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Plan for the Establishment of ASEM Water Resources Research and Development Center

I. Background

As one of the fundamental natural resources and strategic economic resources, and a key component and controlling element of the eco-environment system, water is vital for human survival as well as sustainable socio-economic development. The sustainable utilization and integrated management of water resources also plays a significant role in global actions to address climate change.

In Asia, the water used in agricultural activities takes up around 90% of the total consumption, and a growth demand due to population growth, industrialization and urbanization has further intensified the pressure on water supply. Moreover, the ever-growing pollution sources have made waste water treatment an urgent task. If appropriate measures cannot be adopted to develop and manage water resources, future socio-economic progress in Asian countries will be hindered with water crisis looming ahead. In order to achieve sustainable development, European countries have applied integrated water resources management rather than a segmented one. Europe also highlights the control of non-point source pollution, adopts demand-side management through market mechanism with emphasis on efficient water utilization and protection, and has greatly spurred public as well as other stakeholders' participation. Asian and European countries face common challenges such as balancing water supply and demand, drought, floods, soil erosion and water pollution. Thus ASEM member countries share the goals of achieving sustained utilization and integrated management of water, as well as developing and promoting water conservation technologies.

The inaugural ASEM Summit (ASEM 1) was held in Thailand in 1996. After that, a lot of actions were taken to promote Asia-Europe science and technology (S&T) partnerships including water resources management. In 1999, the ASEM Science and Technology Ministers' Meeting held in Beijing put forward the proposal of strengthening science and technology cooperation on water management. In 2002 the ASEM Workshop on Water Management held in Changsha, China endorsed the *Changsha Declaration on Water Management issues*. In 2005, the Chinese Ministry of Science and Technology (MOST) and the EU launched an imitative "Multi-stakeholder Platform for ASEM S&T Cooperation on Sustainable Water Use"(ASEMWATERNET), a project under EU 6th Framework Programme for Research and Technological Development (FP6). In November 2009, the ASEM Forum on Water Resources Management was held in Changsha. Delegates from both Asia and Europe reached consensus on collaboration priority themes and joint actions concerning future collaboration in water-related areas. The Forum also endorsed a new *Changsha Proposal* to further a long-term cooperation mechanism for sustainable utilization of water. The above-mentioned meetings and projects have laid a solid foundation for joint efforts in water related scope among Asian and European

countries in the future.

In light of the multiple challenges faced by Asia and Europe in water resources and the call for science and technology cooperation in this field, at the ASEM 8 Summit in October 2010, the Chinese Premier WEN Jiabao proposed to set up an ASEM Water Resources Research and Development Center in Changsha City, Hunan Province, China, with aims to jointly address the challenges related to water resources through S&T collaboration, and to ensure sustainable socio-economic development in Asia and Europe. The proposal is welcomed by ASEM members and incorporated into the *Chair's Statement of the Eighth Asia – Europe Meeting*.

II. Mission

Based on the principle of voluntary participation, the ASEM Water Resources Research and Development Center invites all ASEM members to take part in its design, establishment, planning, operation and management as well as all cooperative programs. The Center will:

- provide a platform for all ASEM members with interests in water resources issues to strengthen exchange and cooperation;
- enhance information exchanges on S&T strategies and policies as well as R&D programs in the field of water resources;
- promote collaboration including joint research, technical exchange, technology transfer, diffusion and demonstration, personnel exchange and training, capacity building, sharing of share best practice and data, etc.;
- facilitate the establishment of long-term partnership among water resources research and development entities in Asian and European countries and strengthen regional cooperation, including developing a water resources research and development network and creating synergies through joint research activities, so as to jointly address common concerns on water utilization, management and environment degradation;
- submit policy recommendations and offer technological consultations to ASEM, Asian and European governments with regard to sustainable utilization and integrated management of water resources, including strategic planning, S&T action programs, etc.

III. Participants and Partners

- Research institutes, universities and researchers of Asian and European countries in the field of water resources;
- Relevant government agencies of ASEM members;
- Other stakeholders engaged in sustainable water utilization.

IV. Proposed Priorities and Activities

The Center will seek suggestion and comments from ASEM members to identify priority areas, and welcome proposals for cooperative programs in the future. All participation in cooperative programs will be on a voluntary basis and subject to resource availability of participants/partners. To narrow the focus of the Center at its

initial phase, priorities will be chosen from common challenges and urgent needs in ASEM members related to water resources, and those areas with sound basis for collaboration and easy to reach consensus. Potential cooperative programs of the Center in the future may include:

1. Cooperative Research

Research priorities may include:

- Correlation/coupling between forest in basin and water resources, and water resources distribution and regulation;
- Water demand assessment of typical watershed ecosystem and efficient water utilization technologies;
- Evaluation of the functions of wetland in ecosystem and restoration techniques of degraded wetlands;
- Waste water treatment techniques of constructed wetlands;
- Cause and mechanism of flood and drought as well as disaster mitigation technologies;
- Strategies for water resources protection, conservation, development and utilization;
- Assessment framework and eco-compensation mechanism of water resources;
- Sustainable water use in the process of urbanization;
- Water resources and global change, etc.

2. Planning and Consultation

The Center will provide technical information and consultation services to decision makers, scientific and engineering communities, etc., and facilitate stakeholders to set strategy, formulate policies and action plans. Priorities may include: integrated water utilization planning in river basin, irrigation district planning, water-saving renovation planning, water diversion and supply planning, surface water protection planning, centralized water-supply source conservation planning, underground water conservation planning, water resources monitoring planning, and soil erosion control planning, etc.

3. Human Resource Development and Capacity Building Programs

- The Center schedules to organize a series of academic forum and training workshops on wastewater treatment technology, techniques of water saving for agriculture and forestry, small hydropower construction and management, flood control and disaster mitigation management and related technologies, integrated watershed management, etc. These forum and training workshops will strengthen the exchange and collaboration among scientist, researchers, technicians and managers, especially young professionals from ASEM members.
- Research posts in the Center will be open to application from all ASEM members. The Center welcomes visiting scholars, facilitate exchange visits of researchers particularly young researchers between the Center and research institutes in ASEM member countries.
- The Center will develop a network for water research institutions in ASEM member countries. The website of the Center will be the most important releasing

and sharing channel for information/data concerning policies, technologies, best practices in sustainable utilization and integrated management of water resources. A journal *ASEMWater* and other publications including research reports with thematic topics are proposed to be issued by the Center in the future.

- The Center plans to help ASEM developing member countries to promote monitoring, evaluation, planning, research, technology absorption and other local capacities.
- The Center intends to establish field monitoring sites and sub-centers in the future, which may focus on water resources policy and management, planning and consultation for water resources engineering, sewage treatment, eco-purification of constructed wetland, etc.
- The Center will initiate public promotion activities to disseminate information about water resources protection and conservation, so as to raise public awareness and involvement.

4. Technology Transfer, Promotion and Demonstration

Upon the request of ASEM members, the Center will facilitate technology transfer, diffusion and demonstration projects among members. Areas with interests may include: membrane treatment in bio-chemical wastewater, bio-enzyme sewage treatment, soil erosion control, water saving in agriculture, trans-regional assessment of ecological water demands, and water resources distribution, etc.

V. Operational Mechanism at Initial Phase

China welcomes governmental agencies, research institutes, universities and other stakeholders to actively engage in the establishment, operation and management of the Center.

1. The Center will set up an Academic and Development Committee. ASEM members are invited to nominate experts to be members of the Committee. The Committee will provide suggestion and information concerning strategy, priorities, annual plan of the Center as well as selection, approval, implementation and evaluation of cooperative programs to the Secretariat.
2. The Center will establish a Secretariat/headquarter office with laboratories and training facilities in Changsha City, Hunan Province, China. The Secretariat will include local staffs recruited by China and foreign staffs recommended by ASEM members. Based on suggestion from the Academic and Development Committee and ASEM members, the Secretariat will formulate and implement strategy, priorities and annual plan of the Center, manage and implement cooperative programs. The Secretariat will also communicate and coordinate with participants and partners from ASEM members.
3. At the initial phase of the Center, the Chinese Government will provide funds for its establishment and operation, including Chinese staffs' salary, office and equipment rent, laboratory and training facilities, website maintenance, cost share in cooperative programs, etc.

4. Cooperative programs initiated by the Center will be open to all ASEM members and the Center welcome active participation on a voluntary and cost-sharing basis. As for Human resource development and Capacity building Programs such as training courses designed for developing members, China will provide a portion of funding and also welcome financial or in-kind inputs from developed and developing members of ASEM.

VI. Annual Plan for 2011

1. A letter from Chinese Ministry of Foreign Affairs will be delivered to senior officials of ASEM members for nomination of contact agency and comments on the Plan of the Center.

2. Contact agencies of ASEM members are invited to nominate experts to form the Academic and Development Committee.

3. The Center will identify its priorities, cooperative activities, governing and operational mechanism at its initial phase.

4. The Center will invite domestic and foreign research entities to be its partners to foster an expert/research network.

5. In mid-May, the initial version of Center's website (www.asemwater.org) will be launched.

6. In early June, the progress of the Center will be reported to the ASEM Foreign Ministers' Meeting.

7. An international workshop on Information Technology for Small-and-Medium-Sized Hydropower will be held in Changsha, Hunan, China from August 20 to September 10, 2011, primarily focused on ASEM developing countries.

8. In July/August, the Inauguration Ceremony of the Center is to be held in Changsha, China, with the 1st Academic and Development Committee Meeting and parallel academic events organized at the same time.

9. Collect information and compile a brochure focused on applicable water resources technologies to address climate change.

10. The Center will initiate joint projects in 2011 in accordance with its priorities.

11. The Center will organize an expert team and collect information to draft an outline and prepare the Asia-Europe Water Resources Report (2011-2012), which will be submitted to the Ninth ASEM Summit (ASEM 9) in Vientiane, Lao People's Democratic Republic in November, 2012.