

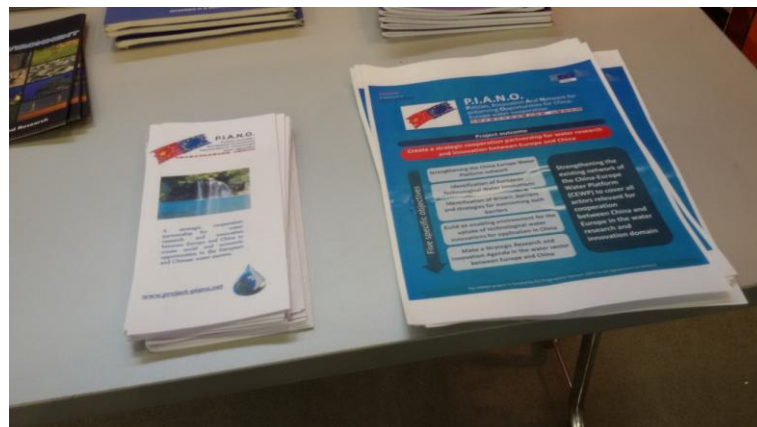


Dear Reader,

as you already know the project PIANO promotes a stronger and fruitful cooperation between Europe and China in the water sector and builds new opportunities for creating synergies among institutions, agencies, companies and enterprises dealing with water management in the two areas of the world. The project activities are now focused on the elaboration of its Strategic Research and Innovation Agenda jointly elaborated among researchers and experts from both sides. The PIANO Strategic Research and Innovation Agenda (SRIA) will define the innovation needs in the research domains of the project: agricultural water management, municipal water management, industrial water management, river basin management, water for energy. The document will also prioritize objectives, topics and actions in the China-Europe water cooperation. A survey to identify these needs and priorities is ongoing. A questionnaire based on the results of the new technological solutions mapped and analyzed in [WP 2](#) has been circulated to European and Chinese key actors in the water sector to gather their valuable contributions and suggestions. This questionnaire can be filled in [on line](#) till the end of May. The contributions received to this survey will be analyzed, aggregated and taken into consideration for the development of the PIANO SRIA in the following months.

The elaboration of the PIANO Strategic Research and Innovation Agenda (SRIA) carried out within the frame of PIANO WP 4 is also based on the comparative analysis of agendas launched by significant water research, development and innovation national and international programmes, initiatives and organisations in Europe and similar documents made available from Chinese institutions. Vision, needs and actions highlighted in the agenda of [Acqueau](#), the water industrial cluster of the European programme [EUREKA](#), in the SIRA of the Water Supply and Sanitation Technology Platform [WssTP](#) and the implementation plan of the European Innovation Partnership on water [EIP-Water](#) are close to the general conceptual framework of the PIANO project and are very relevant in identifying key technology areas of interest able to tackle the main present and future water challenges. The Central Chinese Government policy document on water resources management was also examined to extrapolate the main problems pointed out and to compare measures and solutions proposed. Further contributions to this mapping exercise was also provided by some representatives of Chinese institutions who are involved in the PIANO activities.

All documents analyzed emphasize the need to join *implementation and development of best water technologies* with *policy and actions to promote proper integrated water management and social awareness*.





Networking, communication and dissemination are very important activities in supporting the achievement of the PIANO objectives. Many presentations of the PIANO goals and activities were held during the two years' life of this international collaboration in the water sector during international conferences and workshops organised in Europe and in China. Information on the progress of the project activities are provided regularly on the website of PIANO partners and published on their bulletins, newsletters and magazines. Also this year many initiatives to raise interest in the project and involve stakeholders have been already developed and new ones are envisaged. PIANO was presented during an event of the Isle Utilities Group based in UK by our English partner Atkins. A presentation of the first results of the PIANO project was held by our French partner [OIEAU](#) during the China Europe Water Platform Joint Steering Committee meeting which took place in Evora (Portugal) on 3-4 May. The project activities and results will be presented at the Qingdao International Water Congress [WRE2017](#) which is organised in China on 26-29 June 2017. Dissemination and exploitation activities are also planned for the Stockholm World Water Week, the annual high-level dialogue conference of the China- Europe Water Platform [CEWP](#) hosted this year in Turku (Finland) on 21-22 September, the annual conference of the European Innovation Partnership [EIP-water](#) which will take place in [Porto](#) from September 24-30. A presentation of the PIANO activities will be given at the 13<sup>th</sup> EWA conference programmed in Brussels for 6-7 November 2017. For the end of this year is also planned the final conference of the PIANO project to be held during a major water-related in China or in Europe.

PIANO WP3 which analyses the drivers, opportunities, barriers and strategies for innovative EU technologies in the Chinese water sector is progressing. This analysis is done for the water sector as a whole and for specific types of technology. Technologies are grouped into the sectors of agricultural, municipal, Industrial water management, river basin management, and water for energy (hydropower). The specific technologies are selected from those prepared in the WP2 database on the basis of being well developed in Europe but not yet in the China market. In each sector technologies and the barriers and opportunities are analysed for those considered as monitoring systems; modelling and DSS systems; control systems; or specific products, processes and technologies. Each technology is also assessed for its commercial potential in China considering the ease with which it might be copied, the suitability to the commercial and regulatory situations and the uniqueness that will drive demand for a product that cannot easily be met by a local substitute. The WP 3 report will also summarise the key market drivers, increasing role of public – private partnerships, the procurement processes and barriers related to IPR protection and import / export restrictions and restrictions to specific industries. Certain technologies have been selected in each category as recommended as having greatest commercial potential and their producers will be invited to join workshops in China as well as other organisations who are undertaking similar exercises to promote water sector technologies in China. This includes Isle Utilities and the EU SME Instrument Overseas Trade Fair Participation Programme. The approach to the workshops was discussed with the Chinese government partners.

*Next meeting of the PIANO partnership to take stock of the project progress and results is envisaged for the end of September 2017 in Portugal and will be hosted by the Portuguese partner [LNEC](#).*



### **China will be more environment-friendly**

Presenting the government [work report](#) at the 12th National People's Congress Chinese Premier Li Keqiang set China's GDP growth target for the year at "around" 6.5%, slightly lower than last year's goal of between 6.5% and 7%, as the economy continued to lose momentum. In any case China's economy will be greener: more than 800,000 hectares of marginal farmland will be turned into forests or grassland this year. China will also begin to pilot projects to improve the quality of forests and restore ecosystems along the Yangtze economic belt. Chemical oxygen demand and ammonia nitrogen emissions should both drop by two percent this year, stated Li and added that China will also make big moves to improve the environment for foreign investors, including making service industries, manufacturing, and mining more open to foreign investment, encouraging foreign-invested firms to be listed and issue bonds in China, and allowing them to take part in national science and technology projects. Furthermore, China will strengthen its capability for making technological innovations, by improving mechanisms for providing continued long-term support for fundamental research and original research, building major national infrastructure projects for science and technology and setting up technological innovation hubs, and establishing platforms for sharing R&D resources, among other measures.

### **Urban water supplies from a new wetland park in China**

Two-thirds of Chinese cities suffer from water scarcity and water pollution. In Deyang, a pilot artificial recharge water supply system was developed and tested following the longstanding Sino-Dutch cooperation. This artificial recharge water supply system, developed based on the Amsterdam dune system, increases groundwater storage, maintains constant water supply and improves water quality. This site integrates a recreational wetland park, surface water quality treatment, artificial groundwater recharge, drinking water production, public education and scientific research. The Deyang wetland park was officially opened to the public with an opening ceremony on September 23, 2016.



### **China's plans to pump in Siberian water**

Chinese urban planners have proposed building a 2,000 km pipeline to pump water from the Siberian lake Baikal to relieve shortages in the parched north-western city of Lanzhou. Lake Baikal holds 20% of the earth's freshwater supplies and this mega-project to be negotiated with the Russian authorities could quench the dryness of a Chinese area which saw just 380 mm of rain last year. According to Siberian scientists fresh water supplies in China could be a promising area of Russian exports.



## Poyang Lake hit by severe drought

Located in Jiangxi Province, Poyang is the largest freshwater lake in China. The lake is fed by the Gan, Xin, and Xiu rivers, which connect to the Yangtze through a channel. The size of the Poyang Lake fluctuates every year. It has been recorded to cover 4,500 square kilometres (1,737 square miles) at its largest. Historically, the lake was known for its abundance in freshwater fish and shrimps and supplied water resources for nearby rice fields. However, pictures taken last February in Jiujiang revealed scenes a world away. In Jiujiang's Lushan district, a huge ship could be seen stranded on the former lake bed of Poyang. The Poyang Lake regularly dries out in winter. However, this year's dry spell came 54 days earlier than usual. According to Jiangxi Hydrology Bureau, the low-water period of Poyang Lake has become longer since 1952. It can be linked to the decrease of the water levels in the Yangtze River, caused by reduced rainfall and human activities in particular considerable sand extractions for the Chinese building industry.



## Networks, centres and partnerships in water innovation

The report "*Review of Networks, Centres (w/o hubs), Clusters, and Partnerships active in water innovation*" prepared by the EIP Water Secretariat provides insights in the development, management and success factors of these organisations within Europe, but also in Sub-Saharan Africa, Latin America and the Caribbean, Oceania and several regions of Asia. The Innovation Support Vehicle (INSUV) is the unit of measurement of this [report](#) and refers to networks, centres, clusters and partnership active in the main present and future water innovation priority areas. Identified success factors of the examined INSUVs are: to have a healthy level of competition of ideas and commercial input, ability to use some of the INSUV's stakeholders or members as launching customers, ability to cooperate in knowledge spill-over activities, have effective business development services, have flexible and dynamic resource distribution, have a strong INSUV board and management.

## European Commission addresses barriers to innovation

The [innovation-deal](#) is a voluntary agreement aiming to bring together relevant national, local and EU regulatory bodies to help innovators overcome perceived regulatory barriers to innovation. The first innovation deal signed is on "Sustainable waste water treatment combining anaerobic membrane technology (AnMbr) and water reuse".



## A European Research and Innovation Centre for China

The establishment of [ERICENA](#) is funded by the European Commission through the programme Horizon 2020 to provide a comprehensive and diverse range of services to support and facilitate collaboration in the areas of research, innovation and business for all possible customers: SMEs, start-ups, entrepreneurs, national and regional authorities, universities, funding agencies, research and technology organisations.

## TWEES: a Sino-Italian cooperation project

Aim of the project "*Tongzhou water environment evaluation and strategy*", acronym TWEES, is to set up a general water environment governance and management in the Tongzhou district in the south-east area of Beijing, paying attention to permit terms or conditions, control, monitoring, compliance measures to improve water quality in rivers, streams and other water-bodies. The project will contribute to ensure access to good quality water, according to the standards of the Beijing Water Pollution Prevention and Control Work Plan by strengthening the knowledge base for decision making concerning feasibility, effectiveness, costs and impacts of related measures and options. The results should assist Chinese policy makers in identifying and applying effective strategies towards an efficient "*Water Environment Comprehensive Management Scheme*". The implementation plan is based on the execution of a highly specialized technical support service, provided by Italian experts, aimed at: developing a methodology for the analysis of the qualitative and quantitative status of the water bodies, through the implementation of a Decision Support System (DSS); developing a technical proposal for the strengthening of planning for the protection of water in the Tongzhou District (BTH), inspired to the approach of the EU Directive 2000/60/EC (WFD), as reported in the Management Plans of River Basin Districts; organizing and training of technical staff, by introducing the ecological approach to the management of the quality of aquatic environments.



## A new tool to monitor water productivity

Measuring how efficiently water is used in agriculture, particularly in water-scarce countries, is going high-tech with the help of a new tool developed by FAO. The [WaPOR](#) open-access database has gone live, tapping satellite data to help farmers achieve more reliable agricultural yields and allowing for the optimization of irrigation systems. WaPOR was presented on 20 April 2017 in Rome during a high-level partners meeting for FAO's [Coping with water scarcity in agriculture: a global framework for action in a changing climate](#). It allows for fine-grained analysis of water utilised through farming systems, generating empirical evidence about how it can be most productively used.



### **A safe use of wastewater in agriculture**

The United Nations University Institute for Integrated Management of Material Fluxes and of Resources (UNU-FLORES) has launched a new book that will serve as a resource for governments interested in learning from existing good practice on using wastewater in agriculture. The book *Safe Use of Wastewater in Agriculture: Good Practice Examples*, aims to highlight how a sound understanding of the opportunities and potential risks must be the base for any use of wastewater. In face of increasing water scarcity, recognising wastewater as a resource has been a crucial step towards ensuring future water security. Today, more than 20 million hectares of land are irrigated with wastewater. However, much of this practice is not based on any scientific criteria ensuring the safe use of the wastewater. The partners involved in the safe use of wastewater in agriculture initiative were approached by a number of countries with the request to help them address capacity needs. In response to this request, UNU-FLORES identified several case studies from around the world in 2015 exemplifying the practice of wastewater use in agriculture across the globe.

### **UN report on the value of wastewater**

The 2017 edition of this UN-Water flagship [report](#) "*Wastewater: the untapped resource*" demonstrates how improved wastewater management generates social, environmental and economic benefits essential for sustainable development and is essential to achieving the 2030 Agenda for Sustainable Development. The publication addresses the value of wastewater as a key component in the Circular Economy and as an important job creator considering related innovations and R&D and seeks to inform decision-makers, government, civil society and private sector, about the importance of managing wastewater as an undervalued and sustainable source of water, energy, nutrients and other recoverable by-products.

### **The URBAN EU-CHINA project**

The H2020 project EU-China Innovation Platform on Sustainable Urbanisation has been officially kicked-off in a partner meeting held in Putian City in China on 19 March and in a launching event organized in Brussels on 28 March. The project brings together twelve European and Chinese consortium partners from research, business and research and innovation funding dealing with sustainable urbanization according to the needs and priorities identified in the JPI Urban Europe's Strategic Research and innovation Agenda.





### Acquatech event in Shanghai

A large [exhibition](#) of water industrial products and solution will be held in Shanghai (China) on 7-9 June 2017. Around 70,000 water professionals and 1,400 companies of the water sector are expected.

### Water Innovation Europe 2017

The highlights of the upcoming edition of this annual event organized by the European platform for water WssTP are: the keynote speech by Jyrki Katainen, EC Vice-President for Jobs, Growth, Investment & Competitiveness, the sessions focused on the main innovation concepts of the new WssTP Water Vision 2030 [The value of water](#), the presentation of the most outstanding water-related H2020 projects, the exhibition floor with projects and companies, showcasing their work.

### Next water technology event in Italy

[Watectaly](#) 2017 is scheduled to take place in Palermo, Sicily from June 21st till June 23rd. It is an initiative aimed at promoting cooperation between both Italian and international companies that will also foster the interaction between the private sector and the public one. One of the most interesting topics of this second Italian edition of WATEC is the reduction of water scarcity and the solutions thereof. The conference, will include seminars and discussions about desalination, industrial wastewater treatment, water filtration and ultra-filtration technologies, funding opportunities.

### Eco-Expo Asia Hong Kong

The 12<sup>th</sup> edition of this international trade for environmental protection will take place on 26-29 October 2017. Last year 13% of buyer's interest was focused on water treatment and quality management. More information is available [here](#).

### Amsterdam International Water Week

The focus theme of this event programmed for 30 October-3 November 2017 will be: "Creating a circular and resilient water environment in high density living areas". A session will tackle with innovative water system implementations.

