

# The 28th AIM International Workshop

National Institute for Environmental Studies (Online)

September 13 and 14, 2022

## DAY 1: September 13, 2022

12:30 of JST      Open Zoom Account and Registration

### 13:00-14:20      **Session 1: Opening**

Chairperson: Dr. Toshihiko Masui (NIES)

13:00-13:05      Opening Remarks

Ms. Kotoe Kuroda (MOEJ)

13:05-13:10      Photo session

13:10-13:20      Activities in FY 2021-2022

Dr. Toshihiko Masui (NIES)

13:20-13:40      Keynote speech (1): United States Emissions Pathways to 2050 Net Zero

Dr. James Edmonds (PNNL)

13:40-14:00      Keynote speech (2): Sustainable Development and Mitigation of Climate Change: IPCC (AR6) and India's Energy System Transformation to Net Zero

Prof. Priyadarshi Shukla (Ahmedabad Univ.)

14:00-14:20      Keynote speech (3): 30 years of AIM -Backbone of Japanese Science-based Climate Policy

Dr. Shuzo Nishioka (IGES)

14:20-14:50      Break

### 14:50-16:10      **Session 2: GHG Mitigation and AIM in Asia (1)**

Chairperson: Dr. Yuko Kanamori (NIES)

14:50-15:05      Net Zero Emissions 2050 Thailand

Prof. Bundit Limmeechokchai (SIIT-TU)

15:05-15:20      Roadmap to Indonesia Energy Sector NZE

Prof. Rizaldi Boer (IPB),

Prof. Retno Gumilang Dewi and Prof. Ucok WR. Siagian (ITB)

15:20-15:35      The National Strategy on Climate Change for 2050 of Vietnam: Introduction and AIM Models Contributions

Dr. Tung Lam Nguyen (VNPI)

15:35-15:50      China's Energy and Economy Transition with the Multiple Objectives

Prof. Xiulian Hu and Prof. Kejun Jiang (ERI)

15:50-16:05	Long Term Strategies towards Net Zero for India Prof. Amit Garg (IIMA)
16:05-16:15	Discussion
16:15-16:35	Break
<b>16:35-18:00</b>	<b>Session 3: GHG Mitigation and AIM in Asia (2)</b> Chairperson: Dr. Tatsuya Hanaoka (NIES, Japan)
16:35-16:50	Transitioning Towards Water Sensitive Cities and its Co-Benefits for Energy Conservation Prof. Manmohan Kapshe (MANIT)
16:50-17:05	Local Mitigation Planning and Actions for Malaysian Cities Prof. Chin Siong Ho (UTM)
17:05-17:20	The Impact of Demographic Structural Changes on CO2 Emission: Case of Korea Prof. Tae Yong Jung (Yonsei Univ.), Dr. Yong-Gun Kim and Dr. Jongwoo Moon (KEI)
17:20-17:35	Achieving Net Zero CO2 Emissions in Nepal: The Role of Clean Energy Options Prof. Ram Manohar Shrestha (IIDS), Dr. Bijay Bahadur Pradhan and Prof. Bundit Limmechokchai (SIIT-TU)
17:35-17:50	The effects of transition to green energy: Implications from Taiwan Dr. Yi-Hua Wu (ITRI)
17:50-18:00	Discussion
18:00	Adjourn

## DAY2: September 14, 2022

- 12:30 of JST      Open Zoom Account and Registration
- 13:00-15:00      Session 4: Climate Impact, Adaptation, and Sustainability**  
Chairperson: Dr. Kiyoshi Takahashi (NIES)
- 13:00-13:15      Nutrient Availability in CGE Models  
Dr. Ronald Sands (USDA)
- 13:15-13:30      Extreme Climate Events Increase Risk of Global Food Insecurity and Adaptation Needs  
Dr. Tomoko Hasegawa (Ritsumeikan Univ.)
- 13:30-13:45      Biodiversity Implications of Large-scale Bioenergy and Afforestation Implementation  
Dr. Akiko Hirata (FFPRI)
- 13:45-14:00      Environmental and Health Co-benefits of Replacing Ruminant Meat with Forage Fish  
Dr. Shujuan Xia (NIES)
- 14:00-14:15      Development of an Earth System Model with Human Water Management, Crop Growth, and Land Use Change: MIROC-INTEG-ES  
Dr. Tokuta Yokohata (NIES)
- 14:15-14:30      Securing Climate Resilience in Urban Space Using Technology Assessments and Decision-making Support System  
Dr. Hui Cheul Jung (KEI) and Prof. Dong Kun Lee (SNU)
- 14:30-14:45      Delineating Future Climate Change Impacts for Cross-scale Adaptation Strategies: A Case Study of Japan  
Dr. Fei Liu and Dr. Yoshifumi Masago (NIES)
- 14:45-15:00      Discussion
- 15:00-16:00      Break
- 16:00-17:50      Session 5: From Research to Actions towards Net-zero Society**  
Chairpersons: Dr. Toshihiko Masui (NIES) and Dr. Rahul Pandey (IGSA Lab.)
- 16:00-16:05      Objective of This Session and New Research Project  
Dr. Toshihiko Masui (NIES)
- 16:05-16:30      Local Decarbonization  
Dr. Shuichi Ashina and Dr. Kei Gomi (NIES)
- 16:30-16:55      National Decarbonization in Asia  
Dr. Toshihiko Masui, Dr. Shuichi Ashina, Dr. Kazuaki Tsuchiya,  
Dr. Marissa Malahayati (NIES),  
Prof. Tomoko Hasegawa (Ritsumeikan Univ.) and  
Prof. Runsen Zhang (Univ. of Tokyo)
- 16:55-17:20      SLCFs and Decarbonization in Asia: Activities among UNEP/CCAC & Other Programs  
Dr. Tatsuya Hanaoka (NIES) and Prof. Kejun Jiang (ERI)

17:20-17:50 Global Study  
Dr. Kiyoshi Takahashi (NIES)

**17:50-18:00 Session 6: Closing**

Chairpersons: Dr. Toshihiko Masui (NIES) and Dr. Rahul Pandey (IGSA Lab.)

17:50-17:55 Poster Award Ceremony  
Dr. Junya Takakura (NIES)

17:55-18:00 Closing Remarks  
Dr. Mikiko Kainuma (IGES and NIES)

18:00 Adjourn

**Poster session: Please access the BOX to view posters, and vote for the best poster.**

**Please send us your comments on the comment sheet.**

- (1) Impact of Decarbonization Pathways on Mercury Emissions: Indian Power Sector  
Dr. Saritha Vishwanathan (NIES)
- (2) Prediction of the Impact of Climate Change on the Heatstroke Incidence in Japan with the Long-term Effect of Heat-adaptation  
Dr. Kazutaka Oka (NIES)
- (3) Analysis on Pathways toward Carbon Neutrality in Vietnam using AIM/Enduse  
Mr. Takaharu Ota (MHRT)
- (4) Emission Pathways towards Carbon Neutrality and Alternative Fuels Use in Asian Region  
Ms. Yurie Goto (MHRT)
- (5) Source Attributions of Radiative Forcing by Regions, Sectors, and Climate Forcers  
Dr. Xuanming Su (NIES)
- (6) Explaining Regional Differences in Japan's Residential Energy Demand: Grouped Regressor Effect Approach  
Dr. Keita Honjo (Center for Environmental Science in Saitama)
- (7) Prediction of Range Expansion and Estimation of Dispersal Routes of Water Deer (*Hydropotes Inermis*) in the Transboundary Region between China, the Russian Far East and the Korean Peninsula  
Prof. Yongwon Mo (Yeungnam Univ.,)
- (8) Analysis of CO<sub>2</sub> Emission Reduction Scenario in the Municipal Scale Focusing on Biomass Energy: A case of Maniwa, Okayama, Japan  
Dr. Hiroto Shiraki (The Univ. of Shiga Pref.)
- (9) Vietnam towards a Net Zero Emission Scenario  
Dr. Thai Hoa Nguyen (IGES)
- (10) GHG Mitigation in China's Agriculture Sector  
Mr. Yizhi Deng (Shanghai Jiao Tong Univ.)
- (11) Global Land-use and Sustainability Implications of Bioenergy Supply under China's 2060 Carbon Neutrality Target  
Ms. Yazhen Wu (Peking Univ.)
- (12) Technical Energy Potentials of Solar PV and Onshore Wind in Asia-Pacific Regions  
Dr. Diego Silva Herran (NIES)
- (13) AIM ExSS & EndUse Modelling of DKI Jakarta Decarbonization  
Dr. Retno Gumilang Dewi (ITB)
- (14) Relationship between Changes in the Characteristics of Demographic Structure and Korea Residential Energy Consumption  
Prof. Chan Park (Univ. of Seoul)
- (15) What Should the Sub-national Planning be Considered to Achieve Carbon Neutrality? Exploring a Case Study in Jeju Province, South Korea  
Mr. Yohan Choi (Univ. of Seoul)
- (16) How to Manage the High Emission Industries and Promote the Carbon Peak in Guangdong  
Prof. Peng Wang (GIEC, CAS)

- (17) The Evaluation on LCOH of Conventional Technology, Energy Storage Coupled Solar PV Electrolysis, and HTRG in China  
Dr. Pianpian Xiang (Beijing Univ. of Technology)
- (18) China Ultra-low Emission Steel Production & Industry Relocation Analysis  
Ms. Weiyi Jiang (Yonsei Univ.)
- (19) Quantification of Indicators for Selected SDGs with the Climate Change Mitigation Pathways for China  
Dr. Chenmin He (Zhejiang Univ. of Technology)
- (20) Cross Cutting Scenarios and Strategies for Designing Decarbonization Pathways in the Transport Sector toward Carbon Neutrality  
Dr. Runsen Zhang (Univ. of Tokyo)
- (21) Scoping Review - Health Effects of Vegetation and Peatland Fires in Southeast Asia  
Dr. Vera Ling Hui Phung (NIES)
- (22) Diagnosing the Key Economic Channels of How Deep Decarbonization Benefits Air Pollution Alleviation in the Greater Bay Area of China  
Ms. Xiaorui Liu (Peking Univ.)
- (23) The Dilemma of China's National Carbon Neutrality and Sub-national Economic Inequality  
Mr. Chaoyi Guo (Peking Univ.)
- (24) Constraining Carbon Drives Eastern Coal-intensive Industries Northwards in China  
Ms. Ziqiao Zhou (Peking Univ.)
- (25) Economic and Health Impacts of Carbon Emission Reduction in Four Provinces of Northwest China under Carbon Neutrality Target  
Mr. Zhengdong Yang (Beihang Univ.)
- (26) Carbon Reduction Pathways in 6 Provinces of China Towards Carbon Neutrality Goal  
Mr. Minghao Wang (Beihang Univ.)
- (27) Electrification Contributes Significantly to Climate Mitigation and Human Health  
Ms. Mengdan Zhao (Beihang Univ.)
- (28) Analysis of Carbon Emission and Economy of Hydrogen Production Routes in China Based on Life Cycle Assessment (LCA) Method  
Dr. Lixing Zheng (GIEC, CAS)
- (29) Climate and Socioeconomic Impact on Fire PM2.5 Mortality  
Dr. Chaeyeon Park (NIES)
- (30) Carbon Neutrality Policy is Conducive to the Implementation of the Minamata Convention on Mercury  
Mr. Yujie Pan (Peking Univ.)