

Programme Overview

*** Meeting Time Zone: UTC ***

	Tuesday 1 December			Wednesday 2 December		
11.30-12.30				POSTER SESSION 2		
12.30-12.45	INTRODUCTION			DEEP 2	SUSTAINABLE 2	IMPACTS & CLIMATE 1
12.45-13.00	IPCC UPDATE				DEMAND 1	
13.00-13.15						
13.15-13.30						
13.30-13.45	SOCIAL COSTS OF CARBON					
13.45-14.00				DISCUSSION		
14.00-14.15	*** BREAK ***					
14.15-14.30	DEEP 1	ELECTRICITY	SUSTAINABLE 1	NATIONAL 1	DEMAND 2	IMPACTS & CLIMATE 2
14.30-14.45						
14.45-15.00		DISCUSSION				
15.00-15.15						
15.15-15.30			DISCUSSION	DISCUSSION	DISCUSSION	DISCUSSION
15.30-15.45	DISCUSSION		DISCUSSION	DISCUSSION	DISCUSSION	DISCUSSION
15.45-16.00	DISCUSSION			DISCUSSION		
16.00-17.00	POSTER SESSION 1			POSTER SESSION 3		

	Thursday 3 December			Friday 4 December			
11.30-12.30	POSTER SESSION 4			POSTER SESSION 6			
12.30-12.45	NATIONAL 2	COVID 1	ECONOMICS 1	FEASIBILITY	METHODS 2	LAND	
12.45-13.00	DISCUSSION						
13.00-13.15	SECTORAL 1			DISCUSSION			
13.15-13.30				SSP		DISCUSSION	
13.30-13.45							
13.45-14.00	*** BREAK ***						
14.00-14.15							
14.15-14.30	SECTORAL 2	COVID 2	ECONOMICS 2	NET-ZERO EMISSION TARGETS			
14.30-14.45		DISCUSSION					
14.45-15.00		METHODS 1		REPORTING BACK OF SWG			
15.00-15.15					ANNOUNCEMENT OF AWARDS AND FINAL WORDS		
15.15-15.30			DISCUSSION				
15.30-15.45	DISCUSSION		DISCUSSION				
15.45-16.00	DISCUSSION			DISCUSSION			
16.00-17.00	POSTER SESSION 5						

Plenary session



Parallel session



Poster session



US West coast	US East Coast	UTC MEETING TIME	CET Brussels	Bangalore	Beijing	Tokyo
UTC- 8:00 h	UTC - 5:00 h	00:00	UTC+ 1:00 h	UTC+ 5:30 h	UTC + 8:00 h	UTC + 9:00 h

Topics

COVID	Assessment of impacts of COVID-19 and crisis recovery packages
Deep	Assessment of deep mitigation scenarios, including the use of carbon dioxide removal
National	Assessment of national mitigation efforts, including contributions to the UNFCCC stocktake process
Sustainable	Assessment of Sustainable Development Strategies, including evaluation of SDGs and analysis of the energy-water-land nexus
Economics	Economic assessment of climate policy, including the distribution of impacts for different societal groups
Feasibility	Feasibility of socio-technical energy/land transitions - representation in IAM research.
Demand	Modelling of energy demand, lifestyle change and radical energy efficiency improvements
Electricity	Advanced modelling of electricity system and renewable energy (including sector coupling)
Sectoral	Integrated assessment of pathways to carbon neutrality in industry / buildings / transport
Land	Integrated assessment of land-based mitigation
Impacts	Integrated assessment of climate change impacts, including adaptation.
Methods	Methodological issues (uncertainty analysis, new programming languages, presentation tools etc).
SSP	Further elaboration of the Shared Socio-economic Pathways (SSP) and updates of existing quantifications
Climate	Representation of the climate system and implications of new climate research insights (including carbon budgets)

Plenary Sessions Programme

Tuesday
1
Dec
12.30-12.45

INTRODUCTION

Chair: Detlef VAN VUUREN (PBL, UU)

12.30-12.35 **Quick introduction of the agenda**

Detlef VAN VUUREN (PBL, UU)

12.35-12.45 **Introduction**

John WEYANT (Stanford University)

Tuesday
1
Dec
12.45-13.30

PLENARY SESSION 1 IPCC update

Chair: Keywan RIAHI (IIASA)

IAM research plays an important role in IPCC's assessment (AR6). In this session, we will present some key themes in the current work, including the assessment of long-term scenarios, the climate impacts and the assessment of feasibility of emission reduction.

12.45-12.55 **A New Round of IAM Contributions to the IPCC WGIII AR6**

Roberto SCHAEFFER (COPPE)

12.55-13.05 **A multidimensional feasibility evaluation of IAM scenarios**

Elina BRUTSCHIN (IIASA)

13.05-13.15 **Climate Model Emulators**

Malte MEINSHAUSEN (University of Melbourne)

13.15-13.30 **Forum discussion**

Tuesday
1
Dec
13.30-14.00

PLENARY SESSION 2 Social costs of carbon

Chair: Massimo TAVONI (RFF-CMCC EIEE and Politecnico di Milano)

In this session, we will look into the benefits of mitigation with two presentations covering the social costs of carbon and estimates of avoided damages.

13.30-13.40 **Updating the Scientific Basis and Transparency of Social Cost of Carbon Estimates**

Kevin RENNERT (Resources for the Future - RFF)

13.40-13.50 **Accounting for the benefits from mitigation in IAMs**
Laurent DROUET (RFF-CMCC EIEE)

13.50-14.00 **Discussion**

Friday
4
Dec
14.15-15.00

PLENARY SESSION 3
Net-zero emission targets
Chair: Stephanie WALDHOFF (JCGRI/PNNL)

This year several countries, including the EU and China, announced net-zero emission targets for the middle of the century. Also Joe Biden mentioned in his climate plan the ambition to reduce the USA emission to net-zero in 2050. In this session, several speakers discuss the implications, feasibility and prospects of these targets.

14.15-14.25 **Net-zero emission target for the EU**
Tom VAN IERLAND (European Commission)

14.25-14.35 **Net-zero emission target for China**
Jiang KEJUN (ERI)

14.35-14.45 **Prospects of a Net-Zero Target for the United States**
Joseph E. ALDY (Harvard-Kennedy School)

14.45-15.00 **Discussion**

Friday
4
Dec
15.00-15.30

Reporting back of SWG
Chair: John WEYANT (Stanford University)

Scientific Working Group on Data Protocols and Management

Kate CALVIN (PNNL)

Scientific Working Group on Evaluation and Diagnostics

Mathijs HARMSSEN (PBL)

Scientific Working Group on Scenarios

Keywan RIAHI (IIASA)

Scientific Working Group on Scenarios for Climate-related Financial Analysis

Elmar KRIEGLER (PIK)

Friday

4

Dec

15.30-16.00

Announcement of awards and final words

Chair: Detlef VAN VUUREN (PBL, UU), John WEYANT (Stanford University)

The following IAMC Awards will be announced during this session: Lifetime Achievement Award, Award for Extraordinary Contributions to the Field of IAM, and Best Poster Award. Do not miss this opportunity to acknowledge and congratulate together excellence within our field.

Parallel Sessions Programme

Tuesday 1 Dec 14.15-16.00	PARALLEL SESSION DEEP 1 Chair: John WEYANT (Stanford University)
14.15-14.30	When the most valuable becomes the cheapest: Increasing electrification of global energy use on the road to climate neutral energy systems <u>Gunnar LUDERER</u> (PIK), Silvia Madeddu (PIK), Falko Ueckerdt (PIK), Robert Pietzcker (PIK), Antoine Levesque (PIK), Michaja Pehl (PIK), Marianna Rottoli (PIK), Alois Dirnaichner (PIK), Elmar Kriegler (PIK)
14.30-14.45	Moratoria on fossil fuels warrants climate policy success <u>Pietro ANDREONI</u> (RFF-CMCC EIEE and Politecnico di Milano), Massimo Tavoni (RFF-CMCC EIEE and Politecnico di Milano), Laurent Drouet (RFF-CMCC EIEE), Lara Aleluia Reis (RFF-CMCC EIEE)
14.45-15.00	Retrofitting coal-fired power plants with biomass co-firing and CCS for net zero carbon emission: A plant-by-plant assessment based on GIS-LCA framework <u>Rui WANG</u> (Ministry of Education Key Laboratory for Earth System Modeling and Tsinghua University), Wenjia Cai (Ministry of Education Key Laboratory for Earth System Modeling and Tsinghua University)
15.00-15.15	The role of Carbon Capture and Storage (CCS) in power generation and industrial applications in deep mitigation scenarios <u>Sergey PALTSEV</u> (MIT), Jennifer Morris (MIT), Erin Smith (MIT), Haroon Kheshgi (ExxonMobil Research and Engineering), Howard Herzog (MIT)
15.15-15.30	Evaluating NETs in deep decarbonization pathways: focusing on the mutual dependence of energy systems and NET <u>Raphael APEANING</u> (American University), David Morrow (American University)
15.30-15.45	Food energy water implications of negative emissions technologies in a +1.5°C future <u>Jay FUHRMAN</u> (University of Virginia), Haewon McJeon (University of Maryland), Pralit Patel (IGCRI), Scott Doney (University of Virginia), William Shobe (University of Virginia), Andres Clarens (University of Virginia)
15.45-16.00	DISCUSSION

Tuesday
1
Dec
14.15-15.45

**PARALLEL SESSION
ELECTRICITY**
Chair: Gokul IYER (JGCRI/PNNL)

- 14.15-14.30 **Challenges for modeling high-penetration renewable energy and energy efficiency technologies in Integrated Assessment Models**
Kelly EUREK (National Renewable Energy Laboratory - NREL), Laura Vimmerstedt (NREL), Patrick Lamers (NREL), Stuart Cohen (NREL), Kara Podkaminer (United States Department of Energy Strategic Priorities and Impacts Analysis), Kara Podkaminer (U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy), Gokul Iyer (JGCRI/PNNL), Matthew Binsted (JGCRI/PNNL), Marshall Wise (JGCRI/PNNL), Neal Graham (JGCRI/PNNL)
- 14.30-14.45 **Impact of carbon dioxide removal technologies on deep decarbonization of the electric power sector**
John BISTLINE (EPRI), Geoffrey Blanford (EPRI)
- 14.45-15.00 **Insights from improved power sector modeling in GCAM-USA**
Gokul IYER (JGCRI/PNNL), Matthew Binsted (JGCRI/PNNL), Mohamad Hejazi (JGCRI/PNNL), Zarrar Khan (JGCRI/PNNL), Son Him (JGCRI/PNNL), Yang Ou (JGCRI/PNNL), Pralit Patel (JGCRI/PNNL), Marshall Wise (JGCRI/PNNL)
- 15.00-15.15 **Rapid cost decrease of renewables and storage accelerates the decarbonization of China's power system**
Gang HE (Stony Brook University), Jiang Lin (Lawrence Berkeley National Laboratory - LBNL), Froylan Sifuentes (Western Washington University), Xu Liu (LBNL), Nikit Abhyankar (LBNL), Amol Phadke (LBNL)
- 15.15-15.30 **Long-term energy planning towards 100% renewable electricity in Ireland with considerations in short term constraints**
Xiufeng YUE (University College Cork), James Glynn (University College Cork), Brian O'Gallachoir (University College Cork)
- 15.30-15.45 **DISCUSSION**

Tuesday
1
Dec
14.15-16.00

PARALLEL SESSION SUSTAINABLE 1

Chair: Detlef VAN VUUREN (PBL, UU)

- 14.15-14.30 **Agricultural impacts of sustainable water use in the United States**
Neal GRAHAM (JGCRI/PNNL), Gokul Iyer (JGCRI/PNNL), Mohamad Hejazi (JGCRI/PNNL) Son Kim (JGCRI/PNNL), Pralit Patel (JGCRI/PNNL), Matthew Binsted (JGCRI/PNNL)
- 14.30-14.45 **Combining climate action with the 2030 Agenda: A sustainable development pathway with REMIND-MAgPIE**
Bjoern SOERGEL (PIK), Elmar Kriegler (PIK), Alois Dirnaichner (PIK), Florian Humpenöder (PIK), Sebastian Rauner (PIK), Isabelle Weindl (PIK), Nico Bauer (PIK), Christoph Bertram (PIK), Matthias Hofmann (PIK), Marian Leimbach (PIK), Julia Leininger (German Development Institute), Hermann Lotze-Campen (PIK), Gunnar Luderer (PIK), Alexander Popp (PIK), Constantin Ruhe (Goethe-Universitaett), Christopher Wogens (German Development Institute)
- 14.45-15.00 **Water-energy-land-use nexus in a decarbonization scenario using the BLUES model**
Eveline VASQUEZ ARROYO (COPPE), Gerd Angelkorte (COPPE), Pedro R.R. Rochedo (COPPE), André Lucena (COPPE), Roberto Schaeffer (COPPE), Alexandre Szklo (COPPE)
- 15.00-15.15 **Does ignoring the social dimensions of climate change introduces a bias in models?**
Juanjo MEDIAVILLA (U Valladolid), Gonzalo Parrado-Hernando (University of Valladolid), André Cieplinsky (Università di Pisa), Robert Oakes (UNU), Amandine V. Pastor (Associação para a Investigação e Desenvolvimento de Ciências), Tiago C. Lourenço (Associação para a Investigação e Desenvolvimento de Ciências), Luis Javier Miguel González (U Valladolid), Lukas Egger (Austrian Energy Agency, AEA)
- 15.15-15.30 **Regional sustainable development implications of ambitious climate mitigation**
Jarmo KIKSTRA (IIASA), Volker Krey (IIASA), Keywan Riahi (IIASA), Shinichiro Fujimori (Kyoto University)
- 15.30-15.45 **Assumptions on employment factor approach in energy scenarios**
Aman MALIK (PIK), Christoph Bertram (PIK)
- 15.45-16.00 **DISCUSSION**

Wednesday
2
Dec
12.30-14.00

**PARALLEL SESSION
DEEP 2**
Chair: **Sergey PALTSEV (MIT)**

- 12.30-12.45 **A sensitivity analysis on energy technology costs**
Anastasis GIANNOUSAKIS (PIK), Jerome Hilaire (PIK), Gregory Nemet (University of Winsconsin), Gunnar Luderer (PIK), Robert Pietzcker (PIK), Renato Rodrigues (PIK), Lavinia Baumstark (PIK), Elmar Kriegler (PIK)
- 12.45-13.00 **Scenarios for limiting temperature change without overshoot and without net negative CO₂ emissions - the ENGAGE model intercomparison**
Keywan RIAHI (IIASA), Christoph Bertram (PIK), Oliver Fricko (IIASA)
- 13.00-13.15 **The role of biomaterials in a Brazilian integrated assessment model**
Camilla OLIVEIRA (COPPE), Gerd Angelkorte (COPPE), Pedro R. R. Rochedo (COPPE), Alexandre Szklo (COPPE)
- 13.15-13.30 **Role of hydrogen in China's deep cut of GHGs scenarios toward to Paris 1.5°C target: IPAC analysis**
Kejun JIANG (Energy Research Institute), Chenmin He (Peking University), Sha Chen (Beijing University of Technology), Pianpian Xiang (Beijing University of Technology), Weiyi Jiang (Yonsei University), Jia Liu (Renm Consulting Co.)
- 13.30-13.45 **The benefit of collaboration in the North-European electricity system transition: sectoral integration, role of biomass and negative emissions**
Mariliis LEHTVEER (Chalmers University of Technology)
- 13.45-14.00 **Hydrogen-based synthetic fuels: competitiveness in long-term EU decarbonization scenarios**
Felix SCHREYER (PIK), Gunnar Luderer (PIK), Falko Ueckerdt (PIK)

Wednesday
2
Dec
12.30-13.00

PARALLEL SESSION SUSTAINABLE 2

Chair: Detlef VAN VUUREN (PBL, UU)

- 12.30-12.45 **A global assessment of sustainable development under future socioeconomic scenarios**
Enayat A MOALLEMI (Deakin University), Lei Gao (Commonwealth Scientific and Industrial Research Organisation - CSIRO), Sibel Eker (International Institute for Applied Systems Analysis -IIASA), Brett A. Bryan (Deakin University)
- 12.45-13.00 **Trans-boundary cooperation key to sustainable development: the case of the Indus Basin dealing with water-energy-land nexus issues**
Simon PARKINSON (IIASA), Adriano Vinca (IIASA), Keywan Riahi (IIASA), Edward Byers (IIASA), Afreen Siddiqi (MIT), Abubakr Muhammad (Lahore University of Management Sciences), Ansir Ilyas (Lahore University of Management Sciences), Nithiyandam Yogeswaran (TERI School of Advanced Studies) Barbara Willaarts (IIASA), Piotr Magnuszewski (IIASA), Muhammad Awais (IIASA), Andrew Rowe (University of Victoria), Ned Djilali (University of Victoria)

Wednesday
2
Dec
13.00-14.00

PARALLEL SESSION DEMAND 1

Chair: Oreane EDELENBOSCH (PBL)

- 13.00-13.15 **Can we use online social media data for modelling lifestyle change?**
Sibel EKER (IIASA), David Garcia (Complexity Science Hub)
- 13.15-13.30 **The impacts of demographic transitions on consumption pattern, energy consumption and carbon emissions in China towards 2050**
Xiaorui LIU (Peking University), Hancheng Dai (Peking University), Chaoyi Guo (Peking University)
- 13.30-13.45 **The inter-group heterogeneity of energy consumption patterns and energy technology preferences of Chinese residents**
Mingyu LEI (Ministry of Education Key Laboratory for Earth System Modeling, Tsinghua University), Wenjia Cai (Ministry of Education Key Laboratory for Earth System Modeling, Tsinghua University)
- 13.45-14.00 **End-use energy projections and status of energy poverty in states of India**
Satish Kumar YAWALE (NIES), Tatsuya Hanaoka (NIES), Manmohan Kapshe (Maulana Azad National Institute of Technology)

Wednesday
2
Dec
12.30-14.00

**PARALLEL SESSION
IMPACTS & CLIMATE 1**
Chair Steve ROSE (EPRI)

- 12.30-12.45 **Food security responses to food self-sufficiency in a changing climate**
Ying ZHANG (JGCRI/PNNL), Stephanie Waldhoff (JGCRI/PNNL), Marshall Wise (JGCRI/PNNL),
Jae Edmonds (JGCRI/PNNL)
- 12.45-13.00 **Marginal damage of methane emissions: ozone impacts on agriculture**
Stephanie WALDHOFF (PNNL), Jon Sampedro (PNNL), Marcus Sarofim (US EPA)
- 13.00-13.15 **A phase space approach to understanding water quality resilience to agricultural nutrient management interventions under future climate scenarios**
Elizabeth DORAN (University of Vermont), Asim Zia (University of Vermont), Donna Rizzo (University of Vermont), Chris Koliba (University of Vermont), Jonathan Winter (Dartmouth College), Andrew Schroth (University of Vermont), Clelia Marti (University of Vermont), Patrick Clemins (University of Vermont), Scott Turnbull (University of Vermont)
- 13.15-13.30 **Climate change contributes to immobility: when migration cannot be used as an adaptation solution**
Hélène BENVENISTE (Princeton University), Michael Oppenheimer (Princeton University),
Marc Fleurbaey (Paris School of Economics/CNRS)
- 13.30-13.45 **Endogenizing the Costs of climate-induced violence in the optimal management of the climate: A MERGE modeling approach**
S. Victoria SHEN (Stanford University, University of Virginia)
- 13.45-14.00 **Discussion**

Wednesday
2
Dec
14.15-16.00

PARALLEL SESSION NATIONAL 1

Chair: Jae EDMONDS (JGCRI/PNNL)

- 14.15-14.30 **EMF 35 JMIP study for Japan's long-term climate and energy policy: scenario designs and overview**
Masahiro SUGIYAMA (University of Tokyo), Shinichiro Fujimori (Kyoto University), Kenichi Wada (RITE), Ken Oshiro (Kyoto University), Etsushi Kato (Institute of Applied Energy), Ryoichi Komiyama (University of Tokyo), Diego Silva Herran (NIES), Yuhji Matsuo (Institute of Energy Economics) Hiroto Shiraki (University of Shiga Prefecture), Yiyi Ju (University of Tokyo), Shogo Sakamoto (Central Research Institute of Electric Power Industry)
- 14.30-14.45 **Insights and challenges for Japan's 2040 emission target considering multiple ambition levels**
Diego Silva HERRAN (NIES, IGES), Shinichiro Fujimori (Kyoto University, NIES, IIASA)
- 14.45-15.00 **Electrification of the transport system: electric vehicle penetration and supply chain impacts. A case study for Pakistan**
Molly CHARLES (PNNL), Travis Douville (PNNL), Zarrar Khan (PNNL), Juliet Homer (PNNL), Trevor Hardy (PNNL), Steven J. Smith (PNNL), Sha Yu (PNNL), Jamil Masud (Sustainable Energy for Pakistan Project), Akbar Yusuf (Sustainable Energy for Pakistan Project), Salis Usman (National Transmission and Despatch Company), Naveed Arshad (Lahore Institute of Management Sciences)
- 15.00-15.15 **The role of climate finance flows in national mitigation strategies: allocation effects on recipient economies**
Rafael GARAFFA (COPPE), Andre Lucena (COPPE), Alexandre Szklo (COPPE), Angelo Gurgel (Getúlio Vargas Foundation), Bruno Cunha (COPPE), Roberto Schaeffer (COPPE)
- 15.15-15.30 **Bioenergy and carbon capture and storage spatially explicit modelling in Brazil**
Isabela SCHMIDT TAGOMORI (COPPE), Vassilis Daioglou (UU/PBL), Pedro Rochedo (COPPE), Alexandre Szklo (COPPE), Detlef van Vuuren (UU/PBL), Roberto Schaeffer (COPPE)
- 15.30-15.45 **Tightening the EU 2030 targets: Impacts of different splits to ETS and non-ETS sectors**
Robert PIETZCKER (PIK), Renato, Rodrigues (PIK), Gunnar Luderer (PIK)
- 15.45-16.00 **DISCUSSION**

Wednesday
2
Dec
14.15-16.00

**PARALLEL SESSION
DEMAND 2**
Chair: Bas VAN RUIJVEN (IIASA)

- 14.15-14.30 **Drivers of air conditioning in emerging economies and implications for climate risk**
Enrica DE CIAN (Ca' Foscari University of Venice, CMCC and EIEE), Filippo Pavanello (Bologna University and CMCC), Marinella Davide (Harvard University, Ca' Foscari University of Venice, CMCC, EIEE), Malcolm Mistry (Ca' Foscari University of Venice), Talita Borges Cruz (COPPE), Paula Borges (COPPE), Sebastian Renner (Mercator Research Institute on Global Commons and Climate Change), Jagu Dattakiran (COPPE), Roberto Schaffer (COPPE), André Lucena (COPPE)
- 14.30-14.45 **Global scenarios of household appliance ownership and energy demand**
Miguel POBLETE-CAZENAVE (IIASA), Edward Byers (IIASA), Alessio Mastrucci (IIASA), Shonali Pachauri (IIASA), Bas van Ruijven (IIASA)
- 14.45-15.00 **The demand hiding in the shadow: impacts on modelling passenger activity**
Camila CALLEGARI (COPPE), Roberto Schaeffer (COPPE), Alexandre Szklo (COPPE)
- 15.00-15.15 **Energy and emissions impacts of disruptive mobility changes and advanced transportation technologies**
Paige JADUN (National Renewable Energy Laboratory), Matteo Muratori (National Renewable Energy Laboratory), Brian Bush (National Renewable Energy Laboratory), Chris Hoehne (National Renewable Energy Laboratory)
- 15.15-15.30 **What does the 1.5 degree target mean at the household level? A new tool for downscaling IAM results**
Clare HANMER (University of East Anglia), Charlie Wilson (University of East Anglia), Oreane Edelenbosch (PBL), Vassilis Daioglou (Utrecht University), Detlef van Vuuren (Utrecht University)
- 15.30-15.45 **Decomposition tool for assessing effects of consumption changes and technology changes on emission for different scenarios**
Nicole VAN DEN BERG (Utrecht University - UU), Andries Hof (UU, PBL), Kaj-Ivar van der Wijst (PBL), Lewis Akenji (University of Helsinki), Vassilis Daioglou (UU), Oreane Edelenbosch (PBL), Mariësse van Sluisveld (Lund University), Vanessa Timmer (One Earth), Detlef van Vuuren (UU, PBL)
- 15.45-16.00 **DISCUSSION**

Wednesday
2
Dec
14.15-16.00

**PARALLEL SESSION
IMPACTS & CLIMATE 2**
Chair: **Stephanie WALDHOFF (JCGRI/PNNL)**

- 14.15-14.30 **The social costs of carbon caused by tropical cyclones**
Franziska PIONTEK (PIK), Hazem Krichene (PIK), Christian Otto (PIK)
- 14.30-14.45 **A multi-hazard object based risk analysis of transport infrastructures in Europe**
Eamonn MULHOLLAND (European Commission, Joint Research Centre - JRC), Francesco Dottori (JRC), Lorenzo Alfieri (CIMA Research Foundation), Lorenzo Mentaschi (JRC), Juan-Carlos Ciscar (JRC), Luc Feyen (JRC)
- 14.45-15.00 **Climate impacts and adaptation in Europe (JRC PESETA IV project)**
Juan-Carlos CISCAR (European Commission, Joint Research Centre - JRC), Luc Feyen (JRC), Simon Gosling (University of Nottingham), Dolores Ibarreta (JRC), Antonio Soria (JRC)
- 15.00-15.15 **The economic incidence and interactions of climate change impacts in the United States across regions, sectors, and households**
James MCFARLAND (US EPA), James McFarland (US EPA), Allen Fawcett (US EPA), Jameel Alsalam (US EPA), Mei Yuan (MIT), Elodie Blanc (MIT), John Reilly (MIT), Jeremy Martinich (US EPA), Marcus Sarofim (US EPA)
- 15.15-15.30 **FaIR v2.0: a calibrated simple climate model**
Chris SMITH (University of Leeds and IIASA), Nicholas Leach (University of Oxford), John Broadbent (University of Oxford), Stuart Jenkins (University of Oxford), Tristram Walsh (University of Oxford), Myles Allen (University of Oxford)
- 15.30-15.45 **Permafrost in a simple carbon-climate model**
Dawn WOODARD (JCGRI/PNNL), Alexey Shiklomanov (Goddard Space Flight Center), Ben Kravitz (JCGRI/PNNL), Corinne Hartin (JCGRI/PNNL), Ben Bond-Lamberty (JCGRI/PNNL)
- 15.45-16.00 **DISCUSSION**

Thursday
3
Dec
12.30-13.15

PARALLEL SESSION NATIONAL 2

Chair: Jae EDMONDS (JGCRI/PNNL)

12.30-12.45 **Implications of changing global natural gas dynamics on India's ambition of being a gas-based economy**

Ankur MALYAN (Council on Energy, Environment and Water), Poonam Nagar Koti (Council on Energy, Environment and Water), Nitin Maurya (Council on Energy, Environment and Water), Diptiranjana Mahapatra (Indian Institute of Management-Sambalpur), Vaibhav Chaturvedi (Council on Energy, Environment and Water)

12.45-13.00 **Low carbon transition pathway of China under 1.5-degree climate target**

Mingjian YIN (Tsinghua-Berkeley Shenzhen Institute - TBSI), Junling LIU (Harbin Institute of Technology), Ke Wang (Renmin University of China - RUC)

13.00-13.15 **DISCUSSION**

Thursday
3
Dec
13.15-14.00

PARALLEL SESSION SECTORAL 1

Chair: Detlef VAN VUUREN (PBL, UU)

13.15-13.30 **A race to the bottom - assessing net-zero emissions pathways for heavy industry**

Mariësse van SLUISVELD (Lund University, Utrecht University), Harmen Sytze de Boer (PBL), Vassilis Diaoglou (PBL, UU), Andries Hof (PBL, UU), Detlef van Vuuren (PBL, UU)

13.30-13.45 **Technology pathways for iron and steel industry in China under 2°C target**

Ming REN (Peking University), PanTao Lu (Peking University), Hancheng Dai (Peking University)

13.45-14.00 **Pathways to decarbonize aviation and maritime bunkers: an energy model assessment**

Kimon KERAMIDAS (Joint Research Centre of the European Commission), Burkhard Schade (JRC), Stéphane Tchong-Ming (JRC)

Thursday
3
Dec
12.30-14.00

**PARALLEL SESSION
COVID 1**
Chair: Peter RUSS (JRC)

- 12.30-12.45 **Faster or slower decarbonization: the impact of the COVID-19 crisis on climate policy**
Silvia PIANITA (Bocconi University and RFF-CMCC EIEE), Elina Brutschin (IIASA), Bas van Ruijven (IIASA), Valentina Bosetti (Bocconi University and RFF-CMCC EIEE)
- 12.45-13.00 **Exploring the impact of the COVID-19 pandemic on global emission projections**
Ioannis DAFNOMILIS (PBL), Michel den Elzen (PBL), Heleen van Soest (PBL), Frederic Hans (NewClimate Institute), Takeshi Kuramochi (NewClimate Institute), Niklas Höhne (NewClimate Institute)
- 13.00-13.15 **A green energy recovery after COVID-19 pandemic can reduce costs of climate change mitigation**
Adriano VINCA (IIASA), Jarmo Kikstra (IIASA), Francesco Lovat (IIASA), Benigna Boza-Kiss (IIASA), Bas Van Ruijven (IIASA), Joeri Rogelj (IIASA), Charlie Wilson (IIASA), Behnam Zakeri (IIASA), Keywan Riahi (IIASA)
- 13.15-13.30 **Long-term climate scenarios from the COVID-19 pandemic global economic response**
Lilia CAIADO COUTO (UCL), Bruno S. L. Cunha (COPPE), Rafael Garaffa (COPPE), Angelo C. Gurgel (Sao Paulo School of Economics and Fundação Getulio Vargas), Eveline Vasquez (COPPE), Fabio Diuana (COPPE), Gerd Angelkorte (COPPE), Luiz Bernardo Baptista (COPPE), Joana Portugal-Pereira (COPPE), Pedro R. R. Rochedo (COPPE), André F. P. Lucena (COPPE), Alexandre Szklo (COPPE), Roberto Schaeffer (COPPE)
- 13.30-13.45 **Assessment of impacts of COVID-19 and crisis recovery packages**
Bence Kiss-DOBRONYI (Cambridge Econometrics), Hector Pollitt (Cambridge Econometrics), Richard Lewney (Cambridge Econometrics), Bert Kramer (Ortec Finance) Edwin Massie (Ortec Finance), Patrick TUIJP (Ortec Finance)
- 13.45-14.00 **Evaluating economic recovery investments in electricity to create jobs and low-carbon electricity**
Daniel GINGERICH (The Ohio State University), Yue Qin (The Ohio State University), Jeffrey Bielicki (The Ohio State University)

Thursday
3
Dec
12.30-14.00

PARALLEL SESSION ECONOMICS 1

Chair: Massimo TAVONI (RFF-CMCC EIEE and Politecnico di Milano)

- 12.30-12.45 **Within-country inequality and climate change - A model for IAMs with an application to Brazil and France**
Johannes EMMERLING (RFF-CMCC European Institute on Economics and the Environment - EIEE), Yu Zheng (EIEE), Carolin Grottera (UFRJ), Giacomo Marangoni (Politecnico di Milano), Federico Crippa (University of Pisa), Massimo Tavoni (EIEE)
- 12.45-13.00 **Persistent inequality in economically optimal climate policy paths**
Paolo GAZZOTTI (Politecnico di Milano - POLIMI), Johannes Emmerling (RFF-CMCC European Institute on Economics and the Environment - EIEE), Giacomo Marangoni (POLIMI and EIEE), Massimo Tavoni (POLIMI and EIEE)
- 13.00-13.15 **Studying environmental justice impacts of climate change policy using mixed methods**
Jia LI (U.S. Environmental Protection Agency – EPA), Jefferson Cole (EPA), James McFarland (EPA), Jared Creason (EPA), John O’Neill (UMD)
- 13.15-13.30 **An assessment of the potential of using carbon tax revenue to tackle poverty**
Shinichiro FUJIMORI (Kyoto University), Tomoko Hasegawa (Ritsumeikan University), Ken Oshiro (Kyoto University)
- 13.30-13.45 **Revisiting the international, inter-temporal, and inter-sectoral knowledge spillovers of low-carbon technologies**
Yeong Jae KIM (RFF-CMCC European Institute on Economics and the Environment - EIEE), Elena Verdolini (EIEE and University of Brescia)
- 13.45-14.00 **Estimating financial risks from the energy transition: potential impacts from decarbonisation in the European power sector**
Alexandre KOBERLE (Imperial College London), Chris Cormack (Quant Foundry and Imperial College London), Anastasiya Ostrovskaya (Imperial College London), Charles Donovan (Imperial College London)

Thursday
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Dec
14.15-16.00

PARALLEL SESSION SECTORAL 2

Chair: Detlef VAN VUUREN (PBL, UU)

- 14.15-14.30 **Better representing international shipping in the IMAGE model**
Eduardo MÜLLER-CASSERES (COPPE, PBL), Oreane Edelenbosch (PBL), Alexandre Szklo (UFRJ), Roberto Schaeffer (COPPE), Detlef van Vuuren (PBL)
- 14.30-14.45 **Electric vehicle penetration in China: Implications for energy consumption and emissions in transport sector up to 2050**
Runsen ZHANG (Hiroshima University), Tatsuya, Hanaoka (NIES)
- 14.45-15.00 **The footprint of the future European LDV fleet: a comparison of transport electrification pathways**
Alois DIRNAICHNER (PIK), Marianna Rottoli (PIK), Robert Pietzcker (PIK), Romain Sacchi (PSI), Christian Bauer (PSI), Chris, Mutel (PSI), Gunnar Luderer (PIK)
- 15.00-15.15 **Alternative roads to achieve mid-century CO₂ net-neutrality in Europe**
Renato RODRIGUES (PIK), Robert Pietzcker (PIK), Gunnar Luderer (PIK), Panagiotis Fragkos (National Technical University of Athens), James Price (UCL)
- 15.15-15.30 **Carbon neutrality in global residential space heating**
Alessio MASTRUCCI (IIASA), Bas van Ruijven (IIASA), Miguel Poblete-Cazenave (IIASA), Edward Byers (IIASA), Shonali Pachauri (IIASA)
- 15.30-15.45 **Comparative assessment of hydrogen and electrification for decarbonising heating**
Pooya HOSEINPOORI (Imperial College London), Richard Hanna (Imperial College London), Christos Markides (Imperial College London), Jeremy Wood (Imperial College London), Nilay Shah (Imperial College London)
- 15.45-16.00 **DISCUSSION**

Thursday
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Dec
14.15-15.00

**PARALLEL SESSION
COVID 2**
Chair: Elmar KRIEGLER (PIK)

- 14.15-14.30 **Green recovery after COVID-19: new challenges for a just transition**
Yaxin ZHANG (Tsinghua University), Xinzhu Zheng (China University of Petroleum), Can Wang (Tsinghua University), Huilin Luo (Tsinghua University)
- 14.30-14.45 **Impacts of COVID-19 crisis traditional recovery packages on China's economy and energy consumption -- based on input-output analysis**
Yuning ZHANG (Renmin University of China), Ke Wang (Renmin University of China)
- 14.45-15.00 **DISCUSSION**

Thursday
3
Dec
15.00-16.00

**PARALLEL SESSION
METHODS 1**
Chair: John WEYANT (Stanford University)

- 15.00-15.15 **Adding macro-economic detail to IAMs: development of an energy-system emulator**
Johannes KOCH (PIK)
- 15.15-15.30 **En-ROADS: a global energy and climate simulator to support strategic thinking and public outreach**
John STERMAN (MIT), Florian Kapmeier (Reutlingen University), Lori Siegel (Climate Interactive), Sibel Eker (Climate Interactive), Tom Fiddaman (Ventana Systems), Jack Homer (Homer Consulting), Juliette Rooney-Varga (University of Massachusetts), Andrew Jones (Climate Interactive)
- 15.30-15.45 **Reproducible development of IAM variants: the example of MESSAGEix-Transport**
Paul KISHIMOTO (IIASA), Francesco Lovat (IIASA), Bas van Ruijven (IIASA), Keywan Riahi (IIASA), Volker Krey (IIASA)
- 15.45-16.00 **DISCUSSION**

Thursday
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Dec
14.15-16.00

PARALLEL SESSION ECONOMICS 2

Chair: **Stephanie WALDHOFF** (IGCRI/PNNL)

- 14.15-14.30 **Economic structural change in global greenhouse gas emissions scenarios**
Julien LEFÈVRE (CIRED), Thomas Le Gallic (CIRED), Panagiotis Fragkos (E3Modelling), Jean-François Mercure (University of Exeter), Yeliz Simsek (University of Exeter)
- 14.30-14.45 **A new energy geography**
Jean-Francois MERCURE (University of Exeter), Pablo Salas (UCAM), Pim Vercoulen (Cambridge Econometrics), Hector Pollitt (Cambridge Econometrics), Aileen Lam (University of Macau), Phil B. Holden (Open University - OU), Negar Vakilifard (OU), Gregor Semieniuk (University of Massachusetts), Neil R. Edwards (OU), Unnada Chewpreecha (Cambridge Econometrics), Jorge E. Vinuales (UCAM)
- 14.45-15.00 **Costs of avoiding net negative emissions under a carbon budget**
Kaj-Ivar VAN DER WIJST (PBL), Andries Hof (PBL) Detlef van Vuuren (PBL)
- 15.00-15.15 **Energy system developments and investments in decisive decade for Paris Agreement targets**
Christoph BERTRAM (PIK) Research Gunnar Luderer (PIK), Keywan Riahi (IIASA)
- 15.15-15.30 **The ambition club: could Article 6 compacts incentivize enhanced Paris ambition?**
James EDMONDS (PNNL and University of Maryland), Sha Yu (PNNL and University of Maryland), Ryna Cui (University of Maryland), Dirk Forrester (International Emissions Trading Association), Stefano De Clara (International Emissions Trading Association), Leon Clarke (PNNL and University of Maryland)
- 15.30-15.45 **Measuring potential enhanced ambition using the Paris Agreement's Article 6: a model intercomparison exercise**
Sha YU (PNNL), Jae Edmonds (PNNL), Dirk Forrester (International Emissions Trading Association - IETA), Stefano De Clara (IETA), Ryna Cui (U Maryland), Leon E. Clarke (PNNL, University of Maryland)
- 15.45-16.00 **Assessment of the economic and environmental potential of Paris Agreement Article 6**
Gamze ÜNLÜ (IIASA)

Friday
4
Dec
12.30-13.15

PARALLEL SESSION FEASIBILITY

Chair: Keywan RIAHI (IIASA)

- 12.30-12.45 **Societal transformations in models for energy and climate policy: the ambitious next step**
Evelina TRUTNEVYTE (University of Geneva - UNIGE), Leon F. Hirt (UNIGE), Nico Bauer (PIK), Aleh Cherp (CEU and Lund University), Adam Hawkes (Imperial College London), Oreane Y. Edelenbosch (CMCC and Politecnico di Milano), Simona Pedde (Wageningen University), Detlef P. van Vuuren (PBL and Utrecht University)
- 12.45-13.00 **Inertia in energy transitions: soft-linking an optimisation integrated assessment model to a simulation power sector diffusion model**
Adrian ODENWELLER (University of Hamburg)
- 13.00-13.15 **Evaluating the feasibility and desirability of 1.5 degree scenarios**
Elina BRUTSCHIN (International Institute of Applied System Analysis – IIASA), Silvia Pianta (Bocconi University, RFF-CMCC European Institute on Economics and the Environment - EIEE), Massimo Tavoni (POLIMI & EIEE), Valentina Bosetti (Bocconi University), Keywan Riahi (IIASA), Giacomo Marangoni (POLIMI), Bas van Ruijven (IIASA)

Friday
4
Dec
13.15-14.00

PARALLEL SESSION SSP

Chair: Detlef VAN VUUREN (PBL, UU)

- 13.15-13.30 **Structural change scenarios within the SSP framework**
Marian LEIMBACH (PIK), Marcos Marcolino (PIK)
- 13.30-13.45 **A research framework for phosphorus demand projections in China using Shared Socioeconomic Pathways**
Jing-Yu LIU (Shanghai Jiaotong University)
- 13.45-14.00 **Scenarios for the U.S. Great Lakes Region using SSPs, spatially explicit data, and iterative participatory processes**
Jeffrey BIELICKI (Ohio State University), Elena Irwin (Ohio State University), Bhavik Bakshi (Ohio State University), Yongyang Cai (Ohio State University), Mary Doidge (McGill University), Douglas Jackson-Smith (Ohio State University), Jay Martin (Ohio State University), Alan Randall (Ohio State University), Ian Sheldon (Ohio State University), Robyn Wilson (Ohio State University)

Friday
4
Dec
12.30-14.00

**PARALLEL SESSION
METHODS 2**
Chair: Gokul IYER (JGCRI/PNNL)

- 12.30-12.45 **Reviewing principles of integrated assessment for environment & sustainable development. An opportunity for joint work by IAMC and TIAS**
Jan BAKKES (The Integrated Assessment Society)
- 12.45-13.00 **Introducing TIMES-GEO - A global IAM with hourly time resolution and high spatial resolution; exploring climate extreme impacts in pathways to a zero carbon power system**
James GLYNN (MaREI-UCC), Maurizio Gargiulo (e4sma), Siddharth Joshi (MaREI-UCC), Xiufeng Yue (MaREI-UCC), Brian Gallachair (MaREI-UCC)
- 13.00-13.15 **Modeling the health implications and economic costs of the double burden of malnutrition in IAM**
Wenchao WU (NIES), Tomoko Hasegawa (Ritsumeikan University), Shinichiro Fujimori (Kyoto University), Kiyoshi Takahashi (NIES), Junya Takakura (NIES)
- 13.15-13.30 **Multi-objective assessment of solar radiation management scenarios with well below 2C temperatures**
Giacomo MARANGONI (Politecnico di Milano and RFF-CMCC EIEE), Michele Mauri (POLIMI), Vivek Srikrishnan (Penn State University), Klaus Keller (Penn State University), Massimo Tavoni (POLIMI and EIEE)
- 13.30-13.45 **A consistent framework for probabilistic uncertainty quantification in coupled human-earth system models**
Jennifer MORRIS (MIT), Andrei Sokolov (MIT), John Reilly (MIT), Sergey Paltsev (MIT)
- 13.45-14.00 **Sources of uncertainty in long-term global scenarios of solar photovoltaic technology**
Marc JAXA-ROZEN (University of Geneva - UNIGE), Evelina Trutnevyte (UNIGE)

Friday
4
Dec
12.30-13.30

PARALLEL SESSION LAND

Chair: Shinichiro FUJIMORI (Kyoto University)

- 12.30-12.45 **Rosetta stone method translates land-use mitigation pathways to estimates compatible with countries' GHG inventories**
Giacomo GRASSI (Joint Research Centre, European Commission), Alexander Popp (PIK), Joeri Rogelj (Imperial College London and IIASA), Elke Stehfest (PBL), Detlef van Vuuren (PBL and UU), Alessandro Cescatti (JRC), Jo House (University of Bristol), Gert-Jan Nabuurs (Wageningen University), Simone Rossi (JRC), Romain Alkama (JRC), Raul Abad Viñas (JRC), Katherine Calvin (PNNL), Guido Ceccherini (JRC), Sandro Federici (Institute for Global Environmental Strategies), Shinichiro Fujimori (IIASA, Kyoto University and NIES), Mykola Gusti (IIASA and Lviv Polytechnic National University), Tomoko Hasegawa (Ritsumeikan University), Petr Havlik (IIASA), Florian Humpenöder (PIK), Anu Korosuo (JRC)
- 12.45-13.00 **Bioenergy-related co-emissions in climate change mitigation scenarios with sectorally fragmented policies**
Leon MERFORT (PIK), Nico Bauer (PIK), Florian Humpenöder (PIK), David Klein (PIK), Alexander Popp (PIK), Gunnar Luderer (PIK), Elmar Kriegler (PIK)
- 13.00-13.15 **Implementation of integrated cropland-livestock-forestry systems in a national IAM**
Gerd ANGELKORTE (COPPE), Pedro Rochedo (COPPE), Roberto Schaeffer (COPPE), Alexandre Szklo (COPPE), Taisa Morais (COPPE)
- 13.15-13.30 **DISCUSSION**

Poster sessions Programme

Tuesday

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Dec

16.00-17.00

POSTER SESSION 1

COVID

N. 1 Assessing short-term and long-term economic and environmental effects of the COVID-19 crisis in France

Meriem HAMDI-CHERIF (OFCE Sciences Po), Paul Malliet (OFCE Sciences Po), Frederic Reynas (OFCE Sciences Po, NEO Netherlands Economic Observatory, TNO Netherlands Organization for Applied Scientific Research), Gissela Landa (OFCE Sciences Po), Aurélien Saussay (OFCE Sciences Po, LSE)

Deep

N. 2 The dark side of the hydrogen production

Luiz Bernardo BAPTISTA (COPPE), Clarissa Bergman (COPPE), Eveline Vasquez-Arroyo (COPPE), Pedro R. R. Rochedo (COPPE)

National

N. 3 The role of integrated assessment models in decarbonisation strategies: The case of Ecuador

Daniel VILLAMAR (EPN), Rafael Soria (EPN) Pedro Rochedo (COPPE), Alexandre Szklo (COPPE), Mariana Imperio (COPPE), Pablo Carvajal (IRENA), Roberto Schaeffer (COPPE)

Sustainable

N. 4 Comparing environmental and energy policy options in India: Sectoral impacts and interactions

Brinda YARLAGADDA (JGCRI/PNNL), Steven J. Smith (JGCRI/PNNL), Bryan K. Mignone (ExxonMobil Research and Engineering Company), Dharik Mallapragada (MIT Energy Initiative), Cynthia A. Randles (ExxonMobil Research and Engineering Company), Jon Sampedro (JGCRI/PNNL)

Economics

N. 5 Is it possible to reach the Brazilian NDC target and mitigate inequality through carbon pricing schemes?

Paula BEZERRA (COPPE), Rafael Garaffa (COPPE), Bruno S. L. Cunha (COPPE), Talita Cruz (COPPE), André F. P. Lucena (COPPE), Angelo C. Gurgel (Escola de Economia de Sao Paulo - EESP - Fundação Getulio Vargas – FGV)

Feasibility

N. 6 The impact of oil quality in the distribution of unburnable resources through the lens of COFFEE model

Rebecca DRAEGER (COPPE) Alexandre Szklo (COPPE), Pedro R. R. Rochedo (COPPE)

Demand

N. 7 Income Inequality & the US Energy System

Siwa MSANGI (JGCRI/PNNL), Jon Sampedro (JGCRI/PNNL), Gokul Iyer (JGCRI/PNNL), Jae Edmonds (JGCRI/PNNL), Mohamad Hejazi (JGCRI/PNNL), Stephanie Waldhoff (JGCRI/PNNL)

Electricity**N. 8 Modelling hydropower cost overruns in GCAM-Canada**

Evan ARBUCKLE (University of Alberta), Matthew Binsted (JGCRI/PNNL), Evan Davies (University of Alberta), Diego Vanucci Chiappori (University of Alberta), Maria Candelaria Bergero (JGCRI/PNNL), Muhammad-Shahid Siddiqui (Environment and Climate Change Canada), Nick Macaluso (Environment and Climate Change Canada)

Sectoral**N. 9 Near term to net zero: An alternative approach to setting carbon prices for domestic policy**

Haewon MCJEON (JGCRI/PNNL), Noah Kaufman (Columbia University), Alexander Barron (Smith College), Wojciech Krawczyk (University of Maryland), Peter Marsters (Columbia University)

Land**N. 10 Implications of land-based climate change mitigation for agricultural intensification**

Ronald SANDS (USDA Economic Research Service)

Impacts**N. 11 Global market and economic welfare implications of changes in agricultural yields due to climate change**

Katherine CALVIN (JGCRI/ PNNL), Bryan Mignone (ExxonMobil Research and Engineering), Haroon Kheshgi (ExxonMobil Research and Engineering), Abigail Snyder (JGCRI/ PNNL), Pralit Patel (JGCRI/ PNNL), Marshall Wise (JGCRI/ PNNL), Leon Clarke (UMD), Jae Edmonds (JGCRI/ PNNL)

Climate**N. 13 Beyond decarbonization: modeling the deep mitigation of all greenhouse gases towards a 1.5°C future**

Yang OU (JGCRI/PNNL), Christopher Roney (JGCRI/PNNL), Jameel Alsalam (U.S. Environmental Protection Agency), Jared Creason (U.S. Environmental Protection Agency), Allen A. Fawcett (U.S. Environmental Protection Agency), Kanishka Narayan (JGCRI/PNNL), Patrick O'Rourke (JGCRI/PNNL), Shaun Ragnauth (U.S. Environmental Protection Agency), Steven J. Smith (JGCRI/PNNL), Haewon McJeon (JGCRI/PNNL)

Wednesday

2
Dec

11.30-12.30

POSTER SESSION 2

COVID

N. 14 Potential economic and environmental impact of COVID-19 in Indonesia

Marissa MALAHAYATI (NIES), Toshihiko Masui (NIES), Lukytawati Anggraeni (Institut Pertanian Bogor IPB University)

Deep

N. 15 Exploring the energy system transition and macroeconomic impacts of achieving Thailand's 2-degree target

Salony RAJBHANDARI (Sirindhorn International Institute of Technology, Thammasat University), Bundit Limmeechokchai (Sirindhorn International Institute of Technology, Thammasat University), Toshihiko Masui (NIES)

Deep

N. 56 Winners and losers from regional CO2 storage constraints in long-term decarbonisation scenarios

Neil GRANT (Imperial College London), Ajay Gambhir (Imperial College London), Chris Greig (Princeton University), Alexandre Koberle (Grantham Institute, Imperial College London)

National

N. 16 Food, Agriculture, Biodiversity, Land use and Energy (FABLE): pathways for sustainable food and land use systems in India

Chandan KUMAR JHA (IIMA), Vartika Singh (IIMA, Humboldt-Universitaet zu Berlin), Miodrag Stevanoviaet (PIK), Jan Philipp Dietrich (PIK), Satyam Saxena (IIMA), Aline Mosnier (UN Sustainable Development Solutions Network), Isabelle Weindl (PIK), Benjamin Leon Bodirsky (PIK), Alexander Popp (PIK), Ranjan Kumar Ghosh (IIMA), Hermann Lotze-Campen (PIK, Humboldt-Universitaet zu Berlin), Guido Schmidt-Traub, (UN Sustainable Development Solutions Network)

Sustainable

N. 17 Sustainable development goals of Nepal: economic, energy and emission perspective

Bijay B. PRADHAN (Sirindhorn International Institute of Technology, Thammasat University), Ram M. Shrestha (Asian Institute of Technology), Bundit Limmeechokchai (Sirindhorn International Institute of Technology, Thammasat University)

Economics

N. 18 China's carbon neutral strategies under the enhanced warming-limit pledges

Hongbo DUAN (University of Chinese Academy of Sciences), Jiali Zheng (University of Chinese Academy of Sciences, Xi'an Jiaotong University), Sheng Zhou (Tsinghua University), Shouyang Wang (University of Chinese Academy of Sciences), Kejun Jiang (Energy Research Institute), Ji Gao (Environmental Defense Fund), Shuo Gao (Environmental Defense Fund)

Economics

N. 19 Modelling interaction effects of power sectors policies

Yeliz SIMSEK (University of Exeter), Pim Vercoulin (University of Exeter), Jean Francois Mercure (University of Exeter)

Demand

- N. 20 The impact of COVID-19 pandemic on electricity consumption in the greater Tokyo area**
Yuki HIRUTA (NIES), Lu Gao (NIES), Shuichi Ashina (NIES)

Demand

- N. 21 Assessment of the solar rooftop potential by open data**
Vladimir POTASHNIKOV (RANEPA)

Electricity

- N. 22 A smart energy interconnected ecosystem for a sustainable carbon neutral city**
Chunyan DAI (Chongqing Technology and Business University), Ying Yang (Chongqing Technology and Business University), Jijiang He (Tsinghua University), Zhongqing Yang (Aalto University) Rui Jing Key (Chinese Academy of Sciences)

Sectoral

- N. 23 Prospects and challenges of decarbonising heating via electrification**
Pooya HOSEINPOORI (Imperial College London), Andreas V. Olympios (Imperial College London), Christos N. Markides (Imperial College London), Niall Mac Dowell (Imperial College London)

Methods

- N. 25 Toward more comprehensive environmental impact assessments: interlinked global models of LCIA and IAM applicable to this century**
Koji TOKIMATSU (Tokyo Institute of Technology)

Methods

- N. 26 Empirical testing of the visualizations of climate change mitigation scenarios with citizens: A comparison among Germany, Poland, and France**
Georgios XEXAKIS (University of Geneva), Evelina Trutnevyte (University of Geneva)

Climate

- N. 27 Probabilistic climate projections for the assessment of mitigation pathways reflecting new climate model ensembles and observed warming trends**
Junichi TSUTSUI (Central Research Institute of Electric Power Industry)

Wednesday

2
Dec

16.00-17.00

POSTER SESSION 3

COVID

- N. 28 COVID-induced low power demand and market forces starkly reduce CO2 emissions**
Christoph BERTRAM (PIK), Gunnar Luderer (PIK, TUB), Felix Creutzig (MCC, TUB), Nico Bauer (PIK), Falko Ueckerdt (PIK), Aman Malik (PIK, UB), Ottmar Edenhofer (PIK, MCC, TUB)

Deep

- N. 29 Using the Global Change Assessment Model 5.2 to assess the global implications of different bioenergy carbon capture and storage policy schemes**
Garrett GUARD (American University)

National

- N. 30 An integrated assessment of a low coal low nuclear future energy system for Taiwan**
Candelaria BERGERO (JGCRI/ PNNL), Matthew Binsted (JGCRI/ PNNL), Brinda Yarlagadda (JGCRI/ PNNL), Haewon C. McJeon (JGCRI/ PNNL)

National

- N. 31 Tightening EU ETS targets in line with the European Green Deal: Impacts on the decarbonization of the EU power sector**
Robert PIETZCKER (PIK), Sebastian Osorio (PIK), Renato Rodrigues (PIK)

Sustainable

- N. 32 Addressing both climate and air pollution mitigation in a national Integrated Assessment Model: Results for the BLUES model**
Mariana IMPERIO (COPPE), Alexandre Szklo (COPPE), Roberto Schaeffer (COPPE), Pedro R. R. Rochedo (COPPE)

Economics

- N. 33 Impacts of the U.S. rejoining the Paris Agreement: an analysis of U.S. fossil fuel trade**
Matthew BINSTED (JGCRI/PNNL), Stephanie Waldhoff (JGCRI/PNNL), Jonathan Huster (JGCRI/PNNL), James Edmonds (JGCRI/PNNL)

Economics

- N. 34 Risk factor pathways: translating climate scenario data into useful metrics for financial risk analysis**
Jérôme HILAIRE (PIK), Christoph Bertram (PIK), Elmar Kriegler (PIK), Jihoon Min (IIASA), Keywan Riahi (IIASA), Bas van Ruijven (IIASA)

Sectoral

- N. 36 Production of alternative marine fuels in Brazil to fulfil IMO2050: an IAM perspective**
Eduardo MÜLLER-CASSERES, (COPPE and PBL), Francielle Carvalho (COPPE), Matheus Poggio (COPPE), Tainan Nogueira (COPPE), Clarissa Fonte (COPPE), Huang Ken Wei (COPPE), Mariana Império (COPPE), Joana Portugal-Pereira (COPPE), Pedro R. R. Rochedo (COPPE), Alexandre Szklo (COPPE), Roberto Schaeffer (COPPE)

Impacts

- N. 37 Climate refugees and carbon pricing**
Maria ALSINA-PUJOLS (University of Zurich)

Methods

- N. 39 Dynamic in-code documentation for GAMS**
Jan Philipp DIETRICH (PIK), Kristine Karstens (PIK), David Klein (PIK), Lavinia Baumstark (PIK)

Climate

- N. 40 Extreme sea levels at different warming levels**
Claudia TEBALDI (JGCRI/PNNL), DJ Rasmussen (Princeton University), Ben Vega Westhoff (University of Illinois Urbana Champaign), Ryan Sriver (University of Illinois Urbana Champaign), Robert Kopp (Rutgers University), Rosh Ranasinghe (EHT Delft), Carley Isle (Institut Pierre Simon Laplace), Ebru Kirezci (University of Melbourne), Michalis Vourdoukas (European Joint Research Center)

Thursday

3
Dec

11.30-12.30

POSTER SESSION 4

COVID

N. 41 Financial risk analysis of new coal power since COVID 19 based on cost analysis of coal fired plants in ChinaYanhua WANG (Renmin University of China), Ke WANG (Renmin University of China)

Deep

N. 42 Long-term GHG mitigation towards 2050 in Thailand cement industryPuttipong CHUNARK (Sirindhorn International Institute of Technology, Thammasat University), Bundit Limmeechokchai (Sirindhorn International Institute of Technology, Thammasat University), Achiraya Chaichaloempreecha (Sirindhorn International Institute of Technology, Thammasat University)

National

N. 43 Measuring stranded investment associated with transformation of energy supply and demand sectors in JapanKen OSHIRO (Kyoto University), Shinichiro Fujimori (Kyoto University)

National

N. 44 GCAM-India: A tool for informing state-level climate-friendly economic development policies for IndiaVaibhav CHATURVEDI (CEEW), Nagar Koti (CEEW), Ankur Malyan (CEEW), Puneet Kamboj (CEEW), Sweta Jha (CEEW), Gokul Iyer (JGCRI/PNNL), Ryna Cui (UMD), Matthew Binstead (JGCRI/PNNL), Sha Yu (JGCRI/PNNL), Pralit Patel (JGCRI/PNNL)

Sustainable

N. 45 Explore water-energy relationship under climate change in Beijing-Tianjin-HebeiMeijing CHEN (School of Water Resources and Environment, China University of Geosciences), Qiang Xue (School of Water Resources and Environment, China University of Geosciences), Cuibai Chen (School of Water Resources and Environment, China University of Geosciences)

Economics

N. 46 Scenario-based analysis of electric vehicle penetration in road transportation in LaosBounEua KHAMPHILAVANH (Tokyo Institute of Technology), Toshihiko Masui (NIES)

Economics

N. 47 Assessment of climate-related risks and opportunities for the financial sector - Comparison of Climate MAPS with the NGFS reference scenariosDora FAZEKAS (Cambridge Econometrics), Linda Knoester (Ortec Finance)

Feasibility

N. 48 The ambitions of coalitions: politically feasible coal exitsStephen BI (PIK), Nico Bauer (PIK), Jessica Jewell (Chalmers University of Technology)

Demand**N. 49 Modelling the potential impacts of production and consumption-based measures of the waste sector in Indonesia toward 2030**

Ambiyah ABDULLAH (NIES), Toshihiko Masui (NIES)

Demand**N. 50 Global climate and air quality benefits of road transport and building electrification**

Toon VANDYCK (European Commission, Joint Research Centre), Kimon Keramidas (European Commission), Stéphane Tchong-Ming (European Commission), Matthias Weitzel (European Commission), Rita Van Dingenen (European Commission)

Sectoral**N. 51 Direct and indirect electrification pathways for light duty vehicles: a comparison**

Marianna ROTTOLI (PIK), Alois Dirnaichner (PIK), Gunnar Luderer (PIK), Robert Pietzcker (PIK)

Impacts**N. 52 Estimation of embodied carbon emissions by trade in China**

He WANG (North China Electric Power University)

Methods**N. 53 A common nomenclature for assessing low-carbon transition pathways**

Daniel HUPPMANN (IIASA), Volker Krey (IIASA)

Methods**N. 54 Hi-resolution assessment of global rooftop solar PV's technical and economic potential using big data and machine learning**

Siddharth JOSHI (MaREI, ERI, University College Cork), Shivika Mittal (Grantham Institute Climate Change and the Environment, Imperial College London), Paul Holloway (ERI, University College Cork), Brian O'Gallachoir (MaREI, ERI, University College Cork), Priyadarshi Ramprasad Shukla (Global Centre for Environment and Energy, Ahmedabad University), James Glynn (MaREI, ERI, University College Cork)

Thursday
3
Dec
16.00-17.00

POSTER SESSION 5

Deep

- N. 55 Betting on carbon dioxide removal in deep mitigation scenarios: quantifying the risks**
Neil GRANT (Grantham Institute, Imperial College London), Adam Hawkes (Grantham Institute, Imperial College London), Shivika Mittal (Grantham Institute, Imperial College London), Ajay Gambhir (Grantham Institute, Imperial College London)

National

- N. 57 IAM-oriented mid-century strategies for BRICS Countries**
Pedro ROCHEDO (COPPE), Bruno Cunha (COPPE), Alexandre Szklo (COPPE), Roberto Schaeffer (COPPE)

Sustainable

- N. 58 Beyond SSPs: modeling sustainable development scenario demonstrating distributional effects on sdgs**
Mel GEORGE (University of Maryland), Haewon McJeon (University of Maryland), Seth Monteith (ClimateWorks Foundation)

Sustainable

- N. 59 Application of an integrated water-energy-land model to quantify the costs of environmental flows allocation in the Indus river basin**
Muhammad AWAIS (IIASA), Adriano Vinca (IIASA), Simon Parkinson (IIASA), Madeleine McPherson (University of Victoria), Keywan Riahi (IIASA)

Economics

- N. 60 Quantify progress towards No New Coal and the regional stranded asset risks under 1.5°C**
Ryna CUI (University of Maryland), Morgan R. Edwards (University of Wisconsin), Nathan Hultman (University of Maryland), Haewon McJeon (JGCRI/PNNL), Alicia Zhao (University of Maryland)

Demand

- N. 61 Global transportation decarbonization pathways considering lifestyle change and mineral availabilities**
Daniel PULIDO SÁNCHEZ, (University of Valladolid), Iñigo Capellán-Pérez (University of Valladolid), Ignacio de Blas Sanz (University of Valladolid)

Electricity**N. 62 Energy system flexibility for renewable energy variability in IAMs**

Ilija BATAS-BJELIC (Institute of Technical Sciences of Sasa), Nikola Rajakovic (University of Belgrade), Neven Duic (University of Zagreb), Antun Pfeifer (University of Zagreb), Inigo Capellan Perez (University of Valladolid), Fernando Frechoso (University of Valladolid), Alexandros Adam (Center for Renewable Energy Sources)

Sectoral**N. 63 The material dimensions of carbon mitigation pathways**

Marianne ZOTIN, (Universidade Federal do Rio de Janeiro), Leticia Magalar (Universidade Federal do Rio de Janeiro), Luiz Bernardo Baptista (Universidade Federal do Rio de Janeiro), Pedro Rochedo (Universidade Federal do Rio de Janeiro), Alexandre Szklo (Universidade Federal do Rio de Janeiro)

Land**N. 64 Accounting for local temperature effect substantially alters afforestation patterns**

Michael WINDISCH (PIK), Florian Humpender (PIK), Carl-Friedrich Schleussner (Humboldt-Universitaet zu Berlin, Climate Analytics), Hermann Lotze-Campen (Humboldt-Universitaet zu Berlin), Alexander Popp (PIK)

Impacts**N. 65 Economic damage of climate change: How far is it from the physical damage?**

Taoyuan WEI (CICERO), Hans Asbjorn Aaheim (CICERO)

Methods**N. 66 Community Emissions Data System (CEDS): current work**

Steven SMITH (JGCRI/PNNL), Patrick O'Rourke (JGCRI/PNNL), Andrea Mott (JGCRI/PNNL)

Methods**N. 67 Linked open data infrastructure for energy system and integrated assessment models**

Michaja PEHL (PIK), Anastasis Giannousakis (PIK), Jan Philipp Dietrich (PIK), Gunnar Luderer (PIK)

Friday
4
Dec

11.30-12.30

POSTER SESSION 6

Deep

- N. 69 Modelling the implications of permanent CO₂ disposal through a Carbon Takeback Obligation**
Stuart JENKINS (University of Oxford), Eli Mitchell-Larson (University of Oxford), Stuart Haszeldine (University of Edinburgh), Myles Allen (University of Oxford)

National

- N. 70 Impacts of air quality target in 2030 on climate change mitigation in Beijing**
Pianpian XIANG (College of Environmental and Energy Engineering, Beijing University of Technology), Kejun Jiang (Energy Research Institute, Chinese Academy of Macroeconomic Research), Jia Xing (School of Environment, Tsinghua University)

National

- N. 71 Exploring deep decarbonisation pathway uncertainties in switching Irish households from gas boilers to electrical heat pumps**
Jason MC GUIRE (University College Cork Fionn), Rogan Marei (Centre Environmental Research Institute, University College Cork), Brian O'Gallachoir (MaREI, Centre Environmental Research Institute, University College Cork), Hannah Daly (MaREI, Centre Environmental Research Institute, University College)

Economics

- N. 72 SCCO₂, climate-economy feedbacks, and variability**
Jarmo KIKSTRA (IIASA), Paul Waidelich (NERA Economic Consulting), James Rising (LSE), Dmitry Yumashev (Lancaster University), Chris Hope (University of Cambridge), Chris Brierley (UCL)

Economics

- N. 73 Converging household carbon footprints in China**
Zhifu MI (UCL)

Sustainable

- N. 74 The development of an environmental module in the global integrated assessment model WILIAM**
Amandine Valerie PASTOR (cE3c, Faculdade de Ciencias de Lisboa), Tiago Capela Lourenço (cE3c, Faculdade de Ciencias de Lisboa), Noelia Ferreras-Alonso (CARTIF, University of Valladolid), Ivan Ramos-Diez (CARTIF), Stavroula Papagianni (CRES), Alexandros Adam (CRES), Harald Ulrik Sverdrup (INN), Santi Sabaté (CREAF), Roger Samso (CREAF), Jordi Solé Ollé (CREAF), Robert Oakes (UNU-EHS UK), Margarita Mediavilla (University of Valladolid), Gonzalo Parrado (University of Valladolid), Nathalie Wergles (University of Valladolid), Luis Javier de Miguel (University of Valladolid)

Demand

- N. 75 Impacts of carbon tax on China's economy and environment based on a CGE model**
Jiajue ZHANG (North China Electric Power University), Qian Zhou (North China Electric Power University)

Electricity

- N. 76 Regional impacts of electricity system transition in Central Europe until 2035**
Jan-Philipp SASSE (University of Geneva) Evelina Trutnevte (University of Geneva)

Sectoral

- N. 77 Improving the climate footprint of energy-intensive materials: a modelling-based approach integrating demand and supply**
Kimon KERAMIDAS, (Joint Research Centre of the European Commission), Silvana Mima, (CNRS/Université Grenoble-Alpes)

Impacts

- N. 78 Impacts of climate change mitigation on agriculture water use: a provincial analysis in China**
Chaoyi GUO (Peking University), Hancheng Dai (Peking University), Xiaorui Liu (Peking University), Yazhen Wu (Peking University), Yong Liu (Peking University), Xiaoyu Liu (Peking University)
- N. 79 Silicone: an open-source Python package for inferring missing emissions data**
Robin LAMBOLL (Imperial College), Zebedee R. J. Nicholls (Imperial College), Jarmo S. Kikstra (Imperial College), Malte Meinshausen (Imperial College), Joeri Rogelj (Imperial College)

Methods

- N. 80 A target-based scheme to include SRM-induced stratospheric ozone loss in integrated assessment**
Daria TATSII (Voeikov Main Geophysical Observatory), Elnaz Roshan (University of Hamburg), Rolf Mueller (Forschungszentrum Juelich), Hermann Held (University of Hamburg)