

# The 29th AIM International Workshop

Ohyama Memorial Hall in National Institute for Environmental Studies and Online  
September 14 and 15, 2023

## DAY 1: September 14, 2023

13:00 of JST      Open Zoom Account and Registration

### 13:30-14:30      **Session 1: Opening**

Chairperson: Dr. Toshihiko Masui (NIES)

13:30-13:35      Opening remarks

Ms. Kotoe Kuroda (MOEJ)

13:35-13:50      Activities in FY 2022-2023

Dr. Toshihiko Masui (NIES)

13:50-14:10      Keynote speech (1): U.S. Emissions to 2050

Dr. James Edmonds (PNNL)

14:10-14:30      Keynote speech (2):

Prof. Priyadarshi Shukla (Ahmedabad Univ.)

14:30-14:40      Photo session

14:40-15:00      Break

**15:00-16:40      Session 2: GHG mitigations in Asia (1)**

Chairperson: Dr. Toshihiko Masui (NIES)

- 15:00-15:15      China's Modeling Activities from IPAC in 2022-2023  
                         Prof. Xiulian Hu and Prof. Kejun Jiang (ERI)
- 15:15-15:30      India's Residential Sector: Spatial Analysis of Air Pollution and GHG Emissions  
                         Prof. Manmohan Kapshe (MANIT)
- 15:30-15:45      Macroeconomic Effects of Clean Energy Transition for Net Zero Emissions in Nepal  
                         Dr. Salony Rajbhandari (NIES), Dr. Bijay B. Pradhan (Thammasat Univ.) and  
                         Prof. Ram Manohar Shrestha (AITM)
- 15:45-16:00      Korea's Activities for Carbon Neutrality in 2050  
                         Prof. Dong-Kun Lee (SNU), Prof. Tae-Yong Jung (Yonsei Univ.)  
                         Prof. Chan Park and Dr. Yohan Choi (Univ. of Seoul)
- 16:00-16:15      Taiwan's Efforts to Net-zero Emissions in 2050  
                         Dr. Yi-Hua Wu (National Applied Research Laboratories)
- 16:15-16:25      Introduction of S-20-3 Project  
                         Dr. Tatsuya Hanaoka (NIES)
- 16:25-16:35      Extension of National Decarbonization Studies in AIM -Toward an Integrated Analysis of  
Decarbonization and Other Issues-  
                         Mr. Go Hibino and Dr. Yuko Kanamori (NIES)
- 16:35-16:45      Research Activities on Local Decarbonization in Japan: Progress and Way Forward  
                         Dr. Shuichi Ashina (NIES)
- 16:45-17:00      Discussion

17:00-17:20      Break

**17:20-19:30      Session 3: Poster Session and Reception**

19:30              Adjourn

## DAY2: September 15, 2023

12:30 of JST	Open Zoom Account and Registration
<b>13:00-15:00</b>	<b>Session 4: Climate impact, adaptation, and sustainability</b> Chairperson: Dr. Kiyoshi Takahashi (NIES)
13:00-13:15	Global to Subnational Data Framework for Agriculture Dr. Ronald Sands (USDA)
13:15-13:30	Potential Health Benefits of Replacing Red Meat with Forage Fish Dr. Shujuan Xia (NIES)
13:30-13:45	Updates on AIM Global Modeling and Relevant International Activities Prof. Shinichiro Fujimori (Kyoto Univ.)
13:45-14:00	Historical Global Fire Smoke and its Impact on Human Health Dr. Chaeyeon Park (AIST)
14:00-14:15	Status and Challenges of Local Climate Change Adaptation in Japan Dr. Yoshifumi Masago (NIES)
14:15-14:30	Assessing the Impact of Climate Change on South Korea's Electricity Demand Dr. Hyun-Gyu Kim, Dr. Hui-Cheul Jung (KEI) and Prof. Dong-Kun Lee (SNU)
14:30-14:45	Asia-Pacific Climate Change Adaptation Information Platform (AP-PLAT): Bridging Science and Stakeholders Dr. Yuji Masutomi (NIES)
14:45-15:00	Discussion
15:00-15:20	Break
<b>15:20-16:40</b>	<b>Session 5: GHG mitigations in Asia (2)</b> Chairperson: Ms. Tomoko Ishikawa (IGES)
15:20-15:35	Thailand's Net-Zero Emissions 2050 Prof. Bundit Limmeechokchai (SIIT-TU)
15:35-15:50	The Acceleration of Decarbonization for Mitigation of the GHG Emissions in Indonesia Prof. Rizaldi Boer (IPB), and Prof. Retno Gumilang Dewi (ITB)
15:50-16:05	GHG Mitigation of Vietnam Dr. Tung Lam Nguyen (VNPI)
16:05-16:20	Climate Action Planning in Urban Development -the Case of Malaysian Cities Prof. Chin Siong Ho (UTM)
16:20-16:40	Discussion
16:40-17:00	Break

**17:00-18:00      Session 6: AIM Activities; Past 20 Years and Next 20 Years**

Chairperson: Dr. Toshihiko Masui (NIES)

- 17:00-17:05      Introduction of This Session  
                    Dr. Toshihiko Masui (NIES)
- 17:05-17:10      Activities of Global Decarbonization and Sustainability Studies in AIM  
                    Dr. Tatsuya Hanaoka (NIES) and Prof. Shinichiro Fujimori (Kyoto Univ.)
- 17:10-17:15      Activities of National Decarbonization Studies in AIM  
                    Dr. Yuko Kanamori and Mr. Go Hibino (NIES)
- 17:15-17:20      Activities of Local Decarbonization Studies in AIM  
                    Dr. Shuichi Ashina and Dr. Kei Gomi (NIES)
- 17:20-17:25      Activities of Impact and Adaptation Studies in AIM  
                    Dr. Kiyoshi Takahashi and Dr. Yasuaki Hijioka (NIES)
- 17:25-17:30      Activities of Climate Change Adaptation Policy Support in Japan  
                    Dr. Yasuaki Hijioka and Dr. Kiyoshi Takahashi (NIES)
- 17:30-17:35      India and IPCC  
                    Prof. P. R. Shukla (Ahmedabad Univ.)
- 17:35-17:40      Activities in China  
                    Prof. Xiulian Hu and Prof. Kejun Jiang (ERI)
- 17:40-17:45      AIM Activities in Korea; Past 20 Years and Next 20 Years  
                    Prof. TaeYong Jung (Yonsei Univ.) and Prof. DongKun Lee (Seoul Nat. Univ.)
- 17:45-17:50      Activities in ASEAN countries  
                    Prof. Chin Siong Ho (UTM), Prof. Rizaldi Boer (IPB),  
                    Prof. Retno Gumilang Dewi (ITB), Prof. Bundit Limmeechokchai (SIIT-TU) and  
                    Dr. Tung Lam Nguyen (VNPI)
- 17:50-17:55      Integrated Assessment of Climate Change in the United States 1979 to Present...And, Into the  
Future  
                    Dr. Jae Edmonds (PNNL) and Dr. Ronald Sands (USDA)
- 17:55-18:00      Linkage with Governance Research  
                    Dr. Kanako Morita (FFPRI)

**18:00-18:20      Session 7: Closing**

Chairpersons: Dr. Toshihiko Masui (NIES, Japan)

- 18:00-18:10      Poster Award Ceremony  
                    Dr. Junya Takakura (NIES, Japan)
- 18:10-18:20      Closing remarks  
                    Dr. Mikiko Kainuma (IGES and NIES, Japan)

**18:30-20:00      Dinner**

20:00              Adjourn

## Poster session

- (1) Just Coal Transition to Net Zero: India  
Kopal Agrawal (Ahmedabad University)
- (2) High-Resolution Air Temperature Maps Based on Deep Learning Models May Underestimate Temperatures at the Microscale  
Ayano Aida (Univ. of Seoul)
- (3) Estimation of Greenhouse Gas Reduction Potential in Existing Buildings Using the CEA Model : Focus on Aging Apartment Complexes  
Siwoo Baek (Univ. of Seoul)
- (4) Co-Benefits and Trade-Offs in Thailand's Net Zero Emissions 2050  
Achiraya Chaichaloempreecha (NIES)
- (5) Assessment of Long-Term Mitigation Scenarios in China's Agriculture  
Yizhi Deng (Shanghai Jiao Tong Univ.)
- (6) Impact of Climate Change on Building Energy Use in Hot Humid Climate Regions  
Yohan Choi (Univ. of Seoul)
- (7) Navigating towards 2035 Beautiful China: Assessing a Low-Carbon, Resilient, and Inclusive Energy Transition Pathway through Multi-Model Analysis  
Ji Gao (Environmental Defense Fund)
- (8) Effect of Governance Constraints on Long-Term Scenarios of Global Decarbonization  
Diego Silva Herran (NIES)
- (9) Assessment of CO2 Emissions Reduction Potential in China's Thermal Power Sector to 2060: Empirical Evidence from a Windows DEA Model  
Lu Gao (Univ. of South China)
- (10) Assessment of the Impacts of Wood Substitution for Steel and Cement in Building Materials on Climate Change Mitigation  
Yoshida Hiroki (Kyoto Univ.)
- (11) Zero-Carbon Steel Production Technology Pathway Analysis in China  
Weiyi Jiang (Yonsei Univ.)
- (12) Changes in Wood Area and CO2 Absorption due to Urbanization in Tsukuba  
Satoko Kawarasaki (NIES)
- (13) Climate Finance to Support the Carbon-Neutral Transition of China's Iron and Steel Industry  
Xuejing Jiang (Shanghai Jiao Tong Univ.)
- (14) AIM developed a 2050 net-zero scenario for Luang Prabang City  
BounEua Khamphilavanh (MONRE)
- (15) Data-Driven Monitoring and Evaluation of Effects of Urban Cooling Technologies  
Seon Hyuk Kim (Univ. of Seoul)
- (16) Analysis of Appropriate Index for Heat-Related Morbidity  
Sanghyuck Kim (Seoul National Univ.)
- (17) Energy Reduction Effect by Thermal Insulation Promotions in Shiga Prefecture  
Reina Kawase (Lake Biwa Environmental Research Institute)

- (18) Examining the Mobility Pattern of the Transient Population in Seoul in Response to Air Temperature Variation  
Jae Hong Lee (Seoul National Univ.)
- (19) Influence of Climate Change and its Mitigation Measures on Global Poverty  
Yumi Maruta (Kyoto Univ.)
- (20) Priority for Re-wild of Abandoned Land to Enhance Biodiversity in Agriculture Landscapes  
Yongwon Mo (Yeungnam Univ.)
- (21) Analysis on Technologies and Costs for Achieving Decarbonization in Households in Japan  
Takaharu Ota (Mizuho Research & Technologies, Ltd.)
- (22) An Assessment of the Role of Synthetic Fuels in Mitigating the Rapid End-Use Technology Transition in Net-Zero Emissions Scenarios  
Shotaro Mori (Kyoto Univ.)
- (23) Comparative Analysis of Biomass-Based and Direct Air Capture-Based Technologies for Decarbonization  
Osamu Nishiura (Kyoto Univ.)
- (24) Developing a Spatial Climate Adaptation Framework with a Citizen Participatory Approach  
Somin Park (Univ. of Seoul)
- (25) Thailand's Net-Zero Emissions by 2050: Analysis of Economy-Wide Impacts  
Salony Rajbhandari (NIES)
- (26) Cost Analysis for the Implementation of LUCF Mitigation toward NDC Target in Indonesia  
Annuri Rossita (NIES)
- (27) Creating an Integrated Assessment Model to Optimize Paths for Lowering Greenhouse Gas Emissions for SSP1-5 Scenarios  
Xuanming Su (NIES)
- (28) How Digital Transformation Promotes China's Energy Transition: An Empirical Study Based on a Quasi-Experiment  
Yasi Tu (Institute of Energy Research, Jiangxi Academy of Science)
- (29) Research on Energy Demand Prediction and Economic and Social Impact of Carbon Emission Dual Control Based on CGE Model  
Peng Wang (Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences)
- (30) Zero-Carbon Ammonia Technology Pathway Analysis by IPAC-Technology Model in China  
Pianpian Xiang (Beijing Univ. of Technology)
- (31) Study on the Distribution of Carbon Emission Reduction Potential of Urban Transformation Development under the "Dual Carbon" Goal--Taking Guangzhou as an Example  
Yunsheng Xie (Institute of Energy Research, Jiangxi Academy of Sciences)
- (32) Assessing the Climate, Health, and Agricultural Impacts of Global NOx Emission Reductions  
Koga Yamazaki (Kyoto Univ.)
- (33) Assessing the Distributional Impacts of Carbon Pricing in China's Agricultural Sector  
Qishi Zhang (Shanghai Jiao Tong Univ.)
- (34) Health and Economic Impacts of High Temperature and Heatwaves in China  
Mengdan Zhao (Beihang Univ.)