

The 25<sup>th</sup> East-Asia Round Table Meeting of Academies of Engineering  
Summary Minutes

Symposium: 9:30 – 15:05 (JST)

Round Table Meeting: 15:30 – 17:00 (JST)

Thursday, November 10, 2022

Hybrid Style

**I. Symposium on Prevention and Mitigation of Disasters as Climate Change Adaptation**

**1. Opening Remarks**

Prof. Yuko Harayama, Distinguished Fellow of the EAJ, welcomed the participants and presented her opening remarks. She emphasized the importance of predicting and mitigating extreme weather leading to water hazards caused by global climate change.

Prof. Oh-Kyong Kwon, NAEK President, and Prof. Wang Chen, CAE Vice President, presented their opening remarks respectively.

**2. Keynote Speech**

Prof. Taikan Oki, University of Tokyo, presented his keynote speech titled “The Climatic Risk Boundaries and Adaptation”. He stated that climate change is a serious risk that affects human society and ecosystems, and the realization of a carbon-neutral society as a countermeasure for climate change requires rapid social change and has significant impacts on society.

**3. Presentations and Discussions**

Global climate change has caused extreme weather, leading to water hazards such as flooding and landslides. The earth is getting increasingly vulnerable due to the effects of global warming. Our three countries have recently experienced torrential rain and gigantic typhoons which resulted in severe damages to daily life of citizens and critical infrastructure in the vast areas. It is therefore important to learn lessons from each other and share the vision toward the future.

The representatives from the EAJ, CAE and NAEK made presentations in the following three sessions, and then Q&A and discussions followed.

### **Session 1: Frontiers of flooding prediction and flood control in the river basin**

- (1) “Development of Today’s Earth: A global to regional simulator of terrestrial hydrological cycles”  
Prof. Kei Yoshimura, Institute of Industrial Science, the University of Tokyo
- (2) “Flood Assessment and Mitigation to Support Flood Control in the Soemjin River Basin, Korea”  
Dr. Joonwoo Noh, K-water Research Institute, Korea Water Resources Corporation
- (3) “Historical and future changes in droughts, floods and abrupt drought-flood shifts in a warming climate”  
Prof. Dawen Yang, Tsinghua University

### **Session 2: Frontiers of landslide disaster prediction and damage reduction measures**

- (1) “Climate Change-induced Landslide and Debris Flow Prediction and Countermeasures in Korea”  
Prof. Sangseom Jeong, School of Civil and Environmental Engineering, Yonsei University
- (2) “Challenges and Strategies of Risk Mitigation on Catastrophic Landslides in China”  
Dr. Yin Yueping, Chief Geologist, China Institute of Geo-environment Monitoring, China Geological Survey
- (3) “Influences of Long-Term Changes Related to Forest Vegetation and Heavy Rainfall Characteristics on Sediment-Related Disasters in Japan”  
Prof. Yasuhiro Shuin, Kyushu University

### **Session3: Other advanced measures for prediction and mitigation of water hazards**

- (1) “From Resolute Flood Defense to Active Flood Diversion: Practices and Challenges of Flood Risk Management”.  
Prof. Xiaotao Cheng, China Institute of Water Resources and Hydropower Research
- (2) “Future Changes and Adaptation to Coastal Hazards Due to Climate Change”  
Prof. Nobuhito Mori, Vice-Director, Disaster Prevention Research Institute, Kyoto University
- (3) “Other Advanced Measures for Prediction and Mitigation of Natural Disasters”  
Prof. Hung Soo Kim, Department of Civil Engineering, Inha University

## **II. Round Table Meeting**

### **4. Introduction of academy activities**

The following representatives from the three academies introduced the outline of the recent academy activities and updated the information.

Koichi Morimoto, Executive Director, EAJ

Jung-hee Song, Vice-President, NAEK

Huang Lin, Deputy Director General of Department of International Cooperation, CAE

### **5. Report on the Joint Survey**

Prof. Nozomu Mishima reported the results of the joint survey relating to the prevention and mitigation of disasters. The number of respondents were 106, 78 and 54 for CAE, NAEK and EAJ, correspondingly. Since the disasters are highly global and local problems simultaneously, the survey result highlighted the common interests of three academies regarding the impacts and countermeasures of the climate change. The result also clarified different social and economic approaches in mitigating the disaster impacts.

### **6. Proposal for the 26<sup>th</sup> EA-RTM**

Prof. Inkyu Lee, Chair of International Relations Committee, NAEK, presented the following proposal for the 26<sup>th</sup> EA-RTM:

Theme: Autonomous Driving for Future Mobility

Sub-themes:

- (1) Autonomous vehicle technologies  
e.g. autonomous platform, SW architecture, autonomous valet parking system, etc.
- (2) Autonomous driving infrastructure  
e.g. intelligent transport system, V2X(Vehicle-to-Everything) communication technology, etc.
- (3) Other applications of autonomous driving technologies  
e.g. maritime autonomous surface ships (MASS), autonomous delivery robots, etc.

CAE commented that autonomous driving technologies are closely related to the policies of the government and so they will consult with relevant organizations. EAJ commented that automakers take diverse approaches to autonomous driving technologies so the goals of the symposium need to be assessed to cover different directions. Finally, participants agreed that details of the topics, sessions, dates etc. will be discussed further.

## **7. Symposium Summary**

Prof. Taikan Oki who made the keynote speech summarized the outcome of the symposium, corresponding to the three sessions for flood, landslide and holistic risk management. As for the overall comments, although the land area of China is different from the other two countries there are common problems regarding the impacts of the climate change. Therefore, sensor technologies, numerical models and Artificial Intelligence technologies to overcome the influences can be shared. Because of the above-mentioned land area differences, specific disasters in focus and social approaches may vary by country and region. The summary was wrapped up by pointing out the significance of cooperation through exact understanding of similarities and differences of three countries.

## **8. Closing**

Prof. Harayama presented the closing remarks. She expressed sincere appreciation to the participants and the speakers who made presentations during the meeting. She hoped that preparations for the meeting next year will advance through the cooperation among the three countries.

## **Participants List of Round Table Meeting**

### **EAJ**

Prof. Yuko Harayama, Distinguished Fellow, EAJ

Mr. Koichi Morimoto, Executive Director, EAJ

Mr. Tetsuya Mutsu, Executive Director, EAJ

Prof. Nozomu Mishima, Chair of EA-RTM Steering Committee, Fellow, EAJ

Prof. Taikan Oki, Fellow, EAJ

Mr. Kotaro Inoue, Chief Secretariat, EAJ

Ms. Kaori Yoneno, Secretariat, EAJ

Ms. Yuko Sasama, Secretariat, EAJ

### **CAE**

Prof. Deng Xiuxin, Vice President, CAE

Prof. Wang Chen, Vice President, CAE

Prof. Tian Qi, Director General of Department of International Cooperation, CAE

Prof. Huang Lin, Deputy Director General of Department of International Cooperation,  
CAE

Ms. Liu Chang, Director of Division I, Department of International Cooperation, CAE

Ms. Zhu Yu, Deputy Director of Division II, Department of International Cooperation,  
CAE

### **NAEK**

Prof. Jung-hee Song, Vice President, NAEK

Prof. Inkyu Lee, Chair of International Relations Committee, NAEK

Ms. Shinye Kim, Officer, International Affairs, NAEK

Ms. Chanmi Lee, Officer, International Affairs, NAEK