

# **7<sup>th</sup> ASEM Sustainable Development Dialogue**

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Budapest, Hungary  
11-12 September, 2018

# ASEM Collaboration Mechanism for Research, Development and Innovation in Water

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Presented by

**Dr. PENG Qinghui**

**Deputy Director of the Secretariat,  
ASEM Water Resources Research and Development Center**

# Outline

- 1. Water Innovation Mechanism in EU and China**
- 2. Welcome to ASEM WATER**
- 3. What We Have Done**
- 4. Challenges and Requests**

# **Section 1 Innovation in Water Mechanism in EU and China**

- 1. Joint Programming Initiative on water (JPI)**
- 2. European Innovation Partnership on water (EIP)**
- 3. Water Supply and Sanitation Technology Platform (WssTP)**
- 4. European Water Association (EWA)**
- 5. China-Europe Water Platform (CEWP)**
- 6. Research Development and Innovation in China**

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Synergism among JPI, EIP and WssTP

Agency Perspectives	JPI	EIP	WssTP
Feature	<ul style="list-style-type: none"><li>➤ End-User Involvement</li><li>➤ RDI Agenda &amp; Activity Harmonization</li><li>➤ Supporting Leadership</li></ul>	<ul style="list-style-type: none"><li>➤ Innovative Tool &amp; Policy Seeking</li><li>➤ Innovation Dissemination</li></ul>	<ul style="list-style-type: none"><li>➤ Innovative Methodology</li><li>➤ Innovative Technology</li><li>➤ Decision-Making</li></ul>
Difference	<ul style="list-style-type: none"><li>➤ RDI</li><li>➤ 2P (Public - Public)</li><li>➤ Action on Agenda</li><li>➤ Calls for Proposal</li></ul>	<ul style="list-style-type: none"><li>➤ Innovation</li><li>➤ 3P (Public – Private - Public)</li><li>➤ Mix of Implementation Mechanism</li></ul>	<ul style="list-style-type: none"><li>➤ R&amp;D Platform</li><li>➤ Industry - Public</li><li>➤ Fundamental Research</li></ul>
Complementarity	<ul style="list-style-type: none"><li>➤ JPI: Innovation</li><li>➤ EIP: Policy &amp; Tools</li><li>➤ WssTP: Technology &amp; Methodology</li></ul> <p>Independently <b>Existed without Overlapping</b></p>		
Similarity	<ul style="list-style-type: none"><li>➤ Affiliate to <b>EU</b></li><li>➤ Share <b>Key Stakeholders</b></li><li>➤ Among Industry, Research Group, Policy-Makers &amp; Water-Users</li></ul>		

# Section 1 Innovation in Water Mechanism in EU and China

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## Sustainable Development – Paris Agreement



### Target 6.3

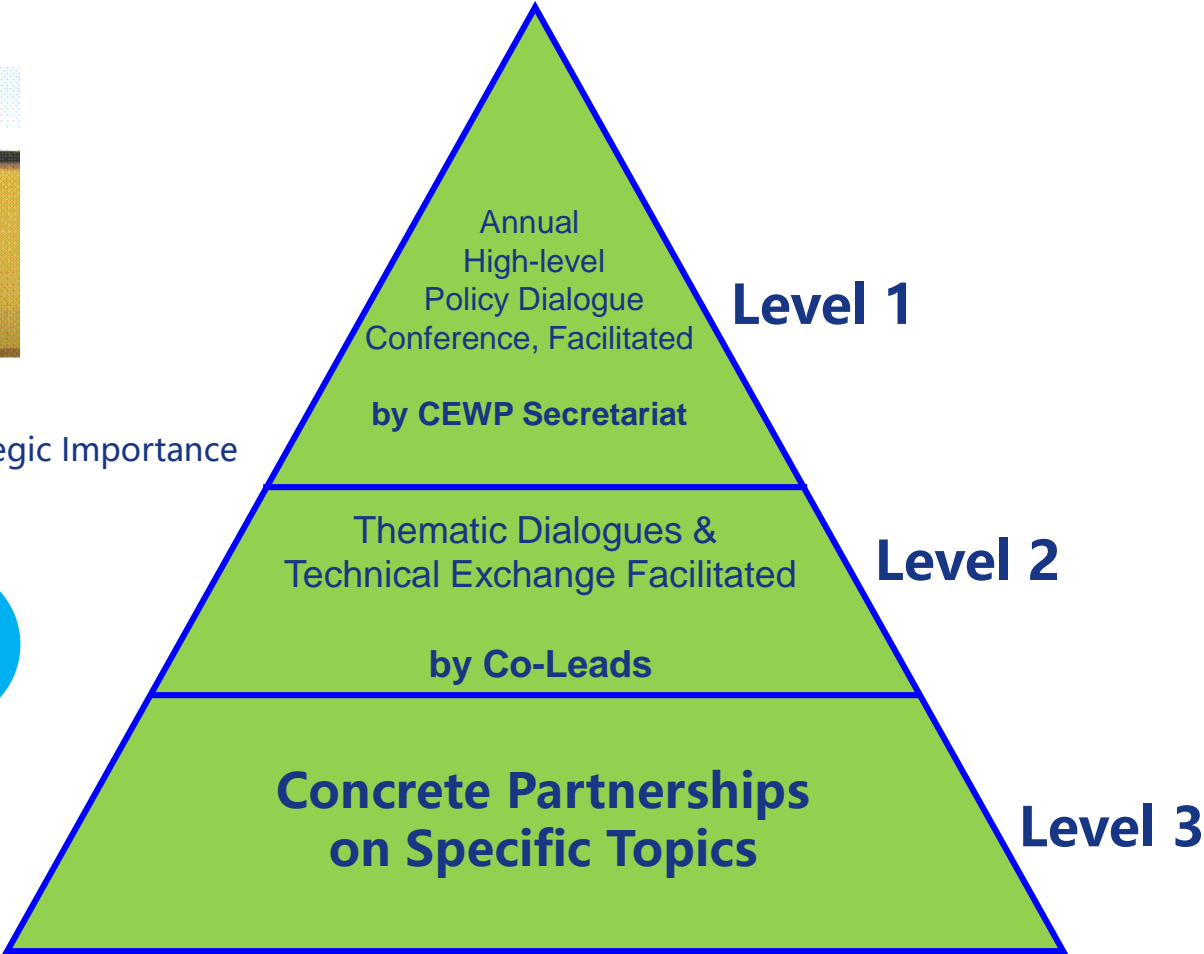
By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and increasing recycling and safe reuse globally

### 3 China Europe Water Platform (CEWP)



China & Europe

Promote Water Policy Dialogue of Strategic Importance



# 4 Research Development and Innovation in China

## RDI Investment on Water Governance by MOST

Strategy

- **National Medium & Long-term Science and Technology Program** (2006-2020);

Policy

- **Law of Environment Protection (LEP) : The Most Strict Law** (Jan. 2015)
- Announcement of Strengthening **Supervision & Enforcement** LEP: **Zero** Tolerance (Jan. 2015)
- **Protection Programme for Good Water Quality Lakes: Lakes' Management** (Jun. 2014);

Measure

- **Pollution Control & Treatment of Water Body** (Investment ≈ **\$5.83B**);

Target

- P1: To achieve techniques to **Control Pollution Source & Cut Emission**;
- P2: To achieve techniques on **Water Environment Management & Restoration**;
- P3: To achieve techniques on **Integrated Water Governance**;

Market

- Huge Water Market;
- Investment: **Central Government & Local Government & Social Finance**;

Investments in R&D  
💧 **2.11%**

Volume of R&D  
💧 **\$249B**

High-tech Incubators  
💧 **7533**

Patent Application Growth  
💧 **20%/y**



## Session 2 Welcome to ASEMWater

ASEM Water Resources Research and Development Center

- 💧 A member of ASEM Family
- 💧 Research & Development
- 💧 Science & Technology Cooperation
- 💧 Public & Non-profit
- 💧 International Organization in Water Resources



They noted China's initiative to establish an ASEM Water Resources Research and Development Center in Hunan



Resources

Statement

Ceremony



Strengthening S&T Cooperation on Water Management

Changsha Declaration

FP6: Multi-stakeholder Platform Proposal for ASEM S&T Cooperation on Sustainable Water Use

Changsha

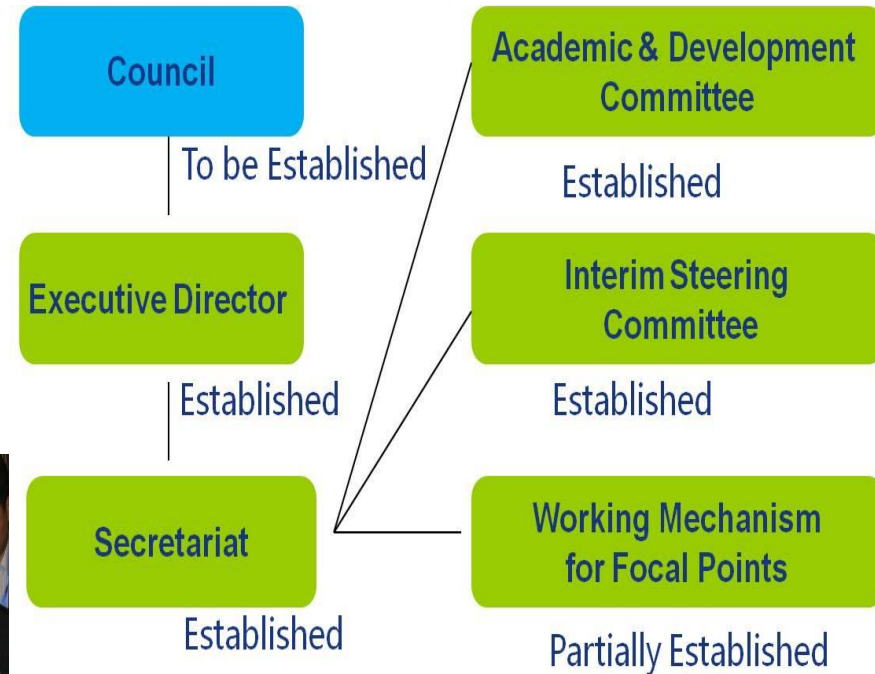
# Framework of the ASEMWater

(25 members from 17 ASEM members)



Chairman: Liu Yanhua

Counselor, State Council, P.R. China,  
Academician, International Academy of  
Sciences for Europe and Asia



Five Vice-Chairmen





## Session 3 What We Have Done

- 💧 **ASEM Networking**
- 💧 **Innovative Bases**
- 💧 **Multi-level Cooperative Mechanism**
- 💧 **Strengthen Joint Research**

# 1 ASEM Networking



Strategic Partner  
💧 58

Focal Point  
💧 80+

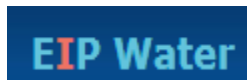


Expert & Scholar  
💧 400+

## Strategic Partner:



## Focal Point:



## Strengthen Talents Exchange



150+ Representatives  
Visit Mutually  
for Cooperative Partnership;



300+ Experts  
Visit Mutually  
for Academic Exchanges;

50+ Conferences  
in Water Security Industry  
for Technology Transfer





## 2 Innovative Bases



**Aquatic Ecology Observation in Big Lake**

Lead Partner: HPAF, ASEMWater;  
Consortia Members: CEH, HU;



**Water Environment Monitoring in Deep Lake**

Lead Partner: ASEMWater  
Consortia Members: CEH, LBERI, HU



**National Engineering Technological Center of Heavy Metal Pollution Control**

Lead Partner: CSU, ASEMWater; Consortia Members: BRGM, HAU



## 2 Innovative Bases



Joint Centre for Arid Region with Turpan Government, China  
Joint Centre for East Europe with ECSE, Romania



## 2 Innovative Bases



ASEMWATER Dongting Lake Eco-station

Space-Sky-Ground Information Network for Data Produce and Development



Beidou Satellite  
( $\geq 20\text{km}$ )

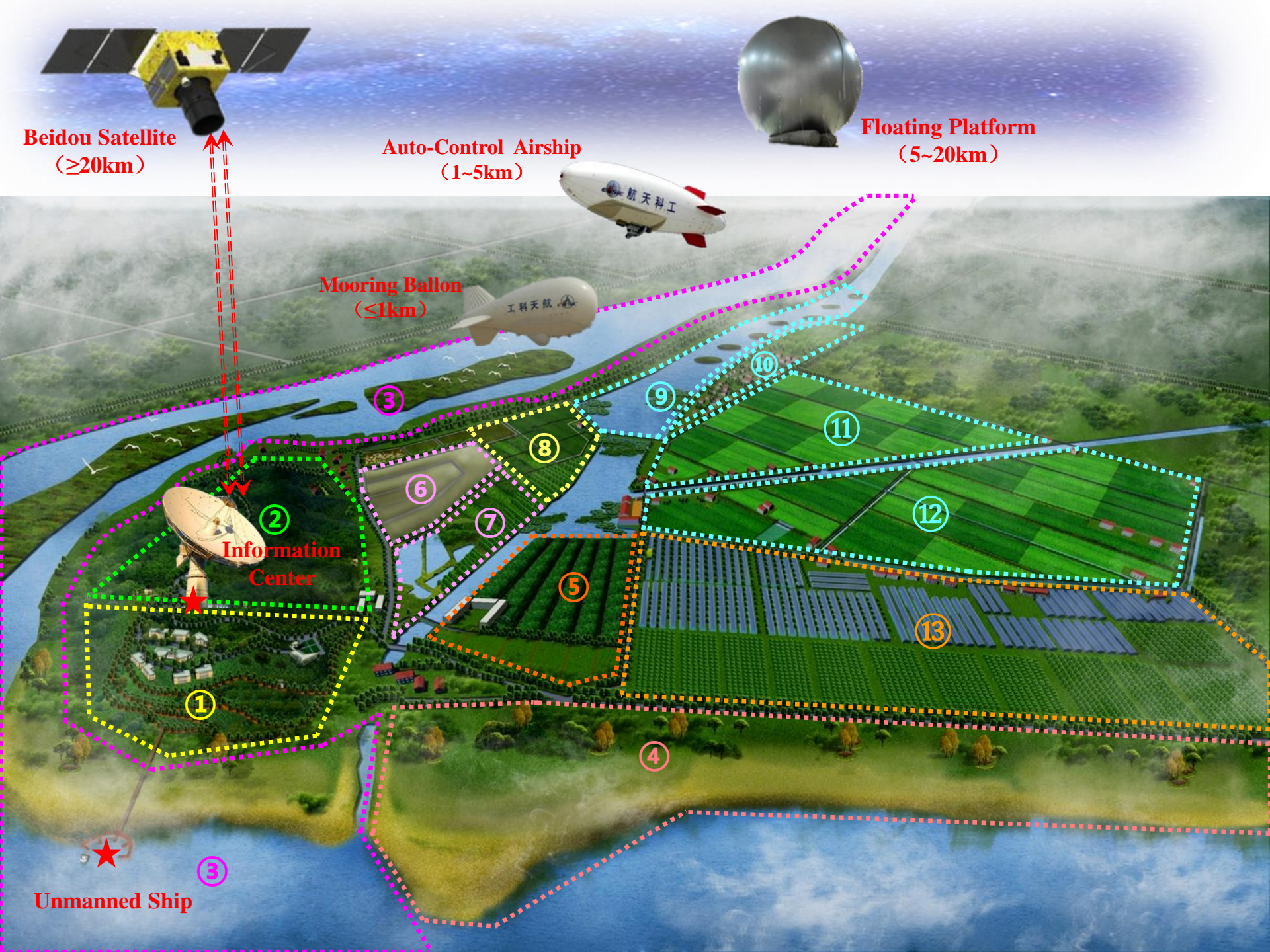
Auto-Control Airship  
(1~5km)

Floating Platform  
(5~20km)

Mooring Ballon  
( $\leq 1\text{km}$ )

Information  
Center

Unmanned Ship



**University:****Innovative Research & Technology Development**

CSU



HNU



NUDT



HUNNU



HUNAU



CSUFT



HNCU

**Enterprise:****Achievement Transfer & Transformation**

CASIC

Hongdong  
Photoelectricity

SPATIOMAP



HNAC

**Platform:****International Cooperation & Information Sharing**

ASEM WATER



### 3 Multi-level Cooperative Mechanism



**To Deepen capacity building, knowledge innovation and academic exchange**

## ASEM Seminar



Participant

300+

ASEM Member

18

Matchmaking

60+

MoU

1

Proposal

1

11 International seminars served as a high-level platform for policy dialogues, information sharing, experience exchanges, project collaboration and pragmatic cooperation among ASEM members;

6 International Training Workshops  
for Developing Countries with 154 trainees;



Increase Awareness in Primary & Middle School Cooperated with Japan & France;

## Promote Knowledge Dissemination



## Facilitate Joint Research

[illegible]

10+ International Projects Funded by ASEF,  
EU & MOST of China;  
Asia-Europe Water Resources S&T Report;



# Session 4 Challenges and Requests

## Chinese Initiatives



### Sponge City

Promote the building of sponge cities and launch low-carbon pilot zones

### River Chief

The appointment of local government heads as chiefs of the country's rivers and lakes

### Integrated River Basin Management

Coordinate conservation, water management and related resources

# Session 4 Challenges and Requests

## Chinese Initiatives



**National S&T Program for Water Pollution Control and Treatment**

### **Belt and Road**

Strategic Cooperation in the field of water resources between countries along the Belt and Road routes

# Session 4 Challenges and Requests

## Technology Base

Hunan Provincial Dongting Lake Institute

Ecology

Wetland, forestry

Environment

Control & Monitor

Conservancy

Security Warning

Bio-diversity

Habitat

Intelligent Agriculture

Customization, traceability

Landscape

Biomass

Disaster Warning

Extreme Weather

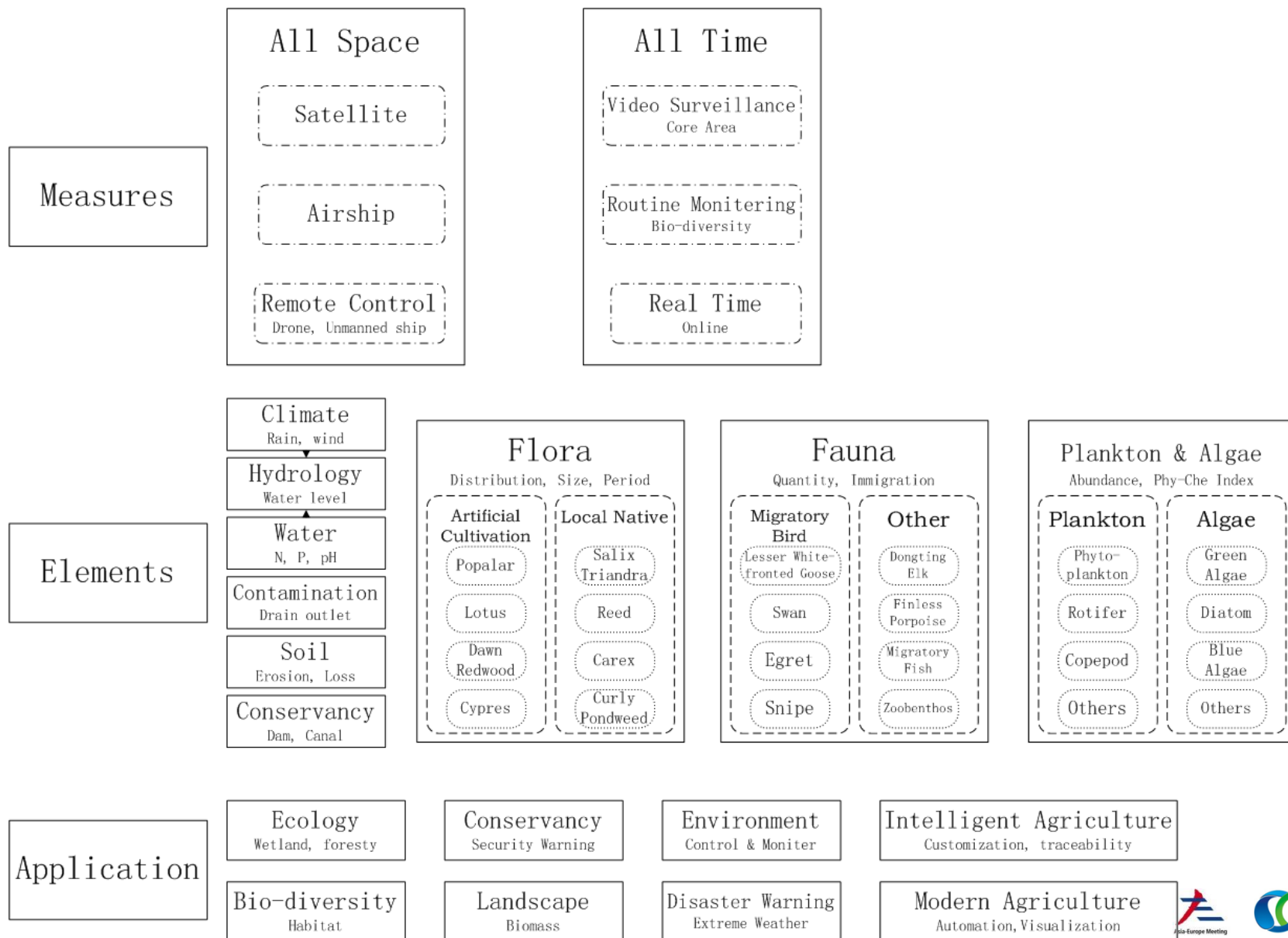
Modern Agriculture

Automation, Visualization

**Proposal**  
An **All-space & All-time** Ecological **Surveillance** System  
with **All Directions, No Dead ends & Stereoscopic View**

Drone, Unmanned ship

Online



# Session 4 Challenges and Requests

## Challenges:

- Strengthening the Capacity-Building & Services
- Promoting the Cooperation Between Governments
- Expanding Industry Cooperation
- Addressing Common Issues & Sharing Mutual Benefits

## Requests:

- Supporting the establishment of **ASEM Network for Science, Technology and Innovation Cooperation in Water Resources & Hunan Provincial Dongting Lake Institute** to promote the collaboration including best practices and information sharing, policy recommendations, etc.



# Thank you

# for your attention!



Creating Partnership for Achieving  
Water S&T Innovation!

The Secretariat of ASEMWater

**Tel:** 86-731-88988865

**Fax:** 86-731-88988865

**E-mail:** [asemwater@asemwater.org](mailto:asemwater@asemwater.org)

**Website:** <http://www.asemwater.org>