



THE 3RD ASEM SEMINAR ON URBAN WATER MANAGEMENT

-- URBAN SOLUTIONS FOR GLOBAL CHALLENGES

13-14 September 2018, Budapest, Hungary

Concept Paper

I. Background

Built on the results of 2nd ASEM Seminar on Urban Water Management in 2016, the 3rd ASEM Seminar on Urban Water Management (hereinafter referred as to the Seminar) is aimed to generate a fruitful dialogue between the countries of Europe and Asia in the field of integrated water management. The ASEM Water Resources Research and Development Center (hereinafter referred as to ASEM Water) is to join hands with partners including the European Water Association (EWA), Asia-Europe Foundation (ASEF), Hungarian Water Association (HWA), Hungarian Water Cluster (HWC) to host the 3rd ASEM Seminar on Urban Water Management in Budapest, Hungary, on 13-14 September 2018.

The aim of the Seminar, the continuation of ASEM Water's event series on sustainable water management, is to establish an international multi-stakeholder forum and network on sustainable water management from a European and Asian perspective, providing opportunities to discuss the challenges and best practices, exchange experiences, and seek solutions. The Seminar fosters dialogues among the governments, private sector, academia, and the civil society from Europe and Asia in the field of integrated and sustainable water management.

This year the Seminar is focusing on integrated water management (from integrated urban water management through water security in the context of climate change to infrastructure development), reflecting upon the Sustainable Development Goals (SDGs) adopted by the United Nations in September 2015. The SDGs among others set milestones and call for action in relation to water management in cities via ensuring availability and sustainable management of water and sanitation for all (SDG 6), as well as making cities and human settlements inclusive, safe, resilient, and sustainable (SDG 11).

Water situation – resources and assets

The fact is that clean drinking water is irreplaceable necessity for human existence. However, the amount available is limited. The only renewable water source is rain water, and the threat of pollution to our global surface and ground waters, and the threat of aquifer depletion are ever increasing. Currently one in five people live without access to drinking water. The United Nations predicts that by 2025 35% of the world's population is going to experience water shortages, and two-thirds of the world's population could be living under water stressed conditions.

Moreover, according to a survey based on global urbanization trends carried out by United National Environment Programme (UNEP), we can see that global infrastructure development and reconstruction needs during the next 25 years is 41 trillion USD (1 trillion is 10¹²) and water sector covers the 54% of it!

Fresh and clean water is an essential but finite resource and needs to be carefully allocated and used. Most water networks are designed for a life time of more than 50 years. The threat of aging infrastructure, extreme weather conditions caused by climate change, depletion of natural resources and miscalculated investments in inaccurately planned systems and unfit materials, are pushing cities towards new strategic choices. Therefore, a new process for decision-making needs to be developed, combining the expected performances, the acceptable risks, the affordable cost, sustainable asset management and a life-cycle approach.

Sustainable asset management of water infrastructure, such as sewer and water supply systems, is of major importance for cities' finances, as well as for water infrastructure performances and reliability, surface and ground water quality and human and environmental health. Organizational tools need to be used efficiently to ensure high quality and sustainability through the whole asset life cycle. Investment not only in new water infrastructure, but also in the maintenance of the existing facilities is unavoidable. Not only in the developing countries, but also in some developed countries in Europe and Asia, there is an urgent need for qualified personnel in the water sector. Therefore, attention should be directed towards the capacity building of skilled water experts as well.

Impact of Climate Change on Water

Climate change is showing an increased impact on the freshwater resources in Europe and Asia as well. Changes in the water availability, such as shortage, excess, poor quality and influence on freshwater ecosystems, have been observed with increasing frequency in different parts of the continents. The existing management, infrastructure and planning strategies are no longer reliable considering the rapidly changing challenges that climate change is bringing about. Complex changes are expected, which will affect all aspects of the water cycle.

Asia is home to more than half of the world's population. It has less freshwater—3,920 cubic meters per person per year—than any continent except for Antarctica. Europe and Asia are facing two major challenges: the increase of water stress and related droughts, mainly in Southeastern Europe and Eastern Asia, and the increase of flood risks across the continents. Climate mitigation and adaptation need to be considered and integrated more efficiently within the smart cities strategy in order to bring together fragmented initiatives and increase the economic viability and the environmental sustainability of innovative solutions. Climate adaptation policies have to encourage further initiatives addressing water issues in key priority areas such as agriculture and energy,

ensuring resilience to extreme water events and domestic water services in changing climate situations.

Effects of urbanization on water

Urban areas currently give home to approximately 50% of the global population, projected to reach over 60% by 2050. In this period, water demand will increase globally by 55% and around 4 billion people will live in water-stressed areas. This means that fierce competition is unavoidable among different water users – particularly users in agriculture and energy sector, as well as urban dwellers. If current tendencies are not changed, water security will be increasingly jeopardized.¹

Due to rapid urbanization, water scarcity and poor water quality in heavily overcrowded cities, as well as the lack of extensive and sustainable urban water management systems are problems affecting not only the poorest but the developed countries of the world. Cities are facing significant challenges such as mitigating water risk and securing financially sustainable water and sanitation services to urban population. A concerted effort is required in putting water supply and sanitation policies in the wider context of institutional arrangements and water resources management. We must think carefully about how to manage urban water costs effectively and learn from the experience of others in addressing the demand and supply sides of the urban water management challenge. The Seminar therefore intends to bring together key stakeholders, facilitate the outlining of proper strategies conforming to national and regional circumstances, and put the theory of sustainable urban water management into practice.

Challenges of urban water management and the response of integrated urban water management to climate change

The integrated urban water management approach has emerged from the growing recognition that an integrated approach to water management at the urban level offers a relevant framework for decision-making and concrete action. Urban areas are appropriate as management units, as specific problems and needs faced by cities may transcend the physical and scientific boundary embodied by more traditional units of management of catchments and watersheds. The Seminar encompasses various aspects of water management, including environmental, economic, technical, political, as well as social impacts and implications.

As for the integrated urban water management, there is a high demand for optimal usage of municipal water (drinking and other domestic water, industrial water, fire water and irrigation water), to have integrated approach of water resources (storm water, surface and groundwater) and for water recycling to decrease extreme weather events. Integrated urban water management means how these challenges can be turned into opportunities to develop new technologies, solutions, business and governance models for the water-smart society of the future, where water scarcity and pollution of ground and surface water are avoided, water, energy and resource loops are closed to a large extent to realize a circular economy, the water system is resilient against climate change events and water-dependent business thrives as a result of forward-looking research and innovation.

II. Agenda

With integrated water management as the theme of the event, 4 main topics are to be discussed and explored during the seminar.

Topic 1. Water security in the context of climate change

According to the United Nations World Water Development Report 2016, “Water and Jobs”, the 5th Assessment of the Intergovernmental Panel on Climate Change(IPCC) Projects that for each degree of global warming; approximately 7% of the global population will be exposed to a decrease of renewable water resources of at least 20%. Several studies estimate that by 2050 about 150 to 200 million people could be displaced as a consequence of phenomena, such as desertification, sea level rise and increased extreme weather events. With such acceleration of urbanization, the sustainable development of cities will face more acute challenges including but not limited to water supply balance, public health, drinking water safety, water security, pollution treatment, water disasters under extreme climate.

Advanced countries in Europe have accumulated rich experience and possess advanced technology in this regard, which are in urgent demand from those developing countries in Asia and Europe. Therefore, the Seminar aims to share relevant experiences among all the member countries in the development of a new model to safeguard and improve water security in the context of climate change.

- European case studies, experience in the field
- Asian case studies, experience in the field
- How Sponge Cities use these practices

Topic 2. Good practices in the preparation of infrastructure development projects

In the coming 25 years there will be a 22.6 trillion USD reconstruction need. Taking the effects of climate change and urbanization and aging infrastructure into consideration, further development needs are constantly evolving. We have to consider not only the technical elements of such needs but to achieve circular economy and sustainability. And cost recovery and affordability and economic planning are also important segments of the future developments.

Life Cycle Costing (LCC) is being applied increasingly by many organizations and public authorities all over the world. Because water infrastructure plays a fundamental role in and provides essential services to the society and the economy, life cycle approach should prevail in decision-making. At all stages of the decision-making process, for the evaluation of cost-efficiency, all cost of the whole life cycle should be taken into account, in line with sustainability principle. Besides many other benefits, using the LCC method promotes optimum solutions over the “cheapest”, improves resource efficiency at both individual and global levels, and serves as a key driver for water-industry innovation as well.

During the Seminar we will discuss the challenges and possibilities with many international financial institutions, banks, funding authorities and international water-related associations (Export-Import Bank of China (EXIM Bank), European Bank for Reconstruction and Development (EBRD), Asian Development Bank (ADB), World Bank, International Water Association (IWA), European Water Association (EWA), International Association of Water Supply Companies in the Danube River Catchment Area (IAWD),etc.).

- Experiences, success stories and collaboration platforms from home and abroad

- International review of management and practices at regional and global level
- Technical cooperation between water sectors and universities
- Specialization, social partnership and best practices

Topic 3. Integrated urban water management

Integrated urban water management is an important and critical matter in every city and country. Many objectives and criteria such as satisfaction of the urban water consumers, the national benefits and social hazards must be considered in the integrated urban water management. So the integrated urban water management can be considered as a multi-objective problem that has to be solved: by creating awareness among potential partners (cities and regions), networking and sharing best practices among cities to allow municipalities and regions meet their urban water challenges and overcome barriers in governance systems that hinder the development and uptake of innovations in municipal water management.

- Higher efficiency and reliability of public facilities in water development and utilization
- Prospect for international cooperation, exhibition of public achievements and future development
- Better knowledge of international legal and financial aspects to identify and remove potential obstacles to cooperation
- Domestic and international innovation (application in new town development, old town renovation, green transport, and industrial parks, and cost-effectiveness analysis of the application)

III. Participants

Around 200 representatives from industry and business communities, governments, research institutions, academia and other stakeholders from ASEM members are expected to attend the seminar.

- Water professionals from Europe and Asia, representatives of the academic and scientific sector, ministries, NGOs, stakeholders and business;
- Authorities, ministries, regional development centers institutions;
- Representatives of EXIM, EBRD, ADB, World Bank, IWA, EWA and IAWD;
- Operators, suppliers, representatives of municipalities, consulting experts from Asia and Europe.

IV. Date, Venue and Format

1. Overall Schedule

Time	Schedule
12 September 2018 (Wednesday)	
All Day	Seminar Registration
Evening	Welcome Gala
13 September 2018 (Thursday)	

Morning	Opening Ceremony & Plenary Session I
Afternoon	Plenary Session II, III
Evening	Seminar on ASEM Network for Science, Technology and Innovation Cooperation in Water Resources
All Day	ASEM Water Security Industrial B2B Match-making Event
14 September 2018 (Friday)	
Morning	Plenary Session IV, V & Closing Ceremony
Afternoon	Field Trip
All Day	ASEM Water Security Industrial B2B Match-making Event

2. ASEM Water Security Industrial B2B Match-making Event: On the basis of combing and clarification of cooperative demands and pre-matching of all the innovative B2B participants, representatives from intentional enterprises and agencies shall be arranged to have on-site exchanges and sharing.

3. Seminar Venue: Danubius Hotel Helia

Address: Karpat street 62-64, 13. Újlipótváros-Angyalföld- Margitsziget, Budapest, Hungary, 1133

Phone Number: +36 8895500

Website: <https://www.danubiushotels.com/en/>

V. Sponsors, Organizers and Partners

Sponsors

Asia-Europe Foundation

Ministry of Foreign Affairs and Trade, Hungary

Ministry of Foreign Affairs, China

Ministry of Science and Technology, China

People's Government of Hunan Province, China

Organizers

Hungarian Water Cluster

ASEM Water Resources Research and Development Center

Co-organizers

Hungarian Water Association

European Water Association

Partners

Water-related international funding organizations, non-governmental organizations, and water-related enterprises and institutes

VI. Expected Outcomes

1. Experience and information sharing among members.
2. A Seminar Summary or Declaration will be issued in order to define steps toward water smart economy and society. It will be distributed to participants and all ASEM members, published by ASEF on the ASEM Infoboard, and submitted to ASEM Senior Officials' Meeting (SOM) and other related meetings.
3. Increased synergy between European and Asian water- related associations in order to maximize their potential as an instrument. Members in each organization have to be encouraged to improve their knowledge and pursue the developments for a more climate-resilient future.
4. Examination of progress of the SDGs (mainly water related ones).
5. Focusing on integrated water management, participants will be engaged in a fruitful dialogue between Europe and Asia in the field of water resources and management, sharing the experience of water expertise, projects and development and discussing achievements that the sector has realized.
6. Providing professional networking and B2B opportunities for the participants.
7. Traditional and new media coverage for increasing visibility of ASEM, ASEM Water and Hungarian Water Cluster and EWA cooperation in this field.