

## Attachment 1

### Concept Paper

#### I. Background

Water is one of the most critical issues facing the world today. With developing and emerging economies confronted with some of the biggest water challenges, they also represent some of the biggest opportunities to get our water future right. At present, the world is entering a crucial stage to promote green and low-carbon development, accelerate sustainable urbanization, transform and upgrade environmental protection industry, as well as to build a modern water safety guarantee system. The achievements in the process of sustainable development are remarkable to all. While there have been some undisputed successes, much of the world is still moving along an unsustainable way. The crisis of too little, too much or too dirty water is here. The crisis already affects millions of people, threatening their health and well-being, undermining efforts at food security, destroying our ecosystems, compromising all spheres of development and causing the migration of large numbers of people. As we stand on this precipice, we offer both warnings and hope. Among matters demanding immediate attention are:

→ The recognition of the value of water as a precious common good in the fullest sense, spanning people and countries through water flows in rivers, lakes and groundwater;

→ The recognition that water security issues cannot be effectively addressed only through established water governance institutions; citizens including scientists, artists, faith leaders, the private sector, indigenous people and students need to work together to build a new culture of water and play their part;

→ The opportunities offered by innovative technologies such as the new earth sciences, remote sensing and digital methods to help us understand the unprecedented rapid changes that are taking place in the hydrosphere. They help us ALL connect in the search for lasting solutions, using the rich cultural traditions and new ways of building our resources and capacities, both financial and human. Related to these

opportunities is the need to understand that cyber security is of essence and that big data and artificial intelligence should be used with judgment and through the rigor of verification at ground level;

→ The need to improve our understanding of water cycle management and its nuances including the realities of trade-offs and the need to make informed choices;

→ The recognition of the interconnectedness of the major international agreements when it comes to managing water and sanitation needs and issues that are tackled in the in the *2030 Agenda*, the *Paris Agreement*, the *Sendai Framework* and the *Habitat 3 Agenda*.

Built on the results of the 3<sup>rd</sup> ASEM Seminar on Urban Water Management in 2018, the 4<sup>th</sup> ASEM Seminar on Urban Water Management (hereinafter referred as to the “Seminar”) is aimed at generating a fruitful dialogue among 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 “ASEMWater”) is to join hands with partners including the Asia-Europe Foundation (ASEF), Hungarian Water Association (HWA), Hungarian Water Partnership (HWP), Shiga Prefecture of Japan, Eco-Innovation Cluster for Sustainable Environment (CLEMS) of Romania, Natural Resources and Environmental Research Institute (NRERI) of Laos, and Department of Water Resources of Thailand (DWR) to organize the 4<sup>th</sup> Seminar in 2020 together.

This year the Seminar is focused 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).

## II. Main themes

How water-related sustainable development can be achieved on urban and local levels?

### a) Importance of the governmental level actions:

Managing water for all is not only a question of resources availability and money, but equally a matter of good governance. Water is essentially a local issue and involves lot of stakeholders at basin, municipal, regional, national and international levels. In the absence of effective public governance to manage interdependencies across policy areas and between levels of government, policymakers inevitably face obstacles to effectively designing and implementing water reforms.

Water governance is the set of rules, practices, and processes through which decisions for the management of water resources and services are taken and implemented, and decision-makers are held accountable.

There is now an urgent need to take stock of recent experiences, identify good practices and develop practical tools to assist different levels of governments and other stakeholders in engaging effective, fair and sustainable water policies.

- **Keywords:** good governance, finance, investments, policies for water resource management, pricing policies, benchmarking, water services

### b) Developments from an economic and awareness raising aspects

According to a UNEP survey ([http://www.unep.org/resourcepanel/portals/24102/pdfs/Cities-Full\\_Report.pdf](http://www.unep.org/resourcepanel/portals/24102/pdfs/Cities-Full_Report.pdf))

during the next 25 years more than 22 trillion USD water-related investment needs are identified in the world. These projects are about reconstruction, water treatment plants, network construction, etc., and generally there is no specific project element dedicated neither to capacity building (CB) to plan, implement, manage and operate these infrastructures, nor to R&D task to find the optimal solution in each project.

We are about to focus on the value of water from an economic and awareness raising point of view. It means two parallel challenges in the water sector: lack of

awareness about the state of our water infrastructure and fragmentation (economic, HR and management aspects, development needs, appropriate project preparation, responsible decision-making, etc.) in the water sector. Often referred to as “out of sight and out of mind,” millions of kilometers of pipes are buried underground and pumping stations and treatment plants are tucked away in places the public doesn’t go, the consumers do not have information and knowledge about the enormous work the water utility sector is doing on a daily basis to provide us with the eternal source of life.

The aim of the topic is to have an overview on water challenges, opportunities and potential solutions as well as to present good practices of water-smart professional decisions, investment possibilities - what kind of water-related infrastructure development strategies the international banks and financial institutes have to support these initiatives - and knowledge sharing of basic methodologies to find the way to the consumers/citizens in order to have real solutions for sustainable water infrastructure.

- **Keywords:** value of water, optimal solutions, life cycle approach, affordable and sustainable developments, water-smart society

#### c) Industrial R&D Innovation in the field of sustainable water management

To explore technological innovation and industrialization development, it should be concerning about the common problems in the Asia and Europe region to find the key and common technology solutions and to promote bilateral or multilateral exchanges and cooperation.

Ambitious living-labs in cities, rural and industrial areas need to involve different multi-stakeholder governance collaborations, as well as researchers and solution developers, to realize and test new technological and non-tech solutions in the field of sustainable water management, and to foster accelerated market introduction.

It can lead in advanced irrigation and crop-growing technologies that drastically reduce water use in agriculture all over the world. It can also lead to water

information systems, for near-real time decision support, which combines these new technological solutions with modern inclusive governance practices. Innovations in water treatment, redesign of the water infrastructure, increased awareness and better user-oriented management tools, can lead to new business models regarding water.

An integrated and global approach is expected to have if we talk about innovation. Although water is predominantly a local issue, water problems are increasingly globalised, requiring focus at a range of scales, from local responses to global strategies. While there are many opportunities for innovation based on experiences within and over the EU, there is a need to look, learn and develop strategic partnership with countries and regions already experiencing the challenges.

- **Keywords:** upgrading wastewater infrastructure, water reuse and recycling, economic approach through water and energy integration, optimal solution, life-cycle approach, water-energy nexus, sponge city, black odour treatment, agricultural source pollutions, digital water solutions

#### d) Role of education and capacity building in preventing water crises

How to prevent water crises with the power of the education and new projects how the youth and the young generation deal with the challenges they face with if the question is the water of their future; what is the role of the awareness raising in solving these challenges; how the value of water can be achieved, etc.

To enhance the environmental awareness of residents is quite essential after the implementation of the policy and application of technologies; it could explore methods, means and methods of environmental education.

Water education is key to achieve the water related SDG. Education about water issues will have to occur at all levels to equip people with the knowledge, skills and values to play a role in protecting the resource.

For sustainable operation and continuous maintenance of the infrastructure and underlines the need for well- educated staff. In addition to the tertiary and professional dimensions of water education, the water sector should invest in recruitment, management and development of young staff, as well as put them at the

and China (Chenzhou) International Expo on the Sustainable Utilization of Water Resources and Green Development  
forefront of design, development and implementation of current change processes. It is not a concern of the future; it is happening now!

The ageing of the water infrastructure in many countries creates additional challenges. Asset management plans should be elaborated by each water utilities. The most apparent problems in this respect concern bursting and leaking of the pipelines. Along with the necessity of the conventional wastewater treatment, the removal of micro pollutants such as pharmaceuticals is gaining importance. In many European countries there is an increasing lack of qualified staff to operate and maintain the water infrastructure.

- **Keywords:** water education, share knowledge, awareness raising, professional trainings, how to make water profession attractive again, life-long learning and carrier structure

#### e) Cooperation and partnership on water

Water is one of the most shared resources on Earth. As the climate changes and water resources become scarcer, the need for effective and equitable governance becomes ever important. Though there is no blueprint for how transboundary cooperation should be done, it is important to consider that while there are many international water cooperation agreements in place, disagreements and disputes also still occur. It is therefore important that societies set in place domestic, bi- and multilateral mechanisms to support peaceful and effective mediation.

Cooperation is especially critical in water-scarce regions where the upstream and downstream impacts of consumption and pollution are magnified. Effective and sustainable global, regional and basin-level legal and institutional frameworks, and effective can also be conducive to stable and reliable cooperation, increasing security for competing uses and preventing conflicts.

It is important to deepen water cooperation between Asia and Europe. As it is declared on the 8<sup>th</sup> ASEM Sustainable Dialogue - organized in Cambodia in September 2019 within the framework of “Enhancing Water Partnership towards the Sustainable Development and Inclusive Growth” – that the key challenges and

opportunities are cooperation in transboundary water management, food and energy security, climate change, and flood and drought issues to achieve sustainable development and inclusive growth. Within this theme we are looking for the answer how to enhance the cooperation in the climate change, sustainable development and digital economy.

- **Keywords:** partnership to address water challenges, cooperation and coordination, knowledge and experience sharing, collaboration

### III. International Expo

In September 2015, President Xi Jinping attended the United Nations Development Summit and adopted the *2030 Agenda for Sustainable Development* with leaders of various countries. In order to positively honor its international commitments, promote the implementation of the UN *2030 Agenda for Sustainable Development*, as well as to give a full play to the backup and leading role of scientific and technological innovation in the sustainable development, the State Council of China published the *Development Plan of China's Innovation Demonstration Zone for the Implementation of the 2030 Agenda for Sustainable Development* with the aim to create a batch of sustainable development reality models that are replicable and scalable to share experience of serving sustainable development with science and technology innovation, drive sustainable development in other regions, and provide the world with a China solution to sustainable development. To promote the work of China's innovation demonstration zone for the implementation of the *2030 Agenda for Sustainable Development*, Chinese government has established a collaborative working mechanism led by the Ministry of Science and Technology, and participated by the Ministry of Foreign Affairs, the Development and Reform Commission, the Ministry of Ecology and Environment and other 20 departments. In March 2018, the State Council officially approved Shenzhen Municipality, Taiyuan City and Guilin City as the first batch of China's Innovation Demonstration Zones for Implementation of the *2030 Agenda for Sustainable Development*.

On 6 May 2019, the State Council officially approved Chenzhou City as one of the second batch of China's Innovation Demonstration Zones for Implementation of the *2030 Agenda for Sustainable Development*. In the next three years, the People's Government of Hunan Province will vigorously support Chenzhou City, with the theme of "Sustainable Utilization of Water Resources and Green Development", to implement 4 major actions (Water Source Ecological and Environmental Protection Actions, Heavy Metal Pollution and Source Comprehensive Governance Actions, Ecological Industries and Water-conservative Society Actions, as well as Scientific and Technological Innovation Backup Actions) and 15 key projects. By 2020, the total investment will have reached 107.8 billion Yuan.

In order to promote the scientific and technological innovation exchanges and industrial development, as well as the international communication and cooperation for the ecology and environment, **China (Chenzhou) International Expo on the Sustainable Utilization of Water Resources and Green Development will be held at the same time** with the 4<sup>th</sup> ASEM Seminar on Urban Water Management to consolidate the development of Chenzhou National Innovation Demonstration Zone for the Implementation of the *2030 Agenda for Sustainable Development*.

China (Chenzhou) International Expo on the Sustainable Utilization of Water Resources and Green Development aims to create a comprehensive exchange platform for water resources, water environment, water ecology, water safety, and water culture, and to promote the development of the water treatment industry in China and ASEM members. At the same time, the Expo will invite national and industry leaders to have high-end releases of policy planning, project requirements and development trends in this arena. The Expo will focus on displaying the new achievements, new technologies, new equipment, new crafts and engineering cases of the development in water industry both abroad and at home. By providing a global water resources solution platform, the Expo will enable decision makers, industry professionals and practitioners to get together to meet challenges, demonstrate technologies, explore opportunities and share fruits, to realize the development for

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water treatment technology and industry in joint hands.

#### **IV. Organization**

##### **Guided by**

the Ministry of Foreign Affairs of China, the Ministry of Science and Technology of China

##### **Hosted by**

the People's Government of Hunan Province of China

##### **Organized by**

the Department of Science and Technology of Hunan Province of China, the People's Government of Chenzhou City, Hunan Province of China, Asia-Europe Foundation (ASEF)

##### **Co-organized by**

ASEM Water Resources Research and Development Center (ASEMWater), Chenzhou Sustainable Development Innovation Center, Hungarian Water Association (HWA), Hungarian Water Partnership (HWP)

##### **In joint Partnership with**

Shiga Prefecture of Japan, Eco-Innovation Cluster for Sustainable Environment (CLEMS) of Romania, Natural Resources and Environmental Research Institute (NRERI) of Laos, and Department of Water Resources of Thailand (DWR)

##### **Supported by**

Other international funds, NGOs, and well-known water-related professional a and companies in the Asia-Europe region

#### **V. Organizational Form**

In response to the special situation for the prevention and control of COVID-19 Pandemic this year, and in order to strictly implement the policy of "Preventing Both Case Import and Domestic Resurgence" and effectively do a good job in joint prevention and control of the Pandemic, this event will innovate the organizational

mode to set up an online platform for both Seminar and Expo, which will be open to the public, and make full use of Internet "Cloud" video, "Cloud" conference, "Cloud" exhibition and other data transmission and information sharing technologies to invite overseas guests to participate in the Seminar and the Expo. The event strives to realize the diversification and increase the participation and influence on the basis of safety, efficiency and pragmatism.

## **VI. Participants**

1. 53 members of the ASEM governmental departments, international water-related organizations, international financial agencies, fund organizations, scientific research institutes, business elites and representatives of the media.
2. 17 members of the Academic and Development Committee of ASEMWater of ASEM members including the United Kingdom, France, Australia, Hungary, Romania, Thailand, and etc.
3. Exhibitors such as water-related scientific research organizations, enterprises and companies, and etc.
4. Professional visitors in the field of water-related industries.
5. Professional media.

## **VII. Expected Outcomes**

1. It is estimated that well-known experts, scholars, entrepreneurs, investors, and etc. of ASEM members will be invited to participate in the online Seminar. There is no limit to the number of online participants (within technical capacity). About 50 institutions and enterprises in water-related areas and industries will be invited as exhibitors to participate in the online Expo with a total number of more than 5,000 visitors.
2. The Seminar will invite water experts, environmental protection experts, green financial experts, and sustainable development strategy experts of Asia-Europe region to deliver special reports to: on the one hand, share perspectives and encourage

collaboration among the many stakeholders who play a role in the path from sustainability concepts to implementation of sustainable practices; and on the other, summarize and promote the construction experience, model and technology of the Chenzhou National Innovation Demonstration Zone for the Implementation of the *2030 Agenda for Sustainable Development* to highlight China experience and Chenzhou model for UN *2030 Agenda for Sustainable Development*.

3. At the end of the Seminar, Accomplishment Document will be issued, which contains important conclusions and the exact steps to achieve these goals, which is of milestone significance. The Document will be prepared by the drafting committee to study the implementation of the Sustainable Development Goals. Based on the Document, an action plan will be worked out to identify the necessary steps to reach the Goals. The steps will be identified within a two-year long period, so during the next (the 5<sup>th</sup>) ASEM Water Seminar the progress can be measured and analyzed.

4. The online Expo will showcase the technologies and products of water-related and environmental protection enterprises, build an e-commerce platform for the online Expo, publish a *Guide* to the project needs of Chenzhou National Innovation Demonstration Zone for the Implementation of the *2030 Agenda for Sustainable Development*, introduce more than 100 innovative professional products + technologies, and promote business negotiations and cooperation. It is expected that about 30 projects will be reached and signed; promote the implementation and transformation of Seminar results, promote scientific and technological achievements to benefit the people, and continue to expand the influence of this series event.