



Webinar ~~Draft~~ Report

Take away messages and good Chinese and European experiences presented in CEWP Webinar Series March 16nd, 2021 – Water Management in development of Blue Green Cities

Introduction: The webinar followed by more than 100 participants from 16 countries explored the perspectives of the Sponge City approach and similar European approaches to constitute a key element of urban development, presented concrete cases, discussed cross-sector elements including other urban functionalities, participatory approaches and relation to the concept of Smart Cities. Chinese and European technology cases were presented with specific focus on nature-based solutions in an urban setting and water retention. The report presents *take away messages* from the roundtable, the chair and rapporteur of the seminar as well good experiences presented by the speakers of the webinar. The webinar programme is enclosed as annex to this report and the presentations from the webinar with more details is available at the CEWP webpage.

Take away messages: China and Europe are on *the same track* with more or less similar approaches to move towards resilient cities. There are *shared visions* - with differences in solutions due to weather, urban infrastructure and legislation etc.

Overall, Chinese cities sees increasing urbanization (with the 14th 5 Year Plan setting a target for 2025 of 65% compared to today's 61%) and construction of new, urban areas, compared to a stronger focus on retrofitting existing urban areas in Europe.

This however also can help us in *sharing adaptable solutions*. Both in China and Europe different cities have different challenges and *solutions need to be adapted to the local situation*.

Lack of *data*, access to data and *silos* among institutions involved in urban water management is sometimes a barrier for efficient solutions. An increased focus on developing the concepts and training of competences required for co-creation will be needed.

Stronger *multisector cooperation*, planning and learning may be a way forward to deal with this barrier.

Lack of financing (particularly investments for the construction phase and subsequent operations, management and maintenance, while financing for the design and consultancies doesn't seem to be in similar need) and efficient use of funds available is also a barrier, which may be overcome



through a *stronger engagement of the private sector* both as a co-funder but also as a knowledge provider. A special challenge is to get *all who benefit* from improved urban water management to also contribute to financing of projects.

Blue Green solutions are increasingly being part of the solution to water management challenges, both in China promoted by the Sponge City Approach and Europe through similar approaches. European solutions tend to have a stronger focus on *solving extreme rainfall challenges*, challenges in coastal cities from *sea level rise and soil subsidence* and in *private sector engagement* in financing of projects.

From the presentations it appears that European consulting companies with presence in China has a good understanding of the *Chinese market*, has established strong networks and are able to get contracts and bid on tenders. Larger tenders are still primarily won by large Chinese contractors and European technology producers and consultants should aim at building networks and being sub-contractors to these.

Both Chinese and European partners participating in CEWP see a great scope in continuing the cooperation and sharing practices and experiences.

Setting the scene for the webinar

Mr. Henrik Dissing CEWP as chair of the webinar welcomed the participants and set the scene by asking a number of questions which the speakers and participants could focus on: Do we have the solutions? How to cover related water management challenges? How to scale up? Financing not only involving grants? How to include true cost of ownership?

Mrs. Lykke Leonardsen, Copenhagen Municipality and C40 stressed the importance of raising the awareness at global and local level of the challenges faced by cities due to a.o. increased urbanization. The Safe City Programme of C40 address barriers to improved urban water management in particular adaptation of solutions to local and regional contexts, availability of data downscaled to local level to support local solutions and data for monitoring of impacts and efficiencies, innovative financing through fees/taxes, external funding, bonds and insurance funds and innovation to find new solutions. Mrs. Leonardsen presented blue-green solutions from Copenhagen, which reduced the impacts of cloudburst, however which also increased the recreational value of the project areas.

Mr. Chen Liqun, China Academy of Urban Planning and Design, stressed the important role the Sponge City Approach had been up to now in providing guidance to the cities participating and in testing and documenting solutions at the local level. The Academy is undertaking and evaluation of the Sponge City Approach in China and in a Study of Urban Water system planning as an element of the 14th Five Year Plan. Mr. Liqun stressed the importance of city-to-city learning, and that they are also through CEWP learning more about European practices and policy tools. Mr. Liqun specifically called for more exchanges regarding PPP models for financing investments. Through CEWP they aim at cooperate with European Countries, undertake project activities, promote projects for CEWP and strengthen promotion.



Good experiences in the public and private sector in Europe presented in the webinar

Mr. Mads Terkelsen, Rambøll, Denmark showed that in Copenhagen a square with changed architecture made it much more liveable and attractive while efficiently collecting rainwater and discharging it into the sea via both over and underground facilities. In Singapore a 1.6 miles long straight concrete drainage channel has been restored into a sinuous, natural river that meanders through the park and in China they designed a system in a cultural park that protects against flooding and integrated it in a landscape design. Rambøll's involvement in several city projects in China, also in cities beyond the circle of the 30 pilot projects, have led to additional involvements in other similar projects in e.g. Africa.

Mr. Frederic Ohls, SWECO, Sweden explained how the introduction of a demand for all public and private sector landowner in Stockholm to be able to take care of 20 mm rain in their own area had made major changes in water management in the city. Mr. Ohls informed that the 20 mm demand is simple and easy to understand and has been widely applied in Stockholm. Mr. Ohls encouraged other cities to calculate their own value and urged the stakeholders to make approaches simple: a few key criteria and targets would be sufficient to build momentum.

Mr. Jeroen Rijdsdijk, Arcadis, The Netherlands, informed about a project in Wuhan in a business area with no surface water, low infiltration capacity high building density and full covered underground buildings. Arcadis undertook master planning and design planning following the Sponge City Criteria. To protect underground facilities in the area they also added adaptation of critical underground infrastructure and vulnerable functions to the sponge city criteria for in their planning and design undertaken with local partners.

Mr. Frans Van De Veen, Deltares, The Netherlands presented the results of their comparison of the Sponge City Guidelines with the Australian Water Sensitive Urban Planning and the Dutch Climate Resilient City Planning, showing a need to strengthen a) Flood hazard assessment and storage capacity assessment b) drought mitigation assessment and c) groundwater system analysis. Mr. Van De Veen stressed that Blue Green Cities Development is a complex learning process and requires a comprehensive approach to the urban water system and to water governance. There are multifactor benefits through multi-functional use and a need for multi-stakeholder planning. Supporting tools like the Climate Resilience City Tool can to support the planning process and can be supported by training and education.

Mr. Simone Padoan, EEGEX - Energy Environment Global Exchange, Italy explained how the construction of a dedicated sewerage pipeline and waste water treatment plant in combination with pile walls at a huge 22 km² industrial park in Venice had assured remediation of the effluents, remediation of underground water and the potential to reuse water for industrial purposes (e.g. in cooling systems). A natural wetland had been constructed to polish the treated wastewater before discharging into the marine area.

Mrs. Carina Almeida, [Aqualogus](#) **AQUALOGUS**, Portugal, presented a technological Platform to monitor and control all system stages for of the urban water cycle: Water supply, Drainage, waste water treatment and stormwater streams and beaches and Integrates remote and real-time



information. All information is collected and systematized in order to anticipate episodes of pollution, flood, etc. through numerical modelling and Implemented a public remote control and information system. The system developed for city of Porto, [in Portugal](#), is adaptable [to any city](#), and can support a move from reactive to proactive management of urban water Mrs, Almeida informed.

[Mrs, Carina Almeida; calmeida@aqualogus.com](mailto:calmeida@aqualogus.com)

Chris Zevenberger, IHE Delft, The Netherlands presented sustainable financing mechanisms experiences based on results of analysis of Sponge City Projects and international experiences. Public Private Partnerships is applied to a much larger extent in Europe than in China. Mr. Zevenberger argued that there is scope to China to apply PPP much more in Sponge cities and that this would make projects more affordable. PPP's can also bring in new innovations in using green solutions in combinations with gray solutions. There is a need for good business cases in Sponge Cities, to engage stakeholders, connect with new policy domains to understand the value of e.g. projects on health and also to value the impacts on carbon neutrality.

Results of the round table of the webinar

Mr. Henrik Dissing invited Mads Terkelsen, Frans Van De Veen, Sergio Correia da Costa from Aqualogus, Chen Liqun and Gerard De Vries, CEWP to discuss if solutions are at hand and how these could be scaled up without being too costly.

Frans Van De Veen found that solutions are at hand- however they need to be customized to local conditions. Scaling up requires additional learning and should cover both construction, maintenance and data sharing aiming at avoiding silos.

Sergio Correia da Costa (scosta@aqualogus.com) found that [commonly](#) it is easier to apply [this type of solutions](#) in the construction of new areas/[cities](#) and that it is often a problem that data ~~do not exist~~ [is not available](#) in existing areas/[cities](#).

Chen Liqun, considered that the Sponge City concept with 30 cities in different areas of China is a major endeavor. There are challenges in data availability and data sharing, and smaller cities simply lack data or have outdated data on networks for drinking water and sewage. The most recent 5-Year plan has larger investments in water sustainability, and there is a potential for a larger engagement in Public Private Partnerships.

Mads Terkelsen also addressed the problem with lack of data in small cities, not only on water quantity but also on quality. He found that there is a lack of data on which sources are causing the pollution problems and that there is a need for more green technologies to reduce the impacts of pollution. Mr. Terkelsen also emphasized the perspectives and win-win synergies related to combining efforts regarding sponge city, hard core floods management, water scarcity, soil and water pollution etc.



Gerard de Vries, CEWP Lot 3, was pleased to see that the webinar also covered adaptation to extreme events and added that subsidence in coastal areas was also a challenge. He informed that plans for the coming period of cooperation in CEWP between China and Europe would a.o. focus on co-creation of planning involving multisector institutions and stakeholders; co-creation of sustainable financing both investment and maintenance. In Blue-green projects- we know the benefits, but there is a need to find ways to make those who actually benefit and not pay for the project also contribute.

Closing session of the webinar

Mr. Liam Jia, liam.jia@eumecentre.org.cn, EU-SME Centre, a project supported by EU, presented the four services which are free of charge to European Small and Medium Sized companies: Knowledge Centre, Advice Centre, Training Centre and SME Advocacy Platform. Mr. Jia informed that they would organize a booth in the coming Aquatech Meeting in June in Shanghai and that he could be contacted for more information.

<https://www.eumecentre.org.cn/>

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Mrs. Editha Hoogenberg- Derksen, E.Hoogenberg@rai.nl, Rai Amsterdam informed about the upcoming Aquatech meeting in Shanghai and that she could be contacted for more information.

<https://www.aquatechtrade.com/china/>

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Mr. Henrik Dissing, hedis@mst.dk, CEWP closed the webinar and thanked RAI Amsterdam for their assistance in organizing the event and the interpreters for their work during the event. The slides from the event and a short report would be made available after the webinar on the CEWP webpage. He urged the participants to register to the seminars and that the next would be on 30th March.

<https://www.cewp.eu/waterurban>

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Rapporteur: Mr. Palle Lindgaard-Jorgensen, InWater, plj@in-water.dk



CEWP Webinar Series

March 16nd – Water Management in development of Blue Green Cities

The Concept of Sponge Cities in China aims at managing excessive amounts of surface water, often causing severe and costly floods, by turning these water resources into urban development assets as part of an overall blue-green profile of the Future City. The webinar will explore the perspectives of Sponge City approach to constitute a key element of urban development, present concrete cases, discuss cross-sector elements including other urban functionalities, participatory approaches and relation to the concept of Smart Cities. Technology cases will focus on nature-based solutions in an urban setting and water retention.

Program - Chinese Time/European Time

- 1500/08:00 Welcome remarks, Henrik Dissing, CEWP, eventually Lot 3
- 08:10 Cities, water and climate change – Lykke Leonardsen, C40 and Municipality of Copenhagen
- 08:20 Setting the scene – CAUPD – Chen Liqun
- 08:30 Blue green urban development – Mads Terkelsen, Rambøll
- 08:39 How the value of 20 mm changed Stockholm – Lessons that China can learn - Fredrik Ohls, SWECO
- 08:48 Supporting Blue Green Sponge City Planning – Frans van de Ven, Deltares
- 08:57 Urban Development and the Blue-Green Element – Jeroen Rijdsdijk, Arcadis China -
- 09:06 Remediation of heavily polluted urban areas – Simone Padoan, EEGES
- 09:15 Improvement of water management and use efficiency in Smart Cities– Carina Almeida, Aqualogus
- 09:24 Sustainable Financing Mechanisms – Chris Zevenbergen, IHE Delft
- 09:33 Roundtable
- 09:53 Supporting Market Access for EU SMEs to China - Liam Jia, EU SME Centre
- 09:56 Aquatech Shanghai - Editha Hoogenberg-Derksen, RAI Amsterdam
- 09:59 Closing remarks, Henrik Dissing CEWP