonstrating an innovative route to implement the WssTP Water Vision. Due to its significant relevance and its connection to the Water JPI SRIA, the Water JPI endorsed it.

SYNTHESIS REPORT FOR SDG6 IN-DEPTH REVIEW

In 2015, UN Member States adopted the historic 2030 Agenda, setting universal and transformative goals and targets, and committing to working tirelessly for their full implementation. To ensure that no one is left behind, it will be vital to track progress towards the goals. While a number of UN entities plan to produce regular monitoring <u>reports for SDG 6</u> – to ensure the availability and sustainable management of water and sanitation for all by 2030 – there is a need for a report that presents the overview of progress at the high-level political forum in 2018 when SDG 6 will be reviewed in depth.

INTCATCH

INTCATCH is a <u>HORIZON2020</u> project, which aims to revolutionise the way water monitoring and decision-making will be implemented for the period 2020-2040. INTCATCH aims to:

- use digital technologies and innovative tools to deliver smart water monitoring solutions;
- bring the lab into the field in order to decrease the cost and resources of water monitoring;
- actively engage citizens and NGOs in water monitoring activities for the benefit of society;
- to provide a complete platform for water monitoring solutions.

INTCATCH intends to change the current way in which river and lake water monitoring is implemented. The project will accomplish this by developing efficient, user-friendly water monitoring strategies and systems based on innovative technologies that will be able to provide real time data for important parameters. The new business model will transform water governance by facilitating sustainable water quality management by community groups and NGOs using a decision support system and eco-innovative technologies. The INTCATCH systems will be implemented and validated in the urban London and rural Great House rivers in the UK and in Lake Garda (Italy) and will be demonstrated in Lake Yliki (Greece) and in River Tier (Spain).

WATER SAFETY AND SECURITY <u>WORKSHOP</u> 12 DECEMBER 2016, BRUSSELS

Improving coordination among science, policymaking and management/operation actors JRC and DG HOME co-organized the «<u>Water Safety</u> and Security» workshop on the 10th anniversary of the groundwater directive.

The workshop aimed at improving the coordination of information exchange between policymakers, scientists and practitioners in the area of water safety and security. Synergies among the safety and security (research and policy) areas were proposed and discussed.

DRINKING WATER DIRECTIVE: WORKSHOP ON MATERIALS AND PRODUCTS IN CONTACT WITH DRINKING WATER 19 JANUARY BRUSSELS

The workshop was organized to update stakeholders on the activities of the Commission, the four-Member-State-initiative and industry providers of materials in contact with drinking water. The Commission emphasized the political will to develop a European-wide certification scheme although several aspects require further work. A public event will be held on 18 May 2017.

WATER FRAMEWORK DIRECTIVE CIS MEETINGS: 15-16 DECEMBER 2016 COMMON IMPLEMENTATION STRATEGY FOR



THE WATER FRAMEWORKDIRECTIVE

On the 15-16 December 2016 the meeting of the WG chemicals of the Water Framework Directive CIS was dedicated to the priority substances and the strategic approach on pharmaceuticals. The meeting documents are available <u>here</u>. As a part of a common implementation strategy of Water Framework Directive (WFD), a technical document (EX, 2011) was developed where Environmental Quality Standards (EQSs) are elaborated. The standards are, in particular, annual average (AA) EQSs and maximum allowable concentration (MAC) EQSs, protecting aquatic organisms from acute and chronic effects. In addition to these two standards, EU-wide EQSs in biota have been set for some priority substances to protect against secondary poisoning or to protect human health. Each member states can establish national EQSs, according to WFD or, alternatively, they can set EQSs level as long as they provide the same level of protection. This policy leads to high degree of variability observed for some EQSs as showed here.

CIRCULAR ECONOMY

<u>Circular Economy</u> is a relevant theme related to waste and in particular regarding waste water and its reusing. The european Commission adopted an ambitious <u>Circular Economy Package</u>, which includes revised legislative proposals on waste to stimulate Europe's transition towards a circular economy, which will boost global competitiveness, foster sustainable economic growth and generate new jobs.

The Commission launched a communications campaign to raise awareness of why water reuse is important. In the video <u>interview</u> with <u>EurEau</u> president Bruno Tisserand, it is explained connection between circular economy and water reuse. Water reuse is one way to increase the available water resources, reducing environmental impact and water scarcity. As Bruno Tisserand said, "Water is too precious to be used only once. It is crucial that water is managed so that everyone can benefit from it now and for our children and grandchildren. Water reuse has significant environmental, social and economic gains". Reused water is safe and almost one billion cubic metres were reused in Europe. The Commission's press about Circular Economy is <u>here</u>.

<u>THE ECONOMIC</u> <u>CHALLENGE OF REDUCED</u> <u>WATER CONSUMPTION</u>

EurEau members support the objective to increase resource efficiency, in particular for water and energy use. Decreasing water consumption has been encouraged for many years across Europe by legislation and by technological progress. This is an economic challenge for water and waste water operators, since most of their costs are fixed but their income is closely linked to consumption. These challenges should be addressed by relevant authorities; otherwise, the economic balance of water services might be compromised as well as the investment capacity. Service levels might suffer in the medium term if appropriate measures are not in place. Tariffs should recover costs. Given that 60-80% of the costs are fixed, measures should guarantee that all fixed costs are recovered, for example by a better reflection in the tariff structure.

WSSTP OASC CONNECTED SMART CITIES

In the context of the <u>OASC Connected Smart Cities</u> <u>conference</u> held last 12th of January, WssTP organised a special break-out session dedicated to "Digital water: water management is one of the biggest existing deployments of sensors in urban areas". The session was made up of three panels in which participants offered their viewpoints about opportunities and needs of digital solutions for addressing the current and future global water challenges.

Mr. Andrea Rubini, scientific and policy manager of the WssTP, opened the session and explained how

the new WssTP Water Vision 2030 emphasises the role of digital water as pivotal pillar for the development of a European sustainable and circular water-smart society.

The session demonstrated that digital water technology is already bringing forward promising results but this needs to be further developed and scaled-up through effective actions and tools, such as pre-commercial procurement and living labs. The speakers stressed that digital water solutions can drive the infrastructure renewal, retrieve the true value of water, boost new water management models and make cities resilient to climate change and security threats.

THE WORLD ECONOMIC GLOBAL RISKS 2017 REPORT

Water Crises are again in the TOP 5. This illustrates a cluster of interconnected environment-related risks - including extreme weather events, climate change and water crises -have consistently featured among the topranked global risks for the past seven editions of The Global Risks Report Environment related risks again stand out in this year's global risk landscape, environmental risks are also closely interconnected with other risk categories. Four of the top ten risk interconnections in this year's Global Risks Perception Survey (GRPS) involve environmental risks, the most frequently cited of these being the pairing of "water crises" and "failure of climate change mitigation and adaptation". This shows that ineffective management of the "global commons" - the oceans, atmosphere, and climate system - can have local as well as global consequences. For example, changing weather patterns or water crises can trigger or exacerbate geopolitical and societal risks such as domestic or regional conflict and involuntary migration, particularly in geopolitically fragile areas.

THE ROLE OF SCIENCE, TECHNOLOGY AND INNOVATION POLICIES TO FOSTER THE IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT GOALS REPORT OF THE EXPERT GROUP "FOLLOW-UP TO RIO+20, NOTABLY THE SDGS"

This report presents the conclusions of the independent expert group on the 'Follow-up to Rio+20, notably the sustainable development goals (SDGs)' that were established by the European Commission (EC) to provide advice on the role of science, technology and innovation (STI) for implementing the new global sustainable development agenda (2030 Agenda). The group provides recommendations, in terms of both general policy orientations and concrete areas of engagement, for EU STI policy to contribute to the implementation of the 2030 Agenda in Europe and beyond, as well as for possible engagement in international initiatives concerning STI. It recommends the EU capitalise on its Horizon 2020 research and innovation programme, which is seeking to invest more than 60% of its budget for sustainable development and is fully open to international participation.

Water JPI

ENVIRONMENT JOURNAL PROCEEDINGS OF THE ROYAL IRISH ACADEMY ADVANCES IN WATER RESEARCH: EVIDENCE-BASED CONTRIBUTIONS TO MANAGEMENT AND POLICY IN IRELAND UNDER THE WATER FRAMEWORK DIRECTIVE

"Biology and the Environment" is a broadspectrum journal publishing biological and environmental research in topics of Irish interest for an international readership. There are three issues produced each year, the latest issue "Advances in water research: evidence-based contributions to management and policy in Ireland under the Water Framework Directive". This issue includes a diverse range of research that draws on the experiences encountered during the first cycle of Water Framework Directive (WFD) river basin management planning, develops an evidence base and new tools for decision-making that are informing the second planning cycle, and provides insights to meet future challenges. These research outputs build on new datasets collated to support the WFD implementation. The Irish Environmental Protection Agency's (EPA) water research programme and the data collated support researchers in increasing our understanding of the factors affecting the ecological and environmental status of aquatic ecosystems. An overview paper of the EPA's Water Research Programme is provided by Water JPI partner, Alice Wemaere, in addition to reviewing the wider European water research funding context and Irish contributions in this wider forum.

SOURCES, OCCURRENCE AND PREDICTED AQUATIC IMPACT OF LEGACY AND CONTEMPORARY PESTICIDES IN STREAMS MCKNIGHT, S.U., RASMUSSEN, J.J., KRONVANG, B. ET AL. (2015) - ENVIRONMENTAL POLLUTION

The EU has banned many toxic pesticides, however some can remain in the environment for many decades. Aquatic invertebrates are particularly vulnerable to pesticides, which can alter their feeding behaviour, growth and mobility. New research has found that persistent pesticides can increase toxicity in streams by up to 10 000 times compared to the residues of currently used pesticides. The researchers recommend these be taken into account when calculating overall toxicity.

This study couples current findings of pesticidesin surface and groundwater to the history of pesticide usage, focusing on the potential contribution of legacy pesticides to the predicted ecotoxicological impact on benthic macroinvertebrates in headwater streams. Results suggest that groundwater, in addition to precipitation and surface runoff, is an important source of pesticides (particularly legacy herbicides) entering surface water. In addition to current-use active ingredients, legacy pesticides, metabolites and impurities are important for explaining the estimated total toxicity attributable to pesticides. Sedimentbound insecticides were identified as the primary source for predicted ecotoxicity. Our results support recent studies indicating that highly absorbant chemicals contribute and even drive impacts on aquatic ecosystems. They further indicate that groundwater contaminated by legacy and contemporary pesticides may impact adjoining streams. Stream observations of soluble and sediment-bound pesticides are valuable for understanding the long-term fate of pesticides in aquifers, and should be included in stream monitoring programs.



ASSESSMENT OF THE BIODEGRADABILITY OF SELECTED SULFA DRUGS IN TWO POLLUTED RIVERS IN POLAND: EFFECTS OF SEASONAL VARIATIONS, ACCIDENTAL CONTAMINATION, TURBIDITY AND SALINITY E., BARAN, W. & SOBCZAK, A. (2016) - JOURNAL OF HAZARDOUS MATERIALS

Up to 90% of consumed drugs enter the environment. This may have negative effects on wildlife, especially when the drugs take long periods to break down. Pharmaceutical pollution is a growing environmental concern in the EU, as the world's second biggest consumer of human medicinal products. The aim of this study was to assess the aerobic biodegradation of four selected sulfonamides (sulfanilamide, sulfamethoxazole, sulfadiazine and sulfathiazole) using water samples drawn from highly polluted rivers. Additionally, we aimed to identify the factors that have a significant effect on the process efficiency. 19 water samples were collected from Brynica and Czarna Przemsza rivers (in Poland) at the same location at approximately monthly intervals. A characteristic feature of the results is the presence of significant differences between the rates of sulfonamides biodegradation in particular samples. The sulfonamide most resistant to biodegradation was sulfamethoxazole, whereas sulfathiazole was most biodegradable. Seasonal variations and related microbial population changes had the most significant effects on sulphonamides biodegradation, e.g., the studied process was highly inhibited during wintertime. A decrease in the biodegradation rate in the river water could be caused by accidental water pollution from industrial wastewater with heavy metals, an increase in salinity and a decrease in pH, and turbidity.



<u>EUROPE'S RIVERS</u> 'HIGHLY CONTAMINATED' WITH LONG-CHAIN PERFLUOROALKYL ACIDS

Long-chain perfluoroalkyl acids (PFAAs) are persistent chemicals with proven toxic effects. This study estimated the emissions and concentrations of two such chemicals, perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), in 11 of Europe's most populated river catchments. Estimated emissions were lowest in the Thames and highest in the Rhine, while the EU environmental quality standard for PFOS was exceeded in all rivers. This study provides a picture of PFAAs contamination in rivers across Europe, and makes recommendations for achieving reductions.

OPPORTUNITIES

HORIZON2020 OPEN CALLS 2016-2017

H2020 SC5 - SOCIETAL CHALLENGES

- <u>SC5-02-2017</u> Integrated European regional modelling and climate prediction system
- <u>SC5-01-2016-2017</u> Exploiting the added value of climate services
- <u>SC5-08-2017</u> Large-scale demonstrators on nature-based solutions for hydro-meteorological risk reduction
- <u>SC5-31-2017</u> Widening international cooperation activities on climate adaptation and mitigation
- <u>SC5-33-2017</u> Closing the water gap

H2020 SFS - SUSTAINABLE FOOD SECURITY – RESILIENT AND RESOURCE-EFFICIENT VALUE CHAINS

- <u>SFS-49-2017</u> Better understanding the challenges facing agriculture and the impacts of policies - A European platform to support modelling in agriculture
- <u>SFS-47-2017</u> Management of soil water resources in the EU and China and its impact on agroecosystem functions
- <u>SFS-50-2017</u> Supporting international cooperation activities on agriculture soil contribution to climate change mitigation and adaptation
- <u>SFS-27-2017</u> Permanent grassland farming systems and policies

H2020 ERA-NET COFUND - SUSFOOD2

The food supply chain is under pressure due to limited resources, water scarcity, soil degradation, biodiversity loss and the impacts of climate change. The strategic goal of SUSFOOD2 complements the EU bioeconomy and food policies, and aims to reinforce cooperation in research, development and innovation between EU members and associated States in order to maximize the contribution of research to the development of more sustainable food systems from production to consumption.

JPIAMR 5TH CALL FOR PROPOSAL

JPIAMR launched its fifth transnational call on comparison of prevention, control and intervention strategies for AMR infections through multidisciplinary studies, including One Health approaches. The deadline for submission of pre-proposals is March 21st (1700 CET). The deadline for consortia invited to submit full proposals is July 4th (1700 CET).

Budget: 12 million Euro (for 3 year projects). Eligible participants are researchers from the following countries: Belgium, Germany, Italy, Latvia, Romania, Canada, Israel, Netherlands, Norway, Poland, Spain, Sweden, Ireland, and Switzerland.

EVENTS

FEBRUARY 1, 2017 BRUXELLES, BELGIUM WATER GOVERNANCE ACROSS EUROPE IN LIGHT OF THE REVIEW OF THE EU WATER FRAMEWORK DIRECTIVE

The Water Framework Directive (WFD) is EU's forefront legislative instrument to protect european water resources. However, the achievement of the "good status" for EU waters as laid down in the WFD lags behind. To understand implementation gaps, the issue of governance is a key aspect to look at. The correct and full implementation of policy measures is closely linked to the proper distribution of roles and responsibilities among stakeholders at all levels. The amount of resources available for each actor is another key element. The regulatory framework defines such issues of governance. Within the context of WFD's review by the european Commission in 2019, the topic of water governance will be an important aspect to look at, in order to improve the implementation of European water policies.

This debate-meeting will gather representatives of European institutions, International organisations, local authorities and the civil society, and will be the opportunity to discuss the main issues related to water governance at European level, to propose solutions and to address challenges such as climate change and water security.

20-22 FEBRUARY 2017 LONDON, <u>UK WORLD WATER TECH</u> INNOVATION SUMMIT

World Water-Tech has established itself as a meeting place for international stakeholders focused on advancing the commercialisation of advanced water and wastewater solutions. Based on the outstanding success of the first two summits, World Water-Tech North America was launched in partnership with WaterTAP Ontario, and takes place each fall in Toronto, Canada. The World Water-Tech team also works in partnership with PUB Singapore and BlueTech Research to host the TechXchange, a one day summit focused on technology innovation at Singapore International Water Week.

The 6th annual World Water-Tech Innovation Summit 2017 focuses on building resilience and accelerating the adoption of commercially viable technologies to meet the demand for sustainable water and urban infrastructure management. 250 industry leaders will meet in London to explore how we can harness innovation to address the most urgent issues facing the world's water supply. Emphasis will be placed on the need for greater collaboration between different stakeholders in developing a more holistic approach to water management, innovation and financing. Furthermore, the summit will seek to evaluate and optimise current technologies and approaches for transforming waste streams into value streams through effective data management and water re-use and resource recovery, while delving deep into consequences of flooding and drought.

14-16 MARCH 2017 MARRAKECH, MAROCCO INTERNATIONAL CONFERENCE ON WATER STORAGE AND HYDROPOWER DEVELOPMENT FOR AFRICA

Aqua~Media International, in partnership with the International Commission on Large Dams, and with the strong support of the Government of Morocco, has reconvened the next regional conference for Africa, AFRICA 2017, which will take place in Marrakech. This follows the unfortunate need to postpone AFRICA 2015, at the time of the tragic ebola outbreak, on the advice of various relevant authorities.



19-22 MARCH 2017 DEAD SEA, JORDAN 4TH ARAB WATER **WEEK**

The Arab Water Week (AWW) is an international meeting in the Arab region, which tackles water management issues through establishing innovative partnerships and platforms of collaborative work on water issues in the region. The importance of this meeting lies in providing a platform for greater coordination among the existing network of key stakeholders active in the water sector in the region. The Arab Water Week (AWW) does not only provide an opportunity to enhance communication flows, synergies and the sharing of successful experiences, but as well, it will facilitate the creation of new partnerships that complement and maximise the impact of on-going work in this sector for the benefit of all countries in the region.

22-24 MARCH 2017 EKURHULENI METROPOLITAN MUNICIPALITY, SOUTH AFRICA LOCS4AFRICA

The Local Climate Solutions for Africa (LOCS4Africa) congress, held under the ICLEI Africa's Urban Leadership for African Sustainability (ULAS) programme, is Africa's leading platform on local climate action for cities and sub-national governments across the continent. The platform offers opportunity for engagement and strategic discussions around current on the ground solutions and emerging trends relating to Africa's vulnerability to climate change in urban areas.

28-31 MARCH 2017 BERLIN, GERMANY WASSER BERLIN **INTERNATIONAL**

Together with a high quality congress program, this event has become established as the central meeting point for the international water industry. It is also a specialist marketing platform for new products and technologies and a forum for sharing knowledge. This is where industry decision makers and experts come together, where supply meets demand.

Wasser Berlin International 2015 was characterised by a stronger international scope and an increase in the number of trade visitors. On 36,000 m2 exhibition area and with 557 exhibitors from 26 countries, which is a growing proportion of foreign exhibitors and trade visitors, the importance of water as a global resource is reflected. This also attests to the high relevance of the industry meeting in Berlin.

06 APRIL 2017 BARCELONA, SPAIN WEAM41 FINAL WORKSHOP, APRIL 6TH 2017

It is a project under the european Union's Seventh Programme for research, technological development and demonstration. The agriculture sector is accountable for 30% of the total water consumption in Europe, but reaches up to 70% of total water consumption in several European southern countries. In recent years, most of the efforts have been focused on water efficiency, without taking care of energy aspects, resulting in some cases in a significant increase in energy consumption, both per irrigated surface and per volume unit of water. The WEAM4i project will mainly address 2 of the priorities of the EIP on Water: "Water-Energy nexus" and "Decision support systems (DSS) and monitoring".

The aim of the event is to present the results of the project and its success case studies as well as to make synergies with the different projects and initiatives working on the Water-Energy-Food (WEF) nexus. Different stakeholders, from the irrigation communities as well as water and energy sectors across Europe, will join the workshop.Furthermore, parallel sessions on the WEF nexus focusing on the policy perspectives will be organised in parallel to B2B roundtables gathering the end-users with the producers of WEAM4i smart irrigation tool.

24-25 APRIL 2017, LONDON, UK SMART WATER SYSTEMS 2017

The Smart Water Systems conference will not only discuss the market drivers responsible for this rapid growth, but also address the increasingly large role that data and information plays in the water management industry and analyse various data strategies and the demand for real-time information. As smart water meter roll outs have been happening across the UK and parts of Europe, challenges and new developments of this implementation - such as increasing water demand, meter reading challenges and customer focused approaches - will be a special focus. This conference will take a deeper look at the value of the information that can be extracted from smart water meters beyond its known use. New smart technologies and smart networks will be discussed, as well as concerns about data security and data protection. Smart Water Systems features talks about current challenges in water treatment, water cycle optimization and customer engagement programmes, presented by key speakers of the industry will successfully help you drive efficiency and increase your knowledge of smart water.

EUROPEAN GEOSCIENCES UNION - EGU - DIVISION ON HYDROLOGICAL SCIENCES - GENERAL ASSEMBLY 23-28 **APRIL 2017 VIENNA AUSTRIA**

The Division on Hydrological Sciences (HS) of the European Geosciences Union (EGU) organizes the hydrological part of the program during the annual EGU General Assembly 2017 that will bring together geoscientists from all over the world to one meeting covering all disciplines of the Earth, planetary and space sciences. The EGU aims to provide a forum where scientists, especially early career researchers, can present their work and discuss their ideas with experts in all fields of geoscience.

The Division on Hydrological Sciences (HS) ensures that the sessions during the General Assembly cover the hydrological sciences as comprehensively as possible, there are currently ten subdivisions for distinct fields within the broad area of hydrology. Each Subdivision Committee organizes a set of oral and poster sessions to cover its field.

The EGU 2017 General Assembly promises to be the largest and most exciting to date. The early registration deadline is 16 March.

24-25 APRIL 2017 MADRID, SPAIN THE GLOBAL WATER **SUMMIT 2017: ACCELERATING GROWTH THROUGH INTELLIGENT SYNERGIES**

The Global Water Summit has always been about connections: water meets money, public meets private, business meets opportunity. For 2017, we want to take it one-step further, to explore how the connections at the edges of the sector can give us fresh perspective on the roadblocks to growth. Water management no longer lives in isolation; the digital revolution means that utility business models are evolving and data is empowering the customer and the developing world. Meanwhile, the age of the 'smart' and 'liveable' city has made water an intimate bedfellow with other environmental services such as waste and energy.





11-13 MAY 2017 CASABLANCA, MAROCCO INTERNATIONAL WATER EXHIBITION & FORUM



Water Expo & Forum a new meeting

opportunity for speakers and global specialists in a space for reflection and business development. The water sector in Morocco is of special interest to the government and it is central to economic policy concerns because it plays a major role in the water security of the country.

15-17 MAY 2017 VIENNA, AUSTRIA <u>PI 2017</u> - SPECIALIST CONFERENCE ON BENCHMARKING AND PERFORMANCE ASSESSMENT

Every two years the International Water Association IWA Benchmarking and Performance Assessment Specialist Group (BPA SG) organises a conference presenting experiences, learning about benchmarking practices and assessment of projects around the world. The PI Conference is also a traditional forum where ideas and methodologies are exchanged. The next PI Conference will be hosted by the International Association of Waterworks in the Danube Catchment Area (IAWD) from 15 – 17 May 2017 in Vienna.

The PI Conference 2017 will be held in conjunction with the Danube Water Conference 2017. The annual Danube Water Conference is an event jointly organised by IAWD and the World Bank within the Danube Water Program (DWP). The DWC will involve dialogue between countries and persons from different sectors involved in the delivery of water services. The next DWC will occur on 17/18 May 2017 in Vienna.

29 MAY-01 JUNE 2017 THE HAGUE, THE NETHERLAND LUWQ2017 3RD INTERNATIONAL INTERDISCIPLINARY CONFERENCE ON LAND USE AND WATER QUALITY: EFFECT OF AGRICULTURE ON THE ENVIRONMENT

LuWQ2017 is an international and interdisciplinary conference at the cutting edge of science, management and policy to minimise the effects of agriculture and land use changes on the quality of groundwater and surface waters.

Objectives of the conference are to:

- provide a forum for the exchange of scientific knowledge, research on system knowledge, modelling and uncertainty;
- discuss the entire policy cycle for water quality improvement;
- intensify contacts (a) between soil/water related scientists, agro related scientists, social scientists, ecological scientists and economists, and (b) between water managers and policy makers.

IWRA XVI WORLD WATER CONGRESS "BRINGING SCIENCE AND POLICY" CANCUN, MEXICO 29 MAY-3 JUNE 2017

Under the theme "Bringing Science and Policy", the International Water Resources Association (<u>IWRA</u>) in partnership with both the Mexico's National Water Commission (CONAGUA) and Mexico's National Association of Water and Sanitation Utilities (ANEAS), is organising the XVI World Water Congress in Cancun, Mexico, from May 29th to June 3rd, 2017.



academia (Colorado State University, Lee Kuan Yew, Texas A&M) and civil society. In addition, more than 250 scientific papers and 100 posters will be presented, and 50 special sessions are planned. Around 1,500 attendees are expected in Cancun, maximising the ability of participants to network with other attendees to share experiences, promote discussion, and present new knowledge, research and developments in the field of water policy and science from around the world. This Congress is also an important stepping stone to the 8th World Water Forum planned to take place in Brasilia in 2018.

06 JUNE LIEGE, BELGIUM ASTEE 96TH ANNUAL <u>CONFERENCE</u>

Nowadays EU policies heavily influence regional management, investment and development projects, particularly those dealing with water, environment and waste management. In order to prepare for the upcoming cycles in the fields of water and waste, it is essential to take stock of the progress accomplished through EU directives as well as the difficulties in implementing them, by comparing case studies and feedback from different regions and member states. In the current European and global context of ongoing humanitarian and financial crises, what can we do to ensure the European Union will protect us, give us collective strength, help us improve our way of life, and no longer be considered solely as a series of constraints or obstacles? What strategic vision can be developed? How can the European impetus be used to act in our regions? What paradigm shifts can be brought about?

10-14 JULY 2017PORT ELIZABETH, SOUTH AFRICA WATER AND DEVELOPMENT: SCIENTIFIC CHALLENGES IN ADDRESSING SOCIETAL ISSUES

The South African National Committee of the International Association of Hydrological Scientists (SANCIAHS) invite to participate in the 2017 IAHS Scientific <u>Assembly</u> to be held July 10-14th in Port Elizabeth, South Africa.

The theme of the meeting is "Water and Development: scientific challenges in addressing societal issues" which is particularly appropriate in the context of an IAHS Scientific Assembly meeting being held for the first time in sub-Saharan Africa and is well aligned with the IAHS Panta Rhei. South Africa has a rich and varied hydrological history and has been a research leader in many aspects of hydrology through years of paired catchment and process hydrology research, model development and in the inclusion of scientific knowledge as exemplified by the South African National Water of 1998. SANCIAHS is a strong and active network representing South African hydrologists and is active for nearly 40 years recently hosting its 18th national symposium. SANCIAHS is joined by Waternet as a major scientific partner in hosting the 2017 Scientific Assembly. WaterNet is a southern Africa regional network of university departments and research and training institutes active in integrated water resources management.



This international event aims to promote the use of sound science to help develop strong water policies. There will be distinguished speakers from various water ministries, (including China, Mexico and Senegal); international organisations (World Water Council, World Bank, WWF, UNESCO-IHP, SIWI, OECD, IUCN, GWP, CAF),

12-14 JUNE 2017 GOTHENBURG, SWEDENEMBRACE THE WATER – CITIES OF THE FUTURE CONFERENCE (IWA)

The conference <u>Embrace the Water</u> aims at gathering urban planners and water professionals from around the globe in order to share experiences and projects on the opportunities and threats of water in modern, sustainable and innovative cities. The conference contributes to celebrating the Gothenburg 400 year's jubilee, and to the IWA Cities of the future programme.

10-12 OCTOBER 2017 AARHUS, DENMARK NORDIC WASTEWATER CONFERENCE

DANVA, SAMORKA, FIWA, Svenskt Vatten and Norsk Vann invite all water professionals with an interest in wastewater, sewage and climate change adaptation to submit abstracts for platform, poster and workshop presentations at <u>NORDIWA 2017</u>. Deadline for submission of abstracts is 6 March 2017.

