## Programme

### Day 1: Monday, December 2nd, 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>Opening Session</td>
</tr>
<tr>
<td>09:30</td>
<td>Plenary Session 1: Climate policy in Asia and IAM research</td>
</tr>
<tr>
<td>10:45</td>
<td>Break</td>
</tr>
<tr>
<td>11:15</td>
<td>Plenary Session 2: Elements of successful transition</td>
</tr>
<tr>
<td>13:00</td>
<td>Lunch and group photo</td>
</tr>
<tr>
<td>14:00</td>
<td>Parallel Session 1A DEEP 1</td>
</tr>
<tr>
<td>15:45</td>
<td>Break</td>
</tr>
<tr>
<td>16:15</td>
<td>Parallel Session 2A DEEP 2</td>
</tr>
<tr>
<td>18:00</td>
<td>Poster Session: Slot 1 (with cocktails and tapas)</td>
</tr>
<tr>
<td>19:30</td>
<td>Poster Session: Slot 2 (with cocktails and tapas)</td>
</tr>
</tbody>
</table>

### Day 2: Tuesday, December 3rd, 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>Parallel Session 3A DEEP 3</td>
</tr>
<tr>
<td>10:45</td>
<td>Break</td>
</tr>
<tr>
<td>11:15</td>
<td>Parallel Session 4A MITIGATION 1</td>
</tr>
<tr>
<td>13:00</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:00</td>
<td>Parallel Session 5A MITIGATION 2</td>
</tr>
<tr>
<td>15:45</td>
<td>Break</td>
</tr>
<tr>
<td>16:15</td>
<td>Parallel Session 6A MITIGATION 3</td>
</tr>
</tbody>
</table>

### Day 3: Wednesday, December 4th, 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Plenary Session 3: Report on IPCC Special Report on Land</td>
</tr>
<tr>
<td>08:45</td>
<td>Plenary Session 4: New directions for representing climate impacts in IAMs</td>
</tr>
<tr>
<td>10:25</td>
<td>Break</td>
</tr>
<tr>
<td>10:45</td>
<td>Plenary Session 5: Digital revolution</td>
</tr>
<tr>
<td>12:00</td>
<td>Final session</td>
</tr>
<tr>
<td>13:15</td>
<td>Lunch</td>
</tr>
<tr>
<td>14:30</td>
<td>SWG on Evaluation and Diagnostics</td>
</tr>
<tr>
<td>16:00</td>
<td>Break</td>
</tr>
<tr>
<td>16:30</td>
<td>SWG on Scenarios for Climate-related Financial Analysis</td>
</tr>
<tr>
<td>16:30</td>
<td>SWG on Data Protocols and Management</td>
</tr>
</tbody>
</table>
Detailed Programme

Day 1: Monday, December 2nd, 2019

09:00-09:30  OPENING SESSION  
Chair: Detlef VAN VUUREN (PBL)  
Room: 102

09:00-09:15  Opening remarks on behalf of NIES  
Chiho WATANABE (NIES)

09:15-09:30  Opening remarks on behalf of IAMC  
John WEYANT (Stanford University)

09:30-10:45  PLENARY SESSION 1  
Climate policy in Asia and IAM research  
Chair: Detlef VAN VUUREN (PBL)  
Room: 102

09:30-09:45  China’s recent climate policy agenda and its modelling implication  
Fu SHA (Energy Foundation)

09:45-10.00  Climate policy development in Japan  
Kazuhiro WADA (Government of Japan)

10:00-10:15  IAM analysis of Asian climate Policy  
Mikiko KAINUMA (NIES)

10:15-10:45  Open discussion with panel

10:45-11:15  Break

11:15-13:00  PLENARY SESSION 2  
Elements of successful transition  
Chair: Meriem HAMDI-CHERIF (CIRED)  
Room: 102

11:15-11:35  Climate change and sustainable development  
Keywan RIAHI (IIASA)

11:35-11.55  Scenario analysis in climate-related financial disclosures  
Satoshi IKEDA (Chief Sustainable Finance Officer, Government of Japan)

11:55-12:15  Analysis of feasibility  
Massimo TAVONI (RFF-CMCC and Politecnico di Milano)

12:15-12:35  Achievements and needs for the climate change scenarios framework  
Brian O’NEILL (Frederick S. Pardee Center for International Futures at the University of Denver)

12:35-13:00  Open discussion

13:00-14:00  Lunch and group photo
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Room</th>
<th>Title</th>
<th>Chairs/Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00-15:45</td>
<td>PARALLEL SESSION 1A</td>
<td>201A</td>
<td>Deep mitigation scenarios – DEEP 1</td>
<td>Chair: Detlef VAN VUUREN (PBL), Elmar KRIEGLER (PIK), Sergey PALTSEV (MIT)</td>
</tr>
<tr>
<td>14:00-14:05</td>
<td>Introduction</td>
<td>201A</td>
<td></td>
<td>Detlef VAN VUUREN (PBL), Elmar KRIEGLER (PIK), Sergey PALTSEV (MIT)</td>
</tr>
<tr>
<td>14:05-14:30</td>
<td>A new scenario logic  to meet the Paris Agreement long-term temperature goal</td>
<td>201A</td>
<td></td>
<td>Joeri Rogelj (IIASA and Imperial College London), Daniel Huppmann (IIASA), Volker Krey (IIASA), Keywan RIAHI (IIASA), Leon Clarke (University of Maryland), Matthew Gidden (IIASA), Zebedee Nicholls (University of Melbourne), Malte Meinshausen (University of Melbourne and PIK)</td>
</tr>
<tr>
<td>14:30-14:55</td>
<td>How to shape a carbon price path</td>
<td>201A</td>
<td></td>
<td>Jessica STREFLER (PIK), Elmar Kriegler (PIK), Nico Bauer (PIK), Gunnar Luderer (PIK), Robert Pietzcker (PIK), Ottmar Edenhofer (PIK)</td>
</tr>
<tr>
<td>14:55-15:20</td>
<td>Detailed Power System Analysis of IAM 1.5 C 2 C Scenarios with an Hourly Global Electricity Model</td>
<td>201A</td>
<td></td>
<td>Maarten BRINKERINK (University College Cork), James Glynn (MaREI Centre, University College Cork), Brian Ó Gallachóir (MaREI Centre, University College Cork), Paul Deane (MaREI Centre, University College Cork)</td>
</tr>
<tr>
<td>15:20-15:45</td>
<td>Power-to-heat: The potential for direct industry electrification</td>
<td>201A</td>
<td></td>
<td>Silvia MADEDDU (PIK), Falko Ueckerdt (PIK), Jürgen Peterseim (University of Technology Sydney, Institute for Sustainable Future), Karthik Ajith Kumar (PIK), Christoph Krüger (Geoscience Faculty Utrecht University), Gunnar Luderer (PIK)</td>
</tr>
<tr>
<td>14:00-15:45</td>
<td>PARALLEL SESSION 1B</td>
<td>201B</td>
<td>National mitigation scenarios - NATIONAL 1</td>
<td>Chair: Jae EDMONDS (PNNL), Jiang KEJUN (ERI), Toshihiko MASUI (NIES)</td>
</tr>
<tr>
<td>14:00-14:05</td>
<td>Introduction</td>
<td>201B</td>
<td></td>
<td>Jae EDMONDS (PNNL), Jiang KEJUN (ERI), Toshihiko MASUI (NIES)</td>
</tr>
<tr>
<td>14:05-15:20</td>
<td>Global stocktake of long term strategies in the seven largest emitting regions</td>
<td>201B</td>
<td></td>
<td>Elmar KRIEGLER (PIK), Christoph Bertram (PIK), Falko Ueckerdt (PIK), CD-LINKS Consortium</td>
</tr>
<tr>
<td>14:30-15:20</td>
<td>EU Effort-Sharing: required system transformations and implied carbon prices</td>
<td>201B</td>
<td></td>
<td>Renato RODRIGUES (PIK), Gunnar Luderer (PIK), Robert Pietzcker (PIK)</td>
</tr>
</tbody>
</table>
15:20-15:45 **Assessment of Negative Emissions Technologies (NETs) for Brazil**
Isabela TAGOMORI (COPPE/UFRJ), Gerd Angelkorte (COPPE/UFRJ), Fábio da Silva (COPPE/UFRJ), Francielle Carvalho (COPPE/UFRJ), Camilla de Oliveira (COPPE/UFRJ), Pedro Rochedo (COPPE/UFRJ), Alexandre Szklo (COPPE/UFRJ), Roberto Schaeffer (COPPE/UFRJ)

14:00-15:45 **PARALLEL SESSION 1C**
**Impacts of climate change and impact of adaptation - IMPACTS 1**
Chair: Stephanie WALDHOFF (PNNL), Shinishiro FUJIMORI (NIES)

14:00-14:05 **Introduction**
Stephanie WALDHOFF (PNNL), Shinishiro FUJIMORI (NIES)

14:05-14:30 **Economic Evaluation of Climate Change Impacts and Adaptation in the United States: Comparing Models and Methods**
Allen FAWCETT (US EPA), James McFarland (US EPA), Mei Yuan (MIT), Elodie Blanc (MIT), John Reilly (MIT), Jeremy Martinich (US EPA), Marcus Sarofim (US EPA), Jameel Alsalam (US EPA)

14:30-14:55 **Sector-wide Estimation of Economic Impacts of Climate Change Considering Variations in Exposure and Vulnerability Represented by SSP Scenarios**
Jun’ya TAKAKURA (NIES), Shinichiro Fujimori (Kyoto University and NIES), Naota Hanasaki (NIES), Tomoko Hasegawa (Ritsumeikan University), Yasushi Honda (University of Tsukuba), Toshichika Iizumi (National Agriculture and Food Research Organization), Chan Park (University of Seoul), Kiyoshi Takahashi (NIES), Qian Zhou (North China Electric Power University), Yasuaki Hijioka (NIES)

14:55-15:20 **Adaptive capacity scenarios in the SSP framework for use in IAMs**
Johannes Emmerling (RFF-CMCC), Enrica De Cian (Ca’ Foscari University of Venice and CMCC), Marinella Davide (CMCC), Shouro DASGUPTA (CMCC and Ca’Foscari University of Venice), Franziska Piontek (PIK)

15:20-15:45 **Capturing Energy-Water-Economy Interactions in an Integrated Modeling Framework: the economic impacts of water shortages on the Western power grid**
Karen FISHER-VANDEN (Penn State University), Vijay Kumar (Penn State University), Richard Lammers (University of New Hampshire), Joseph Perla (Penn State University), Mort Webster (Penn State University)

14:00-15:45 **PARALLEL SESSION 1D**
**Methodological issues - METHODS 1**
Chair: Massimo TAVONI (RFF-CMCC and Politecnico di Milano), Jessica STREFFLER (PIK)

14:00-14:05 **Introduction**
Massimo TAVONI (RFF-CMCC and Politecnico di Milano), Jessica STREFFLER (PIK)

14:05-14:30 **Insights from carbon pricing estimates methods**
Sara GIAROLA (Imperial College London), Daniel Crow (Imperial College London), Adam Hawkes (Imperial College London)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:30</td>
<td>Coupling IAMs to Reduced Complexity Climate Models: methodological procedures in the context of the IPCC’s Sixth Assessment Report&lt;br&gt;Matthew GIDDEN (IIASA), Zebedee Nicholls (Australian-German Climate &amp; Energy College), Daniel Huppmann (IIASA), Edward Byers (IIASA), Robert Gieseke (PIK), Jared Lewis (Institut für Meteorologie, Freie Universität Berlin), Sven Wilner (PIK), Malte Meinshausen (Australian-German Climate &amp; Energy College), Keywan Riahi (IIASA)</td>
</tr>
<tr>
<td>14:55</td>
<td>Application of Custom Neural Networks in Transport Sectors Energy Service Demand Estimation for SSPs&lt;br&gt;Siddarth JOSHI (University College Cork), Brian O’ Gallachoir (University College Cork), James Glynn (University College Cork)</td>
</tr>
<tr>
<td>15:20</td>
<td>An integrated multi-objective appraisal of mitigation and climate engineering under uncertainty&lt;br&gt;Giacomo MARANGONI (RFF-CMCC and Politecnico di Milano), Klaus Keller (Penn State University), Massimo Tavoni (RFF-CMCC and Politecnico di Milano)</td>
</tr>
<tr>
<td>15:45</td>
<td>Break</td>
</tr>
<tr>
<td>16:15</td>
<td>PARALLEL SESSION 2A&lt;br&gt;Deep mitigation scenarios – DEEP 2&lt;br&gt;Chair: Detlef VAN VUUREN (PBL), Elmar KRIEGLER (PIK), Sergey PALTSEV (MIT)</td>
</tr>
<tr>
<td>16:15</td>
<td>Does a global power grid reduce mitigation costs?&lt;br&gt;Bas VAN RUIJVEN (IIASA), Fei Guo (IIASA), Behnam Zakeri (IIASA), Volker Krey (IIASA), Keywan Riahi (IIASA)</td>
</tr>
<tr>
<td>16:40</td>
<td>Comparing quantitative industry decarbonization perspectives towards 2050 for Europe&lt;br&gt;Mariesse VAN SLUISVELD (PBL), Harmen Sytze de Boer (PBL), Andries Hof (PBL), Detlef van Vuuren (PBL), Clemens Schneider (Wuppertal Institute), Stefan Lechtenboehmer (Wuppertal Institute)</td>
</tr>
<tr>
<td>17:05</td>
<td>Assessing the Sectoral Value of Carbon Capture and Storage, given the New Economics of Solar PV&lt;br&gt;Neil GRANT (Grantham Institute, Imperial College London), Ajay Gambhir (Grantham Institute, Imperial College London), Tamaryn Napp (Grantham Institute, Imperial College London), Adam Hawkes (Grantham Institute, Imperial College London)</td>
</tr>
<tr>
<td>17:30</td>
<td>Managing Variable renewables in the European electricity system with Biomass: Emission Targets and Investment Preferences&lt;br&gt;Marillis LEHTVEER (Chalmers University of Technology), Mathias Fridahl (Linköping University)</td>
</tr>
<tr>
<td>16:15</td>
<td>PARALLEL SESSION 2B&lt;br&gt;National mitigation scenarios - NATIONAL 2&lt;br&gt;Chair: Jae EDMONDS (PNNL), Jiang KEJUN (ERI), Toshihiko MASUI (NIES)</td>
</tr>
<tr>
<td>16:15</td>
<td>EU-India Cooperation on Low Carbon Transportation&lt;br&gt;Vaibhav Chaturvedi (Non-Profit Resarch Think Tank), Poonam NAGAR KOTI (Council on Energy, Environment and Water)</td>
</tr>
</tbody>
</table>
16:40-17:05  **India’s New Biofuel Policy for climate change mitigation and its implications on land-use requirements**  
Chandan KUMAR JHA (Indian Institute of Management), Vartika Singh (Indian Institute of Management), Miodrag Stevanovic’ (PIK), Ranjan Kumar Ghosh (Indian Institute of Management), Jan Philipp Dietrich (PIK), Hermann Lotze-Campen (PIK and Humboldt-Universität zu Berlin), Alexander Popp (PIK)

17:05-17:30  **A sub-national scenario modeling framework applied to the Indus River Basin**  
Simon Parkinson (IIASA and University of Victoria), Adriano Vinca (IIASA and University of Victoria), Ansir Ilyas Lahore (University of Management Sciences), Edward Byers (IIASA), Peter Burek (IIASA), Yoshihide Wada (IIASA and Utrecht University), Keywan RIAHI (IIASA)

17:30-18:00  **Quantifying the deep decarbonization strategies of energy system in Thailand towards 2050**  
Bundit LIMMEECHOKCHAI (Sirindhorn International Institute of Technology, Thammasat University), Puttipong CHUNARK (Sirindhorn International Institute of Technology, Thammasat University)

16:15-18:00 **PARALLEL SESSION 2C  Room: 202A**

16:15-16:40  **A Pathway of Global Food Supply Adaptation in a World with Increasingly Constrained Groundwater**  
Mohamad HEJAZI (PNNL), Sean Turner (PNNL), Katherine Calvin (PNNL), Page Kyle (PNNL), Son Kim (PNNL)

16:40-17:05  **Future projection of water, food, bio-energy, ecosystem and land investigated with an integrated Earth System Model (MIROC-INTEG)**  
Tokuta YOKOHATA (NIES), Tsuguki Kinoshita (Ibaraki University), Gen Sakurai (National Agriculture and Food Research Organization), Yadu Pokhrel (Michigan State University), Akihiko Ito (NIES), Yusuke Satoh (NIES), Etsushi Kato (The Institute of Applied Energy), Shinichiro Fujimori (Kyoto University and NIES), Kaoru Tachiiri (Japan Agency for Marine-Science and Technology), Tomohiro Hajima (Japan Agency for Marine-Science and Technology), Kiyoshi Takahashi (NIES), Naota Hanasaki (NIES), Seita Emori (NIES)

17:05-17:30  **Impact of water availability on coal-based power plants in India under RCP 4.5 and 8.5 scenarios**  

17:30-18:00  **How will concurrent and recurrent extreme events impact global agricultural markets in the next decade? A stochastic partial-equilibrium framework**  
Thomas CHATZOPOULOS (European Commission, JRC), Ignacio Pérez Domínguez (European Commission, JRC), Marcel Adenaeyer (OECD, Trade and Agriculture Directorate), Andrea Toreti (European Commission, JRC), Matteo Zamper (European Commission, JRC)
PARALLEL SESSION 2D  
Methodological issues - METHODS 2  
Chair: Massimo TAVONI (RFF-CMCC and Politecnico di Milano), Jessica STREFFLER (PIK)  

16:15-16:40  Informed citizen panels on the Swiss electricity supply in 2035  
Evelina TRUTNEVYTE (University of Geneva), Xexakis George (University of Geneva), Hansmann Ralph (ETH Zurich), Volken Sandra (ETH Zurich)  

16:40-17:05  Historic development of IAMs in the climate science-policy interface  
Lisette VAN BEEK (Utrecht University), Detlef van Vuuren (Utrecht University and PBL), Maarten Hajer (Utrecht University), Peter Pelzer (Utrecht University)  

17:05-18:00  Final Discussion  

Poster Session 1  
Chair: Brian O’NEILL (Denver)  
Room: Multi-purpose room  

Land-based mitigation  
1 Better Representing Land-Use Technologies in National IAM  
Gerd Angelkorte (PPE/COPPE/UFRJ), Pedro ROCHEDO (PPE/COPPE/UFRJ), Alexandre Szklo (PPE/COPPE/UFRJ), Roberto Schaeffer (PPE/COPPE/UFRJ), Andre Lucena (PPE/COPPE/UFRJ), Isabela Tagomori (PPE/COPPE/UFRJ), Alexandre Koberle (Imperial College London)  

2 Integrated assessment of bioenergy potential for Japan  
Wenchao WU (NIES), Tomoko Hasegawa (Ritsumeikan University), Shinichiro Fujimori (Kyoto University), Kiyoshi Takahashi (NIES), Ken Oshiro (Kyoto University)  

Deep mitigation scenarios  
3 Uran-Leap Modelling for Coordinated Emission Reduction of Greenhouse Gas and Air Pollutants in Beijing-Tianjin – Hebei: A Case Study of Jinnan China  
Sha CHEN (Beijing University of Technology), Yingying Liu (Beijing University of Technology), Jin Hu (Beijing University of Technology), Kejun Jiang (Energy Research Institute)  

4 The potential of ammonia as marine fuel in climate mitigation  
Mariliis LEHTVEER (Chalmers University of Technology), Julia Hansson (IVL Swedish Environmental Research Institute) Selma Brynholf (Chalmers University of Technology), Erik Fridell (IVL Swedish Environmental Research Institut)  

6 Electrification in 1.5C Scenarios  
Shogo SAKAMOTO (Central Research Institute of Electric Power Industry)  

Impacts of climate change and impact of adaptation  
7 Modelling the economic wide impacts of the autonomous and planned adaptation measures of flood in Indonesia  
Ambiyah ABDULLAH (NIES), Toshihiko Masui (NIES)
8 An integrated water-energy-economic model for simultaneous assessment of climate change adaptation and mitigation options in river basins
Maksud BEKCHANOV (ZEF)

9 The nonlinear impacts of global warming on regional economic production: An Empirical Analysis from China
Junjie CHANG (Beijing Institute of Technology), Yi-Ming Wei (Beijing Institute of Technology), Xiao-Chen Yuan (Beijing Institute of Technology), Hua Liao (Beijing Institute of Technology), Bi-Ying Yu (Beijing Institute of Technology)

10 The demand-based adaptation strategy for urban heat stress
Ara KIM (Kyunghee University), Gayoung Yoo (Kyung Hee University)

11 Interlinkage effects of adaptation and mitigation policies for integrated assessment models
Yong Jee KIM (Korea Environment Institute), Seo Hyung Choi (Korea Environment Institute), Daesoo Kim (Korea Environment Institute), Yeora Chae (Korea Environment Institute)

12 An Assessment of Global Macro-Economic Impacts caused by Sea Level Rise Using SSPs and RCPs framework
Osamu NISHIURA (Kyoto University), Shinichiro Fujimori (Kyoto University), Makoto Tamura (Institute for Global Change Adaptation Science, Ibaraki University)

13 Effect on the Earth system of realizing a 1.5°C warming climate target after overshooting to the 2°C level
Kaoru TACHIIRI (Japan Agency for Marine-Earth Science and Technology - JAMSTEC), Diego Silva Herran (Institute for Global Environmental Strategies), Xuanming Su (Japan Agency for Marine-Earth Science and Technology - JAMSTEC), Michio Kawamiya (Japan Agency for Marine-Earth Science and Technology - JAMSTEC)

Modelling climate change in IAMs & carbon budgets

14 Regional and sectoral attributions of recent climate change
Xuanming SU (Japan Agency for Marine-Earth Science and Technology - JAMSTEC), Kaoru Tachiiri (Japan Agency for Marine-Earth Science and Technology - JAMSTEC), Katsumasa Tanaka (NIES), Michio Watanabe (Japan Agency for Marine-Earth Science and Technology - JAMSTEC)

15 Asserting the climate benefits of the coal-to-gas shift across temporal and spatial scales
Katsumasa TANAKA (NIES), Otávio Cavalett (Norwegian University of Science and Technology), William Collins (University of Reading), Francesco Cherubini (Norwegian University of Science and Technology)

Sustainable development strategies

16 Ancillary Benefits of Reducing Global Food Loss and Waste
Shinichiro FUJIMORI (Kyoto University and NIES), Kou Kushibe (Kyoto University)

17 Conditions and mechanism behind co-benefits of CO2 emissions reduction and ambient PM2.5 concentration reduction in China and India
Keii GI (Research Institute of Innovative Technology for the Earth - RITE), Fuminori Sano (Research Institute of Innovative Technology for the Earth - RITE), Ayami Hayashi (Research Institute of
Innovative Technology for the Earth - RITE, Keigo Akimoto (Research Institute of Innovative Technology for the Earth - RITE)

18 Climate and Health Benefits of Phasing Out Iron & Steel Production Capacity in China
Boshu LI (College of Environmental Sciences and Engineering, Peking University)

20 Using Genuine Savings for climate policy evaluation with an integrated assessment mode
Koji TOKIMATSU (Tokyo Institute of Technology)

Methodological issues

21 Evaluating long-term subnational reference scenarios of the energy system
Matthew BINSTED (JGCRI/PNNL), Gokul Iyer (JGCRI/PNNL), Leon Clarke (PNNL / University of Maryland)

22 Range Analysis of the Linear-Programming Bottom-up Energy Systems Model
Takuya HARA (Toyota Central R&D Labs., Inc.)

23 Sustainability check for Integrated Assessment models
Oleg LUGOVOY (Environmental Defense Fund, USA)

24 Achieving sustainable development in Eastern Africa: a portfolio based integrated assessment modelling analysis among different Shared Socioeconomic Pathways
Alexandros NIKAS (National Technical University of Athens), Haris DOUKAS (National Technical University of Athens), Aikaterini Forouli (National Technical University of Athens), Dirk-Jan Van de Ven (Basque Centre for Climate Change), Jon Sampedro (Basque Centre for Climate Change)

26 Modeling Regional Water Quality Impacts of Global Climate Change and Adaptation Strategies
Stephanie WALDHOFF (JCGRI), Jia Li (US EPA), Xuesong Zhang (JGCRI), Jefferson Cole (US EPA)

27 The MESSAGEix Integrated Assessment Model and the ix modeling platform (ixmp): An open framework for integrated and cross-cutting analysis of energy, climate, the environment, and sustainable development
Behnam ZAKERI (IIASA), Paul Kishimoto (IIASA), Daniel Huppmann (IIASA), Matthew Gidden (IIASA), Oliver Fricko (IIASA), Peter Kolp (IIASA), Clara Orthofer (IIASA), Michael Pimmer (IIASA), Nikolay Kushin (IIASA), Adriano Vinca (IIASA), Alessio Mastrucci (IIASA), Keywan Riahi (IIASA), Volker Krey (IIASA)

19:30-21:00 Poster Session 2
Chair: Detlef VAN VUUREN (PBL), John WEYANT (Stanford)
Room: Multi-purpose room

Economic impact of mitigation

28 Economic Impacts of Climate Change and Air Pollution through Health and Labor Supply Perspective in China: An Integrated Assessment Model Analysis
Hai HUANG (Tsinghua University), Mengzhen Zhao (Ministry of Education and Tsinghua University), Jin Li (Tsinghua University), Can Wang (Tsinghua University)
| 29 | Estimating health co-benefits of China’s climate policies to meet the 2°C target  
    | Chenfei QU (Tsinghua University), Xi Yang (Tsinghua University), Shuxiao Wang (Tsinghua University), Xiliang Zhang (Tsinghua University) |
| 30 | The atmospheric double dividend: air quality co-benefits of climate policy across sectors and regions  
    | Peter RUSS (European Commission, Joint Research Centre), Toon Vandyck (European Commission, Joint Research Centre), Kimon Keramidas (European Commission, Joint Research Centre), Stephane Tchung-Ming (European Commission, Joint Research Centre), Matthias Weitzel (European Commission, Joint Research Centre), Rita Van Dingenen (European Commission, Joint Research Centre) |
| 31 | The Impact of Renewable Energy Development on Industrial Materials and Carbon Emissions in China  
    | Yanhua WANG (Renmin University of China), Ke Wang (Renmin University of China), Qinrui Xiahou (Renmin University of China) |

**National mitigation scenarios**

| 32 | China’s pathway and policy analysis by 2050: Lessons from CEMF02 study  
    | Ji Gao (Environmental Defense Fund, Beijing Representative Office), Shuo Gao (Environmental Defense Fund, Beijing Representative Office), Kejun JIANG (Energy Research Institute) |
| 33 | Willingness to pay promoted renewable energy penetration in power sector to a low carbon society in Japan  
    | Lu GAO (NIES), Yuki Hiruta (NIES), Shuichi Ashina (NIES) |
| 34 | Investigating the potentials of CO2 and air pollutants mitigation by the energy transition: A case study in South Korea based on energy demand model  
    | Hocheol JEON (Korea Environment Institute), Daesoo Kim (Korea Environment Institute) |
| 35 | Industrial Decarbonization Under Japan’s National Mitigation Scenarios: A Multi-Model Analysis  
    | Yiyi JU (Institute of Future Initiative, The University of Tokyo), Masahiro Sugiyama (Institute of Future Initiative, The University of Tokyo) |
| 36 | Analysis of Japanese energy system toward net-zero CO2 emissions with TIMES-Japan - role of BECCS and DAC  
    | Etsushi KATO (Institute of Applied Energy), Atsushi Kurosawa (Institute of Applied Energy) |
| 37 | Impact of Fine Particulate Matter Concentration on Green Energy Transition with Photovoltaic Generation  
    | Somi JUNG (Hanyang University), Dongwoo Kim (Hanyang University) |
| 38 | Estimating the Future Emission Pattern of Iron and Steel Industry in China Using AIM/Enduse Model  
    | Zhaoling LI (NIES), Tatsuya Hanaoka (NIES) |
| 39 | The low carbon transition pathway for China through 2050: A sectoral perspective  
    | Junling LIU (Tsinghua University), Ke Wang (Renmin University of China), Ji Zou (Renmin University of China), Ying Kong (Tsinghua University; York University) |
40  “Laundering” the CO2 emissions: the role of carbon removal technologies in meeting stringent national climate change mitigation targets: the case of Switzerland
Evangelos PANOS (Paul Scherrer Institute), Christian Bauer (Paul Scherrer Institute), Tom Kober (Paul Scherrer Institute)

41  Societal expectation for scenarios: Results from a pilot stakeholder workshop in Japan
Masahiro SUGIYAMA (University of Tokyo), Kengo SUZUKI (Tsukuba University)

43  Scenario modeling for emission pathway and the related synergies in China’s steel and cement sectors
Shaohui ZHANG (Beihang University)

Transitions and feasibility assessment

44  Optimal mix of climate-related energy in global power systems
Cheng-Ta CHU (Imperial College London), Adam Hawkes (Imperial College London)

Modelling energy demand and the impact of behavioural change

45  A method to assess the impact of the spatial concentration of households on hourly electricity consumption
Yuki HIRUTA (NIES), Gao Lu (NIES), Shuich Ashina (NIES)

46  The Opportunity Cost of the Refusal to a Global Dietary Change
Pedro ROCHEDO (COPPE/UFRJ), Bruno Cunha (COPPE/UFRJ), Angelo Gurgel (EESP-FGV), André Lucena (COPPE/UFRJ), Rafael Garaffa (COPPE/UFRJ), Roberto Schaeffer (COPPE/UFRJ), Alexandre Szklo (COPPE/UFRJ)

47  Decomposition analysis of changes in per capita consumption: a tool for identifying lifestyle changes within scenarios
Mariesse VAN SLUISVELD (Netherlands Environmental Assessment Agency), Nicole van den Berg (Utrecht University), Andries Hof (Netherlands Environmental Assessment Agency), Lewis Akenji (University of Helsinki), Vanessa Timmer (Utrecht University), Oreane Edelenbosch (Politecnico di Milano), Detlef van Vuuren (Netherlands Environmental Assessment Agency & Utrecht University)

48  Transport electrification requires renewable energy penetration to mitigate climate change
Runsen ZHANG (Hiroshima University), Runsen Zhang (Hiroshima University), Shinichiro Fujimori (Kyoto University)

SSP updates and extensions

49  Starved and stuffed: Using anthropometrics to estimate future food demand and food waste under an advancing nutrition transition
Florian HUMPENÖDER (PIK), Benjamin Leon Bodirsky (PIK), Jan Philipp Dietrich (PIK), Eleonora Martinelli (PIK), Antonia Stenstad (PIK), Prajal Pradhan (PIK), Sabine Gabrysch (PIK), Abhijeet Mishra (PIK), Isabelle Weindl (PIK), Chantal Le Mouël (National Institute of Agricultural Research, France), Susanne Rolinski (PIK), Lavinia Baumstark (PIK), Xiaoxi Wang (PIK), Jillian Waid (PIK), Hermann Lotze-Campen (PIK), Alexander Popp (PIK)

50  Analysing sustainable pathways and carbon reduction trajectories based on SSPs in Los Angeles to achieve a carbon neutral and sustainable city
Miho KAMEI (Institute for Global Environmental Strategies)

51  **Projection of Subnational Economy under the Shared Socioeconomic Pathways in China**  
    Jiachen Wang (Tsinghua University), Yidan Chen (Tsinghua University), Fang Guo (Tsinghua University), Can Wang (Tsinghua University), Wenjia Cai (Tsinghua University)

Others

53  **Climate Change Scenario Services: General concept and first products of the SENSES project**  
    Elmar KRIEGLER (PIK), Cornelia Auer (PIK), The SENSES consortium (SENSES project)

54  **Modeling 1-hour resolution 100% renewable systems with R and energyRt**  
    Oleg LUGOVOY (Environmental Defense Fund, USA)

55  **Tradeoffs between regionally equitable and cost-efficient allocation of decentralized renewable electricity generation**  
    Evelina TRUTNEVYTE (University of Geneva), Jan-Philipp Sasse (University of Geneva)

56  **The unbalance between CO2 emission and value added along the inter-regional trade in China: A study based on MRIO from 2002 to 2012**  
    Yaxin ZHANG (SKLESPC and Tsinghua University), Can Wang (SKLESPC and Tsinghua University)
### Day 2: Tuesday, December 3, 2019

**09:00-10:45 PARALLEL SESSION 3A**  
**Room: 201A**  
**Deep mitigation scenarios – DEEP 3**  
Chair: Detlef VAN VUUREN (PBL), Elmar KRIEGELR (PIK), Sergey PALTSEV (MIT)

09:00-09:25  
**A general equilibrium analysis of the economic impacts and benefits of achieving 1.5 and 2-degree targets in China by 2050**  
Xiaorui LIU (College of Environmental Sciences and Engineering, Peking University), Hancheng Dai (College of Environmental Sciences and Engineering, Peking University, Beijing)

09:25-09:50  
**Feasibility study of China’s electric power sector transition to zero emissions by 2050**  
Oleg LUGOVOY (Environmental Defense Fund, USA), Kejun Jiang (ERI), Shuo Gao (Environmental Defense Fund, China), Ji Gao (Environmental Defense Fund, China)

09:50-10:20  
**Final Discussion**

10:20-10:45  
No schedule

**09:00-10:45 PARALLEL SESSION 3B**  
**Room: 201B**  
**National mitigation scenarios - NATIONAL 3**  
Chair: Jae EDMONDS (PNNL), Jiang KEJUN (ERI), Toshihiko MASUI (NIES)

09:00-09:25  
**A plant-by-plant assessment of accelerated coal power phase-out in China under the Paris climate goals**  
Ryna Yiyun CUI (University of Maryland), Nathan Hultman (University of Maryland), Haewon McJeon (JGCRI-PNNL), Sha Yu (JGCRI-PNNL), Diyang Cui (University of Maryland), Morgan Edwards (University of Maryland), Arijit Sen (University of Maryland), Kaihui Song (University of Maryland)

09:25-09:50  
**The Role of Emission Allowance Allocation in China’s Cap and Trade Carbon Market: A General Equilibrium Analysis**  
Hancheng DAI (Peking University), Yana Jin (The College of William and Mary), Xiaorui Liu (Peking University)

09:50-10:15  
**Make 2/1.5°C pathway Feasible: Way for Low Carbon City in China**  
Kejun JIANG (ERI)

10:15-10:45  
**A Cross-sectoral Integrated Assessment of NDC Alternatives for Madagascar**  
Larissa P. N. DE OLIVEIRA (ECN part of TNO), Francesco Dalla Longa (ECN part of TNO), Bob van der Zwaan (ECN part of TNO, University of Amsterdam, Johns Hopkins University)

**09:00-10:45 PARALLEL SESSION 3C**  
**Room: 202A**  
**Impacts of climate change and impact of adaptation - IMPACTS 3**  
Chair: Stephanie WALDHOFF (PNNL), Shinishiro FUJIMORI (NIES)

09:00-09:25  
**Modeling Climate Change Impacts and Adaptation: An Analytical Framework and Application in the U.S. Agriculture Sector**  
Allen FAWCETT (US Environmental Protection Agency), Stephanie Waldhoff (JGCRI-PNNL),
Xuesong Zhang (JGCRI-PNNL), Jia Li (US Environmental Protection Agency), Jefferson Cole (US Environmental Protection Agency), Richard Moss (JGCRI-PNNL)

09:25-09:50 Estimating rainfed and irrigated crop response to weather variability
Mary Ollenberger (Appalachian Laboratory, University of Maryland Center for Environmental Science), Abigail Snyder (JGCRI-PNNL), Stephanie WALDHOFF (JGCRI-PNNL)

09:50-10:15 Potential influence of climate change on grain self-sufficiency considering adaptation measures
Taoyuan WEI (CICERO), Tianyi Zhang (Chinese Academy of Sciences), Xuefeng Cui (Beijing Normal University), Yu Liu (Chinese Academy of Sciences), Solveig Glomsrød (CICERO)

10.15-10.30 Current activities as part of ISIMIP
Franciska PIONTEK (PIK)

10:30-10:45 Final Discussion

09:00-10:45 PARALLEL SESSION 3D Room: 202B
Sustainable development strategies - SD1
Chair: Detlef VAN VUUREN (PBL), Jessica STREFFLER (PIK)

09:00-09:05 Introduction
Jessica STREFFLER (PIK), Detlef VAN VUUREN (PBL)

09:05-09:25 Resource efficiency and circular economy policies: macroeconomic impacts and implications for labour markets
Ruben BIBAS (OECD), Jean Chateau (OECD), Elisa Lanzi (OECD)

09:25-09:45 Pursuing the SDGs: Integrated Scenario Analysis
Barry HUGHES (Pardee Center, University of Denver)

09:45-10:05 The importance of socioeconomic condition in achieving climate mitigation and SDGs
Jing-Yu LIU (Shanghai Jiaotong University and NIES), Shinichiro Fujimori (Kyoto University and NIES), Kiyoshi Takahashi (NIES), Tomoko Havegawa (Ritsumeikan University), Wenchao Wu (NIES), Toshihiko Masui (NIES)

10:05-10:25 Optimal Global Benefit-Cost Analysis on Air Pollution and Climate - Policies that saves lives
Lara Aleluia Reis (RFF-CMCC), Laurent DROUET (RFF-CMCC), Massimo Towoni (RFF-CMCC and Politecnico di Milano)

10:25-10:45 Improved food distribution reconciling growing food demand and the environment
Tomoko HASEGAWA (Ritsumeikan University), Petr Havlik (IIASA), Stefan Frank (IIASA), Amanda Palazzo (IIASA), Hugo Valine (IIASA)

10:45-11:15 Break
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Name</th>
<th>Chair</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:15-13:00</td>
<td>PARALLEL SESSION 4A</td>
<td>Economic impact of mitigation - MITIGATION 1</td>
<td>Shinishiro FUJIMORI (NIES), Sergey PALTSEV (MIT), Massimo TAVONI (RFF-CMCC and Politecnico di Milano)</td>
</tr>
<tr>
<td>11:15-11:20</td>
<td>Introduction</td>
<td></td>
<td>Shinishiro FUJIMORI (NIES), Sergey PALTSEV (MIT), Massimo TAVONI (RFF-CMCC and Politecnico di Milano)</td>
</tr>
<tr>
<td>11:20-11:45</td>
<td>The Potential Economic Value of Article 6 of the Paris Agreement</td>
<td>James EDMONDS (PNNL), Sha Yu (PNNL), Dirk Forrister (IETA), Joe Aldy (Harvard University), Nate Hultman (University of Maryland), Ryna Cui (University of Maryland), Stephanie Waldhoff (PNNL), Leon Clarke (University of Maryland), Stefano De Clara (IETA), Clayton Munning (IETA), Ghassem Asrar (PNNL)</td>
<td></td>
</tr>
<tr>
<td>11:45-12:10</td>
<td>The public costs of climate induced financial instability</td>
<td>Massimo TAVONI (RFF-CMCC and Politecnico di Milano), Francesco Lamperti (RFF-CMCC), Valentina Bosetti (RFF-CMCC)</td>
<td></td>
</tr>
<tr>
<td>12:10-12:35</td>
<td>Carbon pricing and Climate Finance: a new form of what and where flexibilities</td>
<td>Meriem HAMDI-CHERIF (CIRED), Christophe Cassen (CIRED)</td>
<td></td>
</tr>
<tr>
<td>12:35-13:00</td>
<td>Quantifying the trade-off between cost efficiency and transfers in international climate mitigation agreements</td>
<td>Nico BAUER (PIK), Anselm Schultes (PIK), Christoph Bertram (PIK), Gunnar Luderer (PIK), Elmar Kriegler (PIK), Ottmar Edenhofer (PIK)</td>
<td></td>
</tr>
<tr>
<td>11:15-13:00</td>
<td>PARALLEL SESSION 4B</td>
<td>National mitigation scenarios - NATIONAL 4</td>
<td>Jae EDMONDS (PNNL), Jiang KEJUN (ERI), Toshihiko MASUI (NIES)</td>
</tr>
<tr>
<td>11:15-11:40</td>
<td>Japan’s emission pathways in the context of the 2°C goals and their implications for the mid-century strategy</td>
<td>Ken OSHIRO (Kyoto University), Shinichiro Fujimori (Kyoto University and NIES), Keii Gi (Research Institute of Innovative Technology for the Earth), Heleen van Soest (PBL), Christoph Bertram (PIK), Jacques Després (European Commission, JRC), Toshihiko Masui (NIES), Pedro Rochedo (COPPE/UFRJ), Mark Roelfsema (PBL), Zoi Vrontisi (E3M-Lab, National Technical University of Athens)</td>
<td></td>
</tr>
<tr>
<td>11:40-12:05</td>
<td>Assessment of Japan’s 2050 mitigation goal and the relevance of uncertain nuclear policy</td>
<td>Diego SILVA HERRAN (IGES, NIES), Shinichiro Fujimori (Kyoto University and NIES), Mikiko Kainuma (IGES, NIES)</td>
<td></td>
</tr>
<tr>
<td>12:05-12:30</td>
<td>Assessment of Potential Impacts from Emission Mitigation Policies in Indonesia</td>
<td>Marissa MALAHAYATI (NIES), Toshihiko Masui (NIES)</td>
<td></td>
</tr>
<tr>
<td>12:30-13:00</td>
<td>Final Discussion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11:15-13:00 PARALLEL SESSION 4C
Land-based mitigation - LAND-BASED
Chair: Laurent DROUET (RFF-CMCC)

11:15-11:20 Introduction
Laurent DROUET (RFF-CMCC)

11:20-11:45 The potential contribution of biomass and bioenergy for near-term national mitigation: A geospatial analysis in China
Yuwei WENG (Tsinghua University and Joint Center for Global Change Studies), Yaoyu Nie (Tsinghua University and Joint Center for Global Change Studies), Wenjia Cai (Tsinghua University, Joint Center for Global Change Studies, and Tsinghua-Rio Tinto Joint Research Center for Resources Energy and Sustainable Development)

11:45-12:10 Peatland protection and restoration is key for future transformation pathways
Florian HUMPENÖDER (PIK), Kristine Karstens (PIK), Hermann Lotze-Campen (PIK), Jens Leifeld (Agroscope), Lorenzo Menichetti (Swedish University of Agricultural Sciences), Alexandra Barthelmes (Greifswald Mire Centre), Alexander Popp (PIK)

12:10-12:35 Reconciling differences on anthropogenic forest CO2 fluxes between IAMs and country reporting
Giacomo Grassi (JRC), Detlef VAN VUUREN (PBL), Elke Stehfest (PBL), Simone Rossi (JRC), Alessandro Cescatti (JRC), Joanna Isobe House (Bristol University), Alexander Popp (PIK), Joeri Rogelj (IIASA)

12:35-13:00 Final Discussion

11:15-13:00 PARALLEL SESSION 4D
Sustainable development strategies - SD2
Chair: Stephanie WALDHOFF (PNNL), Detlef VAN VUUREN (PBL), Jessica STREFFLER (PIK)

NON E’ VENUTO!!!! 11:15-11:35 Environmental and Economic Co-benefits: Implications of Reducing Alcoholic Beverage Consumption
Xiaoxi WANG (China Academy for Rural Development, Zhejiang University), Benjamin Leon Bodirsky (PIK), Isabelle Weindl (PIK) Xu Zhao(Hohai University), Miodrag Stevanović (PIK), Jan Philipp Dietrich (PIK), Hermann Lotze-Campen (PIK), Alexander Popp (PIK)

11:35-11:55 Co-benefits of low carbon futures for local air pollution in India
Saritha VISHWANATHAN (Indian Institute of Management- Ahmedabad), Peter Rafaj (IIASA), Amit Garg (Indian Institute of Management- Ahmedabad), Gregor Kiesewetter (IIASA), Wolfgang Schönpp (IIASA), Volker Krey (IIASA)

11:55-12:15 Health co-benefits of implementing the Paris Agreement in China’s power sector
Xueqin CUI (Tsinghua University), Wenjia Cai (Tsinghua University), Shaohui Zhang (Beihang University), Haoran Li (Tsinghua University), Can Wang (Tsinghua University), Gang He (Stony Brook University)

12:15-12:35 Exploring the Implications of Asian Climate Change Mitigation Actions to Sustainable Development Goal
Shinichiro FUJIMORI (Kyoto University and NIES), Kiyoshi Takahashi (NIES), Hancheng Dai (Peking University), Tomoko Hasegawa (Ritsumeikan University), Jing-Yu Liu (NIES), Tetsuya
12:35-13:00 Final Discussion

13:00-14:00 Lunch

14:00-15:45 PARALLEL SESSION 5A Room: 201A
Economic impact of mitigation – MITIGATION 2
Chair: Shinishiro FUJIMORI (NIES), Sergey PALTSEV (MIT), Massimo TAVONI (RFF-CMCC)

14:00-14:25 Impact of global mitigation pathways on the economy of energy exporting regions: The case of Central Asia
Behnam ZAKERI (IIASA), Volker Krey (IIASA), Holger Rogner (IIASA), Clara Orthofer (IIASA)

14:25-14:50 The Economics of BECCS Deployment in a 1.5°C or 2°C World
Mathilde Fajardy (Imperial College), Jennifer Morris (MIT), Howard Herzog (MIT), Niall Mac Dowell (Imperial College), Sergey PALTSEV (MIT)

14:50-15:15 Structural Change in the long run - a case for constant, but time-varying elasticity of substitution
Yu ZHENG (RFF-CMCC), Johannes Emmerling (RFF-CMCC)

15:15-15:45 Evaluation of alternative policy designs for Korean carbon market via an integrated model linking top-down and bottom-up models
Hayeon JEONG (Korea Environment Institute), Yong-Gun KIM (Korea Environment Institute), Hyunhee KIM (Korea Environment Institute), Kibok Chang (Korea Environment Institute), Sung Won Kang (Korea Environment Institute) Insook Kim (Hanyang University), Younmo Koo (Seoul National University)

14:00-15:45 PARALLEL SESSION 5B Room: 201B
Transitions and feasibility assessment - TRANSITION
Chair: Nico BAUER (PIK), Keywan RIAHI (IIASA), Bas VAN RUJVEN (IIASA)

14:00-14:05 Introduction
Nico BAUER (PIK), Keywan RIAHI (IIASA), Bas VAN RUJVEN (IIASA)

14:05-14:23 Exploring the implication of national innovation and technological capability in the context of climate mitigation
Raphael APEANING (Stony Brook University)

14:23-14:41 Uncertainties in committed emissions from coal power plant in China and the implications for 2°C and 1.5°C targets
Mingjian YIN (Tsinghua University), Junling Liu (Tsinghua University), Ke Wang (Renmin University), Ji Zou (Renmin University), Ying Kong (Tsinghua University and York University)

14:41-14:59 Policy options for the decarbonisation of the power sector through “Just transition” in Japan: Estimation of direct and indirect employment impact at the local level
Akihisa KURIYAMA (IGES), Naoya Abe (Tokyo Institute of Technology)
14:59-15:17 Estimating the radiological impact to the public in long-term energy scenarios in an Integrated Assessment Model
Pedro ROCHEDO (COPPE/UFRJ), Elaine Rochedo (CNEN)

15:17-15:35 Heterogeneous Societal Pathways to Deep Decarbonization in the U.S.
Matthew BINSTED (JGCRI-PNNL), James Edmonds (PNNL), Leon Clarke (University of Maryland), Tom Wild (University of Maryland)

15:35-15:45 Final Discussion

14:00-15:45 PARALLEL SESSION 5C Room: 202A
Modelling climate change in IAMs & carbon budgets - CLIMATE
Chair: Detlef VAN VUUREN (PBL)

14:00-14:05 Introduction
Detlef VAN VUUREN (PBL)

14:05-14:25 Carbon budgets for ambitious mitigation goals and their integration with IAMs
Myles ALLEN (University of Oxford), Stuart Jenkins (University of Oxford), Theo Dullin (ENSTA ParisTech), Matthew Ives (University of Oxford), Elizabeth Baldwin (University of Oxford)

14:25-14:45 Distribution of climate sensitivity found in the latest climate model ensemble
Junichi TSUTSUI (Central Research Institute of Electric Power Industry)

14:45-15:05 A framework to estimate and track remaining carbon budgets for stringent climate targets
Joeri Rogelj (Imperial College London and IIASA), Piers M. Forster (Priestley International Centre for Climate, University of Leeds), Elmar KRIEGLER (PIK), Christopher J. Smith (Priestley International Centre for Climate, University of Leeds), Roland Séférian (CNRM, Université de Toulouse, Météo-France, CNRS)

15:05-15:25 The economic value of improvements in climate science
Olivier DESSENS (UCL)

15:25-15:45 Final Discussion

15:45-16:15 Break

16:15-18:00 PARALLEL SESSION 6A Room: 201A
Economic impact of mitigation – MITIGATION 3
Chair: Shinishiro FUJIMORI (NIES), Sergey PALTSEV (MIT), Massimo TAVONI (RFF-CMCC)

16:15-16:40 Co-benefits of Climate Change Mitigation in Improvement of Global Air Quality and Human Health
Yazhen WU (College of Environmental Sciences and Engineering, Peking University), Hancheng Dai (Peking University), Yanxu Zhang (Nanjing University), Yang Xie (Beihang University), Shinichiro Fujimori (Kyoto University and NIES), Yasuaki Hijioka (NIES)

16:40-17:05 Health and economic benefits of China’s climate mitigation in 2030 and 2050
Yang XIE (Beihang University), Yazhen Wu (Peking University), Yuqiang Zhang (Duke University)

17:05-17:30 Incorporating Health Impacts into the Cost-benefits of Achieving China’s INDC Targets at Province-level
17:00-18:00 Final Discussion

16:15-18:00 PARALLEL SESSION 6B Room: 201B
Modelling energy demand and the impact of behavioural change - DEMAND
Chair: Bas VAN RIJVEN (IIASA), John WEYANT (Stanford University)

16:15-16:20 Introduction
Bas VAN RIJVEN (IIASA), John WEYANT (Stanford University)

16:20-16:45 A bottom-up analysis of the future of electricity demand in India: How much, by whom, and under what conditions?
Mohd. Sahil ALI (Brookings India)

16:45-17:10 Long-term energy service demand and the impact of behaviour change in rural and urban area of Indian states
Satish YAWALE (NIES), Tatsuya Hanaoka (NIES)

17:10-17:35 Estimation of CO2 emission reduction and economic impacts of ICT services using AIM/CGE [Japan]
Machiko SHINOZUKA (Nippon Telegraph and Telephone Corporation), Xiaoxi Zhang (Nippon Telegraph and Telephone Corporation), Yuiko Tanaka (Nippon Telegraph and Telephone Corporation), Yuko Kanamori (NIES), Toshihiko Masui (NIES)

17:35-18:00 The role of building insulation and renovation in climate change mitigation pathways
Vassilis DAIIOGLOU (Utrecht University), Efstratios Mikropoulos (Utrecht University), David Gernaat (PBL), Detlef van Vuuren (PBL)

16:15-18:00 PARALLEL SESSION 6C Room: 202A
SSP updates and extensions - EXTENSIONS
Chair: Laurent DROUET (RFF-CMCC), Nico BAUER (PIK), Brian O’NEILL (Denver)

16:15-16:20 Introduction
Laurent DROUET (RFF-CMCC), Nico BAUER (PIK), Brian O’NEILL (Denver)

16:20-16:40 Food Futures: Narratives of Food Systems for Diet and Nutrition along the Shared Socioeconomic Pathways (diet-SSPs)
Benjamin BODIRSKY (PIK), Roberta Alessandrini (Queen Mary University of London), Hermine Mitter (Universität für Bodenkunde), Adrian Leip (IRC-Ispra), Prajhal Pradhan (PIK), Antje Gonera (Nofima), Anna Birgitte Milford (Norwegian Institute of Bioeconomy Research), Katja-Maria Prexl (Nofima), Alberto Sanz Cobeña (Universidad Politécnica de Madrid), Isabelle Weindl (PIK), Hermann Lotze-Campen (PIK), Alexander Popp (PIK)

16:40-17:00 The Strategic Role of Carbon Dioxide Removal and Solar Geoengineering under Alternative World Futures
Dale ROTHMAN (University of Denver), Mariia Belaia (Harvard University), David Keith (Harvard University)
### Programme

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 17:00-17:20 | Municipal Solid Waste Generation in Asia up to 2050 considering SSPs: CH4 Emissions from Landfill Sites vs CO2 Emissions from Incineration  
Tatsuya HANAOKA (NIES), Hiroyuki Ueda (Mitsubishi UFJ Research and Consulting), Tomohiro Tasaki (NIES), Kousuke Kawai (NIES) |
| 17:20-17:40 | SSP extension in the sub-national context: regional heterogeneity and transition pathways in China  
Sha YU (JGCRI-PNNL), Leon Clarke (University of Maryland), Nathan Hultman (University of Maryland), Anand Patwardhan (University of Maryland) |
| 17:40-18:00 | Final Discussion |

### Day 3: Wednesday 4 December, 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 08:30-08:45 | PLENARY SESSION 3  
Report on IPCC Special Report on Land  
Chair: Detlef VAN VUUREN (PBL) |
| 08:30-08:45 | IPCC Special Report on Land  
Kate CALVIN (PNNL) |
| 08:45-10:30 | PLENARY SESSION 4  
New directions for representing climate impacts in IAMs  
Chair: Stephanie WALDHOFF (PNNL) |
| 08:45-09:05 | The evolution of Integrated Assessment: developing the next generation of use-inspired tools  
Karen FISHER-VANDEN (Penn State University) |
| 09:05-09:25 | Climate change impacts: a CGE modeling approach  
Shinichiro FUJIMORI (Kyoto University and NIES) |
| 09:25-09:45 | Modeling inequality in IAMs  
Francis DENNIG (Yale-NUS College) |
| 09:45-10:05 | Linking process-based impacts to IAMs: Persistence and channels  
Franziska PIONTEK (PIK) |
| 10:05-10:25 | Open discussion |
| 10:25-10:45 | Break |
| 10:45-12:00 | PLENARY SESSION 5  
Digital revolution  
Chair: Elmar KRIEGLER (PIK) |
| 10:45-11:05 | Overview on impacts of digital revolution on climate-relevant futures  
Laurent DROUET (RFF-CMCC) |
11:05-11:25  Digital revolution enables the Low Energy Demand future  
Keywan RIAHI (IIASA)

11:25-11:45  The digital revolution as stumbling block to a sustainable future  
Nico BAUER (PIK)

11:45-12:00  Open discussion

12:00-13:15  FINAL SESSION  
Chair: John WEYANT (Stanford University)

12:00-12:15  Reporting on new projects  
Jae EDMONDS (PNNL)

12:15-12:35  Reporting back on SWGs  
John WEYANT (Stanford University)

12:35-12:55  IAMC Database  
Bas VAN RUIJVEN (IIASA)

12:55-13:15  Awards and Closing remarks  
John WEYANT (Stanford University)

13:15-14:30  Lunch

14:30-16:00  Scientific Working Group Meetings

Working Group on Evaluation and Diagnostics  
Room: 201A

Working Group on Scenarios  
Room: 201B

16:00-16:30  Break

16:30-18:00  Scientific Working Group Meetings

Working Group on Scenarios for Climate-related Financial Analysis  
Room: 201A

Working Group on Data Protocols and Management  
Room: 201B
1st floor, Tsukuba International Congress Center

2nd floor, Tsukuba International Congress Center
Internet access

All participants have access to the wireless internet connection available in the Annual Meeting venue.

SSID: IAMC2019
Password: NIES_3058506