



University of Manchester  
26<sup>th</sup>-29<sup>th</sup> June 2019

## Detailed Programme

(Updated 24 June 2019)

Please note that session schedules can be subject to change.  
To access the latest updated programme, please go to  
<http://www.fleximeets.com/eaere2019/?p=programme>

Registration

Wednesday 16:00-19:00

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University Place, Drum Area

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Welcome Reception

Wednesday, 18.00-20.00

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Drinks and buffet

Whitworth Hall

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PARALLEL SESSION 1  
THU 8:30-10:15

## Parallel session 1

Thursday, 08.30-10.15

**THEMATIC SESSION: ENVIRONMENTAL INNOVATION AND ECONOMIC PERFORMANCE**

Room: Lecture Theatre A

Organizer(s): Antoine Dechezlepretre, OECD; Misato Sato, London School of Economics

Chair: Antoine Dechezlepretre, OECD

Investments in low carbon technologies and capital assets need to be rapidly scaled up to meet climate change mitigation targets, and private sector firms are likely to play a key role. Yet current uptake of low carbon investment is woefully lacking. The extant economic literature on the behaviour of firms in the provision of global public goods (e.g. through clean innovation) focuses on the cost channel, and tests the theory that adopting or developing cleaner technologies is associated with high up-front costs but can improve efficiency and reduce costs (e.g. energy costs). More recent literature exploits new firm level databases, and also explores the revenue channel - how the "greening" of firms affects their profitability and market valuation - testing the Porter hypothesis, that pushing environmental innovation frontiers can bring competitive advantage to firms. This thematic session combines three empirical papers that use unique micro-datasets and advance the economic literature by contributing vital evidence on the drivers and financial performance of firms in the 'low carbon economy' thus highlighting the changes necessary to leverage large scale spending from the private sector to enable the low carbon transition. The three papers take complementary perspectives on the innovation behaviour and financial performance of firms in the green economy. They thus contribute to a sound understanding of the intersection of environmental policy and industrial strategy that is of high importance for climate policymaking as well as for a broader economic audience.

**Determinants of environmental product and process innovations: New evidence on the basis of European panel data**

Gunnar Gutsche, University of Kassel; Andreas Ziegler, University of Kassel

**Clean vs dirty innovation and stock market returns**

Antoine Dechezlepretre, OECD; Cal Muckley, University College Dublin; Parvati Neelakantan, University College Dublin

**Does "Going Green" Pay? Evidence from a Global Firm Level Dataset**

Misato Sato, London School of Economics; Tobias Kruse, London School of Economics; Myra Mohnen, University of Essex; Peter Pope, University of Bocconi

**THEMATIC SESSION: REGULATING MEAT CONSUMPTION**

Room: Room 2.220

Organizer(s): Grischa Perino, University of Hamburg; Nicolas Treich, Toulouse School of Economics and INRA

Chair: Grischa Perino, University of Hamburg

A number of environmental, health and demographic pressures as well as evolving societal changes justify regulating meat consumption. However, the efforts to regulate meat consumption seem quite limited in comparison to the external costs of meat and to the regulation of other sectors such as transport or other polluting industries. This thematic session will assess how regulatory interventions and especially provision of information and exposure to different arguments put forward in the public debate on sustainable consumption can efficiently reduce meat consumption. The papers in this session focus on several aspects of the regulatory challenge and use complementary methodological approaches: conceptual and experimental evidence from both the field and the lab on what motivates people to reduce their meat consumption.

**Regulating Meat Consumption: How to Improve Health, Environment and Animal Welfare?**

Nicolas Treich, Toulouse School of Economics; Vincent Requillart, TSE INRA; Zohra Bouamra, TSE INRA; Celine Bonnet, TSE INRA

**Meaty arguments and fishy associations: Field experimental evidence on the impact of reasons to reduce meat consumption on intentions, behavior and satisfaction**

Grischa Perino, University of Hamburg; **Claudia Schwirplies**, University of Hamburg

**Does information on healthiness, carbon footprint and meat content affect willingness to pay for ready meals? Evidence from non-hypothetical discrete choice experiments**

**Simone Cerroni**, Queen's University Belfast; Jennie Macdiarmid, University of Aberdeen

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**POLICY SESSION: ACCELERATING THE TRANSITION TO ELECTRIC ROAD TRANSPORT: BARRIERS, POLICY ENABLERS AND CAVEATS**

Room: Room 1.218

Organizer(s): Walid Oueslati, OECD; Alexandros Dimitropoulos, OECD

Chair: Walid Oueslati, OECD

Road transport is a major source of greenhouse gas emissions and air pollution damaging to health. Electric vehicles (EVs) have tremendous potential to reduce such tailpipe emissions, allowing society to focus on reducing emissions from electricity generation, manufacturing and non-exhaust transport sources. Despite rapid growth in sales of EVs in the past five years, barriers to their adoption remain, and identifying efficient policy solutions to promote their uptake is essential. A growing strand of the environmental and transport economics literature has focused on the effectiveness of various policies in increasing the market uptake of EVs. However, less attention has been paid to the welfare implications of these policies, as well as to their potential side effects on car ownership and use, and congestion. This session will address the following questions: (i) What are the remaining barriers to large-scale production and adoption of EVs? (ii) How effective have been policies implemented in different countries to promote the uptake of EVs? (iii) What are the potential implications of such policies on welfare, public budgets, car ownership and use, and the environment?

Panelist(s): Rafael Cuesta, Transport for Greater Manchester;  
Alexandros Dimitropoulos, OECD;  
Joshua Linn, University of Maryland; Resources for the Future;  
Walid Oueslati, OECD;  
Elisabeth Windisch, International Transport Forum, OECD

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**POLICY SESSION: THE ROLE OF NON-STATE ACTORS IN CLIMATE POLICY**

Room: Room 1.219

Organizer(s): Christiane Reif, ZEW - Leibniz Centre for European Economic Research; Carina Fugger, ZEW - Leibniz Centre for European Economic Research

Chair: Christiane Reif, ZEW - Leibniz Centre for European Economic Research

National laws and regulations introduced by state actors are unlikely to be sufficient to meet the emission targets set in the Paris Climate Agreement, and will have to be supplemented by additional voluntary climate protection activities. Non-state actors include civil society groups, economic actors, and sub-national and local actors, who are heterogeneous and with varying influence. Importantly it remains unassessed whether these actions complement or substitute state actions. The session will start discussing non-state actors from economic, legal, ethical and practical perspectives and then discuss the limits, risks, moral concerns and ability to implement such non-state actions in the European and international context.

Panelist(s): Niels Anger, Centre for European Economic Research (ZEW GmbH);  
Mark Atherton, Greater Manchester Combined Authority;  
Ibon Galarraga, BC3 Basque Centre for Climate Change;  
Goetz Reichert, Centre for European Policy

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**AGRICULTURE AND BEHAVIOURAL ECONOMICS**

Room: Room 4.213

Chair: Prasenjit Banerjee, University of Manchester

**The Role of Farmers' Understanding of Nature in Shaping their Uptake of Nature Protection Measures**

**Barbara Heinrich**, Johann Heinrich von Thünen Institute Federal Research Institute for Rural Areas, Forestry and Fisheries; Nataliya Stupak, Johann Heinrich von Thünen Institute Federal Research Institute for Rural Areas, Forestry and Fisheries; Juern Sanders, Thünen Institute

Discussant: Fabian Thomas, University of Osnabrueck

**Understanding Farmer Self-Identities and Pro-Environmental Behavior: An Experimental Approach and Cluster Analysis**

**Fabian Thomas**, University of Osnabrueck; Stefanie Engel, University of Osnabrueck

Discussant: Jens Abildtrup, INRA-BETA, Université de Lorraine

**Biodiversity protection in private forests: PES schemes, institutions and prosocial behaviour**

**Jens Abildtrup**, INRA-BETA, Université de Lorraine; Anne Stenger, INRA- BETA- University of Strasbourg; Philippe Polomé, GATE; Marieke Blondet, AgroParisTech; Francis De Morogues, FCBA; Claude Michel, PNR des Ballons des Vosges

Discussant: Prasenjit Banerjee, University of Manchester

**Not Money, but the Medal: Social Image, Incentive Mechanism, and Biodiversity Protection on Farmland**

James Asher; **Prasenjit Banerjee**, University of Manchester; Rupayan Pal, Indira Gandhi Institute of Development Research; Ada Wossink, University of Manchester

Discussant: Barbara Heinrich, Johann Heinrich von Thünen Institute Federal Research Institute for Rural Areas, Forestry and Fisheries

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**AIR POLLUTION AND HEALTH I**

Room: Room 3.204

Chair: Milena Suarez, Insee-CREST

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**When a (particulate) matter strikes the city. The social disparities in the health costs of air pollution.**

**Matilde Giaccherini**, University of Rome Tor Vergata - CEIS; Joanna Kopinska, University of Rome Tor Vergata - CEIS; Alessandro Palma, Parthenope University of Naples

Discussant: Toshihide Arimura, Faculty of Political Science and Economics Research Institute for Environmental Economics and Management (RIEEM), Waseda University

**Subjective probabilistic expectations, Indoor Air Pollution and Health: Evidence from cooking fuel use pattern in India**

**Toshihide Arimura**, Faculty of Political Science and Economics Research Institute for Environmental Economics and Management (RIEEM), Waseda University; Mriduchhanda Chattopadhyay, Waseda University; Hajime Katayama, Waseda University; Mari Sakudo, The Japan Economic Research Institute; Hidefumi Yokoo, National Institute of Environmental Studies

Discussant: Luis Sarmiento, German Institute of Economic Research / TU Berlin

**Nitrous Oxides and the Productivity of Cognitive Labor**

**Luis Sarmiento**, German Institute of Economic Research / TU Berlin

Discussant: Milena Suarez, Insee-CREST

**Disentangling the causal effects of air pollutants on health: when the numerous characteristics of the planetary boundary layer can help**

**Milena Suarez**, Insee-CREST; Alexandre Godzinski, CREST - French Ministry of Environment

Discussant: Matilde Giaccherini, University of Rome Tor Vergata - CEIS

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**BIODIVERSITY - DYNAMIC MODELS**

Room: Room 4.210

Chair: Encarna Esteban, University of Zaragoza

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**Protecting rhino populations in South Africa: A bioeconomic evaluation of the trade debate**

**Kenneth Berger**, University of Cape Town; Edwin Muchapondwa, University of Cape Town

Discussant: Simone Borghesi, European University Institute

**Don't feed the bears! Environmental defensive expenditures and species-typical behavior in an optimal growth model**

**Simone Borghesi**, European University Institute; Paolo Russu, University of Sassari; Angelo Antoci, University of Sassari

Discussant: Luc Doyen, CNRS

### **Sustainability standards, multi-criteria maximin and viability**

**Luc Doyen**, CNRS; Pedro Gajardo, usm

Discussant: Encarna Esteban, University of Zaragoza

### **Ecosystems shifts: implications for groundwater management**

**Encarna Esteban**, University of Zaragoza; Elena Calvo, University of Zaragoza; Jose Albiac, CITA-Government of Aragon

Discussant: Kenneth Berger, University of Cape Town

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### **CHOICE MODELLING I**

Room: Room 4.204

Chair: Ioanna Grammatikopoulou, Natural Resources Institute Finland (Luke)

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#### **Antecedent Volition and spatial effects: can multiple goal pursuit mitigate distance decay?**

Mara Thiene, University of Padova; **Cristiano Franceschinis**, Università degli Studi di Padova; Joffre Swait, FASSA

Discussant: Joachim Schleich, Grenoble Ecole de Management

#### **Conveyance, envy, and home-owners adoption of energy-efficient appliances**

**Joachim Schleich**, Grenoble Ecole de Management; Corinne Faure, Grenoble Ecole de Management; Marie-Charlotte Guetlein, Grenoble Ecole de Management; Gengyang Tu, École Supérieure d'Agricultures, Université Bretagne Loire

Discussant: Djiby Thiam, University of Cape Town

#### **The economics of grey water technology diffusion to mitigate water scarcity in South Africa**

**Djiby Thiam**, University of Cape Town; Herbert Ntuli, University of Cape Town; Edwin Muchapondwa, University of Cape Town; Slim Zekri, Sultan Qaboos University

Discussant: Ioanna Grammatikopoulou, Natural Resources Institute Finland (Luke)

#### **Heterogeneity and attribute non-attendance in preferences for peatland conservation**

**Ioanna Grammatikopoulou**, Natural Resources Institute Finland (Luke); Eija Pouta, Natural Resources Institute Finland (Luke); Janne Artell, Natural Resources Institute Finland (Luke)

Discussant: Cristiano Franceschinis, Università degli Studi di Padova

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### **CLIMATE CHANGE - EXTREME EVENTS**

Room: Room 4.211

Chair: Roman Hoffmann, Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/ÖAW, WU)

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#### **Do Natural Disasters Impede Exports? Evidence from Cross-Country Panel Data**

Kaori Tembata, Kobe University; **Kenji Takeuchi**, Kobe University

Discussant: Farzana Hossain, University of Melbourne

#### **Creative Destruction or Destructive Creation? Effects of Floods on Firms in India**

**Farzana Hossain**, University of Melbourne

Discussant: Sébastien Marchand, Université Clermont Auvergne, CNRS, CERDI

#### **Impacts of Extreme Climate Events on Technical Efficiency in Vietnamese Agriculture**

**Sébastien Marchand**, Université Clermont Auvergne, CNRS, CERDI; Yoro Diallo, Université Clermont Auvergne, CNRS, CERDI; Etienne Espagne, Agence Française de Développement (AFD)

Discussant: Roman Hoffmann, Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/ÖAW, WU)

#### **Quantifying the Evidence on Environmental Migration: A Meta-Analysis on Country-Level Studies**

**Roman Hoffmann**, Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/ÖAW, WU); Anna Dimitrova, International Institute for Applied Systems Analysis (IIASA); Raya Muttarak, University of East Anglia, School of International Development International Institute for Applied Systems Analysis (IIASA); Jesus Crespo-Cuaresma, Vienna University of Economics and Business International Institute for Applied Systems Analysis (IIASA)

Discussant: Kenji Takeuchi, Kobe University

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**CLIMATE CHANGE AND DEVELOPMENT I**

Room: Room 4.205

Chair: Waldemar Marz, Ifo Institute/LMU Munich

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**Econometric assessment of climate change adaptation in agriculture: from regional averages to the farm level data**

**Abdul Quddoos**, University of Natural Resources and Life Sciences, Vienna; Klaus Salhofer, Institute for Sustainable Economic Development, University of Natural Resources and Life Sciences Vienna; Ulrich B. Morawetz, Institute for Sustainable Economic Development, University of Natural Resources and Life Sciences Vienna

Discussant: Arnaud Goussebaile, ETH Zurich

**Altruistic Foreign Aid And Climate Change Mitigation**

**Arnaud Goussebaile**, ETH Zurich; Antoine Bommier, ETH Zurich; Jean-Philippe Nicolai, ETH Zurich; Amélie Goerger, ETH Zurich

Discussant: Elise Grieg, ETH Zürich

**Special Interests and Public Opinion in American Environmental Politics**

**Elise Grieg**, ETH Zürich

Discussant: Waldemar Marz, Ifo Institute/LMU Munich

**Climate Policy and Inequality in Two-Dimensional Political Competition**

**Waldemar Marz**, Ifo Institute/LMU Munich

Discussant: Abdul Quddoos, University of Natural Resources and Life Sciences, Vienna

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**EMPIRICAL ANALYSIS OF ELECTRICITY MARKET REGULATION**

Room: Room 3.212

Chair: Victor von Loessl, University of Kassel

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**California's cap-and-trade program and emission leakage in the electricity sector: an empirical analysis**

Chiara Lo Prete, Pennsylvania State University; **Ashish Tyagi**, Frankfurt School of Finance Management; Codl Hohl, Pennsylvania State University

Discussant: Marion Leroutier, Paris School of Economics and CIRE

**The Impact of the GB Carbon Price Floor on CO<sub>2</sub>e Emissions in the power sector**

**Marion Leroutier**, Paris School of Economics and CIRE

Discussant: Yin Chu, Zhongnan University of Economics and Law

**Vertical Separation of Transmission Control and Regional Production Efficiency in the Electricity Industry**

**Yin Chu**, Zhongnan University of Economics and Law

Discussant: Victor von Loessl, University of Kassel

**Revenue decoupling and energy consumption: Empirical evidence from the U.S. electric utilities sector**

**Victor von Loessl**, University of Kassel; Heike Wetzel, University of Kassel

Discussant: Ashish Tyagi, Frankfurt School of Finance Management

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**ENERGY AND CGE MODELLING**

Room: Room 4.209

Chair: Xaquín García-Muros, Basque Centre for Climate Change and MIT

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**Estimating the elasticity of substitution between capital and energy from abatement cost curves: The case of the French industry**

**Paul Malliet**, Sciences Po; Frédéric Reynès, NEO, TNO, OFCE

Discussant: Karl Steininger, University of Graz

**Risk Assessment of the Low-Carbon Transition of Austria's Steel and Electricity Sectors**

**Karl Steininger**, University of Graz; Gabriel Bachner, University of Graz; Brigitte Wolkingner, University of Graz; Jakob Mayer, University of Graz; Andreas Türk, University of Graz



Discussant: Philippe Quirion, CIRED / CNRS

**Prediction is difficult, even when it's about the past: a hindcast experiment using Res-IRF, an integrated energy-economy model**

**Philippe Quirion**, CIRED / CNRS; Louis-Gaetan Giraudet, Ecole des Ponts ParisTech, CIRED; David Glotin, CIRED; Cyril Bourgeois, CIRED

Discussant: Xaquín García-Muros, Basque Centre for Climate Change and MIT

**Who Bears the Burden of Greening Electricity?**

**Xaquín García-Muros**, Basque Centre for Climate Change and MIT; Christoph Böhringer, University of Oldenburg; Mikel Gonzalez-Eguino, Basque Centre for Climate Change (BC3)

Discussant: Paul Malliet, Sciences Po

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**ENERGY DEMAND AND EFFICIENCY I**

Room: Room 2.218

Chair: Ghislaine Lang, University of Neuchatel

**Estimating Energy Price Elasticities when Salience is High: Residential Natural Gas Demand in Ukraine**

**Anna Alberini**, University of Maryland; Olha Khymych, Charles University Prague; Milan Scasny, Charles University in Prague

Discussant: Maria Alice Moz Christofolletti, University of Sao Paulo and Food and Agriculture Organization of the United Nations

**Who pays the bill? Heterogeneous welfare and emission effects of energy tax policies in Brazil**

**Maria Alice Moz Christofolletti**, University of Sao Paulo and Food and Agriculture Organization of the United Nations

Discussant: Andrea Bigano, CMCC

**How are fuel efficient cars priced? Evidence from eight EU countries**

**Anna Alberini**, University of Maryland; Valeria Di Cosmo, Università di Torino; **Andrea Bigano**, CMCC

Discussant: Ghislaine Lang, University of Neuchatel

**Energy efficiency and the marginal cost of CO2 abatement: Evidence from a large sample of renter-occupied buildings**

**Ghislaine Lang**, University of Neuchatel; Bruno Lanz, University of Neuchatel

Discussant: Anna Alberini, University of Maryland

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**POLICY DESIGN - GAME-THEORETICAL MODELLING**

Room: Room 3.210

Chair: Takahiko Kiso, University of Aberdeen

**Incentives for Green Technology Adoption, Imperfect Compliance, and Risk Aversion**

**Carmen Arguedas**, Universidad Autónoma de Madrid; José Luis Zoffo, Universidad Autónoma de Madrid

Discussant: Jasper Meya, Carl von Ossietzky Universität Oldenburg

**Renewable energy policies in federal government systems**

Paul Neetzow, Humboldt-Universität Berlin; **Jasper Meya**, Carl von Ossietzky Universität Oldenburg

Discussant: Jenny De Freitas Fernandes, University of the Balearic Islands

**Environmental policy instruments and strategic restraint: caps versus taxes**

**Jenny De Freitas Fernandes**, University of the Balearic Islands; Daniel Cardona, Universitat de les Illes Balears; Antoni Rubí-Barceló, Universitat de les Illes Balears

Discussant: Takahiko Kiso, University of Aberdeen

**A Subsidy Inversely Related to the Product Price**

**Takahiko Kiso**, University of Aberdeen

Discussant: Carmen Arguedas, Universidad Autónoma de Madrid

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**SPATIAL ANALYSIS**

Room: Room 4.212

Chair: Lutz Philip Hecker, Brandenburg University of Technology Cottbus-Senftenberg

## **Climate, Disease Development: Malaria Control and Historical Agricultural Productivity in the US**

**Michele Malpede**, Cattolica University and Bicocca University, Milan  
Discussant: Menuka Udugama, Wayamba University of Sri Lanka

## **Implications of improved understanding of animal movement patterns for managing invasive species**

**Menuka Udugama**, Wayamba University of Sri Lanka; Elizabeth Robinson, University of Reading  
Discussant: Maria Vrachioli, Technical University of Munich

## **Water's Contribution to Agricultural Productivity over Space**

**Maria Vrachioli**, Technical University of Munich; Spiro Stefanou, University of Florida  
Discussant: Lutz Philip Hecker, Brandenburg University of Technology Cottbus-Senftenberg

## **Spotlight on spatial environmental policy spillovers: An econometric analysis of wastewater treatment in Mexican municipalities**

**Lutz Philip Hecker**, Brandenburg University of Technology Cottbus-Senftenberg; Frank Wätzold, Brandenburg University of Technology Cottbus-Senftenberg; Gunther Markwardt, Technische Universität Dresden, Faculty of Business and Economics  
Discussant: Michele Malpede, Cattolica University and Bicocca University, Milan

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## **STRUCTURAL AND TECHNOLOGICAL CHANGE - EMPIRICAL ANALYSIS**

Room: Room 3.211

Chair: Julien Wolfersberger, AgroParisTech INRA UMR Economie Publique Universite Paris-Saclay

### **Structural Change and the Environment. Unbundling the Contribution of Structural Change to Sustainable Consumption and Production**

**Giovanni Marin**, University of Urbino; Massimiliano Mazzanti, University of Ferrara  
Discussant: Finn Ole Semrau, Kiel Institute for the World Economy (IfW)

### **Stepping up to the mark? Firms' export activity and environmental innovation in 14 European countries**

**Finn Ole Semrau**, Kiel Institute for the World Economy (IfW); Aoife Hanley, Kiel Institute for the World Economy (IfW)  
Discussant: Ruijie Tian, University of Gothenburg

### **Emissions Trading Scheme and Directed Technological Change: Evidence from China**

**Ruijie Tian**, University of Gothenburg  
Discussant: Julien Wolfersberger, AgroParisTech INRA UMR Economie Publique Universite Paris-Saclay

### **Growth and the environment: taking into account structural transformation**

**Julien Wolfersberger**, AgroParisTech INRA UMR Economie Publique Universite Paris-Saclay  
Discussant: Giovanni Marin, University of Urbino

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## **URBAN GREEN SPACES**

Room: Room 2.219

Chair: Bethany Cooper, University of South Australia

### **Is bigger always better? An assessment of cultural ecosystem services of urban greenspaces in Hamburg**

**Leonie Ratzke**, University of Hamburg  
Discussant: Stefano Pareglio, FEEM-Fondazione Eni Enrico Mattei and Università Cattolica

### **Changes in green urban spaces' value perception: A meta-analytic benefit transfer function for European cities**

Francesca Diluio, FEEM-Fondazione Eni Enrico Mattei; Gianni Guastella, FEEM-Fondazione Eni Enrico Mattei and Università Cattolica; **Stefano Pareglio**, FEEM-Fondazione Eni Enrico Mattei and Università Cattolica  
Discussant: Ingmar Schumacher, IPAG Business School

## **Connectedness to nature, urbanization and the environment**

**Ingmar Schumacher**, IPAG Business School; Emeline Bezin, PSE

Discussant: Bethany Cooper, University of South Australia

## **Prioritising Investments in Urban Waterways: Insights on the Relative Value of Amenity**

**Bethany Cooper**, University of South Australia; Michael Burton, University of Western Australia; Lin Crase, University of South Australia; Daniel Rigby, University of Manchester

Discussant: Leonie Ratzke, University of Hamburg

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## **VALUATION OF ECOSYSTEM SERVICES I**

Room: Room 4.206

Chair: Anders Dugstad, Norwegian University of Life Sciences (NMBU)

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### **Incentivizing Hunters to Support Wildlife Disease Management**

**Lusi Xie**, University of Alberta; Vic Adamovicz, University of Alberta; Patrick Lloyd-Smith, University of Saskatchewan

Discussant: Laetitia Pettinotti, London School of Economics and Political Sciences

### **Estimating the distributional impacts on local livelihoods of river flow change due to dam building, northern Ghana**

**Laetitia Pettinotti**, London School of Economics and Political Sciences; Marloes Mul, UNESCO-IHE; Anil Markandya, BC3 Basque Centre for Climate Change, University of Bath; James Dalton, IUCN

Discussant: Moritz Drupp, University of Hamburg

### **Is Ecosystem Resilience an Economic Insurance? Evidence from the Goulburn-Broken Catchment farmland in Australia**

Stefan Baumgärtner, University of Freiburg; **Moritz Drupp**, University of Hamburg

Discussant: Anders Dugstad, Norwegian University of Life Sciences (NMBU)

### **How Reliable are Expert Predictions of Households' Willingness-to-Pay to Preserve the Amazon Rainforest? Comparing Contingent Valuation, Delphi Survey and Benefit Transfer**

**Anders Dugstad**, Norwegian University of Life Sciences (NMBU); Stale Navrud, Norwegian University of Life Sciences

Discussant: Lusi Xie, University of Alberta

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## **WATER POLLUTION**

Room: Room 3.205

Chair: Soren Olsen, University of Copenhagen

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### **Spatio-Temporal Design for a Water Quality Monitoring Network Maximizing the Economic Value of Information to optimize the detection of accidental pollution**

François Destandau, Laboratoire GESTE, UMR Engees-Irstea MA-8101, Strasbourg, France; **Youssef Zaiter**, Laboratoire GESTE, UMR Engees-Irstea MA-8101, Strasbourg, France

Discussant: Raphael Filippelli, Aarhus University

### **Mussel farming as a nutrient reduction measure – a case study in Limfjorden, Denmark**

**Raphael Filippelli**, Aarhus University; Mette Termansen, Copenhagen University; Berit Hasler, Aarhus University; Karen Timmermann, Aarhus University

Discussant: Musharaf A. Talpur, Institute for Environmental Studies (IVM), Vrije Universiteit, Amsterdam, The Netherlands

### **Directional Distance Decay Effects using Multiple Payment Vehicles and Disaggregated Site Quality Attributes in Stated WTP Models**

**Musharaf A. Talpur**, Institute for Environmental Studies (IVM), Vrije Universiteit, Amsterdam, The Netherlands; Roy Brouwer, The Water Institute / University of Waterloo; Mark J. Koetse, Institute for Environmental Studies (IVM) - Vrije Universiteit Amsterdam

Discussant: Soren Olsen, University of Copenhagen

### **The impacts of three dimensions of (dis)similarities on water quality benefit transfer errors**

Johannes Carolus, University of Copenhagen; Jette Bredahl Jacobsen, University of Copenhagen; **Soren Olsen**, University of Copenhagen

Discussant: Youssef Zaiter, Laboratoire GESTE, UMR Engees-Irstea MA-8101, Strasbourg, France

Coffee break

Thursday, 10.15-10.45

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Opening ceremony

Thursday, 10.45-11.15

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- **Welcome address by Ada Wossink**, Chair of LOC Room: Lecture Theatre B
- **Welcome address by Dame Nancy Rothwell**, President and Vice-Chancellor of the University of Manchester (introduction by Alistair Ulph)
- **Welcome address by Carlo Carraro**, President of EAERE

Plenary session 1

Thursday, 11.15-12.15

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**DAVID PEARCE LECTURE: TOWARDS AN OPTIMAL(?) DESIGN OF FOREST CONSERVATION INTERVENTIONS IN DEVELOPING COUNTRIES – EVIDENCE FROM THE FIELD” - DAAN VAN SOEST, TILBURG UNIVERSITY**

Room: Lecture Theatre B

Chair: Ada Wossink, University of Manchester

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**EGG-TIMERS: AIR POLLUTION AND CLIMATE CHANGE**

Room: Room 1.218

Chair: Mette Termansen, Copenhagen University

**Abatement of ammonia emissions from livestock housing fine-tuned according to impact on protected habitat**

David De Pue, Ghent University; **Andreas Bral**, Ghent University; Jeroen Buysse, Ghent University

**Tradable Permits and Efficiency under Eco-Dumping**

**Fabio Antoniou**, University of Ioannina; Panos Hatzipanayotou, Athens University of Economics and Business; Nikos Tsakiris, University of Ioannina

**Motives of firms for the purchase of carbon offset certification: Evidence from a field experiment**

**Carina Fugger**, ZEW - Leibniz Centre for European Economic Research; Kathrine von Graevenitz, ZEW - Leibniz Centre for European Economic Research; Martin Kesternich, ZEW - Leibniz Centre for European Economic Research

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**EGG-TIMERS: ELECTRICITY MARKET I**

Room: Room 2.218

Chair: Karl Steininger, University of Graz

**Power Markets in Transition: Decarbonization, Energy Efficiency, and Short-Term Demand Response**

Christoph Weissbart, ifo Institute; **Mier Mathias**, ifo Institute

**There is no economic case for new coal plants in India**

**Shoibal Chakravarty**, Ashoka Trust for Research in Ecology and the Environment; E. Somanathan, Indian Statistical Institute

**Committed But for How Long? On the Optimal Obligation Periods in Capacity Markets**

**Sylwia Bialek**, New York University; Burcin Unel, Institute for Policy Integrity, New York University

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**EGG-TIMERS: ENVIRONMENT AND BEHAVIOURAL ECONOMICS**

Room: Room 2.220

Chair: Prasenjit Banerjee, University of Manchester

**Does the observability of monitoring promote or hinder cooperation? Experimental evidence from sequential prisoners' dilemma games**

**Johannes Lohse**, University of Birmingham; Michalis Drouvelis, University of Birmingham; Johannes Jarke, University of Hamburg

**Energy Conservation "Nudges": Evidence from a Randomized Residential Field Experiment in the Philippines**

**Majah-Leah Ravago**, Ateneo de Manila University; Arlan Brucal, London School of Economics and Political Science (LSE); Nori Tarui, Dep. of Economics, University of Hawaii; Toshi Arimura, Waseda University

**The impact of communicating immediate emotions on the private provision of public goods: Field experimental evidence from the market of green crowdfunding**

**Anja Köbrich**, University of Kassel; Janosch Schobin, University of Kassel

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**EGG-TIMERS: NATURAL RESOURCE MODELLING**

Room: Room 2.219

Chair: Michael Finus, University of Graz

**Agglomeration and the Environment**

**Andri Brenner**, University of Potsdam, Berlin Brandenburg, MCC Berlin

**A Multi-Sector Multi-Region Macroeconomic Model for Germany -- An Application to the Coal Phase-Out in Germany**

**Christoph Schult**, Halle Institute for Economic Research; Oliver Holtemoeller, Halle Institute of

Economic Research; Katja Heinisch, Halle Institute for Economic Research

**National resource risks in a globalised world**

**Oliver Taherzadeh**, University of Cambridge

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**EGG-TIMERS: TRADE AND ENVIRONMENT**

Room: Room 3.204

Chair: Edward Manderson, University of Manchester, UK

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**ENVIRONMENTAL REGULATION AND EXPORT PERFORMANCE: EVIDENCE FROM THE U.S.**

**Zinnia Mukherjee**, Simmons University; Niloufer Sohrabji, Simmons University

**Environmental Provisions in Trade Agreements: Protectionism in Disguise?**

**Elisa Rottner**, Centre for European Economic Research; Miriam Frey, University of Bayreuth; Joschka Wanner, University of Bayreuth

**Non-Compliance with Environmental Product Standards in an International Duopoly**

Laura Birg, University of Göttingen; **Jan Voßwinkel**, Nürtingen Geislingen University

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**EGG-TIMERS: VALUATION I**

Room: Room 1.219

Chair: Michael Burton, University of Western Australia

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**Modeling household fuel choice and use: A multiple discrete-continuous choice framework**

**Aemiro Melkamu Daniel**, Center for Environmental and Resource Economics, Umeå University

**More in good condition or less in bad condition? Valence-based framing effects in the valuation of ecosystems' restoration**

**Michela Faccioli**, University of Exeter; Klaus Glenk, Scotland's Rural College; Christoph Schulze, Leibniz Centre for Agricultural Landscape Research (ZALF)

**Consequentiality, Elicitation Formats, and the Willingness-To-Pay for Green Electricity: Evidence from Germany**

**Marco Horvath**, RWI - Leibniz Institute for Economic Research; Manuel Frondel, Reinisch-Westfaelisches Institut fuer Wirtschaftsforschung; Mark Andor, RWI - Leibniz Institute for Economic Research

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**POSTER SESSION 1**

Room: Drum Area, G/F

**[1-1] Adoption of mitigation practices in agriculture: an application of the option value theory**

**Camille Tevenart**, INRA, France - Climate Economic Chair, France; Marc Baudry, University Paris 10, Climate economics chair; Edouard Civel, University Paris 10, Climate economics chair, Saint-Gobain research

**[1-2] Benefit-cost analyses of alternative Riparian Buffer Strip management scenarios in Denmark - will allowing for more flexible and targeted buffer strips be beneficial?**

**Soren Olsen**, University of Copenhagen; Kennet Uggeldahl, University of Copenhagen

**[1-3] Designing an EU Ship Recycling Licence: A Roadmap**

**Jean-Philippe Nicolai**, ETH Zurich; Caroline Devaux, University of Nantes, Maritime and Oceanic Law Cent

**[1-4] Economic and Environmental Impacts of Raising Revenues for Climate Finance from Public Sources**

**Jan Schneider**, ETH Zürich; Christoph Böhringer, University of Oldenburg; Marco Springmann, University of Oxford

**[1-5] Energy-related financial literacy and bounded rationality in appliance replacement attitudes: Evidence from Nepal**

Massimo Filippini, ETH Zurich, Centre for Energy Policy and Economics (CEPE); **Nilkanth Kumar**, ETH Zurich; Suchita Srinivasan, ETH Zurich

**[1-6] How reliable are empirical studies on economic preferences with student samples? An analysis on the basis of large-scale data**

**Amantia Simixhiu**, University of Kassel; **Andreas Ziegler**, University of Kassel

**[1-7] Managing a Spatial Externality of RES Development: Uniformity vs. Differentiated Regulation**

**Charlotte Geiger**, Leipzig University; **Paul Lehmann**, Leipzig University

**[1-8] On the relationship between consumption and CO2 emissions: the case of Portugal**

**José Belbute**, University of Évora

**[1-9] Photovoltaic self-consumption is now profitable in Spain: effects of the new regulation on prosumers' internal rate of return**

**Javier López Prol**, Uni. Graz; **Karl Steininger**, University of Graz

**[1-10] Policy congruence on nuclear power between citizens and policy makers**

**Piia Remes**, VATT Institute for Economic Research; **Anni Huhtala**, VATT Institute for Economic Research

**[1-11] Time Rebound Effect in Households' Energy Use: Theory and Evidence**

**Kenichi Mizobuchi**, Matsuyama University; **Hiroaki Yamagami**, Faculty of Economics, Seikei University

Lunch

Thursday, 12.45-14.00

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- \* EAERE Country Reps Meeting – Room 2.217
  - \* EAERE-POC Meeting – Room 3.213
  - \* Journal Board Meeting REE – Room 4.214 (12:15 – 14:00)

\* - by invitation only

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PARALLEL SESSION 2  
THU 14:00-15:45



**THEMATIC SESSION: CARBON MARKETS AND COMPETITIVENESS**

Room: Room 1.219

Organizer(s): Raphael Calel, Georgetown University  
 Chair: Raphael Calel, Georgetown University

Will large-scale carbon market regulations ultimately hurt or help domestic industries? This question has been subject to heated debate preceding every attempt to design and implement carbon markets, but rigorous and comprehensive empirical evidence has long been sorely lacking. This session will bring together three new papers from around the world that jointly represent state-of-the-art empirical research aimed at answering this question, respectively examining the effects of the EU's Emissions Trading System, of China's seven pilot trading programs, and California's AB-32 program.

**China's ETS Improves Firms' Competitiveness**

Jingbo Cui, Wuhan University; Junjie Zhang, Duke University; **Yang Zheng**, London School of Economics and Political Science

**Profit or Perish? The European carbon market's effects on firm competitiveness**

**Raphael Calel**, Georgetown University; Antoine Dechezlepretre, London School of Economics

**Incomplete Regulation, Output-Based Allocation, and Firm Behavior: Evidence from California's GHG Market**

**Matthew Zaragoza-Watkins**, Vanderbilt University

**THEMATIC SESSION: THE POTENTIAL AND OBSTACLES FOR WATER QUALITY TRADING SCHEMES**

Room: Room 2.220

Organizer(s): Berit Hasler, Aarhus University; Mette Termansen, Copenhagen University  
 Chair: Berit Hasler, Aarhus University

Nitrogen runoff from agriculture is widely recognised to cause significant adverse impacts on water quality in freshwater and marine systems. Large heterogeneities in costs of abatement across polluters present opportunities for implementing economic instruments for water quality management. One such instrument is a water quality trading scheme, which has been proposed as a cost-effective policy mechanism with reliable target achievement. However, despite these efficiency gains promised by water quality trading, few schemes have been implemented in practice and even fewer successes have been reported. This session will discuss the current understanding of the economic potential of trading schemes for improving water quality, consider the obstacles which typically prevent that potential from being realized, and illustrate the application of different modelling approaches for evaluating potential solutions to these problems. The different modelling approaches include a "smart market" approach, a contingent behavior approach, and an analysis of stakeholders' perceptions of trading highlighting potential explanations for the lack of trading schemes in this policy area. The session contributes to the discussion of both potentials and barriers of trading as an instrument to regulate agricultural non-point pollution.

**Tradeable nitrogen abatement practices for diffuse agricultural emissions: A 'smart market' approach.**

Jim Smart, Griffith University; Syezlin Hasan, Australian Rivers Institute, Griffith University, Brisbane, Australia; **Mette Termansen**, Copenhagen University; Berit Hasler, Aarhus University; Line Block Hansen, Secretariat of the Danish Economic Councils

**The potential for nitrogen abatement trading in agriculture: A hypothetical market experiment**

**Line Block Hansen**, Secretariat of the Danish Economic Councils; Mette Termansen, Copenhagen University; Berit Hasler, Aarhus University

**Which type of policy instrument do citizens and experts prefer? A choice experiment on Swedish marine and water policy**

Katarina Elofsson, Södertörn University; **Claes Ek**, University of Gothenburg; Carl-Johan Lagerkvist,

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**POLICY SESSION: ECONOMICS OF THE SUSTAINABLE DEVELOPMENT GOALS**

Room: Lecture Theatre A

Organizer(s): Edward B. Barbier, Colorado State University, EAERE Country Representative  
Chair: Edward B. Barbier, Colorado State University, EAERE Country Representative

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In 2015, the General Assembly of the United Nations (UN) formally adopted the Sustainable Development Goals as its 2030 agenda for sustainable development (UN 2015). There are 17 SDGs, which currently comprise 169 targets and 230 indicators. Since the SDGs aim to achieve a combination of economic development, environmental sustainability, and social inclusion they must embrace a wide range of targets and indicators. It has also been stressed that the interlinkages and integrated nature of the SDGs are critical to attaining sustainable development (UN 2018). To date, very few assessments of the SDGs have occurred in environmental and resource economics. The purpose of this session is to bring together three papers that explore economic approaches to assessing progress in attaining these SDGs, through the application of concepts and methods in environmental and resource economics, and thereby show how environmental and resource economics can inform and improve assessment of progress in attaining the 17 Sustainable Development Goals.

Panelist(s): Anil Markandya, BC3 Basque Centre for Climate Change, University of Bath;  
Julie Rozenberg, World Bank;  
Edward B. Barbier, Colorado State University, EAERE Country Representative;  
Michael Hanemann, Arizona State University;  
Joanne Burgess, Colorado State University

**The Role of Natural Capital in Meeting the SDGs**

Anil Markandya, BC3 Basque Centre for Climate Change, University of Bath

**Beyond the Gap: How countries can afford the infrastructure-related SDGs while protecting the planet**

Julie Rozenberg, World Bank; Marianne Fay, World Bank

**Sustainable Development Goal Indicators: Analyzing Trade-offs and Complementarities**

Edward B. Barbier, Colorado State University, EAERE Country Representative; Joanne Burgess, Colorado State University

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**POLICY SESSION: THE EUROPEAN COMMISSION'S LONG-TERM STRATEGY FOR A CLIMATE-NEUTRAL EUROPE BY 2050**

Room: Room 1.218

Organizer(s): Thomas Stoerk, European Commission; LSE  
Chair: Thomas Stoerk, European Commission; LSE

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In November 2018 the European Commission announced its long-term strategy for a climate neutral Europe by 2050, based on detailed modelling of pathways to support its strategy to achieve net-zero climate emissions by 2050 compatible with the goal of limiting global warming to +1.5°C. This session will present the in-depth analysis supporting this strategy and discuss climate policies to achieve this strategy and how they relate to EU institutions.

Panelist(s): Pantelis Capros, National Technical University of Athens;  
Frank Convery, University College Dublin and Envecon;  
Michel den Elzen, PBL Netherlands Environmental Assessment Agency;  
Simon Dietz, LSE

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**CHOICE MODELLING - METHODOLOGICAL ADVANCES**

Room: Room 4.204

Chair: Michael Burton, University of Western Australia

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**Assessing willingness to pay estimates in misspecified mixed logit models**

Daniel Engler, University of Kassel; Andreas Ziegler, University of Kassel

Discussant: Wiktor Budziński, University of Warsaw

### **Misspecification of preference heterogeneity structure in hybrid choice models**

**Wiktor Budziński**, University of Warsaw

Discussant: Johane Dikgang, University of Johannesburg

### **The link between response time and choices in choice experiments**

**Johane Dikgang**, University of Johannesburg; Genius Murwirapachena, Durban University of Technology

Discussant: Michael Burton, University of Western Australia

### **Model in-variance when estimating random parameters with categorical variables**

**Michael Burton**, University of Western Australia

Discussant: Daniel Engler, University of Kassel

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## **CLIMATE CHANGE AND LABOUR MARKET EFFECTS**

Room: Room 4.213

Chair: Jules Schers, Energy Research Centre, University of Cape Town (South Africa); CIRED, Nogent-sur-Marne (France)

### **Labour supply in a warmer world: the impact of climate change on the global workforce**

**James Rising**, London School of Economics; Rachel Baker, Princeton University; Tamma Carleton, University of Chicago; Anthony D'Agostino, Mathematica Policy Research; Michael Delgado, Rhodium Group; Timothy Foreman, Columbia University; Michael Greenstone, University of Chicago; Trevor Houser, Rhodium Group; Solomon Hsiang, University of California, Berkeley; Andy Hultgren, University of California, Berkeley; Amir Jina, University of Chicago; Robert Kopp, Rutgers University; Kelly McCusker, Rhodium Group; Ishan Nash, University of Chicago; Matthew Pecenco, University of California, Berkeley; Ashwin Rode, University of Chicago; Justin Simcock, Rhodium Group; Jiacan Yuan, Rutgers University

Discussant: Francesco Vona, OFCE Sciences-Po

### **Climate Policies and Skill-Biased Employment Dynamics: evidence from EU countries**

**Francesco Vona**, OFCE Sciences-Po; Giovanni Marin, University of Urbino

Discussant: Chi Man Yip, University of Calgary

### **Labor Market Dynamics in Slumps: What, So What, and Now What?**

**Chi Man Yip**, University of Calgary

Discussant: Jules Schers, Energy Research Centre, University of Cape Town (South Africa); CIRED, Nogent-sur-Marne (France)

### **The impact of carbon tax revenue recycling on GDP and employment in South Africa**

**Jules Schers**, Energy Research Centre, University of Cape Town (South Africa); CIRED, Nogent-sur-Marne (France); Frédéric Gherzi, CIRED (AgroParisTech, CIRAD, CNRS, EHESS, Ecole des Ponts ParisTech, Université Paris-Saclay); Franck Lecocq, CIRED (AgroParisTech, CIRAD, CNRS, EHESS, Ecole des Ponts ParisTech, Université Paris-Saclay)

Discussant: James Rising, London School of Economics

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## **CLIMATE RISKS AND STRANDED ASSETS**

Room: Room 4.209

Chair: Frederick van der Ploeg, Dep. of Economics, University of Oxford

### **Disaster risks, disaster strikes, and economic growth: the role of preferences**

**Thomas Douenne**, Paris School of Economics

Discussant: Veronika Stolbova, ETH Zurich

### **Climate policy risks of the Euro Area: financial system and real economy**

**Veronika Stolbova**, ETH Zurich

Discussant: Anna Stünzi, ETH Zurich

### **The potential of clear policy announcements to reduce the risk of stranded assets for individuals**

**Anna Stünzi**, ETH Zurich

Discussant: Frederick van der Ploeg, Dep. of Economics, University of Oxford

## **Race to burn the last ton of carbon and the risk of stranded assets**

**Frederick van der Ploeg**, Dep. of Economics, University of Oxford

Discussant: Thomas Douenne, Paris School of Economics

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## **DISCOUNTING I**

Room: Room 4.205

Chair: Christian Gollier, Toulouse School of Economics

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### **Discounting, inclusive wealth and sustainability**

**Rintaro Yamaguchi**, National Institute for Environmental Studies

Discussant: Maria Arvaniti, ETH Zurich

### **Resource Management, Present Bias and Regime Shifts**

Chandrakiran Krishnamurthy, Swedish University of Agricultural Economics (SLU); **Maria Arvaniti**, ETH Zurich; Anne-Sophie Crepin, Beijer Institute of Ecological Economics, Stockholm

Discussant: Christian Gollier, Toulouse School of Economics

### **On the efficient growth rate of carbon price under a carbon budget**

**Christian Gollier**, Toulouse School of Economics

Discussant: Rintaro Yamaguchi, National Institute for Environmental Studies

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## **EMPIRICAL ANALYSIS OF FORESTRY I**

Room: Room 4.210

Chair: Derya Keles, Université de Lorraine, Université de Strasbourg, AgroParisTech, CNRS, INRA, BETA

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### **The impact of quality and quantity of urban green spaces on the level of life satisfaction: a case of Tokyo metropolitan area**

Ippei Aoshima, Kobe University; **Masayuki Sato**, Kobe University

Discussant: Luiza Martins Karpavicius, University of São Paulo

### **Malaria Incidence and Deforestation: Evidence from Pará, Brazil**

**Luiza Martins Karpavicius**, University of São Paulo; Ariaster Baumgratz Chimeli, University of São Paulo

Discussant: Shilei Liu, Peking University

### **Livelihood mushroomed: examining household level impacts of non-timber forest products (NTFPs) under new management regime in China's state forests**

**Shilei Liu**, Peking University

Discussant: Derya Keles, Université de Lorraine, Université de Strasbourg, AgroParisTech, CNRS, INRA, BETA

### **What Drives Size Reductions in Protected Areas? Evidence about PADD from the Brazilian Amazon**

**Derya Keles**, Université de Lorraine, Université de Strasbourg, AgroParisTech, CNRS, INRA, BETA;

Philippe Delacote, Université de Lorraine, AgroParisTech-INRA, Bureau d'Economie Théorique et

Appliqué (BETA); Alexander Pfaff, Duke University, Sanford School of Public Policy; Siyu Qin,

Biogeography Lab, Geography Department, Humboldt Universität zu Berlin; Michael Mascia,

Conservation International

Discussant: Masayuki Sato, Kobe University

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## **ENVIRONMENT AND DEVELOPMENT I**

Room: Room 3.204

Chair: Raimund Bleischwitz, UCL Institute for Sustainable Resources

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### **Rural population and environmental conservation in the Brazilian Amazon**

**Solène Masson**, PhD student Aix-Marseille University

Discussant: Shouro Dasgupta, Fondazione CMCC, Università Ca' Foscari Venezia, EIEE

### **Climate Change and Gender Pay Gap**

Soheil Shayegh, European Institute on Economy and the Environment (EIEE); **Shouro Dasgupta**,

Fondazione CMCC, Università Ca' Foscari Venezia, EIEE

Discussant: Zenebe Gebreegziabher, Mekelle University

### **Improved Biomass Cookstove Use in the Very Long Run: Results from a Field Experiment in Rural Ethiopia**

Alemu Mekonnen Getnet, Addis Ababa University; Abebe Damtie Beyene, Ethiopian Development Research Institute, Ethiopia; Randall Bluffstone, Portland State University; Sahan Dissanayake, Portland State University; **Zenebe Gebreegziabher**, Mekelle University; Daniel LaFave, Colby College; Peter Martinsson, University of Gothenburg; Michael Toman, World Bank  
Discussant: Raimund Bleischwitz, UCL Institute for Sustainable Resources

### **Technology shocks and the Prebisch-Singer hypothesis**

Vincenzo De Lipsis, University College London; Paolo Agnolucci, University College London; **Raimund Bleischwitz**, UCL Institute for Sustainable Resources  
Discussant: Solène Masson, PhD student Aix-Marseille University

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## **FISHERIES AND GAMES**

Room: Room 3.205

Chair: Stein Ivar Steinshamn, Norwegian School of Economics

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### **The Northeast Atlantic Mackerel Crisis**

**Frank Jensen**, University of Copenhagen; Jens Leth Hougaard, University of Copenhagen; Aleksanders Smilgis, Copenhagen Business School  
Discussant: Erik Ansink, VU University Amsterdam

### **Common pool resources: Is there support for conservationists?**

**Erik Ansink**, VU University Amsterdam; Hans-Peter Weikard, Wageningen University  
Discussant: Olli Tahvonen, University of Helsinki

### **Optimal and Markov-perfect Nash equilibrium in harvesting age-structured populations**

**Olli Tahvonen**, University of Helsinki; Martin Quaas, Leipzig University  
Discussant: Stein Ivar Steinshamn, Norwegian School of Economics

### **Three agents and three species on a common ground: A game-theoretic analysis**

**Stein Ivar Steinshamn**, Norwegian School of Economics; Nils-Arne Ekerhovd, Centre for Applied Research at NHH  
Discussant: Frank Jensen, University of Copenhagen

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## **INTERNATIONAL ENVIRONMENTAL AGREEMENTS I**

Room: Room 4.206

Chair: Eugenie Dugoua, London School of Economics

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### **Transboundary Pollution and Competitiveness Concerns in a Two-Country Differential Game**

Simone Marsiglio, University of Wollongong; **Nahid Masoudi**, Memorial University and School of Economics, Henan University  
Discussant: Hiroaki Sakamoto, Chiba University

### **Sober optimism and the formation of international environmental agreements**

**Hiroaki Sakamoto**, Chiba University; Larry Karp, UC Berkeley  
Discussant: Sylvaine Poret, INRA

### **Interactions between Nutritional and Climate Policies at the International Level**

**Sylvaine Poret**, INRA; Basak Bayramoglu, INRA, UMR Economie Publique  
Discussant: Eugenie Dugoua, London School of Economics

### **International Environmental Agreements and Directed Technological Change: Evidence from the Ozone Regime**

**Eugenie Dugoua**, London School of Economics  
Discussant: Nahid Masoudi, Memorial University and School of Economics, Henan University

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## **MARKET-BASED INSTRUMENTS AND EXPERIMENTS**

Room: Room 2.219

Chair: Zhi Li, Xiamen University

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### **Spatial Coordination and Joint Bidding in Conservation Auctions**

**Frans de Vries**, University of Stirling; Simanti Banerjee, University of Nebraska-Lincoln; Timothy Cason, Purdue University; Nick Hanley, University of Glasgow

Discussant: Ben Balmford, University of Exeter Business School

**Efficiency gains offered by endogenous individual-level monitoring in pollution regulation**

**Ben Balmford**, University of Exeter Business School; Brett Day, University of Exeter; Greg Smith, University of Exeter; Amy Binner, University of Exeter; Ian Bateman, University of East Anglia

Discussant: Lidia Vidal Meliá, Universitat Jaume I

**Dynamic efficiency in experimental emission permits under imperfect compliance**

**Lidia Vidal Meliá**, Universitat Jaume I; Carmen Arguedas, Universidad Autónoma de Madrid; Eva Camacho-Cuena, Universitat Jaume I; José Luís Zoffo, Universidad Autónoma de Madrid

Discussant: Zhi Li, Xiamen University

**Supporting Private Provision of Ecosystem Services through Contracts: Experimental Evidence for Multi-Unit Threshold Public Goods**

**Zhi Li**, Xiamen University; Pengfei Liu, University of Arkansas at Pine Bluff; Stephen Swallow, University of Connecticut

Discussant: Frans de Vries, University of Stirling

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**POLICY INSTRUMENTS FOR ENERGY TRANSITION I**

Room: Room 2.218

Chair: Guy Meunier, INRA

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**Why renewable energy policies can reverse the green paradox**

**Samuel Okullo**, Potsdam Institute for Climate Impact Research; Marjan Hofkes, Department of Economics, Vrije Universiteit Amsterdam, The Netherlands; Frederic Reynes, OFCE Sciences Po's Economic Research Centre

Discussant: Alexander Marbler, University of Graz

**How to overcome the energy transition gap at the local level. A game-theoretic analysis with heterogeneous environmental preferences across households**

**Alexander Marbler**, University of Graz; Birgit Bednar-Friedl, University of Graz

Discussant: Jan-Niklas Meier, University of Leipzig

**Federal regulation of renewable energy expansion: Allocating competences and policy instruments to government levels**

**Jan-Niklas Meier**, University of Leipzig; Paul Lehmann, Leipzig University

Discussant: Guy Meunier, INRA

**Why conditional subsidies for risky innovative green projects should be preferred to flat subsidies**

**Guy Meunier**, INRA

Discussant: Samuel Okullo, Potsdam Institute for Climate Impact Research

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**RENEWABLE ENERGY - ELECTRICITY MARKET I**

Room: Room 3.212

Chair: Andreas Ziegler, University of Kassel

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**The increasing cost of ignoring Coase: inefficient electricity tariffs, welfare loss and distributed energy resources**

**Niall Farrell**, Potsdam Institute for Climate Impact Research

Discussant: Mirjam Kosch, ZHAW - Zurich University of Applied Sciences and ETH Zurich

**Emissions Impacts of Overlapping Regulation: Interactions of Renewable Energy Promotion and Carbon Pricing**

**Mirjam Kosch**, ZHAW - Zurich University of Applied Sciences and ETH Zurich; Jan Abrell, ZHAW - Zurich University of Applied Sciences

Discussant: Jakob Mayer, University of Graz

**Costs or benefits? Assessing the economy-wide effects of the electricity sector's low carbon transition - The role of capital costs, divergent risk perceptions and premiums**

Gabriel Bachner, University of Graz; **Jakob Mayer**, University of Graz; Karl Steininger, University of Graz

Discussant: Andreas Ziegler, University of Kassel

**Heterogeneous preferences and the individual change to alternative electricity contracts**

**Andreas Ziegler**, University of Kassel

Discussant: Niall Farrell, Potsdam Institute for Climate Impact Research

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**RESIDENTIAL ENERGY DEMAND**

Room: Room 4.211

Chair: Marta Talevi, London School of Economics

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**Electrification and Cooking Fuel Choice in Rural India**

**Ridhima Gupta**, IISER Bhopal; Martino Pelli, University of Sherbrooke

Discussant: Anna Risch, GAEL - Université Grenoble Alpes

**Energy efficiency renovation housing tenure status: rebound effect and preferences for thermal comfort**

**Anna Risch**, GAEL - Université Grenoble Alpes; Dorothée CHARLIER, Université Savoie Mont Blanc

Discussant: Maria Grazia Pazienza, Università di Firenze

**WHEN I WAS YOUR AGE... POPULATION DYNAMICS AND HOUSEHOLD ENERGY CONSUMPTION**

**Maria Grazia Pazienza**, Università di Firenze; Rossella Bardazzi, università di firenze

Discussant: Marta Talevi, London School of Economics

**Output-based incentives for residential solar PV: Demand responsiveness, cost-effectiveness, and alternative policy scenarios**

**Marta Talevi**, London School of Economics

Discussant: Ridhima Gupta, IISER Bhopal

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**TRADE AND ENVIRONMENT I**

Room: Room 4.212

Chair: Knut Einar Rosendahl, Norwegian University of Life Science (NMBU)

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**Climate policy design and the competitiveness of the French Industry**

**Gaëlle Le Treut**, CIREN / COPPE

Discussant: Gabriele Standardi, CMCC

**Exploring market adaptation to climate change in a general equilibrium global trade model**

**Gabriele Standardi**, CMCC

Discussant: Noha Elboghhdady, University of Bath

**Strategic Climate Policies with Endogenous Plant Location: The Role of Border Carbon Adjustments**

**Noha Elboghhdady**, University of Bath; Michael Finus, University of Graz

Discussant: Knut Einar Rosendahl, Norwegian University of Life Science (NMBU)

**Smart hedging against carbon leakage**

Christoph Böhringer, University of Oldenburg; **Knut Einar Rosendahl**, Norwegian University of Life Science (NMBU); Halvor Briseid Storrøsten, Statistics Norway

Discussant: Gaëlle Le Treut, CIREN / COPPE

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**TRANSPORTATION I**

Room: Room 3.211

Chair: Efthymia Kyriakopoulou, Swedish University of Agricultural Sciences

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**Cost to car owners of the EU's 2050 targets for CO2 emission reduction from the transport sector**

**Abenezer Zeleke Aklilu**, Sodertorn University; Ing-Marie Gren, Swedish University of Agricultural Sciences

Discussant: Florian Landis, ETH Zürich

**Policy Instrument Choice with Co-Benefits: The Case of Decarbonizing Transport**

**Florian Landis**, ETH Zürich; Sebastian Rausch, ETH Zurich

Discussant: Sumeet Gulati, University of British Columbia

**Estimating the Fuel-tax Elasticity of Vehicle Miles Travelled from Aggregate Data**

**Sumeet Gulati**, University of British Columbia; Werner Antweiler, University of British Columbia  
Discussant: Efthymia Kyriakopoulou, Swedish University of Agricultural Sciences

**Local Pollution, Commuting and the Internal Structure of Cities**

**Efthymia Kyriakopoulou**, Swedish University of Agricultural Sciences; Pierre Picard, University of Luxembourg

Discussant: Abenezzer Zeleke Aklilu, Sodertorn University

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**UNINTENDED CONSEQUENCES AND SPILLOVERS**

Room: Room 3.210

Chair: Tereza Palanská, Charles University

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**Lease Splitting and Dirty Entrants: The Unintended Deforestation Consequences of India's Environmental Clearance Process Reform**

**Anca Claudia Balietti**, University of Heidelberg; Anant Sudarshan, University of Chicago; Rohini Pande, Harvard University; Kevin Rowe, Harvard University; Lucy Page, Massachusetts Institute of Technology

Discussant: Timo Hener, Aarhus University

**Noise Pollution and Violent Crime**

**Timo Hener**, Aarhus University

Discussant: Karel Janda, Charles Uni

**Food versus fuel: An expanded evidence on commodities price co-movement**

**Karel Janda**, Charles Uni; Ladislav Kristoufek, Charles University and UTIA; David Zilberman, UC Berkeley

Discussant: Tereza Palanská, Charles University

**Measurement of volatility spillovers and asymmetric connectedness on commodity and equity markets**

**Tereza Palanská**, Charles University

Discussant: Anca Claudia Balietti, University of Heidelberg

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Coffee break

Thursday, 15.45-16.15



PARALLEL SESSION 3  
THU 16:15-18:00

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**THEMATIC SESSION: RESIDENTIAL ENERGY EFFICIENCY:  
EVALUATION OF POLICY INSTRUMENTS**

Room: Room 1.219

Organizer(s): Andreas Gerster, University of Mannheim

Chair: Andreas Gerster, University of Mannheim

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The low tendency of consumers to invest in seemingly cost-effective energy efficiency technologies, commonly referred to as the “energy efficiency gap” has long been a puzzle in environmental economics. A plethora of factors have been proposed to explain that gap, ranging from market failures through information asymmetries and split incentives to bounded rationality of consumers. By exacerbating problems of environmental pollution and climate change, the energy efficiency gap has motivated the implementation of an array of policies throughout Europe. Such policies typically employ price instruments, such as energy taxes and investment subsidies, or information instruments, such as consumption feedback. While price instruments are favourable from an efficiency perspective, their distributional implications can stir massive protests, as the current “gilets jaunes” protests in France demonstrate. By contrast, information instruments promise to gently “nudge” consumers towards more sustainable behaviours and investments and have become particularly relevant as digitalization progresses. Yet, the required infrastructure, such as smart meters, is costly and consumers are reluctant to pay for it, partly because evidence on potential savings is scarce. This thematic session will present complementary ways of evaluating energy efficiency policies in the residential sector: field experiments, quasi-experimental approaches, and integrated energy-economy modelling. The contributions share a common perspective and offer evidence on the effectiveness of central energy efficiency policies in France, Germany, and the U.S.

**Long-term efficiency and distributional impacts of energy saving policies in the French residential sector**
**Louis-Gaetan Giraudet**, Ecole des Ponts ParisTech, CIREN; Cyril Bourgeois, CIREN; Philippe Quirion, CIREN / CNRS

**Do Energy Efficiency Standards Hurt Consumers? Evidence from Household Appliance Sales**
**Arlan Brucal**, London School of Economics and Political Science (LSE); Michael Roberts, Department of Economics, University of Hawaii at Manoa

**Disaggregated Consumption Feedback and Energy Conservation – Evidence from a Randomized Controlled Trial**
**Andreas Gerster**, University of Mannheim; Mark Andor, RWI - Leibniz Institute for Economic Research; Lorenz Götte, University of Bonn

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**THEMATIC SESSION: THE ECONOMICS IMPACTS OF AIR  
POLLUTION IN CHINA**

Room: Lecture Theatre A

Organizer(s): Min Wang, Peking University

Chair: Shuai Chen, Zhejiang University

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The papers in this thematic session focus on the impacts of air pollution (or climate change) on health and population migration in China. They are all impact analysis papers and jointly provide a picture of the costs of the severe air pollution in China, but are of relevance to pollution problems in developing countries more generally. The papers examine a number of impacts of air pollution. First the session studies contemporaneous and medium-run effects of air pollution on morbidity and medical expenditure. Second, the session also considers temperature effects on mortality and the attempts to mitigate such effects through heating and air conditioning, showing important differences between urban and rural populations. Third the session analyses the extent to which people try to avoid air pollution by travelling between cities.

**Flights to safety: Evidence of Chinese residents fleeing air pollution via air travels**
**Shuai Chen**, Zhejiang University; Yuyu Chen, Peking University; Ziteng Lei, University of California-Santa Barbara; Jie-Sheng Tan-Soo, National University of Singapore

**Temperature Effects on Mortality and Household Adaptation: Evidence from China**  
Xiumei Yu, Peking University; Xiaoyan Lei, Peking University; Min Wang, Peking University

**The Impact of Air Pollution on Morbidity and Medical Expenditure: Analysis Based on Records of Basic Medical Insurance of Beijing**

Fan Xia, National School of Development, Peking University; Jianwei Xing, National School of Development, Peking University; Jintao Xu, National School of Development, Peking University; Xiaochuan Pan, School of Public Health, Peking University

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**POLICY SESSION: THE ROLE OF NATURAL CAPITAL ACCOUNTING IN INFORMING POLICY-MAKING AND ENVIRONMENTAL GOVERNANCE**

Room: Room 2.220

Organizer(s): Silvia Ferrini, Department of Political Science and International, University of Siena and Centre for Social and Economic Research on the Global Environment, University of East Anglia; Marije Schaafsma, University of Southampton; Gaetano Grilli, CEFAS

Chair: Marije Schaafsma, University of Southampton

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Natural Capital Accounting (NCA) frameworks aim to integrate the contribution of environmental non-market goods and services to national wealth in standard National Accounts. Different accounting methods are developing rapidly, with significant contributions from environmental and resource economics, but there are no internationally agreed upon methods. The System of Environmental-Economic Accounting (SEEA) has emerged as a leading tool, and is undergoing revision to reconcile the different priorities and economic accounting system of different countries. However there are significant challenges: conceptual differences, practical problems for standardising data, differences between national needs and needs at local level or applications outside the public sector, and misleading interpretations of NCA results. This session will reflect on progress made so far, hurdles still to be overcome and the potential contribution of environmental and resource economists.

Panelist(s): Martin Lok, Natural Capital Coalition;  
Alessandra La Notte, European Commission Joint Research Centre;  
Tim Sunderland, Natural England, UK Government;  
Kerry Turner, University of East Anglia

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**POLICY SESSION: THE ROLE OF TECHNOLOGIES IN MEETING CLIMATE TARGETS**

Room: Room 1.218

Organizer(s): Elena Verdolini, RFF-CMCC European Institute on Economics and the Environment

Chair: Yeong Jae Kim, RFF-CMCC European Institute on Economics and the Environment

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The aim of this policy session is to promote debate and exchange of ideas about the crucial role that technology innovation, development and diffusion play with respect to the achievement of climate targets. Innovation and diffusion of low carbon technologies has increased the penetration of solar, wind and hydro power by a factor of 3.5 between 1980 and 2017. Yet the distribution of renewable energy technologies is very different across countries and across many energy-intensive and hard-to-decarbonise sectors. To tackle this will require policy makers to consider important bottlenecks as well enabling factors which characterise low-carbon technologies, and this will be the focus of this policy session.

Panelist(s): Roger Cooke, Resources for the Future and the University of Strathclyde;  
Carolyn Fischer, Resources for the Future;  
Thomas Sterner, University of Gothenburg;  
Yeong Jae Kim, RFF-CMCC European Institute on Economics and the Environment

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**CLIMATE CHANGE AND ADAPTATION IN AGRICULTURE**

Room: Room 4.213

Chair: Manuela Coromaldi, University of Rome "Niccolò Cusano"

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**Climate Change and Adaptation in Agriculture: Evidence from US Cropping Patterns**

Xiaomeng Cui, Jinan University

Discussant: Alistair Munro, National Graduate Institute for Policy Studies

**Getting warmer? Getting colder: using experimental evidence from a Kenyan panel to test for the reliability of reported perceptions of climate change and adaptation.**

**Alistair Munro**, National Graduate Institute for Policy Studies  
Discussant: Ajaz Ahmed, Durham University Business School

**Farm Household Weather Change Perceptions and Flood Adaptations in the Northern Pakistan**

**Ajaz Ahmed**, Durham University Business School; Ashar Aftab, Durham University Business School  
Discussant: Manuela Coromaldi, University of Rome "Niccolò Cusano"

**Crop and income diversity as adaptation strategies to cope with climate change: insights from Uganda panel data.**

Chiara Antonelli, University of Rome Tor Vergata; **Manuela Coromaldi**, University of Rome "Niccolò Cusano"; Giacomo Pallante, ENEA - Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile  
Discussant: Xiaomeng Cui, Jinan University

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**CLIMATE CHANGE AND COALITION**

Room: Room 4.211

Chair: Adam Lampert, Arizona State University

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**Strategic Environmental Policy and International Market Share Rivalry under Differentiated Bertrand Oligopoly**

**Shiva Sikdar**, Keele University; Harvey Lapan, Iowa State University  
Discussant: Thomas Kuhn, TU-Chemnitz

**Endogenous Climate Coalitions and Free Trade - Building the Missing Link**

Radomir Pestow, TU-Chemnitz; **Thomas Kuhn**, TU-Chemnitz; Anja Zenker, TU-Chemnitz  
Discussant: Wilfried Rickels, Kiel Institute for the World Economy

**Turning the Global Thermostat—Who, When, and How Much?**

**Wilfried Rickels**, Kiel Institute for the World Economy; Martin Quaas, Leipzig University; Juan Moreno-Cruz, University of Waterloo; Sjak Smulders, Tilburg University; Kate Ricke, University of California, San Diego; Johannes Quaas, University of Leipzig  
Discussant: Adam Lampert, Arizona State University

**When establishing a common environmental project, countries that benefit less may need to contribute more**

**Adam Lampert**, Arizona State University  
Discussant: Shiva Sikdar, Keele University

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**DISTRIBUTIONAL EFFECTS OF ENERGY REGULATION**

Room: Room 3.212

Chair: Lutz Sager, London School of Economics

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**Burdening the Poor with the Cost of Cleaner Fuel? -- Effect Analysis of a Mandatory Household Energy Transition in China on Energy Poverty**

**Lunyu Xie**, Renmin University of China; Xian Hu, Renmin University of China  
Discussant: Jing Cao, tsinghua university

**Who bears the costs of environmental regulations on energy use? Evidence from an energy saving program in China**

**Jing Cao**, tsinghua university; Shanjun Li, Cornell University; Rong Ma, Tsinghua University  
Discussant: Nicolai Kuminoff, Arizona State University

**Is There a Pollution-Poverty Trap for Seniors?**

Sophie Mathes, Arizona State University; **Nicolai Kuminoff**, Arizona State University; Jonathan Ketcham, Arizona State University  
Discussant: Lutz Sager, London School of Economics

**The Global Consumer Incidence of Carbon Pricing: Evidence from Trade**

**Lutz Sager**, London School of Economics  
Discussant: Lunyu Xie, Renmin University of China

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**EMISSIONS TRADING SCHEMES I**

Room: Room 2.219

Chair: Misato Sato, London School of Economics

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**Barriers to Trading in the EU-ETS: a Theoretical and Empirical Appraisal****Anouk Faure**, University Paris-Nanterre Climate Economics Chair; Simon Quemin, London School of Economics; Marc Baudry, University Paris Nanterre

Discussant: Claire Gavard, ZEW - Leibniz Centre for European Economic Research

**Impact of International Carbon Credits on the Price Volatility and Return in the European Emissions Trading Scheme****Claire Gavard**, ZEW - Leibniz Centre for European Economic Research; Djamel Kirat, University of Orléans, CNRS, LEO, FRE 2014

Discussant: Ruediger Pethig, Universitaet Siegen

**Phase-out of 'coal to power' in an ETS****Ruediger Pethig**, Universitaet Siegen; Thomas Eichner, FernUniversit

Discussant: Misato Sato, London School of Economics

**Benchmark design for emissions markets****Misato Sato**, London School of Economics; Vera Zipperer, DIW Berlin; Karsten Neuhoff, DIW Berlin

Discussant: Anouk Faure, University Paris-Nanterre Climate Economics Chair

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**EMPIRICAL ANALYSIS OF NATURAL DISASTERS I**

Room: Room 4.206

Chair: Paul Lohmann, University of Cambridge

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**The impact of wildfires on the recreational value of heathland: a discrete factors approach with recreation demand data from an on-site sample****Anne Nobel**, Hasselt University

Discussant: Paul Hudson, University of Potsdam

**AN EVALUATION AND MONETARY ASSESSMENT OF THE IMPACT OF FLOODING ON SUBJECTIVE WELL-BEING IN FRANCE VIETNAM****Paul Hudson**, University of Potsdam

Discussant: Saul Basurto Hernandez, Vrije Universiteit Amsterdam

**The effects of climate change on crop and livestock choices****Saul Basurto Hernandez**, Vrije Universiteit Amsterdam; David Maddison, University of Birmingham

Discussant: Paul Lohmann, University of Cambridge

**Does Heat Wave Experience raise Concern about Climate Change? Causal Evidence from the July 2013 Heat Wave.****Paul Lohmann**, University of Cambridge; Andreas Kontoleon, University of Cambridge

Discussant: Anne Nobel, Hasselt University

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**ENERGY DEMAND AND EFFICIENCY II**

Room: Room 2.218

Chair: Lukas Tomberg, RWI - Leibniz Institute for Economic Research, Ruhr Graduate School in Economics

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**An Empirical Study of Tokyo Emission Trading Scheme: An Expost Analysis of Emissions from Commercial Buildings****Tatsuya Abe**, Graduate School of Economics, Waseda University; Toshihide Arimura, Faculty of Political Science and Economics Research Institute for Environmental Economics and Management (RIEEM), Waseda University

Discussant: Jonathan Stråle, Swedish University of Agricultural Sciences

**The Income Elasticity of Leisure Air Travel: a Censored Quantile Regression Approach****Jonathan Stråle**, Swedish University of Agricultural Sciences

Discussant: Quentin Coutellier, Imperial College Business School

**Making smart meters smarter the smart way**

Mirabelle Muuls, Imperial College Business School; Ralf Martin, Imperial College Business School; Greer Gosnell, LSE; **Quentin Coutellier**, Imperial College Business School

Discussant: Lukas Tomberg, RWI – Leibniz Institute for Economic Research, Ruhr Graduate School in Economics

**WTA-WTP Disparity: The Role of Perceived Realism of the Valuation Setting**

**Lukas Tomberg**, RWI – Leibniz Institute for Economic Research, Ruhr Graduate School in Economics; Stephan Sommer, RWI – Leibniz Institute for Economic Research; Manuel Frondel, RWI – Leibniz Institute for Economic Research

Discussant: Tatsuya Abe, Graduate School of Economics, Waseda University

**ENVIRONMENT AND BEHAVIOURAL ECONOMICS I**

Room: Room 4.204

Chair: Katharina Momsen, University of Innsbruck

**Reducing Air Pollution through Behavioral Change of Wood-Stove Users: Evidence from an RCT in Valdivia, Chile**

**Cristobal Ruiz-Tagle**, Environmental Defense Fund; Alejandra Schueftan, Instituto Nacional Forestal

Discussant: Maria Naranjo, Wageningen University & Research (WUR)

**Testing conditional cooperation: Local participation of farmers in agricultural cooperatives**

**Maria Naranjo**, Wageningen University & Research (WUR); Peter Martinsson, University of Gothenburg; Francisco Alpizar, Tropical Agricultural Research and Higher Education Center (CATIE)

Discussant: Astrid Dannenberg, University of Kassel

**Status for the Good Guys: A Natural Field Experiment on Climate Charity**

**Astrid Dannenberg**, University of Kassel; Olof Johansson Stenman, University of Gothenburg; Heike Wetzell, University of Kassel

Discussant: Katharina Momsen, University of Innsbruck

**When do people exploit moral wiggle room? - An experimental analysis in a market setup**

**Katharina Momsen**, University of Innsbruck; Markus Ohndorf, University of Innsbruck

Discussant: Cristobal Ruiz-Tagle, Environmental Defense Fund

**HUMAN CAPITAL AND CLIMATE CHANGE**

Room: Room 4.205

Chair: Nicole Wagner, German Institute for Economic Research (DIW Berlin)

**Has the Weather Got You Down? The Impact of Temperature on Mental Health**

**Susana Ferreira**, The University of Georgia; Mengyao Li, The University of Georgia; Travis Smith, The University of Georgia

Discussant: Yun Qiu, Jinan University

**Too hot to focus: The mean and distributional effects of heat on labor productivity**

**Yun Qiu**, Jinan University; Jinhua Zhao, Michigan State University

Discussant: Nikolai Cook, University of Ottawa

**Brain Freeze: How Cold Affected Performance on Over a Million Exams**

**Nikolai Cook**, University of Ottawa; Anthony Heyes, University of Ottawa

Discussant: Nicole Wagner, German Institute for Economic Research (DIW Berlin)

**Fracking and Health-Related Absenteeism of Employees**

**Nicole Wagner**, German Institute for Economic Research (DIW Berlin); Luis Sarmiento, German Institute of Economic Research / TU Berlin

Discussant: Susana Ferreira, The University of Georgia

**MACROECONOMIC MODELLING OF CLIMATE CHANGE**

Room: Room 4.209

Chair: Felix Meier, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig

**Modelling the Green Knowledge Production Function with Fiscal Shocks by a Latent Group Structures for OECD countries**

Saptorshee Chakraborty, University of Ferrara; **Massimiliano Mazzanti**, University of Ferrara

Discussant: Pim Heijnen, University of Groningen

**Reversible environmental catastrophes with disconnected generations**

**Pim Heijnen**, University of Groningen; Ben Heijdra, University of Groningen

Discussant: Mouez Fodha, University Paris 1 Pantheon-Sorbonne

**Pollution in a globalized world: Is the decrease of debt in developing countries a solution?**

**Mouez Fodha**, University Paris 1 Pantheon-Sorbonne; Marion Davin, CEE-M, Univ Montpellier, CNRS, INRA, SupAgro (Montpellier, France); Thomas Seegmuller, Aix-Marseille School of Economics, AMSE

Discussant: Felix Meier, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig

**Solar Geoengineering in a Regionalized Climate Economy**

**Felix Meier**, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig; Christian Traeger, University of Oslo

Discussant: Massimiliano Mazzanti, University of Ferrara

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**OPTIMAL POLICY**

Room: Room 3.210

Chair: Eduardo Souza-Rodrigues, University of Toronto

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**OPTIMAL POLLUTION TAXATION, INCOME REDISTRIBUTION, AND THE NEED FOR EDUCATION SUBSIDIES**

**Diane Aubert**, ETH Zurich; Frederick van der Ploeg, Dep. of Economics, University of Oxford

Discussant: Henriët Fanny, PSE

**On the Socially Optimal Nitrogen and Phosphorus Management in Spring Crop Cultivation**

**Matti Sihvonen**, University of Helsinki; Elena Valkama, LUKE; Kari Hyytiäinen, University of Helsinki

Discussant: Diane Aubert, ETH Zurich

**The principle of targeting in the presence of local externalities**

**Henriët Fanny**, PSE; Stéphane Gauthier, PSE - univ Paris1

Discussant: Eduardo Souza-Rodrigues, University of Toronto

**Optimal Environmental Targeting in the Amazon Rainforest**

**Eduardo Souza-Rodrigues**, University of Toronto; Robert McMillan, University of Toronto; Juliano Assuncao, PUC-Rio and CPI; Joshua Murphy, Natural Resources Canada

Discussant: Matti Sihvonen, University of Helsinki

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**SOLAR AND BIOENERGY**

Room: Room 4.210

Chair: Ruth Delzeit, Kiel Institute for the World Economy

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**Solar Initiatives in the Sunshine State**

**Ritika Khurana**, West Virginia University; Levan Elbakidze, Associate Professor, WVU; Joshua Hall, west virginia university

Discussant: Stefan Pollinger, Toulouse School of Economics

**The Kinks Know More on a Sunny Afternoon: A Solar Energy Policy Evaluation Beyond Bunching**

**Stefan Pollinger**, Toulouse School of Economics

Discussant: Hongbo Duan, University of Chinese Academy of Sciences

**Multi-renewable management: interactions between wind and solar within uncertain technology ecological system**

**Hongbo Duan**, University of Chinese Academy of Sciences

Discussant: Ruth Delzeit, Kiel Institute for the World Economy

**Scenarios for an impact assessment of bioeconomy strategies: results from a co-design process**

**Ruth Delzeit**, Kiel Institute for the World Economy; Tobias Heimann, Kiel Institute for the World Economy; Franziska Schuenemann, Kiel Institute for the World Economy; Mareike Söder, Kiel Institute for the World Economy; Florian Zabel, Ludwig-Maximilian University

Discussant: Ritika Khurana, West Virginia University

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**SUSTAINABLE CONSUMPTION**

Room: Room 3.211

Chair: Edwin van der Werf, Wageningen University

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**How to stimulate environmentally friendly consumption: Evidence from a nationwide social experiment to promote eco-friendly coffee**

**Ryo Takahashi**, Waseda University

Discussant: Ipek Eraydin, University of Kassel

**The effect of social information and financial incentives on preferences for reusable coffee cups**

Claudia Schwirplies, University of Hamburg; **Ipek Eraydin**, University of Kassel

Discussant: Edwin van der Werf, Wageningen University

**Adopters vs Non-Adopters of the Green Key Ecolabel in the Dutch Accommodation Sector**

**Edwin van der Werf**, Wageningen University; Eelco Buunk, KplusV

Discussant: Ryo Takahashi, Waseda University

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**TRADE AND ENVIRONMENT II**

Room: Room 4.212

Chair: Mengdi Liu, Nanjing University

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**Firms' Performance in a Natural Resource Based Economy: Evidence from Canadian Plants**

**Wessel Vermeulen**, Newcastle University; Saeed Moshiri, STM College, University of Saskatchewan; Gry Østenstad, University of South-Eastern Norway

Discussant: Jingbo Cui, Wuhan University

**Does Environmental Regulation Affect Firm Exports? Evidence from Wastewater Discharge Standard in China**

**Jingbo Cui**, Wuhan University; Yan Zhang, Central University of Finance and Economics; Chenghao Lu, Central University of Finance and Economics

Discussant: Victor Dornelas, University of São Paulo

**China shock: environmental impacts in Brazil**

**Victor Dornelas**, University of São Paulo; Ariaster Baumgratz Chimeli, University of São Paulo

Discussant: Mengdi Liu, Nanjing University

**Trade Liberalization, Technology Upgrading, and Environmental Outcomes: Evidence from China's Accession to the WTO**

**Mengdi Liu**, Nanjing University; Bing Zhang, Nanjing University

Discussant: Wessel Vermeulen, Newcastle University

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**WASTE I**

Room: Room 3.204

Chair: Alessio D'Amato, University of Rome Tor Vergata and SEEDS

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**On optimal nuclear waste disposal**

**Pauli Lappi**, Ca' Foscari University of Venice; Jussi Lintunen, Natural Resources Institute Finland (Luke)

Discussant: Prudence Dato, IREGE/Université Savoie Mont Blanc

**Optimal Municipal Solid Waste Taxation with Waste Picking**

Amandine Gnonlonfin, University of Nice; **Prudence Dato**, IREGE/Université Savoie Mont Blanc

Discussant: Gala Sipos, University of Bern: Department of Economics and Oeschger Center for Climate Change Research

**A consumer theory of rational food waste**

**Gala Sipos**, University of Bern: Department of Economics and Oeschger Center for Climate Change Research; Ralph Winkler, University of Bern: Department of Economics and Oeschger Center for Climate Change Research

Discussant: Alessio D'Amato, University of Rome Tor Vergata and SEEDS



**From Corruption to Illegal Waste Disposal: an Evaluation of the Role Played by Waste Management (In)efficiency**

**Alessio D'Amato**, University of Rome Tor Vergata and SEEDS; Gionata Castaldi, Italian Ministry of Environment, TA Sogesid; Mariangela Zoli, University of Rome Tor Vergata and SEEDS

Discussant: Pauli Lappi, Ca' Foscari University of Venice

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**WATER RESOURCES - CHOICE MODELLING**

Room: Room 3.205

Chair: Tobias Häggmark Svensson, Swedish University of Agricultural Sciences

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**Choice uncertainty and preference learning in discrete choice experiments**

**Markus Glatt**, Eawag; Logar Ivana, Eawag; Roy Brouwer, The Water Institute / University of Waterloo

Discussant: Kennet Uggedahl, University of Copenhagen

**Watch, Listen and Learn: Using narrated videos to provide information in stated choice experiments**

**Kennet Uggedahl**, University of Copenhagen; Anne Kejser Jensen, Energinet; Soren Olsen, University of Copenhagen

Discussant: Ewa Zawojska, University of Warsaw

**Benefit Transfer and Commodity Measurement Scales: Consequences for Validity and Reliability**

Robert Johnston, Clark University; **Ewa Zawojska**, University of Warsaw

Discussant: Tobias Häggmark Svensson, Swedish University of Agricultural Sciences

**Farmers' participation in AES, willingness-to-accept and the impact of spatial variables**

**Tobias Häggmark Svensson**, Swedish University of Agricultural Sciences

Discussant: Markus Glatt, Eawag

Social event

Thursday, 18.30-20.00

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PARALLEL SESSION 4  
FRI 8:30-10:15

## Parallel session 4

Friday, 08.30-10.15

**THEMATIC SESSION: IMPACTS OF CLIMATE SHOCKS IN DEVELOPING COUNTRIES**

Room: Room 2.220

Organizer(s): Philippe Delacote, Université de Lorraine, AgroParisTech-INRA, Bureau d'Economie Théorique et Appliqué (BETA); Anna Creti, Paris Dauphine University

Chair: Philippe Delacote, Université de Lorraine, AgroParisTech-INRA, Bureau d'Economie Théorique et Appliqué (BETA)

Climate shocks have strong effects in developing countries' economies both on agriculture and other sectors. Climate change is expected to increase the occurrence of such shocks, raising the question of their impacts on economic performance and livelihoods, as well as adaptation strategies. This session aims to provide a better understanding of the economic impacts of climate shocks in developing as well as investigating options to cope with climate change. Case studies from India and Sub-Saharan Africa will be considered. The focus will be not only on agricultural sectors and land use but also on manufacturing and education.

**The Impact of Temperature on Productivity and Labor Supply: Evidence from Indian Manufacturing**

**E. Somanathan**, Indian Statistical Institute; Anant Sudarshan, University of Chicago; Rohini Somanathan, Delhi School of Economics; Meenu Tewari, University of North Carolina, Chapel Hill

**Coping mechanisms after a shock and land use: impacts of droughts on tree loss**

**Antoine Leblois**, INRA

**Does forced solidarity hinder adaptation to climate change? Evidence from the Burkina Faso cotton sector**

**Pauline Castaing**, CERDI (Center for Studies and Research on International Development)

**THEMATIC SESSION: USING BIG DATA FOR ECOSYSTEM SERVICE VALUATION AND PREFERENCE ASSESSMENT**

Room: Room 1.219

Organizer(s): Maria Loureiro, University Santiago de Compostela

Chair: Ian Bateman, University of East Anglia

Big data, including online social media data, represent an extensive source of environmental variables, behavioural data, and attitudes not yet fully explored. The integration of this information with non-market valuation techniques, such as contingent valuation or the travel cost method provides opportunities to complement survey-based investigations and, potentially, creates an alternative to benefit transfer techniques. In addition, the access to real time data allows for quick assessments of interventions which can be quite useful for decision making. This session contains three papers describing recent applications of big data in the area of valuation of ecosystem services and preference assessment, and should contribute to debate among academics and policymakers.

**A systematic map of the use of social media data in environmental research: can we crowdsource cultural ecosystem service assessments?**

**Michael Sinclair**, University of Haifa; Andrea Ghermandi, University of Haifa

**Exploring geo-tagged photos to assess spatial patterns of visitors in protected areas: the case of park of Etna (Italy)**

**Giovanni Signorello**, University of Catania; Alessandro Torrisi, University of Catania (Italy) University of Liverpool (UK); Giovanni Maria Farinella, University of Catania; Lorenzo Di Silvestro, University of Catania; Giovanni Gallo, University of Catania

**Comparing Sentiment Analysis Results from Twitter Conversations across countries**

**Maria Loureiro**, University Santiago de Compostela; Maria Alló, University A Coruña

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**EAERE SPECIAL SESSION: ERC GRANT WINNERS**

Room: Lecture Theatre A

Chair: Carolyn Fischer, Resources for the Future

This special session will showcase recent recipients of European Research Council (ERC) Starting, Consolidator, or Advanced Grants. The grantees will give presentations on their research program and recent findings, after which we will have a round-table discussion about the ERC grant application and award process. This expert panel will provide information and encouragement to EAERE scholars seeking to apply for these prestigious and transformative multi-year grants.

Panelist(s): Cees Withagen, Vrije Universiteit Amsterdam;  
Lino Paula, European Research Council

**The hidden structure of energy efficiency finance****Nadia Ameli**, UCL; Sumit Kothari, UCL; Giacomo Livan, UCL; Guido Caldarelli, IMT Lucca**Exploring and predicting social impacts of protected areas in Europe****Nikoleta Jones**, Anglia Ruskin University

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**POLICY SESSION: CARBON PRICING AND INCENTIVES FOR CLEAN INVESTMENT AND INNOVATION**

Room: Room 1.218

Organizer(s): Herman Vollebergh, Tilburg University; Alistair Ulph, University of Manchester

Chair: Herman Vollebergh, Tilburg University

This session will consider the latest evidence on the effectiveness of carbon pricing mechanisms (carbon taxation or emission trading schemes) in both reducing emissions and incentivising investment in both existing and new technologies for reducing carbon emissions in the atmosphere. Aspects to be covered include the latest data from OECD's carbon pricing gap; how the Innovation Fund will help to complement and re-inforce incentives for low-carbon innovation beyond the price signal from the EU ETS; whether emission pricing is sufficient to stimulate innovation to reduce emissions, reorient investment capital and reduce stranded assets risk. It will also address empirical analysis of the effectiveness of emissions pricing policies in both reducing GHG emissions and stimulating investment and innovation.

Panelist(s): Florens Simon Flues, OECD;  
Peter Zapfel, European Commission;  
Jan Kiso, BEIS;  
Michael Grubb, University College London and INET;  
Herman Vollebergh, Tilburg University

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**AIR POLLUTION AND HEALTH II**

Room: Room 3.204

Chair: Olexiy Kyrychenko, CERGE-EI

**Behind the Flames: Unintended Impacts of Straw Burning on Human Capital****Tong Liu**, Hong Kong University of Science and Technology; Peng Zhang, Hong Kong Polytechnic University; Qu Tang, Jinan University; Joshua Graff Zivin, University of California, San Diego; Yingquan Song, Peking University

Discussant: Ipsita Das, Duke University

**Social capital and choice of clean cooking and safe sanitation in India****Ipsita Das**, Duke University

Discussant: Martina Zahno, University of Zurich

**Health awareness and the transition towards clean cooking fuels: Evidence from Rajasthan, India****Martina Zahno**, University of Zurich; Katharina Michaelowa, University of Zurich; Purnamita Dasgupta, Institute of Economic Growth; Ishita Sachdeva, Delhi University

Discussant: Olexiy Kyrychenko, CERGE-EI

**The Impact of the Crisis-Induced Reduction in Air Pollution on Infant Mortality in India: A Policy Perspective****Olexiy Kyrychenko**, CERGE-EI

Discussant: Tong Liu, Hong Kong University of Science and Technology

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**CLIMATE CHANGE: MARKET-BASED INSTRUMENTS I**

Room: Room 2.218

Chair: Yiyi Bai, Zhongnan University of Economics and Law

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**Demand- versus Supply-Side Climate Policies with a Carbon Dioxide Ceiling**

**Gilbert Kollenbach**, University of Hagen; Thomas Eichner, FernUniversität; Mark Schopf, University of Hagen

Discussant: Robert Hart, Dep. of Economics, Swedish University of Agricultural Sciences

**Green paradoxes and red herrings**

**Robert Hart**, Dep. of Economics, Swedish University of Agricultural Sciences; Johan Gars, Royal Swedish Academy of Sciences

Discussant: Rob Dellink, OECD, Paris

**The macroeconomic consequences of decoupling materials use**

Elisa Lanzi, OECD; Ruben Bibas, OECD; Jean Chateau, OECD; **Rob Dellink**, OECD, Paris

Discussant: Yiyi Bai, Zhongnan University of Economics and Law

**Cutting carbon through fuel-switching in the EU ETS**

**Yiyi Bai**, Zhongnan University of Economics and Law; Samuel Okullo, Potsdam Institute for Climate Impact Research

Discussant: Gilbert Kollenbach, University of Hagen

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**CLIMATE RESPONSE AND UNCERTAINTY I**

Room: Room 3.211

Chair: Mohammad M. Khabbazan, University of Hamburg

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**Cost Risk Analysis: How Robust Is It in View of Weitzman's Dismal Theorem and Underdetermined Risk Functions?**

**Hermann Held**, Universität Hamburg

Discussant: Richard Jaimes, Tilburg University

**The Dynamic Effects of Environmental and Fiscal Policy Shocks**

**Richard Jaimes**, Tilburg University

Discussant: Margaret Insley, University of Waterloo

**Climate games: Who's on first? What's on second?**

**Margaret Insley**, University of Waterloo; Peter Forsyth, University of Waterloo

Discussant: Mohammad M. Khabbazan, University of Hamburg

**Cost-Risk Analysis Reconsidered: What is the true value of information?**

**Mohammad M. Khabbazan**, University of Hamburg

Discussant: Hermann Held, Universität Hamburg

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**EMPIRICAL ANALYSIS OF FORESTRY II**

Room: Room 4.210

Chair: Sabrina Eisenbarth, University of Exeter

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**Managerial Incentives for Environmental Degradation in Chinese-Style Federalism**

**Yuanyuan Yi**, World Bank; Wolfgang Habla, Centre for European Economic Research (ZEW) and University of Mannheim; Jintao Xu, Peking University

Discussant: Stella Schons do Valle, Virginia Tech

**Smallholder Land Clearing and the Forest Code in the Brazilian Amazon**

**Stella Schons do Valle**, Virginia Tech; Lima Eirivelthon, Interamerican Development Bank; Gregory Amacher, Virginia Polytechnic Institute and State University; Frank Merry, Conservation Strategy Fund

Discussant: Angelika Mueller, Heidelberg University

**Trees and the Grid - Electrification and Timber Consumption in Nigeria**

**Angelika Mueller**, Heidelberg University

Discussant: Sabrina Eisenbarth, University of Exeter

**Can communal resource monitoring save the commons? Evidence from community-managed forests in Uganda**

**Sabrina Eisenbarth**, University of Exeter; Anouk Rigterink, University of Oxford; Louis Graham, Busara Centre for Behavioural Economics

Discussant: Yuanyuan Yi, World Bank

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**EMPIRICAL ANALYSIS OF RENEWABLE ENERGY I**

Room: Room 4.212

Chair: Elke D. Groh, University of Kassel

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**Excess Capacity, Subsidy Policy and Wind Curtailment in China**

**Feng Song**, Renmin University of China; Feng Song, Renmin University of China

Discussant: Haishan Yu, Shanghai Jiao Tong University

**The Clean Development Mechanism and Firm Innovation in Renewable Energy: Evidence from China**

**Haishan Yu**, Shanghai Jiao Tong University; Jingbo Cui, Wuhan University; Yongping Sun, Hubei University of Economics; Xi Liu, Wuhan University

Discussant: Johannes Rode, TU Darmstadt

**Opposition to onshore wind power - A study of spill-over effects from local failed projects in Germany and the UK**

**Johannes Rode**, TU Darmstadt; Marcello Graziano, Central Michigan University

Discussant: Elke D. Groh, University of Kassel

**On self-interested preferences for sharing the costs of energy policy: A stated choice analysis for Germany**

**Elke D. Groh**, University of Kassel; Andreas Ziegler, University of Kassel

Discussant: Feng Song, Renmin University of China

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**ENERGY AND GROWTH**

Room: Room 4.209

Chair: Olga Ivanova, PBL

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**Economic consequence analysis of electric power infrastructure disruptions: An analytical general equilibrium approach**

Ian Sue Wing, Boston University; **Adam Rose**, Sol Price School of Public Policy, University of Southern California

Discussant: Maria A. Cunha-e-Sa, Universidade Nova de Lisboa

**The Pitfalls of Efficiency in Irrigation Modernization**

**Maria A. Cunha-e-Sa**, Universidade Nova de Lisboa; Catarina Roseta-Palma, (ISCTE-IUL), Business Research Unit (BRU-IUL), Lisboa, Portugal;

Discussant: Tunc Durmaz, Yildiz Technical University

**Levelized Cost of Consumed Electricity**

Aude Pommeret, Université Savoie Mont Blanc; **Tunc Durmaz**, Yildiz Technical University

Discussant: Olga Ivanova, PBL

**Modelling the regional impact of the energy transition in the Netherlands: extending a Multi-regional Input-Output framework with a search and matching labour market module**

**Olga Ivanova**, PBL

Discussant: Adam Rose, Sol Price School of Public Policy, University of Southern California

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**ENERGY CONSERVATION**

Room: Room 4.211

Chair: Alastair Fraser, University of Sydney

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**Heterogeneity of social information programs: the role of identity and values**

**Cristina Cattaneo**, RFF-CMCC European Institute on Economics and the Environment (EIEE), Centro Euro-Mediterraneo sui Cambiamenti Climatici and Fondazione Eni Enrico Mattei (FEEM); Jacopo Bonan, Politecnico di Milano, Department of Management and Economics, EIEE and FEEM; Giovanna d'Adda, University of Milan; Massimo Tavoni, RFF-CMCC European Institute on Economics and the Environment (EIEE), CMCC, Politecnico di Milano

Discussant: Tianqi Chen, Center for Energy and Environmental Policy Research of Beijing Institute of Technology

**Energy Conservation Regulations and Enterprises Business Performance: Evidence from China**

Hua Liao, Center for Energy Environmental Policy Research of Beijing Institute of Technology; **Tianqi Chen**, Center for Energy and Environmental Policy Research of Beijing Institute of Technology

Discussant: Vera Huwe, Leibniz-Center for European Economic Research

**Efficiency Improvements and Resource Conservation - Should we expect Offsetting Behavior from low flow shower heads?**

**Vera Huwe**, Leibniz-Center for European Economic Research

Discussant: Alastair Fraser, University of Sydney

**Intensive and Extensive Margin Responses in Electricity Conservation: How Households Respond to Financial Rewards**

**Alastair Fraser**, University of Sydney

Discussant: Cristina Cattaneo, RFF-CMCC European Institute on Economics and the Environment (EIEE), Centro Euro-Mediterraneo sui Cambiamenti Climatici and Fondazione Eni Enrico Mattei (FEEM)

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**ENVIRONMENT AND BEHAVIOURAL ECONOMICS II**

Room: Room 4.204

Chair: Ganga Shreedhar, London School of Economics and Political Science

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**When second best is best: Strategic bias in the field**

**Keila Meginnis**, University of Glasgow; Daniel Rigby, University of Manchester; Michael Burton, University of Western Australia

Discussant: Tuyen Tiet, University of Strasbourg

**Network, social comparison and common pool resource game**

**Tuyen Tiet**, University of Strasbourg; Anne Stenger, INRA- BETA- University of Strasbourg; Phu NGUYEN-VAN, University of Strasbourg

Discussant: Zihan Nie, University of Gothenburg

**Resource scarcity and cooperation: evidence from an irrigation system in western China**

**Zihan Nie**, University of Gothenburg; Xiaojun Yang, Xi'an Jiaotong University; Qin Tu, Beijing Normal University

Discussant: Ganga Shreedhar, London School of Economics and Political Science

**How to nudge a vegetarian diet? The effect of framing benefits in terms of personal or planetary wellbeing**

**Ganga Shreedhar**, London School of Economics and Political Science; Matteo Galizzi, London School of Economics and Political Science

Discussant: Keila Meginnis, University of Glasgow

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**INTERNATIONAL ENVIRONMENTAL AGREEMENTS II**

Room: Room 4.206

Chair: Francesco Furini, Ca' Foscari University of Venice

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**International Environmental Agreements Under an Evolutionary Mechanism of Imitation and Asymmetric Countries**

**Hsiao-Chi Chen**, National Taipei University; Yunshyong Chow, Sinica Academia; Shi-Miin Liu, National Taipei University

Discussant: Alaz Safak Munzur, University of Calgary

**Optimal Carbon Tariffs, Trade Wars and the Paris Agreement**

**Alaz Safak Munzur**, University of Calgary

Discussant: Francesco Furini, Ca' Foscari University of Venice

**The (Un)importance of Stackelberg Leadership for the Formation of (Un)successful International Climate Agreements**

**Francesco Furini**, Ca' Foscari University of Venice; Michael Finus, University of Graz

Discussant: Hsiao-Chi Chen, National Taipei University

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**NON-MARKET-BASED INSTRUMENTS AND INNOVATION**

Room: Room 3.210

Chair: Caroline Orset, Economie Publique, AgroParisTech, INRA, Université Paris-Saclay

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**Carbon-reducing innovation as the essential policy frontier – towards finding the ways that work**

**Frank Convery**, University College Dublin and Envecon

Discussant: Anna Malova, University of Glasgow

**Engineering Institutional Change**

**Anna Malova**, University of Glasgow; Sayantan Ghosal, University of Glasgow; Sharun W. Mukand, University of Warwick

Discussant: Marion Dumas, London School of Economics

**Green Product Innovation in Industrial Networks**

**Marion Dumas**, London School of Economics; Eugenie Dugoua, London School of Economics

Discussant: Caroline Orset, Economie Publique, AgroParisTech, INRA, Université Paris-Saclay

**Innovation, information, lobby and tort law under uncertainty**

**Caroline Orset**, Economie Publique, AgroParisTech, INRA, Université Paris-Saclay; Julien Jacob, Université de Strasbourg - BETA

Discussant: Frank Convery, University College Dublin and Envecon

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**RENEWABLE ENERGY - ELECTRICITY MARKET II**

Room: Room 3.212

Chair: Jan Abrell, ZHAW Zurich

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**The real substitution effect of renewable electricity**

**Philip Schnaars**, Universität Hamburg

Discussant: Dominik Schober, ZEW – Leibniz Centre for European Economic Research

**Acquisitions in Markets with Frictions? The German Electricity Distribution Sector**

**Dominik Schober**, ZEW – Leibniz Centre for European Economic Research; Michael Hellwig, ZEW – Leibniz Centre for European Economic Research

Discussant: Sylvain Weber, University of Neuchâtel

**Who is sensitive to DSM? Understanding the determinants of the shape of electricity load curves and demand shifting: Socio-demographic characteristics, appliance use and attitudes**

**Sylvain Weber**, University of Neuchâtel; Selin Yilmaz, University of Geneva; Martin Patel, University of Geneva

Discussant: Jan Abrell, ZHAW Zurich

**Buffering Volatility: Storage Investments and Technology-Specific Renewable Energy Support**

**Jan Abrell**, ZHAW Zurich; Sebastian Rausch, ETH Zurich; Clemens Streitberger, ETH Zurich

Discussant: Philip Schnaars, Universität Hamburg

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**STATED PREFERENCES**

Room: Room 2.219

Chair: Felix Schlaepfer, Kalaidos Fachhochschule

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**How much do financial incentives influence physical activity and how cost effective are they in reducing health costs and premature mortality? Results from a contingent valuation study in the Basque Country.**

**Eileen Mitchell**, Queen's University Belfast; Alberto Longo, Queen's University Belfast; Anil Markandya, BC3 Basque Centre for Climate Change, University of Bath; Ibon Galarraga, BC3 Basque Centre for Climate Change

Discussant: Malte Welling, Institute for ecological economy research

**Eliciting Consequentiality in Stated Preference Surveys: An Application to Urban Green**

Ewa Zawojcka, University of Warsaw; Julian Sagebiel, Technische Universität Berlin; **Malte Welling**, Institute for ecological economy research



Discussant: George Hutchinson, Queen's University Belfast

**Learning and preference formation in a double bounded contingent valuation study of willingness-to-accept to engage in nested recreational health benefit schemes**

**George Hutchinson**, Queen's University Belfast; Jianjun Tang, School of Agricultural Economics and Rural Development, Renmin University of China; Alberto Longo, Queen's University Belfast; Ruth Hunter, Queens University Belfast; Frank Kee, Queens University Belfast

Discussant: Felix Schlaepfer, Kalaidos Fachhochschule

**Towards a Robust Behavioral Economic Design and Analysis of Stated Preferences: Management of Federal Forests in Austria**

**Felix Schlaepfer**, Kalaidos Fachhochschule; Michael Getzner, Vienna University of Technology; Jürgen Meyerhoff, Technische Universität Berlin

Discussant: Eileen Mitchell, Queen's University, Belfast

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**TRADE AND ENVIRONMENT III**

Room: Room 4.205

Chair: Ohad Raveh, Hebrew University of Jerusalem

**Firms' Export Responses to Energy Price Variation**

Damien Dussaux, MINES ParisTech, PSL University; **Stephanie Monjon**, University Paris Dauphine

Discussant: Stefan Borsky, University of Graz

**Natural disasters and firms' export decision**

**Stefan Borsky**, University of Graz

Discussant: Trang Tran, Deakin University

**Green Havens and Trade in Environmental Goods**

**Trang Tran**, Deakin University

Discussant: Ohad Raveh, Hebrew University of Jerusalem

**Oil Discoveries and Protectionism**

Fidel Perez-Sebastian, University of Alicante; **Ohad Raveh**, Hebrew University of Jerusalem; Frederick van der Ploeg, Dep. of Economics, University of Oxford

Discussant: Stephanie Monjon, University Paris Dauphine

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**WASTE II**

Room: Room 4.213

Chair: Amandine Gnonlonfin, University of Nice

**Changing the incentive to pollute: Heterogeneous effects of waste pricing policies**

**Marica Valente**, Humboldt University and DIW Berlin

Discussant: Masashi Yamamoto, University of Toyama

**Who provides the most cost effective waste management? : Evidence from Japan**

**Masashi Yamamoto**, University of Toyama; Eiji Hosoda, Keio University; Lucy O'Shea, University of Bath; Shasi Nandeibam, University of Bath; Andrew Abbott, University of Hull

Discussant: Mirthe Boomsma, Tilburg University

**Fostering behavioral change: Stimulating in-house waste sorting in apartment buildings**

**Mirthe Boomsma**, Tilburg University; Daan Van Soest, Tilburg University; Cees Midden, Eindhoven University of Technology

Discussant: Amandine Gnonlonfin, University of Nice

**How much does my garbage really cost? Evidence from French communities**

**Amandine Gnonlonfin**, University of nice; Yusuf Kocoglu, University of Toulon/LEAD

Discussant: Marica Valente, Humboldt University and DIW Berlin

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**WATER RESOURCES**

Room: Room 3.205

Chair: Martin Hänsel, Kiel University

**Trade-offs between Water Allocations and Environmental Flows: A Hydro-economic Analysis in the Ebro Basin**

**Jose Albiac**, CITA-Government of Aragon; Daniel Crespo, CITA-Government of Aragon; Taher Kahil, IIASA; Encarna Esteban, University of Zaragoza; Safa Baccour, CITA-Government of Aragon  
Discussant: Genius Murwirapachena, Durban University of Technology

**Efficiency in South African water utilities: a comparison of estimates from three techniques**  
**Genius Murwirapachena**, Durban University of Technology; Jugal Mahabir, University of Johannesburg; Richard Mulwa, University of Nairobi; Johane Dikgang, University of Johannesburg  
Discussant: Phoebe Koundouri, Athens University of Economics and Business

**Managing transboundary water resources under climate uncertainty: Theory and Application to Omo River Basin in Africa**  
**Phoebe Koundouri**, Athens University of Economics and Business; Mike Tsionas, University of Lancaster; Nikolaos Englezos, University of Piraeus  
Discussant: Martin Hänsel, Kiel University

**Ocean warming and acidification may threaten sustainability of commercial Arctic fishery**  
**Martin Hänsel**, Kiel University; Martin Quaas, Leipzig University; Rudi Voss, Kiel University; Jörn Schmidt, Kiel University; Max Stöven, Kiel University; Martina Stiasny, Pelagic Fish Research Group, Institute of Marine Research  
Discussant: Jose Albiac, CITA-Government of Aragon

Coffee break

Friday, 10.15-10.45

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Awards ceremony

Friday, 10.45-11.15

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- Chair: Carlo Carraro, President of EAERE

Room: Lecture Theatre B

Plenary session 2

Friday, 11.15-12.15

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**HUMAN MOBILITY AND CLIMATE CHANGE - KATRIN  
MILLOCK, PARIS SCHOOL OF ECONOMICS**

Room: Lecture Theatre B

Chair: Alistair Ulph, University of Manchester

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**EGG-TIMERS: CHOICE EXPERIMENTS**

Room: Room 2.220

Chair: Daniel Rigby, University of Manchester

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**The effect of gain-loss framing on climate policy preferences**

**Lea Svenningsen**, Technical University of Denmark; Bo Jellesmark Thorsen, University of Copenhagen

**Using choice experiment to value preferences for an increased use of nature based solutions for climate change adaptation in Prague**

**Tomas Badura**, CzechGlobe, Czech Academy of Sciences CSERGE, University of East Anglia; Eliska Lorencova, Czechglobe, Czech Academy of Sciences; Dava Vackaru, CzechGlobe, Czech Academy of Sciences; Silvia Ferrini, Department of Political Science and International, University of Siena and Centre for Social and Economic Research on the Global Environment, University of East Anglia

**Forest Carbon is Not Cheap: Evidence from a Choice Experiment in Community Forests of Nepal**

**Michael Toman**, World Bank; Sahan Dissanayake, Portland State University; Randall Bluffstone, Portland State University; Eswaran Somanathan, Indian Statistical Institute; Harisharan Luintel, Portland State University and Forest Action, Nepal; Naya Paudel, Forest Action, Nepal

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**EGG-TIMERS: ELECTRICITY MARKET II**

Room: Room 2.218

Chair: Antoine Dechezlepretre, OECD

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**Electricity market restructuring and plant generation costs: evidence from the United States**

**Souvik Datta**, University of Glasgow; Massimo Filippini, ETH Zurich; Chiara Lo Prete, Pennsylvania State University

**Investing in electricity production under a reliability options scheme**

**Fulvio Fontini**, University of Padova; Tiziano Vargiolu, University of Padova, Department of Mathematics; Dimitrios Zormpas, University of Padova, Department of Mathematics

**Energy efficiency and general equilibrium effects – Evidence from a randomized policy roll-out in Rwanda**

**Jörg Peters**, RWI - Leibniz Institute for Economic Research; Nathan Fiala, University of Connecticut; Maximiliane Sievert, Leibniz Institute for Economic Research

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**EGG-TIMERS: EMPIRICAL ANALYSIS OF EMPLOYMENT, CREDITS AND MORTALITY**

Room: Room 2.219

Chair: Ron Chan, University of Manchester

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**Employment in the wood-based value chains**

**Nicolas Robert**, European Commission - DG Joint Research Centre

**Weathering the shock: credit-worthiness and mortgage delinquency in the wake of flood events**

**Hannah Hennighausen**, University of Graz

**The impact of temperature on mortality across different climate zones**

**Thomas Longden**, University of Technology Sydney

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**EGG-TIMERS: MARKET-BASED INSTRUMENTS**

Room: Room 3.204

Chair: Simon Dietz, LSE

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**Endogenous Emission Caps Always Induce a Green Paradox**

Reyer Gerlagh, Tilburg University; **R.J.R.K. Heijmans**, Tilburg University; Knut Einar Rosendahl, Norwegian University of Life Science (NMBU)

**Precision, applicability and economic implications: A comparison of alternative biodiversity indexes**

**Johanna Kangas**, University of Helsinki; Peter Kullberg, Finnish Environment Institute; Minna

Pekkonen, Finnish Environment Institute; Janne Kotiaho, University of Jyväskylä; Markku Ollikainen, University of Helsinki

**Optimal environmental policy in presence of a heterogeneous industry**

**Jan Henning Kraft**, European University Viadrina Frankfurt (Oder); Wolfgang Peters, University Viadrina

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**EGG-TIMERS: TIME SERIES OF CARBON EMISSIONS**

Room: Room 1.218

Chair: Sjak Smulders, Tilburg University

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**How to explain the past trends in transport CO2 emissions in France?**

**Aurélien Bigo**, Chair Energy and Prosperity

**Allowance prices in the EU ETS - fundamental price drivers and the recent upward trend**

**Marina Friedrich**, Potsdam Institute for Climate Impact Research

**Impacts of Renewables Integration on Electricity Spot Prices : The French Case**

**Maxime CREMEL**, BETA-CNRS, Université de Lorraine, Lorraine Université d'Excellence; Olivier DAMETTE, BETA-CNRS, Université de Lorraine

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**EGG-TIMERS: VALUATION II**

Room: Room 1.219

Chair: Roger von Haefen, North Carolina State University

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**The impact of microfinance on energy access: A case study from peripheral districts of Lomé, Togo**

**Mohamed Amine Boutabba**, EPEE, Univ Evry, Université Paris-Saclay, 91025, Evry, France

**Time for carbon neutrality and other emission reduction measures at European airports**

**Martin Falk**, Austrian Institute of Economic Research; Eva Hagsten, University of Iceland

**Valuing Urban Air Quality: A Hedonic Price Analysis in Beijing, China**

**Yingdan Mei**, China University of Petroleum Beijing

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**POSTER SESSION 2**

Room: Drum Area, G/F

**[2-1] A Framework for designing Behavioral Economic policy tools to reduce marine plastic debris**

Francisco Alpizar, Tropical Agricultural Research and Higher Education Center (CATIE); Fredrik Carlsson, University of Gothenburg; Reza Daniels, University of Cape Town; Thong Ho, Ho Chi Minh City University of Economics (UEH) - EfD Vietnam; Marcela Jaime Torres, University of Concepción; Zihan Nie, University of Gothenburg; **Gracia Maria Lanza Castillo**, Tropical Agricultural Research and Higher Education Center (CATIE); César Salazar, Universidad del Bio-Bio; Byela Tibesigwa, Environment for Development (EfD) Tanzania; Martine Visser, University of Cape Town; Shivani Wahdera, Indian Statistical Institute (ISI)

**[2-2] Benefit cost analysis when uncertainty is fundamental: An application to deep sea mining**

**David Good**, Indiana University; Kerry Krutilla, Indiana University; Michael Toman, World Bank; Tijan Arin, World Bank

**[2-3] Consumer Preferences for More Sustainable and Healthier Lifestyles: Five-country Discrete Choice Experiments**

Milan Scasny, Charles University in Prague; **Iva Zverinova**, Charles University, Prague; Vojtech Maca, Charles University, Prague

**[2-4] Consumers in a circular economy: economic analysis of household waste sorting behaviour**

**Doan Nainggolan**, Aarhus University; Anders Branth Pedersen, Aarhus University; Sinne Smed, Copenhagen University; Kahsay Haile Zemo, Aarhus University; Berit Hasler, Aarhus University; Mette Termansen, Copenhagen University

**[2-5] Controlling an Invasive Species through Consumption: The Case of Lionfish as an Impure Public Good**

**Ash Morgan**, Appalachian State University; David McEvoy, Appalachian State University; Paul Hindsley, Eckerd College

**[2-6] Economic benefits of achieving a good environmental status in European marine waters – evidence from three Baltic Sea countries**

**Tuija Lankia**, Natural Resources Institute Finland; Heini Ahtiainen, Natural Resources Institute Finland (Luke); Jürgen Meyerhoff, Technische Universität Berlin; Eija Pouta, Natural Resources Institute Finland (Luke); Christine Bertram, Kiel Institute for the World Economy; Kristine Pakalnite, AktiVS Ltd; Katrin Rehdanz, Christian-Albrechts-University Kiel; Janne Artell, Natural Resources Institute Finland (Luke)

**[2-7] How much is marine wildlife worth? Estimating preferences of tourists for marine conservation and tourism infrastructure in Costa Rica.**

**Alicia Egenes**, Norwegian University of Life Sciences and Charles University in Prague; Milan Scasny, Charles University in Prague

**[2-8] On the Efficient and Robust Protection of the German Baltic Sea Coast against Flooding**

**Thomas David van der Pol**, Global Climate Forum; Jochen Hinkel, Global Climate Forum; Jan Merckens, Kiel University; Leigh MacPherson, Siegen University; Arne Arns, Siegen University; Athanasios Vafeidis, Kiel University

**[2-9] Productive Efficiency of Connecticut Long Island Lobster Fishery Using a Novel Finite Mixture Model**

**Zinnia Mukherjee**, Simmons University; Rangan Gupta, University of Pretoria; Mike Tsionas, Lancaster University; Peter Wanke, Federal University of Rio de Janeiro

**[2-10] Realities of decision-making for built and natural water infrastructure in the Volta Basin**

**Laetitia Pettinotti**, London School of Economics and Political Sciences; Bea Mosello, Critical Resources; Marloes Mul, UNESCO-IHE; Evgeniie Matrosov, University of Manchester; James Dalton, IUCN

**[2-11] State-of-the Art Valuation of Wetland Ecosystem Services in Small Island Developing States: A Systematic Review and Framework for Future Research in Valuing Island Ecosystems**

Stephan Moonsammy, University of the West Indies; **Mattias Boman**, The University of the West Indies; Vidwatee Ramdhanie, University of the West Indies; Donna-Marie Renn-Moonsammy, University of the West Indies

**[2-12] Valuing conservation benefits of marine protected areas in Italy**

**Stefania Tonin**, Università IUAV di Venezia

Lunch

Friday, 12.45-14.00

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- EAERE General Assembly – Room 1.219, *please have lunch before*
  - \* Journal Board Meeting REE – Room 2.217 (12:15 – 14:00)
  - \* Journal Board Meeting *Water Resources and Economics* – Room 3.213

\* - by invitation only

PARALLEL SESSION 5  
FRI 14:00-15:45

**THEMATIC SESSION: CLIMATE CHANGE – HEALTH –  
NUTRITION – LABOUR PRODUCTIVITY NEXUS**

Room: Room 1.218

Organizer(s): Shouro Dasgupta, Fondazione CMCC, Università Ca' Foscari Venezia, EIEE; Joacim Rocklöv, Umeå University

Chair: Francesco Bosello, Fondazione Eni Enrico Mattei

The impact of climate change will be multifaceted, threatening to undermine the last half century of advances in global health, affecting many of the socioeconomic dynamics such as labour productivity, labour supply, and economic output. Along with direct impacts, climate change will also have indirect influence on health and labour through nutrition and calorie intake. It is critical that we investigate and disseminate these direct and indirect impacts of climate change. This session will combine analysis from multiple disciplines using high-resolution climatic data, longitudinal micro surveys, spatial econometrics, and Overlapping Generation Models. The focus will be on health impacts of climate hazards, impact of climatic stressors on labour productivity in the EU, and the effects of climatic shocks on labour supply through dietary intakes. The three papers are connected to the nexus through their investigations of each of the components of health, labour productivity, and nutrition but also in that they study both the historical relationships and provide projections on the future impacts on climate change.

**An extract from the 2018 report of the Lancet Countdown on health and climate change: shaping the health of nations for centuries to come**

Elizabeth Robinson, University of Reading

**A Chink in the Armour: How strong European economies are threatened by climate change**

Shouro Dasgupta, Fondazione CMCC, Università Ca' Foscari Venezia, EIEE; Jessie Granadillos, Climate Analytics; Fahad Saeed, Climate Analytics; Malcolm Mistry, CMCC and Università Ca' Foscari Venezia

**Climate change and its economy-wide impact in Uganda**

Shouro Dasgupta, Fondazione CMCC, Università Ca' Foscari Venezia, EIEE; Chiara Antonelli, University of Rome Tor Vergata; Manuela Coromaldi, University of Rome "Niccolò Cusano"; Soheil Shayegh, European Institute on Economy and the Environment (EIEE); Johannes Emmerling, European Institute on Economy and the Environment (EIEE)

**THEMATIC SESSION: CLIMATE POLICY AND FINANCE**

Room: Room 1.219

Organizer(s): Armon Rezai, Vienna University of Economics and Business; Frederick van der Ploeg, Dep. of Economics, University of Oxford

Chair: Frederick van der Ploeg, Dep. of Economics, University of Oxford

Unanticipated climate policy curbs the value of physical capital that is costly to adjust. In this session we study how climate policy geared at keeping peak global warming below 2 degree Celsius affects economies, their fossil industries, and financial markets invested in them. The papers presented show how various sources of uncertainty affect optimal climate policy in a cooperative and uncooperative setting; how oil and gas majors adjust their investment and extraction behaviour to uncertainty about future climate policies, and the implications of temperature changes on asset valuation, applying empirical finance methods to estimate the effects of long-term temperature shifts on asset valuations. In this thematic session we aim to provide conference participants with some of the latest research at the nexus of climate policy and finance, i.e. how climate change and climate policy impact financial valuations.

**The Carbon Abatement Game**

Hambel Christoph, Goethe University Frankfurt; Holger Kraft, Goethe University Frankfurt; Eduardo Schwartz, UCLA

**Policy Tipping and Stranded Carbon Assets**

Frederick van der Ploeg, Dep. of Economics, University of Oxford; Armon Rezai, Vienna University of Economics and Business



## **Price of Long-Run Temperature Shifts in Capital Markets**

Ravi Bansal; Dana Kiku, University of Illinois at Urbana-Champaign; **Marcelo Ochoa**, the Board of Governors of the Federal Reserve System

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### **EAERE SPECIAL SESSION: POLICY AND ACADEMIA: BRIDGING THE GAP**

Room: Lecture Theatre A

Organizer(s): Simone Borghesi, European University Institute; Jos Delbeke, European University Institute

Chair: Simone Borghesi, European University Institute

The session organized by the EAERE POC intends to discuss how to facilitate and create a more integrated dialogue between academia and policy world. The two contexts have departed from each other over time, becoming increasingly technical and partially separated. To fill the gap between these two realms, there is a need to substantiate quantitatively what policies work and what their relative contribution is. In line with the aim of the EAERE POC (i.e. providing advice and support to EU policy makers and institutions in designing policy interventions), a few questions will be addressed during the session to facilitate and promote the discussion: (i) Which policies instruments have performed better/worst so far? (ii) What are the main results emerging from ex-post evaluation of specific policies? (iii) Where are such evaluations needed mainly?

Panelist(s): Christian Gollier, Toulouse School of Economics;

Peter Zapfel, European Commission;

Phoebe Koundouri, Athens University of Economics and Business;

Simon Dietz, LSE;

Herman Vollebergh, Tilburg University;

Thomas Sterner, University of Gothenburg;

Ben Groom, London School of Economics;

Dominique Bureau, Economic Council for Sustainable Development, Paris;

Aldo Ravazzi Douvan, Italian Min.of Environment - Sogesid TA - OECD-WPEP - Luiss -

Tor Vergata

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### **POLICY SESSION: THE CONTRIBUTION OF RESOURCE**

Room: Room 2.220

#### **CYCLING TO SUSTAINABILITY AND RESOURCE EFFICIENCY**

Organizer(s): Tom Murray, DEFRA; Alistair Ulph, University of Manchester

Chair: Christoph Böhringer, University of Oldenburg

This session will assess the latest design of policies to encourage resource cycling to help a shift to a more sustainable use of natural materials and evaluate their effectiveness. The session will address these issues at the international, national and regional levels. It will discuss some of the insights from OECD's RE-CIRCLE project to provide policy guidance on resource efficiency and the transition to a circular economy, aiming to identify and quantify the impact of these policies through quantitative and qualitative analysis. It will reflect on the UK Government's Resources and Waste Strategy for England, its recent consultation announcements and the policy commitments that will drive resource efficiency; and also on the innovative policies introduced by the Welsh Government. Finally it will consider empirical work on the contribution of recycling to enhancing resource efficiency.

Panelist(s): Rob Dellink, OECD, Paris;

Tom Murray, DEFRA;

Christoph Böhringer, University of Oldenburg

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### **AIR POLLUTION ON URBAN POPULATION**

Room: Room 3.212

Chair: Sefi Roth, London School of Economics

#### **Does China Fall into Poverty-Environment Traps? Evidence from Long-term Income Dynamics and Urban Air Pollution**

**ZhongXiang Zhang**, Tianjin University; Jian-Xin Wu, Jinan University; Ling-Yun He, Jinan University

Discussant: Pierre Levasseur, IRSTEA (French Research Institute for Environment and Agriculture)

#### **Why people (continue to) live near mining and industrial sites? Empirical evidence from France, Portugal and Spain**

**Pierre Levasseur**, IRSTEA (French Research Institute for Environment and Agriculture); Katrin Erdlenbruch, IRSTEA; Christelle Gramaglia, IRSTEA  
Discussant: Yiannis Kountouris, Imperial College London

**The effect of air pollution on aggressive and violent behavior: evidence from English football.**

**Yiannis Kountouris**, Imperial College London  
Discussant: Sefi Roth, London School of Economics

**Dirty Density: Air Quality and the Density of American Cities**

**Sefi Roth**, London School of Economics; Felipe Carozzi, London School of Economics  
Discussant: ZhongXiang Zhang, Tianjin University

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**BIODIVERSITY**

Room: Room 4.210

Chair: Endre Kildal Iversen, Norwegian University of Life Sciences

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**Estimating non-market values of fruit tree diversity in the Czech Republic**

**Nicholas Tyack**, IHEID; Milan Scasny, Charles University in Prague  
Discussant: Katarzyna Zagórska, University of Warsaw

**Drivers of farmers' willingness to adopt extensive farming practices in ecologically valuable river valleys – the case of Biebrza Marshes**

Mikolaj Czajkowski, University of Warsaw; **Katarzyna Zagórska**, University of Warsaw; Natalia Letki, University of Warsaw; Piotr Tryjanowski, Poznań University of Life Sciences; Adam Wąs, Warsaw University of Life Sciences  
Discussant: Laura Onofri, University of Padova

**Economic valuation for policy support in the context of ecosystem based adaptation to climate change: an indicator, integrated based approach**

**Laura Onofri**, University of Padova; Paulo A.L.D. Nunes, U.N. Food and Agriculture Organization (FAO)  
Discussant: Endre Kildal Iversen, Norwegian University of Life Sciences

**Trade-offs between carbon sequestration, landscape aesthetics and biodiversity in a cost-benefit analysis of land use options in Norway**

**Endre Kildal Iversen**, Norwegian University of Life Sciences; Henrik Lindhjem, Menon Economics; Kristine Grimsrud, Statistics Norway; Jette Bredahl Jacobsen, University of Copenhagen  
Discussant: Nicholas Tyack, IHEID

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**CLIMATE CHANGE AND ADAPTATION**

Room: Room 4.213

Chair: Simon Touboul, MINES ParisTech

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**Peer Effects and Multiple Adaptation Strategies**

**Avichal Mahajan**, University of Geneva; Angela Doku, University of Geneva; Salvatore Di Falco, University of Geneva  
Discussant: Walid Marrouch, Lebanese American University

**Is Adaptation to Climate Change a Substitute for Emissions Abatement?**

Salpie Djoundourian, Lebanese American University; **Walid Marrouch**, Lebanese American University; Nagham Sayour, Lebanese American University  
Discussant: Saudamini Das, Institute of Economic Growth

**Are shelters perfect substitutes of mangroves for storm protection?**

**Saudamini Das**, Institute of Economic Growth  
Discussant: Simon Touboul, MINES ParisTech

**Adaptation to Climate Change: Innovation, International Technology Transfer, and Country Vulnerability**

**Simon Touboul**, MINES ParisTech; Jana Stoeber, Christian-Albrechts-Universität zu Kiel; Matthieu Glachant, MINES ParisTech; Sam Fankhauser, London School Of Economics; Antoine Dechezlepretre, OECD

Discussant: Avichal Mahajan, University of Geneva

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**DEMAND FOR WATER QUALITY**

Room: Room 3.205

Chair: Eva Tène, Toulouse School of Economics

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**Cash for Clean Water: A Field Experiment of Payments for Ecosystem Services to Improve Water Quality in the UK**

**Greg Smith**, University of Exeter; Brett Day, University of Exeter; Ruth Welters, University of East Anglia

Discussant: Tales Rozenfeld, University of São Paulo

**Health Consequences of Drought-Related Water Supply Policies: Evidence from São Paulo, Brazil**

**Tales Rozenfeld**, University of São Paulo; Ariaster Baumgratz Chimeli, University of São Paulo

Discussant: Annika Tienhaara, Natural Resources Institute Finland (Luke)

**Heterogeneous preferences towards quality changes in water recreation: confirmatory latent class models for contingent behavior data**

**Annika Tienhaara**, Natural Resources Institute Finland (Luke); Eija Pouta, Natural Resources Institute Finland (Luke); Tuija Lankia, Natural Resources Institute Finland

Discussant: Eva Tène, Toulouse School of Economics

**Water Quality, Policy Diffusion Effects and Farmers Behavior**

**Eva Tène**, Toulouse School of Economics; Sylvain Chabé-Ferret, Toulouse School of Economics; Arnaud Reynaud, Toulouse School of Economics

Discussant: Greg Smith, University of Exeter

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**EMISSIONS REDUCTION IN MANUFACTURING**

Room: Room 3.210

Chair: Giovanni Marin, University of Urbino

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**Do voluntary environmental programs reduce emissions? EMAS in the German manufacturing sector**

**Roland Kube**, University of Muenster; Andreas Löschel, University of Muenster; Kathrine von Graevenitz, ZEW - Leibniz Centre for European Economic Research; Philipp Massier, Centre for European Economic Research (ZEW)

Discussant: Elisabeth Isaksen, London School of Economics

**Carbon pricing, compensation, and competitiveness: Lessons from UK manufacturing**

**Elisabeth Isaksen**, London School of Economics; Misato Sato, London School of Economics; Piero Basaglia, Fondazione Eni Enrico Mattei (FEEM)

Discussant: Corrado Di Maria, University of East Anglia

**Climate policy and the efficiency of firms: New evidence from UK manufacturing**

**Corrado Di Maria**, University of East Anglia; Balazs Stadler, OECD

Discussant: Giovanni Marin, University of Urbino

**The Impact of Energy Prices on Employment and Environmental Performance: Evidence from French Manufacturing Establishments**

**Giovanni Marin**, University of Urbino; Francesco Vona, OFCE Sciences-Po

Discussant: Roland Kube, University of Muenster

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**EMISSIONS TRADING SCHEMES II**

Room: Room 2.219

Chair: Fabian Naumann, TU Kaiserslautern

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**ITQs, Market Power and the Potential Efficiency Loss**

**Irmelin Helgesen**, Norwegian University of Science and Technology

Discussant: Marc Gronwald, University of Aberdeen Business School

**How to measure financial market efficiency? A multifractality-based quantitative approach with an application to the European carbon market**

**Marc Gronwald**, University of Aberdeen Business School; Cristina Sattarhoff, University of Hamburg

Discussant: Bouwe Dijkstra, University of Nottingham

### **Estimating EU ETS compliance costs at the installation level**

Filippo Belloc, University of Siena; **Bouwe Dijkstra**, University of Nottingham; Edilio Valentini, University of Chieti-Pescara

Discussant: Fabian Naumann, TU Kaiserslautern

### **Unilateral Carbon Taxation by a Country Engaged in Emissions Trading**

**Fabian Naumann**, TU Kaiserslautern

Discussant: Irmelin Helgesen, Norwegian University of Science and Technology

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## **EMPIRICAL ANALYSIS OF NATURAL DISASTERS II**

Room: Room 3.211

Chair: Jose Feres, Institute for Applied Economic Research

### **Wages, Income and the Impact of Weather: Evidence from half-million American Damaging Winds**

**Federico Crippa**, Sant'Anna School of Advanced Studies; Francesco Lamperti, Sant'Anna School of Advanced Studies; Matteo Coronese, Sant'Anna School of Advanced Studies; Francesca Chiaromonte, Sant'Anna School of Advanced Studies; Andrea Roventini, Sant'Anna School of Advanced Studies

Discussant: Chandra Ssekhar Bahinipati, Indian Institute of Technology Tirupatu

### **Loss and Damages from Floods in India: Influence of Human Development, Income and Inequality**

**Chandra Ssekhar Bahinipati**, Indian Institute of Technology Tirupatu

Discussant: Allan Beltran, University of Birmingham

### **Identifying the Information Effect of Flood Events: A Near-Miss Hedonic Approach**

**Allan Beltran**, University of Birmingham; David Maddison, University of Birmingham; Robert Elliott, University of Birmingham

Discussant: Jose Feres, Institute for Applied Economic Research

### **Drought Shocks and School Performance in Brazilian Rural Schools**

Danyelle Branco, Researcher fellow at the Universidade Federal de Viçosa (DER/UFV); **Jose Feres**, Institute for Applied Economic Research

Discussant: Federico Crippa, Sant'Anna School of Advanced Studies

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## **ENERGY DEMAND AND EFFICIENCY III**

Room: Room 2.218

Chair: Cathrine Hagem, University of Oslo

### **When good managers face bad incentives: Management quality and energy intensity in the presence of price distortions**

**Helena Schweiger**, European Bank for Reconstruction and Development; Alexander Stepanov, European Bank for Reconstruction and Development

Discussant: Dorothée Charlier, Université Savoie Mont Blanc

### **The Role of Individual Preferences in Explaining the Energy Performance Gap**

**Dorothée CHARLIER**, Université Savoie Mont Blanc; Salomé Bakaloglou, Université de Montpellier

Discussant: Martin Baikowski, University of Münster

### **Impacts of consumers' electricity price misperceptions**

**Martin Baikowski**, University of Münster

Discussant: Cathrine Hagem, University of Oslo

### **Vehicle-to-Grid; Impacts on the electricity market and consumer cost of electric vehicles.**

**Cathrine Hagem**, University of Oslo; Stef Proost, KU Leuven; Mads Greaker, Oslo Metropolitan University

Discussant: Helena Schweiger, European Bank for Reconstruction and Development

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## **ENVIRONMENT AND DEVELOPMENT II**

Room: Room 3.204

Chair: Francois Cohen, University of Oxford

**Can happiness be a welfare indicator? Validity testing using sustainability indicators**

**Mattias Boman**, The University of the West Indies; Niels Strange, Department of Food and Resource Economics and Center for Macroecology, Evolution and Climate, University of Copenhagen, Copenhagen, Denmark; Bengt Kristrom, Swedish University of Agricultural Sciences; Stale Navrud, Norwegian University of Life Sciences; Stephan Moonsammy, University of the West Indies  
Discussant: Anne Fournier, Univ. Polytechnique Hauts-de-France

**Feeding the city 'locally' : a trade-off analysis between quality, affordability and sustainability.**

**Anne Fournier**, Univ. Polytechnique Hauts-de-France  
Discussant: Ana Maria Montoya Gómez, ifo Institute

**Natural Resources, Institutions and Development: A Within-Country Approach**

**Ana Maria Montoya Gómez**, ifo Institute  
Discussant: Francois Cohen, University of Oxford

**Is Natural Capital Really Substitutable?**

**Francois Cohen**, University of Oxford; Cameron Hepburn, University of Oxford; Alex Teytelboym, University of Oxford  
Discussant: Mattias Boman, The University of the West Indies

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**ENVIRONMENTAL POLICY DESIGN**

Room: Room 4.209

Chair: Benedict White, University of Western Australia

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**Waiting Periods as a Screening Mechanism for Environmental Subsidies**

**Isla Globus-Harris**, Colgate University  
Discussant: Marion Podesta, ART-Dev- University of Perpignan Via Domitia

**Public Policies against Energy Poverty in Deregulated Markets**

**Marion Podesta**, ART-Dev- University of Perpignan Via Domitia; Jean-Christophe Poudou, MRE, MUSE, University of Montpellier; Michel Roland, CREATE, University of Laval  
Discussant: Stefan Ambec, Toulouse School of Economics

**Environmental policy with green consumerism**

**Stefan Ambec**, Toulouse School of Economics; Philippe De Donder, UQAM  
Discussant: Benedict White, University of Western Australia

**Environmental policy for mines the role of bonds and Pigovian taxes on damaged land**

**Benedict White**, University of Western Australia  
Discussant: Isla Globus-Harris, Colgate University

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**HEDONIC PRICING**

Room: Room 4.206

Chair: Henrik Andersson, TSE

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**Does the Value per Statistical Life Vary with Age or Health? Evidence from a compensating wage study in France**

**Daniel Herrera**, Université Paris Dauphine; Lise Rochaix, Université Paris 1  
Discussant: Matthew Adler, Duke University

**Fair Innings? The Utilitarian and Prioritarian Value of Risk Reduction over a Whole Lifetime**

**Matthew Adler**, Duke University; James Hammitt, Harvard University; Maddalena Ferranna, Harvard University; Nicolas Treich, Toulouse School of Economics  
Discussant: Katarina Elofsson, Södertörn University

**Effects of Carnivore Presence on Hunting Lease Pricing in South Sweden**

Justice Tei Mensah, Swedish University of Agricultural Sciences; Jens Persson, Swedish University of Agricultural Sciences; Petter Kjellander, Swedish University of Agricultural Sciences; **Katarina Elofsson**, Södertörn University  
Discussant: Henrik Andersson, TSE

### **Nitrates and Property Values: Evidence from a French Market Intervention**

**Henrik Andersson**, TSE; Emmanuelle Lavaine, Montpellier University, Lameta

Discussant: Daniel Herrera, Université Paris Dauphine

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### **POLICY INSTRUMENTS FOR ENERGY TRANSITION II**

Room: Room 4.205

Chair: Cristina Peñasco, Department of Politics and International Studies, University of Cambridge.

Centre for the Environment, Energy and Natural Resources Governance (C-EENRG), Department of Land Economy, University of Cambridge

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### **Environmental regulation and innovation in renewable energy technologies: Does the policy instrument matter?**

**Erik Hille**, HHL Leipzig Graduate School of Management; Wilhelm Althammer, HHL Leipzig Graduate School of Management; Henning Diederich, HHL Leipzig Graduate School of Management

Discussant: Carsten Helm, University of Oldenburg

### **Subsidising Renewables but Taxing Storage? Second-Best Policies with Imperfect Carbon Pricing**

**Carsten Helm**, University of Oldenburg; Mier Mathias, ifo Institute

Discussant: Noe Reidt, ETHZ

### **The sunny side of green transport policies: the double dividend effect in a two-sided market**

**Noe Reidt**, ETHZ; Chiara Colesanti Senni, ETHZ

Discussant: Cristina Peñasco, Department of Politics and International Studies, University of Cambridge. Centre for the Environment, Energy and Natural Resources Governance (C-EENRG), Department of Land Economy, University of Cambridge

### **What do we know about the environmental, technological, competitiveness and social outcomes of policy instruments for the low-carbon transition: the importance of policy design**

**Cristina Peñasco**, Department of Politics and International Studies, University of Cambridge. Centre for the Environment, Energy and Natural Resources Governance (C-EENRG), Department of Land Economy, University of Cambridge; Laura Diaz Anadon, Centre for Environment, Energy and Natural Resources Governance (C-EENRG), Department of Land Economy, University of Cambridge; Elena Verdolini, Dipartimento di Giurisprudenza, Università degli Studi di Brescia and RFF-CMCC European Institute of Environmental Economics (EIEE), Centro Euro-Mediterraneo sui Cambiamenti Climatici

Discussant: Erik Hille, HHL Leipzig Graduate School of Management

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### **SOCIAL NORMS I**

Room: Room 4.204

Chair: Timo Goeschl, University of Heidelberg

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### **The economics of participatory value evaluation**

**Thijs Dekker**, University of Leeds; Paul Koster, VU Amsterdam; Niek Mouter, TU Delft

Discussant: Benjamin Ouvrard, Toulouse School of Economics, INRA

### **Identifying Preferences for Sharing a Common Pool Resource: Evidence from a Lab Experiment in India**

Stefan Ambec, Toulouse School of Economics; Stéphane Cezera, INRA; **Benjamin Ouvrard**, Toulouse School of Economics, INRA; Arnaud Reynaud, Toulouse School of Economics; Murudaiah Shivamurthy, Department of Agricultural Extension, GKVK, UAS

Discussant: Jinhua Zhao, Michigan State University

### **Reciprocity and social norms: short- and long-run crowding out effects of financial incentives**

**Jinhua Zhao**, Michigan State University; John Kerr, Michigan State University; Maria Lapinski, Michigan State University; Rob Shupp, Michigan State University

Discussant: Timo Goeschl, University of Heidelberg

### **Exogenous vs. Endogenous Nudges in Social Dilemmas: An Online Experiment on Public Goods**

**Timo Goeschl**, University of Heidelberg; Johannes Diederich, Heidelberg University; Israel Waichman, Bard College Berlin

Discussant: Thijs Dekker, University of Leeds

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**SUSTAINABLE DEVELOPMENT**

Room: Room 4.211

Chair: Stefan Baumgärtner, University of Freiburg

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**Distributional considerations during growth toward the golden rule**

**Stellio Del Campo**, Univerity Paris Nanterre

Discussant: Stefan Baumgärtner, University of Freiburg

**Growth and long-run sustainability**

**Vincent Martinet**, INRA; Robert Cairns, McGill University

Discussant: Etienne Lorang, INRA / Climate Economics Chair

**Recycling under environmental, climate and resource constraints**

**Etienne Lorang**, INRA / Climate Economics Chair; Gilles Lafforgue, Toulouse Business Schhol

Discussant: Vincent Martinet, INRA

**Shadow-price valuation of natural capital under different conceptions of sustainability**

A.M. Tanvir Hussain, East West University; Moritz Meyer, Leuphana University of Lüneburg; Martin Quaas, Leipzig University; **Stefan Baumgärtner**, University of Freiburg

Discussant: Stellio Del Campo, Univerity Paris Nanterre

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**VALUATION OF ECOSYSTEM SERVICES II**

Room: Room 4.212

Chair: Yanay Farja, Tel-Hai College

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**Accounting for subsistence needs in cost-benefit analysis**

**Victor Champonnois**, IRSTEA; Olivier Chanel, AMSE-CNRS-IDEP

Discussant: Tanya OGarra, Middlesex University

**Preferences for Water Treatment Provision in Rural India: Comparing Communal, Pay-per-Use and Labor-for-Water Schemes**

**Tanya OGarra**, Middlesex University; Katherine Alfredo, Columbia University

Discussant: Ash Morgan, Appalachian State University

**The Role of Cultural Worldviews in Willingness to Pay for Environmental Policy: A Contingent Valuation Method Approach**

**Ash Morgan**, Appalachian State University; Paul Hindsley, Eckerd College

Discussant: Yanay Farja, Tel-Hai College

**Does nationality matter? The effect of cross-border information on willingness to pay for migratory species conservation**

**Yanay Farja**, Tel-Hai College; Nir Becker, Tel-Hai College; Janusz Majewski, Warsaw University of Life Sciences – SGGW; Agnieszka Sobolewska, Warsaw University of Life Sciences – SGGW

Discussant: Victor Champonnois, IRSTEA

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Coffee break

Friday, 15.45-16.15

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PARALLEL SESSION 6  
FRI 16:15-18:00



**THEMATIC SESSION: ASSESSING THE MARKET STABILITY RESERVE OF THE EU-ETS**

Room: Room 1.219

Organizer(s): Carolyn Fischer, Resources for the Future; Michael Pahle, Potsdam Institute for Climate Impact Research (PIK); Simon Quemin, London School of Economics

Chair: Carolyn Fischer, Resources for the Future

In 2018 the EU adopted a major reform of its Emission Trading Scheme (ETS) that included intake and cancellation of allowances through the so called Market Stability Reserve (MSR). A primary motivation was to permanently reduce the surplus of allowances, expecting that this would increase prices to higher levels for good. While allowances prices indeed went up over the last months, its effects on long-term price development and volatility are still poorly understood. Yet the MSR will be reviewed in 2021, which is why filling this knowledge gap is of high policy relevance. The three papers in this session analyse different market and design related factors determining their impact, and thus provide a comprehensive assessment of the MSR that can inform the upcoming review.

**Intertemporal Emissions Trading and Market Design: An Application to the EU-ETS**

**Simon Quemin**, London School of Economics; Raphael Trotignon, CEC, Paris-Dauphine University

**Understanding overlapping policies: Internal carbon leakage and the punctured waterbed**

Arthur van Benthem, University of Pennsylvania; Robert Ritz, University of Cambridge; **Grischa Perino**, University of Hamburg

**On the performance of the different components of the EU ETS MSR**

**Michael Pahle**, Potsdam Institute for Climate Impact Research (PIK); Eva-Maria Mauer, Potsdam Institute for Climate Impact Research (PIK); Samuel J Okullo, Potsdam Institute for Climate Impact Research (PIK)

**EAERE SPECIAL SESSION: BEST DOCTORAL DISSERTATION AWARDEES**

Room: Lecture Theatre A

Chair: Mireille Chiroleu-Assouline, Paris School of Economics, University Paris 1 Pantheon-Sorbonne

The EAERE Award for Best Doctoral Dissertations in Environmental and Resource Economics is given to encourage and recognize outstanding and innovative academic achievement in the field of Environmental and Resource Economics. Dissertations must have been written as part of a graduate course of study at an accredited academic European institution and defended in the calendar year preceding the year in which the award is announced. Three dissertations will be awarded every year after peer review of all submissions. This thematic session, organized by the EAERE Council, features the three 2019 winners who will present the best paper coming from their dissertation

**How Effective Was the UK Carbon Tax? A Machine Learning Approach to Policy Evaluation**

Jan Abrell, ZHAW - Zurich University of Applied Sciences; **Mirjam Kosch**, ZHAW - Zurich University of Applied Sciences and ETH Zurich; Sebastian Rausch, ETH Zurich

**Dynamic heterogeneity: rational habits and the heterogeneity of household responses to gasoline prices**

**Aurélien Saussay**, Sciences Po

**The risk-adjusted carbon price**

Frederick van der Ploeg, Dep. of Economics, University of Oxford; **Ton van den Bremer**, Vrije Universiteit Amsterdam and University of Oxford

**POLICY SESSION: APPLICATIONS OF NATURAL CAPITAL IN POLICY MAKING**

Room: Room 2.220

Organizer(s): Ian Bateman, University of East Anglia; Alistair Ulph, University of Manchester

Chair: Ian Bateman, University of East Anglia

This session will consider the latest thinking on bringing natural capital into decision making across all levels of government (international, national, regional), private companies and individuals. For example, at the European level, the session will provide an overview of the Knowledge and Innovation

Project on an Integrated system for Natural Capital and ecosystem services Accounting (KIP INCA) set up by the European Commission, then assess the outcomes and policy applications for a range of 6 ecosystem services. For the UK, the session will outline the work of the Natural Capital Committee, its role in a range of government proposals, and the incorporation of the natural capital approach into the H.M. Treasury 'Green Book' guidance for public spending. The session will consider an application of Natural Capital Accounting to the case study of reducing flooding in the Bristol Channel. It will also consider innovative work on natural capital at the urban level using the example of the Greater Manchester Combined Authority. Finally, the session will discuss the importance of natural capital thinking in influencing investors who want to be able to measure the impacts of their investments and give examples of how this has been achieved.

Panelist(s): Walid Oueslati, OECD;  
Alessandra La Notte, European Commission Joint Research Centre;  
Steven Arnold, Environment Agency;  
Ece Ozdemiroglu, Economics for the Environment Consultancy Ltd;  
Krista Patrick, GMCA;  
Ian Bateman, University of East Anglia

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**POLICY SESSION: TOWARD 100% CLEAN ENERGY:** Room: Room 1.218  
**ECONOMIC AND POLITICAL CONSIDERATIONS FOR ENERGY STORAGE IN FUTURE ENERGY SYSTEMS**

Organizer(s): Maureen Lackner, Environmental Defense Fund; Steven Koller, Environmental Defense Fund

Chair: Thomas Sterner, University of Gothenburg

As renewable energy capacity expands around the world, energy storage will play an important role in the decarbonisation of the electricity sector through its energy arbitrage capabilities. Achieving significant levels of deployment will require innovative policy solutions. One example is the use of reverse auctions (multiple sellers, one buyer), which can provide transparency on actual costs of storage and reduce the price of procuring new capacity. In this session speakers will discuss the scale and costs of energy storage, demonstrate the value of such storage, present evidence on the role of reverse auctions, and shed light on the European Commissions to leverage policy tools like reverse auctions to spur renewable energy and storage capacity.

Panelist(s): Geoffrey M. Heal, Columbia Business School;  
Katheline Schubert, University of Paris;  
Thomas Stoerk, European Commission; LSE

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**CLIMATE CHANGE AND CGE MODELLING** Room: Room 4.209  
Chair: Christoph Böhringer, University of Oldenburg

**Constrains on climate change adaptation: Evidence from sea level rise**

**Theodoros Chatzivasileiadis**, ZEW; Marjan Hofkes, Department of Economics, Vrije Universiteit Amsterdam, The Netherlands; Onno Kuik, Institute for Environmental Studies, Vrije Universiteit Amsterdam; Richard Tol, University of Sussex

Discussant: Nina Knittel, University of Graz

**A global analysis of heat-related labour productivity losses under climate change - implications for Germany's foreign trade**

**Nina Knittel**, University of Graz; Martin W. Jury, University of Graz; Birgit Bednar-Friedl, University of Graz; Gabriel Bachner, University of Graz; Andrea Steiner, University of Graz

Discussant: Frank Venmans, UMONS

**Steering the climate system: an extended comment**

**Frank Venmans**, UMONS; Linus Mattauch, University of Oxford; Richard Millar, University of Oxford; Frederick van der Ploeg, Dep. of Economics, University of Oxford; Armon Rezai, Vienna University of Economics and Business; Anselm Schultes, Potsdam Institute for Climate Impact Research; Nico Bauer, Potsdam Institute for Climate Impact Research; Simon Dietz, LSE; Ottmar Edenhofer, Mercator Research Institute on Global Commons and Climate Change; Niall Farrell, Potsdam Institute for Climate Impact Research; Cameron Hepburn, University of Oxford; Gunnar Luderer, Potsdam Institute for Climate

Impact Research; Jacquelyn Pless, University of Oxford; Fiona Spuler, University of Oxford; Nicholas Stern, London School of Economics and Political Science; Alexander Teytelboym, University of Oxford  
Discussant: Christoph Böhringer, University of Oldenburg

**Greener and Fairer: A Progressive Environmental Tax Reform for Spain**

**Christoph Böhringer**, University of Oldenburg; Xaquín García-Muros, Basque Centre for Climate Change and MIT; Mikel Gonzalez-Eguino, Basque Centre for Climate Change (BC3)

Discussant: Theodoros Chatzivasileiadis, ZEW

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**CLIMATE CHANGE AND DEVELOPMENT II**

Room: Room 3.204

Chair: Lorenza Campagnolo, CMCC@Ca'Foscari Ca' Foscari University

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**Distributional impacts of weather and climate in India**

**Barbora Sedova**, Mercator Research Institute on Global Commons and Climate Change (MCC); Matthias Kalkuhl, MCC Berlin; Robert Mendelsohn, Yale University

Discussant: Giorgia Sforna, University of Roma Tre

**The impact of short and medium-term change in climate conditions on violent conflicts in Africa: a dynamic spatial panel analysis**

**Giorgia Sforna**, University of Roma Tre; Federica Cappelli, University of Roma Tre; Valeria Costantini, University of Roma Tre; Caterina Conigliani, University of Roma Tre; Keti Lelo, University of Roma Tre; Anil Markandya, BC3 Basque Centre for Climate Change, University of Bath; Elena Paglialunga, University of Roma Tre

Discussant: sibananda senapati, chandragupt institute of management patna

**Agriculture, Economy and Climate Change: An inquiry of Bihar's Human Development Trajectory**

**sibananda senapati**, chandragupt institute of management patna

Discussant: Lorenza Campagnolo, CMCC@Ca'Foscari Ca' Foscari University

**SDGs under the climate change threat: an impact assessment in the agricultural sector**

**Lorenza Campagnolo**, CMCC@Ca'Foscari Ca' Foscari University

Discussant: Barbora Sedova, Mercator Research Institute on Global Commons and Climate Change (MCC)

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**DISCOUNTING II**

Room: Room 4.205

Chair: Anna Dugan, University of Graz

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**Planetary boundaries of consumption growth: Declining social discount rates.**

**Yuri Katz**, SP Global

Discussant: Cees Withagen, Vrije Universiteit Amsterdam

**The social cost of carbon and the Ramsey rule**

**Cees Withagen**, Vrije Universiteit Amsterdam

Discussant: Xueqin Zhu, Wageningen University

**Discounting in the Presence of Scarce Ecosystem Services**

**Xueqin Zhu**, Wageningen University; Sjak Smulders, Tilburg University; Aart de Zeeuw, Tilburg University

Discussant: Anna Dugan, University of Graz

**The Optimal Extraction of Non-renewable Resources Under Hyperbolic Discounting**

**Anna Dugan**, University of Graz; Timo Trimborn, Aarhus University

Discussant: Yuri Katz, SP Global

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**ELECTRICITY MARKET AND TRANSITION TO RENEWABLE ENERGY**

Room: Room 2.218

Chair: Karlo Hainsch, TU Berlin

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**Strategic investment decisions under the nuclear power debate in Belgium**

**Julia de Frutos Cachorro**, University of Barcelona; Gwen Willeghems, EnergyVille and VITO; Jeroen Buysse, Ghent University

Discussant: Ali Darudi, University of Basel

**Why incumbents are underactive in renewable energy investments: a market power perspective**

**Ali Darudi**, University of Basel; Hannes Weigt, University of Basel

Discussant: Stefan Lamp, Toulouse School of Economics

**(Mis)allocation of Renewable Energy Sources**

**Stefan Lamp**, Toulouse School of Economics; Mario Samano, HEC Montreal

Discussant: Karlo Hainsch, TU Berlin

**Emission Pathways Towards a Low-Carbon Energy System for Europe - A Model-Based Analysis of Decarbonization Scenarios**

Konstantin Löffler, TU Berlin / DIW Berlin; **Karlo Hainsch**, TU Berlin; Thorsten Burandt, TU Berlin / DIW Berlin / NTNU Trondheim; Claudia Kemfert, DIW Berlin; Pao-Yu Oei, TU Berlin / DIW Berlin; Christian von Hirschhausen, TU Berlin / DIW Berlin

Discussant: Julia de Frutos Cachorro, University of Barcelona

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**EMPIRICAL ANALYSIS OF CLIMATE CHANGE**

Room: Room 4.211

Chair: Sonja Zitzelsberger, University of Kassel

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**Trust and CO2 Emissions: Cooperation on a global scale**

**Ara Jo**, ETH Zurich; Stefano Carattini, Georgia State University

Discussant: Isabel Hovdahl, Norwegian University of Science and Technology

**What can we learn, and what can we not learn, from machine learning in climate economics?**

**Isabel Hovdahl**, Norwegian University of Science and Technology

Discussant: Florian Leblanc, CIRED

**The climate risk of high fugitive methane leakage from shale deposits : assessing the macroeconomic costs in the RCP 2.6**

**Florian Leblanc**, CIRED

Discussant: Sonja Zitzelsberger, University of Kassel

**How climate experts' views on geoengineering depend on their beliefs about climate change impacts**

**Sonja Zitzelsberger**, University of Kassel; Astrid Dannenberg, University of Kassel

Discussant: Ara Jo, ETH Zurich

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**EMPIRICAL ANALYSIS OF RENEWABLE ENERGY II**

Room: Room 4.212

Chair: Robert Germeshausen, ZEW Mannheim

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**The role of political connection on overinvestment of Chinese energy firms**

**Xiaojun Yu**, City University of Hong Kong; Lin Zhang, City University of Hong Kong

Discussant: Keith Williges, University of Graz

**Assessing the effect of unburnable carbon estimates on alternative energy firm stock prices**

**Keith Williges**, University of Graz

Discussant: Paul Lehmann, University of Leipzig/Helmholtz Centre for Environmental Research - UFZ

**The Regional Heterogeneity of Wind Power Deployment: An Empirical Investigation of Land-use Policies in Germany and Sweden**

**Paul Lehmann**, University of Leipzig/Helmholtz Centre for Environmental Research - UFZ; Thomas Lauf, Helmholtz Centre for Environmental Research - UFZ; Kristina Ek, Luleå University of Technology; Erik Gawel, Helmholtz Centre for Environmental Research - UFZ; Patrik Soderholm, Luleå University of Technology

Discussant: Robert Germeshausen, ZEW Mannheim

**State Mandates on Renewable Heating Technologies and the Housing Market**

**Robert Germeshausen**, ZEW Mannheim; Kathrine von Graevenitz, ZEW - Leibniz Centre for European

Economic Research  
Discussant: Xiaojun Yu, City University of Hong Kong

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**ENERGY USE AND BEHAVIOURAL ECONOMICS**

Room: Room 4.206

Chair: Ximeng Fang, University of Bonn

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**Nudges and traditional policies: experimental evidence about substitution effects for energy consumption**

**Valeria Fanghella**, University of Trento; Matteo Ploner, University of Trento; Massimo Tavoni, Politecnico di Milano, RFF-CMCC European Institute on Economics and the Environment (EIEE)

Discussant: Matthias Rodemeier, University of Muenster

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**The Welfare Effects of Information Nudges - Theory and Evidence from a Large-Scale Natural Field Experiment**

**Matthias Rodemeier**, University of Muenster; Andreas Löschel, ZEW; Lorenz Götte, University of Bonn

Discussant: Madeline Werthschulte, University of Münster

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**Cost Misperceptions and Energy Consumption**

**Madeline Werthschulte**, University of Münster; Andreas Löschel, ZEW

Discussant: Ximeng Fang, University of Bonn

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**Feedback Provision and Resource Conservation: Evidence From a Field Study in Student Dorms**

**Ximeng Fang**, University of Bonn; Lorenz Götte, University of Bonn; Verena Tiefenbeck, ETH Zurich; Matthias Sutter, MPI for Research on Collective Goods; Bettina Rockenbach, University of Cologne; Thorsten Staake, University of Bamberg; Samuel Schöb, University of Bamberg

Discussant: Valeria Fanghella, University of Trento

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**ENVIRONMENTAL REGULATION**

Room: Room 3.210

Chair: Mark Curtis, Wake Forest University

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**Regulatory Spillover and Climate Co-benefits: Evidence from the New Source Review Lawsuits**

**Ron Chan**, University of Manchester; Yichen Christy Zhou, Clemson University

Discussant: Oliver Schenker, Frankfurt School of Finance Management

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**Treatment Spillovers of Energy Efficiency Policies in the Indian Cement Sector**

**Oliver Schenker**, Frankfurt School of Finance Management; Ashish Tyagi, Frankfurt School of Finance Management

Discussant: Xian-Liang Tian, Zhongnan University of Economics and Law

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**Less pollution under a little more centralized regulation? Evidence from China**

**Xian-Liang Tian**, Zhongnan University of Economics and Law; Xiao Yue, Zhongnan University of Economics and Law

Discussant: Mark Curtis, Wake Forest University

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**When do Environmental Regulations Backfire? Onsite Electricity Generation, Energy Efficiency and Instrument Selection**

**Mark Curtis**, Wake Forest University; Jonathan Lee, East Carolina University

Discussant: Ron Chan, University of Manchester

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**EXPERIMENTAL ECONOMICS**

Room: Room 4.204

Chair: Johannes Diederich, Heidelberg University

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**Coalition Formation in Water Allocation: A Multilateral Bargaining Experiment with Veto Power and Decision Costs**

Zhi Li, Xiamen University; **Wenchao Xu**, Xiamen University

Discussant: Maho Nakagama, BETA- University of Strasbourg

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**Long-lasting nudge and ad hoc monetary punishment in public good experiments**

**Maho Nakagama**, BETA- University of Strasbourg; Mathieu LEFEBVRE, BETA- University of Strasbourg;

Anne Stenger, INRA- BETA- University of Strasbourg  
Discussant: Andreas Lange, University of Hamburg

**On the performance of green assets in financial markets - Evidence from a laboratory experiment**

**Andreas Lange**, University of Hamburg; Stefan Palan, University of Graz; Andreas Nicklisch, Center for Economic Policy Research, HTW Chur; Jana Freundt, University of Pennsylvania

Discussant: Johannes Diederich, Heidelberg University

**Subsidizing Quantity Donations: Matches, Rebates, and Discounts Compared**

**Johannes Diederich**, Heidelberg University; Timo Goeschl, Heidelberg University; Raphael Epperson, University of Mannheim; Catherine C. Eckel, Texas AM University; Philip Grossman, Monash University

Discussant: Wenchao Xu, Xiamen University

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**FISHERIES**

Room: Room 3.212

Chair: Martin Quaas, Leipzig University

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**Ecosystem wealth in the Barents Sea**

**Sturla Kvamsdal**, NHH Norwegian School of Economics; Diwakar Poudel, Norwegian Polar Institute; Leif Sandal, NHH Norwegian School of Economics

Discussant: María José Gutiérrez, University of the Basque Country

**Fishing mortality hyper-stability: a model of inter-temporal input substitution**

**María José Gutiérrez**, University of the Basque Country; José-María Da Rocha, Universidade de Vigo; Javier García-Citrín, Universidade de Vigo; Raúl Puellezo, AZTI-Tecnalia

Discussant: Oscar Melo, Pontificia Universidad Católica de Chile

**Can a TERRITORIAL USE RIGHT FISHERIES management (TURF) make a difference for fishing communities? The CASE of the AMERB in CHILE.**

**Oscar Melo**, Pontificia Universidad Católica de Chile; Pedro Romero, Instituto Fomento Pesquero (IFOP)

Discussant: Martin Quaas, Leipzig University

**Harvesting efficiency and welfare in restricted open-access fisheries**

**Martin Quaas**, Leipzig University; Anders Skonhoft, Norwegian University of Science and Technology

Discussant: Sturla Kvamsdal, NHH Norwegian School of Economics

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**INSTRUMENT CHOICE ON EMISSIONS REDUCTION**

Room: Room 3.213

Chair: Chandrakiran Krishnamurthy, Swedish University of Agricultural Economics

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**Instrument Choice and Stranded Assets in the Transition to Clean Capital**

Adrien Vogt-Schilb, Inter American development bank; Stephane Hallegatte, World Bank; **Julie Rozenberg**, World Bank

Discussant: Kira Lancker, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig

**Increasing marginal costs and the efficiency of differentiated feed-in tariffs**

**Kira Lancker**, German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig; Martin Quaas, Leipzig University

Discussant: Zuokuan Zhou, University of Birmingham

**Eco-innovation, environmental regulation and firm performance: Evidence from manufacturing firms in French context**

**Zuokuan Zhou**, University of Birmingham; Robert Elliott, University of Birmingham; Liza Jabbour, University of Birmingham

Discussant: Chandrakiran Krishnamurthy, Swedish University of Agricultural Economics (SLU)

**A dynamic bio-economic model of pollination under climate change: An application to oil rapeseed production in the Stockholm region**

**Chandrakiran Krishnamurthy**, Swedish University of Agricultural Economics (SLU); Mattias Vesterberg, Umeå University; Amin Karimu, Umeå University

Discussant: Julie Rozenberg, World Bank

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**MODELLING OF DYNAMIC MARKETS**

Room: Room 4.210

Chair: Aude Pommeret, Université Savoie Mont Blanc

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**Multidimensional designs for durable goods: partial commitment ability and technological progress**

**Sophie Bernard**, Polytechnique Montréal

Discussant: Robert Cairns, McGill University

**Reconciling Hotelling Resource Models with Hotelling's Accounting Method**

**Robert Cairns**, McGill University; John Hartwick, Queen's University

Discussant: Kerry Krutilla, Indiana University

**The Political Feasibility of Environment Policies with Visible Rents and Rent-Seeking**

**Kerry Krutilla**, Indiana University; David Good, Indiana University; Alexander Alexeev, School of Public and Environmental Affairs, Indiana University

Discussant: Aude Pommeret, Université Savoie Mont Blanc

**Valuing Joint Environmental Amenities with an Irreversible Investment**

**Robert Cairns**, McGill University; **Aude Pommeret**, Université Savoie Mont Blanc

Discussant: Sophie Bernard, Polytechnique Montréal

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**OIL DISCOVERY AND ECONOMIC IMPACTS**

Room: Room 4.213

Chair: Lassi Ahlvik, Norwegian School of Economics

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**Resource discoveries and duration of autocratic leadership**

**Alexandra Brausmann**, ETH Zurich; Elise Grieg, ETH Zürich

Discussant: Jubril Animashaun, University of Manchester

**Colonialism, Institutional Quality and the Resource Curse**

**Jubril Animashaun**, University of Manchester

Discussant: Christa Brunnschweiler, University of East Anglia

**Petroleum ownership and discoveries**

**Christa Brunnschweiler**, University of East Anglia; Steven Poelhekke, University of Auckland and Vrije Universiteit Amsterdam

Discussant: Lassi Ahlvik, Norwegian School of Economics

**Tax neutrality, entry and discoveries: Evidence from oil drilling in the North Sea**

**Lassi Ahlvik**, Norwegian School of Economics; Torfinn Harding, Norwegian School of Economics

Discussant: Alexandra Brausmann, ETH Zurich

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**TRANSPORTATION II**

Room: Room 3.211

Chair: Jeremy van Dijk, University of Neuchâtel

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**The Impact of Spatial Patterns in Road Traffic Externalities on Willingness-to-pay Estimates**

**Sandra Rousseau**, KU Leuven, Faculty of Economics and Business, CEDON; Simon De Jaeger, KU Leuven; Marieke Franck, Artevelde Hogeschool

Discussant: Ivan Petrov, University College Dublin

**Vehicle Tax Design and Car Purchase Choices: A Case Study of Ireland**

**Ivan Petrov**, University College Dublin; Sarah La Monaca, University College Dublin; Lisa Ryan, University College Dublin

Discussant: Joshua Linn, University of Maryland; Resource for the Future

**How Do Passenger Vehicle Greenhouse Standards Affect Vehicle Quality ?**

Yujie Lin, University of Maryland; **Joshua Linn**, University of Maryland; Resource for the Future

Discussant: Jeremy van Dijk, University of Neuchâtel

**The impact of public charging infrastructure on electric vehicle adoption: Evidence from Norway**

**Jeremy van Dijk**, University of Neuchâtel; Nathan Delacrétaz, Université de Neuchâtel; Bruno Lanz, University of Neuchatel

Discussant: Sandra Rousseau, KU Leuven, Faculty of Economics and Business, CEDON

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**WASTE III - PLASTIC BAGS**

Room: Room 2.219

Chair: Johane Dikgang, University of Johannesburg

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**A Model of Marine Litter in Sustainable Fisheries**

**Linh Nguyen**, Institute for Environmental Studies, Vrije Universiteit Amsterdam; Roy Brouwer, The Water Institute / University of Waterloo; Pieter van Beukering, Institute for Environmental Studies (IVM) - Vrije Universiteit Amsterdam

Discussant: Rebecca Taylor, University of Sydney

**Bag Leakage: The Effect of Disposable Carryout Bag Regulations on Unregulated Bags**

**Rebecca Taylor**, University of Sydney

Discussant: Marcelo Caffera, University of Montevideo

**Is the willingness to pay for plastic bags low? Evidence from a pricing initiative**

**Marcelo Caffera**, University of Montevideo; José María Cabrera, University of Montevideo; Alejandro Cid, University of Montevideo

Discussant: Johane Dikgang, University of Johannesburg

**Using contingent behaviour analysis to measure the price elasticity of demand for plastic bags**

**Johane Dikgang**, University of Johannesburg; Jugal Mahabir, University of Johannesburg; Zafeer Ravat, University of Johannesburg

Discussant: Linh Nguyen, Institute for Environmental Studies, Vrije Universiteit Amsterdam

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**WATER SCARCITY**

Room: Room 3.205

Chair: Roy Brouwer, The Water Institute / University of Waterloo

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**Virtual Water Trade: The Implications of Capital Scarcity**

Hamed Ghodusi, Stevens Institute of Technology; Mohamad Afkhami, Stevens Institute of Technology;

**Thomas Bassetti**, University of Padua; Filippo Pavesi, University of Verona

Discussant: Hao Zhao, California Institute of Technology

**Surface Water Trading and Groundwater Depletion in California**

**Hao Zhao**, California Institute of Technology

Discussant: Leila Eamen, School of Environment and Sustainability, University of Saskatchewan

**The Economic Impacts of Water Supply Restrictions due to Climate and Policy Change: an Inter-regional Supply-side Input-Output Analysis at Transboundary River Basin Scale**

**Leila Eamen**, School of Environment and Sustainability, University of Saskatchewan; Roy Brouwer, The Water Institute / University of Waterloo; Saman Razavi, School of Environment and Sustainability, University of Saskatchewan

Discussant: Jorge Garcia, University of Waterloo

**Assessing the Economic Impacts of Water Scarcity on the Great Lakes Basin using a Supply-Side Input-Output Model**

**Jorge Garcia**, University of Waterloo; Roy Brouwer, The Water Institute / University of Waterloo; Rute Pinto, University of Waterloo

Discussant: Thomas Bassetti, University of Padua

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Conference dinner

Friday, 19.00-23.00



PARALLEL SESSION 7  
SAT 09:00-10:45

## Parallel session 7

Saturday, 09.00-10.45

**THEMATIC SESSION: MICROECONOMIC PANEL STUDIES ON CLIMATE CHANGE EXPECTATIONS AND ADAPTATIONS: THE EFFECTS OF EXTREME WEATHER EXPERIENCES**

Room: Lecture Theatre A

Organizer(s): Daniel Osberghaus, ZEW – Leibniz Centre for European Economic Research; Pike Brown, Manaaki Whenua - Landcare Research; Katharina Lehmann-Uchner, German Institute for Economic Research (DIW Berlin)

Chair: Daniel Osberghaus, ZEW – Leibniz Centre for European Economic Research

The microeconomic analysis of expectations regarding future climate and any resulting adaptation undertaken by households is hampered by significant identification challenges. Longitudinal/panel data may be used to control for unobserved and unobservable factors, thereby helping to identify causal relationships between exposure to climate-related natural disasters and both expectations of future climate and anticipatory adaptation. Such data are also ideally suited to assess dynamics in expectations and behaviours. However, such data are rare. In this session, we bring together three of the very few micro panel studies on climate change that exist globally; each study assesses expectations, behaviour, and/or anticipation of future climate change using multiple survey waves. Baseline data are used to describe the correlates of future climate expectations, and the longitudinal nature of the data is exploited to evaluate the impact of extreme weather events on beliefs and updating of expectations.

**Effects of extreme weather experience on climate change belief**

**Daniel Osberghaus**, ZEW – Leibniz Centre for European Economic Research; Carina Fugger, ZEW - Leibniz Centre for European Economic Research

**Drought intensity, future expectations, and the durability of climate beliefs**

**Pike Brown**, Manaaki Whenua - Landcare Research; Patrick Walsh, Manaaki Whenua - Landcare Research; Pam Booth, Manaaki Whenua - Landcare Research

**When shocks become persistent: Household-level asset growth in the aftermath of an extreme weather event**

Kati Kraehnert, German Institute for Economic Research (DIW Berlin); **Katharina Lehmann-Uchner**, German Institute for Economic Research (DIW Berlin)

**THEMATIC SESSION: RECENT ADVANCES IN THE THEORETICAL UNDERSTANDING OF SOLAR GEOENGINEERING**

Room: Room 1.219

Organizer(s): Lassi Ahlvik, Norwegian School of Economics; Daniel Heyen, ETH Zurich; Gernot Wagner, Harvard University

Chair: Lassi Ahlvik, Norwegian School of Economics

Solar geoengineering, aka as Solar Radiation Management, is increasingly discussed in the context of temperature targets such as the 1.5C goal. Besides its policy relevance, solar geoengineering also challenges and inspires economic thinking. This session brings together three theoretical contributions at the forefront of solar geoengineering economics, focused on the value of research and experimentation, the termination effect, and the interplay of free-riding and free-driving.

**Geoengineering Bandits**

**Lassi Ahlvik**, Norwegian School of Economics; Gernot Wagner, Harvard University

**Solar Radiation Management Termination: knowing when to start by knowing when to stop**  
**Sjak Smulders**, Tilburg University; Martin Quaas, Leipzig University; Wilfried Rickels, Kiel Institute for the World Economy; Juan Moreno-Cruz, U of Waterloo

## **Free-riders and free-drivers: Non-cooperative public good provision by heterogeneous agents**

**Daniel Heyen**, ETH Zurich; Alessandro Tavoni, University of Bologna

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### **POLICY SESSION: CLIMATE CHANGE AND HEALTH**

Room: Room 1.218

Organizer(s): Elizabeth Robinson, University of Reading

Chair: Elizabeth Robinson, University of Reading

The impacts of climate change on health are already visible. The Lancet Countdown tracks indicators across five domains of health and climate change highlights the health impacts of increasing heat and heatwaves including direct effects such as increased cardiovascular and renal disease and indirect impacts such as increased spread of vectors transmitting pathogens and falling labour productivity. Optimal government policy requires understanding costs, benefits distributional impacts and feasibility of designing strategies that both reduce emissions and improve climate-related health. This session brings together medical and public health practitioners and economists expert in the cost-benefit analysis of climate change mitigation to explore the extent to which can induce cost-effective changes in behaviour that improves health and environmental outcomes.

Panelist(s): Virginia Murray, Public Health England;  
Nick Watts, Executive Director of Lancet Countdown;  
Hilary Graham, University of York;  
Subhrendu K Pattanayak, Duke University;  
Ariane Kehlbacher, School of Agriculture, Policy and Development, University of Reading

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### **POLICY SESSION: ENERGY TRANSITION: THE CASE OF ISRAEL**

Room: Room 2.220

Organizer(s): Ruslana Rachel Palatnik, Yezreel Valley Academic College, EAERE Country representative

Chair: Ruslana Rachel Palatnik, Yezreel Valley Academic College, EAERE Country representative

A historically dependant, centralized and isolated energy island, Israel is now undergoing a swift and large transition. The energy flow changes dramatically, crowding out imported fuels in favour of domestic natural gas and renewable fuels, and the transport sector is being electrified. The electricity market is being reformed through partial privatisation, the system operator is becoming independent and the market is being restructured to facilitate competitiveness. The newfound natural gas discoveries turn Israel into an energy exporter for the first time. These trends present challenging shifts for policy-makers and market stakeholders. This policy session will describe the economic implications, the policy measures and the future challenges facing Israel's energy transition.

Panelist(s): Ruslana Rachel Palatnik, Yezreel Valley Academic College, EAERE Country representative;  
Nurit Gal, Electricity Authority;  
Ofira Ayalon, SNI, University of Haifa;  
Idan Liebes, Samuel Neaman Institute

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### **AIR POLLUTION IN CHINA**

Room: Room 3.212

Chair: Rong Ma, Tsinghua University

#### **Air Pollution Violations in China**

**Wei Guo**, University of California, Berkeley

Discussant: Shaoshuai Li, University of Macau

#### **Growing Pains for Others: Using Holidays to Identify the Pollution Spillover Externality between China and South Korea**

**Shaoshuai Li**, University of Macau; Jia Yuan, University of Macau; Zhigang Li, Asian Development Bank

Discussant: Tong Zhu, The Economic and Social Research Institute

#### **Regulation through revelation: The effect of pollution monitoring on labour demand in China**

**Tong Zhu**, The Economic and Social Research Institute; Puyang Sun, Nankai University

Discussant: Rong Ma, Tsinghua University

## **Regulating air pollution under pollutant spillover: Evidence from the 2+26" Cities**

Jing Cao, Tsinghua University; **Rong Ma**, Tsinghua University

Discussant: Wei Guo, University of California, Berkeley

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## **BEHAVIOUR OF ENERGY CONSUMERS**

Room: Room 4.204

Chair: Ricardo Daziano, Cornell University

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### **Low energy literacy undermines the effectiveness of energy labels – insights from appliance choice experiments in the EU**

**Marie-Charlotte Guetlein**, Grenoble Ecole de Management; Joachim Schleich, Grenoble Ecole de Management; Corinne Faure, Grenoble Ecole de Management; Gengyang Tu, École Supérieure d'Agricultures, Université Bretagne Loire

Discussant: Julia Blasch, Vrije Universiteit Amsterdam, Institute for Environmental Studies (IVM)

### **Behavioral anomalies and energy-related individual choices: the role of status-quo bias**

**Julia Blasch**, Vrije Universiteit Amsterdam, Institute for Environmental Studies (IVM); Claudio Damiano, ETH Zurich, Centre for Energy Policy and Economics (CEPE)

Discussant: Tensay Hadush Meles, University College Dublin

### **Billing Education and Consumption Behavior: Experimental Evidence from Nonlinear Electricity Tariff**

**Tensay Hadush Meles**, University College Dublin

Discussant: Ricardo Daziano, Cornell University

### **Flexible customer willingness to pay for bundled smart home energy products and services**

**Ricardo Daziano**, Cornell University

Discussant: Marie-Charlotte Guetlein, Grenoble Ecole de Management

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## **CHOICE MODELLING II**

Room: Room 4.205

Chair: Katrina Davis, University of Exeter

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### **Do heterogeneous tourists and residents value differently coastal erosion management? Evidence from Hoian (Vietnam), a UNESCO World Heritage Site**

**Thi Lan Anh Nguyen**, French National Institute of Higher Education in Agricultural Sciences (SupAgro Montpellier); Michel Simioni, The Institut national de la recherche agronomique; Arnaud Reynaud, Toulouse School of Economics; Manh-Hung N'Guyen, TSE(INRA); Cecile Aubert, University of Bordeaux (GREThA)

Discussant: Silvia Ferrini, Department of Political Science and International, University of Siena and Centre for Social and Economic Research on the Global Environment, University of East Anglia

### **Green vs. Gray Infrastructures for coastal protection: a choice experiment in the Maddalena Archipelago National Park**

**Silvia Ferrini**, Department of Political Science and International, University of Siena and Centre for Social and Economic Research on the Global Environment, University of East Anglia; Rossella Atzori, University of Cagliari; Sandro De Muro, Coastal and Marine Geomorphology Group, Department of Chemical and Geological Sciences, University of Cagliari

Discussant: Katrina Davis, University of Exeter

### **Preference vs. Production Functions in Integrated Choice Experiments**

**Katrina Davis**, University of Exeter; Michael Burton, University of Western Australia

Discussant: Thi Lan Anh Nguyen, French National Institute of Higher Education in Agricultural Sciences (SupAgro Montpellier)

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## **CLIMATE CHANGE AND AGRICULTURE IN DEVELOPING COUNTRIES**

Room: Room 4.213

Chair: Lotanna Emediegwu, University of Manchester

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### **To what extent do climate-related risks affect agricultural productivity? Empirical evidence from smallholder maize farmers in Tanzania**

**Robertson Khataza**, Lilongwe University of Agriculture Natural Resources

Discussant: Irene Staffieri, Sapienza University of Rome

**Weather anomalies and spatial heterogeneity in farm-gate prices: evidence from Uganda maize farmers**

**Irene Staffieri**, Sapienza University of Rome; Pierluigi Montalbano, Sapienza University of Rome; Richard Tol, University of Sussex

Discussant: Paolo Agnolucci, University College London

**The Impact of Weather on the Trade of Agricultural Commodities**

Chrysanthi Rapti, University College London; **Paolo Agnolucci**, University College London

Discussant: Lotanna Emediegwu, University of Manchester

**The Impacts of Climate Change on Agriculture in Sub-Saharan Africa: A Spatial Panel Data Approach**

**Lotanna Emediegwu**, University of Manchester

Discussant: Robertson Khataza, Lilongwe University of Agriculture Natural Resources

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**CLIMATE RESPONSE AND UNCERTAINTY II**

Room: Room 3.204

Chair: Michael Grubb, University College London and INET

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**Would Solar Geoengineering Devalue Research on Climate Response?**

**Elnaz Roshan**, University of Hamburg

Discussant: Anastasios Xepapadeas, Athens University of Economics and Business

**Regional Climate Policy under Deep Uncertainty**

**Anastasios Xepapadeas**, Athens University of Economics and Business; William Brock, University of Wisconsin and University of Missouri

Discussant: Felix Schreyer, Potsdam Institute for Climate Impact Research

**How to formulate climate targets under uncertainty and anticipated future learning about climate sensitivity? – An axiomatic review of the strong sustainability paradigm**

**Felix Schreyer**, Potsdam Institute for Climate Impact Research; Hermann Held, Universität Hamburg

Discussant: Michael Grubb, University College London and INET

**Systems Innovation, Inertia and Pliability: A mathematical exploration with implications for climate change abatement**

**Michael Grubb**, University College London and INET

Discussant: Elnaz Roshan, University of Hamburg

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**EMPIRICAL ANALYSIS OF MANUFACTURING FIRMS**

Room: Room 3.210

Chair: Ingmar Juergens, German Institute for Economic Research, DIW Berlin

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**Energy endowments and the location of manufacturing plants**

**Edward Manderson**, University of Manchester, UK

Discussant: Maja Zarkovic, University of Basel

**Economically, do environmentally regulated firms perform worse? Lessons from the German manufacturing sector**

**Maja Zarkovic**, University of Basel

Discussant: Soo Keong Yong, Xi an Jiaotong-Liverpool University

**Does 'Green' Matter? Environmental Management and Firm Performance in China**

**Soo Keong Yong**, Xi an Jiaotong-Liverpool University; Laure de Preux, Imperial College London; Mirabelle Muuls, Imperial College Business School; Peiyao Shen, ShanghaiTech University

Discussant: Ingmar Juergens, German Institute for Economic Research, DIW Berlin

**Do corporate GHG emissions and their disclosure affect information asymmetry and firm value?**

**Ingmar Juergens**, German Institute for Economic Research, DIW Berlin

Discussant: Edward Manderson, University of Manchester, UK

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## **FORESTRY**

Room: Room 4.210

Chair: Ibtisam Al-Abri, Sultan Qaboos University

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### **The Risk of Catastrophic Disturbances in a Market Level Age-Structured Forest Model**

Olli-Pekka Kuusela, Oregon State University; **Jussi Lintunen**, Natural Resources Institute Finland (Luke)

Discussant: Jenni Miettinen, University of Helsinki, Department of Economics and Management

### **Cost function approach to water protection in forestry**

**Jenni Miettinen**, University of Helsinki, Department of Economics and Management; Markku Ollikainen, University of Helsinki; Mika Nieminen, Natural Resources Institute Finland (Luke); Lauri Valsta, University of Helsinki

Discussant: Paola Ovando, The James Hutton Institute

### **Forest management and natural capital with an application to Mediterranean silvopastoral systems**

**Paola Ovando**, The James Hutton Institute; Giles Atkinson, London School of Economics; Marcelo Olivera, Universidad Autónoma Metropolitana, Cuajimalpa, Mexico; Carlos Rodriguez-Lucatero, Universidad Autónoma Metropolitana, Cuajimalpa, Mexico

Discussant: Ibtisam Al-Abri, Sultan Qaboos University

### **The Interaction of Wildfire Risk Mitigation Policies in the Presence of Heterogeneous Landowners and Spatial Externalities**

**Ibtisam Al-Abri**, Sultan Qaboos University; Kelly Grogan, University of Florida

Discussant: Jussi Lintunen, Natural Resources Institute Finland (Luke)

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## **FOSSIL FUEL AND CLIMATE CHANGE**

Room: Room 3.211

Chair: Mireille Chiroleu-Assouline, Paris School of Economics, University Paris 1 Pantheon-Sorbonne

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### **Bottom-up world climate policies: Preserving fossil fuel deposits vs. capping fuel consumption**

**Thomas Eichner**, FernUniversität; Ruediger Pethig, Universität Siegen

Discussant: Louison Cahen-Fourot, Vienna University of Economics and Business (WU)

### **Capital stranding cascades: The impact of decarbonisation on productive asset utilisation**

Emanuele Campiglio, Vienna University of Economics and Business (WU); **Louison Cahen-Fourot**, Vienna University of Economics and Business (WU); Eric Kemp-Benedict, Stockholm Environment Institute; Elena Dawkins, Stockholm Environment Institute; Antoine Godin, Agence Française de Développement

Discussant: Roberto Ferreira da Cunha, IHS CERA

### **Hotelling's Sweet Spot**

**Roberto Ferreira da Cunha**, IHS CERA; Antonin Pottier, Centre d'Economie de la Sorbonne; Jean-Charles Hourcade, CIRED, Centre International de Recherche sur l'Environnement et le Développement

Discussant: Mireille Chiroleu-Assouline, Paris School of Economics, University Paris 1 Pantheon-Sorbonne

### **Carbon Curse in Developed Countries**

Mouez Fodha, University Paris 1 Pantheon-Sorbonne; **Mireille Chiroleu-Assouline**, Paris School of Economics, University Paris 1 Pantheon-Sorbonne; Yassine Kirat, University Paris 1 Pantheon-Sorbonne

Discussant: Thomas Eichner, FernUniversität

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## **INTERNATIONAL ENVIRONMENTAL AGREEMENTS III**

Room: Room 4.209

Chair: Eftichios Sartzetakis, University of Macedonia

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### **Self-Enforcing International Environmental Agreements: Adaptation and Complementarity**

**Santiago J. Rubio**, University of Valencia

Discussant: Basak Bayramoglu, INRA, UMR Economie Publique

**With or Without the European Union: the Convention for the Protection of the Black Sea Against Pollution**

**Basak Bayramoglu**, INRA, UMR Economie Publique; Corina Haita-Falah, University of Kassel, Department of Environmental and Behavioral Economics  
Discussant: Sven Christens, University of Kassel

**Water allocation treaties between upstream and downstream states**

**Sven Christens**, University of Kassel  
Discussant: Eftichios Sartzetakis, University of Macedonia

**International Environmental Agreements and Trading Blocks. Can issue linkage enhance cooperation?**

**Eftichios Sartzetakis**, University of Macedonia; Effrosyni Diamantoudi, Concordia University; Stefania Strantza, Concordia University  
Discussant: Santiago J. Rubio, University of Valencia

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**POLICY INSTRUMENTS FOR ENERGY TRANSITION III**

Room: Room 2.218

Chair: **Nathaly Rivera**, University of Alaska Anchorage

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**Incentives for Technology Investments in International Climate Policy**

**Ralph Winkler**, University of Bern; Anna Kulakovskaya, University of Bern  
Discussant: Elias Asproudis, Swansea University

**Climate solidarity, green trade unions and timing of technological choice**

**Elias Asproudis**, Swansea University; Eleftherios Filippiadis, Department of Economics, University of Macedonia, Greece; Mo Tian, Nottingham University Business School  
Discussant: Nathaly Rivera, University of Alaska Anchorage

**The U.S. Coal-To-Gas Power Plant Conversion Process and its Effects in Housing Prices**

**Nathaly Rivera**, University of Alaska Anchorage; Scott Loveridge, Michigan State University  
Discussant: Ralph Winkler, University of Bern

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**TRADE AND ENVIRONMENT IV**

Room: Room 4.212

Chair: **Laura Birg**, University of Göttingen

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**Environmental Taxes and an Incentive for Offshore Outsourcing**

**Takeshi Iida**, University of Fukui; Arijit Mukherjee, Nottingham University Business School  
Discussant: Beat Hintermann, University of Basel

**Home Country Bias in International Emissions Trading: Evidence from the EU ETS**

**Beat Hintermann**, University of Basel; Markus Ludwig, University of Bayreuth  
Discussant: Nikolaos Vlassis, University of Aberdeen

**Multilateral Reforms of Trade and Environmental Policy of an Environmental Union**

**Nikolaos Vlassis**, University of Aberdeen; Avanti Pinto, University of St Andrews; Catia Montagna, University of Aberdeen  
Discussant: Laura Birg, University of Göttingen

**Green Consumers, Emission Taxes, and Firm Relocation**

**Laura Birg**, University of Göttingen; Jan Voßwinkel, Nürtingen Geislingen University  
Discussant: Takeshi Iida, University of Fukui

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**TRANSPORTATION III**

Room: Room 2.219

Chair: **Hanae Tamechika**, Nagoya City University

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**Speed limits and vehicle accidents in built-up areas: The impact of 30 km/h limit zones**

**Davide Cerruti**, ETH Zürich; Massimo Filippini, ETH Zurich  
Discussant: Xiaoxiao Ma, Durham University

**The Impact of Fuel Taxation and Vehicle Production Subsidies in A Dynamic Two-Period Vintage Model**

**Xiaoxiao Ma**, Durham University; Laura Marsiliani, Durham University Business School; Thomas Renstrom, Durham University Business School  
Discussant: Alexandros Dimitropoulos, OECD

**The impact of urban road pricing on the use of green transport modes: the case of Milan**

Elisabetta Cornago, OECD; **Alexandros Dimitropoulos**, OECD; Walid Oueslati, OECD  
Discussant: Hanae Tamechika, Nagoya City University

**Effects of Environment-Related Stimulus Policies: An Event Study Approach**

**Hanae Tamechika**, Nagoya City University  
Discussant: Davide Cerruti, ETH Zürich

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**VALUATION OF ECOSYSTEM SERVICES III**

Room: Room 4.206

Chair: Roger von Haefen, North Carolina State University

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**A combined SP-RP model to estimate the value of freshwater angling in England**

**Paul Metcalfe**, PJM economics; Paulo Ancaes, University College London; Antara Sen, PJM economics  
Discussant: Gianluca Grilli, Economic and social research Institute (ESRI)

**Modelling Anglers' Fish Release Choices Using Logbook Data**

**Gianluca Grilli**, Economic and social research Institute (ESRI); John Curtis, Economic and social research Institute (ESRI); Stephen Hynes, Socio-Economic Marine Research Unit, Whitaker Institute, National University of Ireland  
Discussant: Heidi Pokki, Natural Resources Institute Finland

**Understanding angler profiles in case of heterogeneous count data - a travel cost model**

**Heidi Pokki**, Natural Resources Institute Finland; Jette Bredahl Jacobsen, University of Copenhagen; Soren Olsen, University of Copenhagen; Atso Romakkaniemi, Natural Resources Institute Finland  
Discussant: Roger von Haefen, North Carolina State University

**Should Single Day and Multiple Day Trips Be Pooled when Estimating Travel Cost Models?**

**Roger von Haefen**, North Carolina State University; Eric English, Bear Peak Economics; Ted McConnell, University of Maryland; Frank Lupi, Michigan State University  
Discussant: Paul Metcalfe, PJM economics

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**WATER AND CLIMATE CHANGE**

Room: Room 3.205

Chair: Zehua Pan, University of Waterloo

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**Time = money? Evidence on disparities in environmental value estimates from choice experiments**

**Liselotte Hagedoorn**, Institute for Environmental Studies (IVM) - Vrije Universiteit Amsterdam; Mark J. Koetse, Institute for Environmental Studies (IVM) - Vrije Universiteit Amsterdam; Pieter van Beukering, Institute for Environmental Studies (IVM) - Vrije Universiteit Amsterdam; Luke Brander, Institute for Environmental Studies (IVM) - Vrije Universiteit Amsterdam  
Discussant: Kidanemariam Gebretsadik, Norwegian University of Life Sciences (NMBU)

**Irrigation and Demand for Weather Index Insurance: An Application Using Choice Experiments**

**Kidanemariam Gebretsadik**, Norwegian University of Life Sciences (NMBU); Eirik Romstad, Norwegian University of Life Sciences  
Discussant: Zehua Pan, University of Waterloo

**A Theoretical Modeling Framework to Support Investment Decisions in Green and Grey Infrastructure under Risk and Uncertainty**

**Zehua Pan**, University of Waterloo; Roy Brouwer, The Water Institute / University of Waterloo  
Discussant: Liselotte Hagedoorn, Institute for Environmental Studies (IVM) - Vrije Universiteit Amsterdam



Coffee break

Saturday, 10.45-11.15

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IPCC Presidential Address

Saturday, 11.15-11.35

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**IPCC PRESIDENTIAL ADDRESS - HOESUNG LEE, CHAIR OF THE  
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)**

Room: Lecture Theatre B

Chair: Michael Finus, University of Graz

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- Introduction by Carlo Carraro, President of EAERE

Plenary session 3

Saturday, 11.35-12.35

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**DECOUPLING RECONSIDERED - LUCAS BRETSCHGER, ETH  
ZURICH**

Room: Lecture Theatre B

Chair: Michael Finus, University of Graz

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Closing ceremony

Saturday, 12.35-12.45

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- Christian Gollier, President-elect of EAERE

Room: Lecture Theatre B

Lunch

Saturday, 12.45-14.00

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- \* Journal Board Meeting EDE – Room 3.213
  - \* Journal Board Meeting ERE – Room 2.217
  - IAERE Meeting – Room 2.220

\* - by invitation only

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PARALLEL SESSION 8  
SAT 14:00-15:45

**THEMATIC SESSION: ELECTRIFICATION OF HEAT AS A STEPPING STONE IN THE GREEN TRANSITION**

Room: Room 1.218

Organizer(s): Klaus Skytte, Technical University of Denmark; Lisa Ryan, University College Dublin  
 Chair: Lisa Ryan, University College Dublin

Concerns about climate change and the desire for a more secure energy provision are inducing countries to continuously develop and deploy renewable energy technologies to replace fossil fuels. At present, wind power is the fastest growing renewable energy technology being deployed in Northern Europe. This calls for better coupling between electricity and other energy sectors in order to utilise the cheap wind energy potentials in the heat, gas and transport sectors. At the same time, the integration of large shares of wind energy and other variable renewable sources of energy into power system operations calls for flexibility in the entire energy system. The residential sector represented 25% of final energy consumption in the EU in 2016 and the main use (64.7%) of energy by households is for heating their homes. So, decarbonized electrification of the heat supply can mitigate the adverse effects of carbon-intensive heating systems and provide the flexibility needed to integrate higher shares of variable renewable sources of electricity into the system. The electrification of heating in the residential sector occurs through different channels: individual heating appliances as well as district heating systems. The technology mix in the heat supply will adapt with the electrification of heating; the use of biomass, as the main alternative fossil free technology to power-2-heat technologies will likely rise. Significant barriers remain to the electrification of heat through both channels; the heterogeneity of individual behavior and the influence of non-financial factors on consumer choice mean that residential energy use may perhaps be least amenable to economic incentives.

**Choice vs non-choice in the demand for energy for residential heating**

Xavier Labandeira, Universidade de Vigo; Michael Hanemann, Arizona State University; Labeaga Jose M., UNED

**Consumers' Preferences for Heat Pumps: A Choice Experiment Approach**

Lisa Ryan, University College Dublin; Tensay Hadush Meles, University College Dublin

**The role of present-bias and transaction costs for residential home heating investments in Ireland**

Leonhard Lades, University College Dublin; Peter Clinch, University College Dublin; Andrew Kelly, EnvEcon University College Dublin

**THEMATIC SESSION: NON-MONETARY PRICES IN STATED PREFERENCE ANALYSIS**

Room: Room 1.219

Organizer(s): Daniel Rigby, University of Manchester  
 Chair: Daniel Rigby, University of Manchester

In a recent discrete choice experiment concerning climate change-resilient water infrastructure in rural India respondents were randomly assigned money or labour as the payment vehicle (PV). While at the aggregate level there was no impact of PV on estimates of marginal utilities, there was evidence that (poorer, less educated) women are willing to work more but pay less compared to men. This suggests that the choice of numeraire is non-trivial when men and women have different preferences for the goods or services being valued. An increasing number of studies in the environmental valuation literature argue that monetary payment vehicles (PVs) are problematic when the relevant population is engaged primarily in subsistence activities. Crops such as rice and maize, everyday household items and meals to labourers have all been as alternative forms of PV but the most common non-monetary PV is labour contribution. Non-monetary payment vehicles have been argued to, inter alia, reduce hypothetical bias, increase certainty of responses, avoid sensitivities around money, reduce zero-bids and minimise the risk of offending village leaders. This session will review the evidence from, and implications of, the growing literature on non-monetary payment vehicles and to present new evidence on their use. The papers comprising the session will present new evidence from Ghana, Uganda, India and Kenya to assess implications of different PVs for assessing preferences and reducing hypothetical bias.

**FARMERS' PREFERENCES FOR REDUCTIONS IN FLOOD RISK UNDER MONETARY AND NON-MONETARY PAYMENT MODES**

Godwin Kofi Vondolia, Norwegian Institute for Water Research; **Stale Navrud**, Norwegian University of Life Sciences

**Using choice modelling to investigate behavioural changes for water-quality related human disease in Uganda**

**Keila Meginnis**, University of Glasgow; Lucy Pickering, University of Glasgow; Poppy Lamberton, University of Glasgow; Nick Hanley, University of Glasgow

**MONETARY VS NON-MONETARY PRICES IN STATED PREFERENCE SURVEYS: GENDER AND HYPOTHETICAL BIAS EFFECTS**

**Camilla Knudsen**, University of Manchester; Daniel Rigby, University of Manchester; Prasenjit Banerjee, University of Manchester

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**POLICY SESSION: ADVANCING ECONOMICS IN GLOBAL POLICY DISCUSSIONS**

Room: Lecture Theatre A

Organizer(s): Kevin Boyle, University of Maine

Chair: Maria Loureiro, University Santiago de Compostela

Important environmental issues facing society such as climate change are global in nature and do respect neither geopolitical boundaries nor domains such as AFAERE, AERE, EAAERE, EARE, and LAERE. At the same tie, some populist political regimes around the world are rolling back key environmental policies, and communicating the relevance of concepts such as cap and trade and nonuse values to lay decision-makers is challenging. This session will explore how environmental economists can collaborate across disciplinary foci and geopolitical boundaries to advance efficient policies that can be harmonised across regions. One approach that will be discussed is assembling ad hoc teams to write white papers, an approach successfully instituted by the Urban Land Institute. The panel will discuss the development of a road map of collaboration to provide economic insights to address regional and global environmental concerns.

Panelist(s): Kevin Boyle, University of Maine;

Christian Gollier, Toulouse School of Economics;

Rodrigo Arriagada, Pontifica Catholic University of Chile;

Wisdom Akpalu, UNU - WIDER;

Paulo A.L.D. Nunes, U.N. Food and Agriculture Organization (FAO);

Daniel Phaneuf, University of Wisconsin

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**AGRICULTURE AND FOOD**

Room: Room 4.213

Chair: Elizavetta Dorinet, EconomiX University Paris Nanterre INRA AgroParisTech

**Agricultural Practices and Environmental Degradation. The Case of GM Corn in the Philippines**

**Ludovic Bequet**, UNamur

Discussant: Pamela Katic, University of Greenwich

**Comparing the impacts of different irrigation systems on the livelihoods of women and youth: Applying Propensity Score Matching to Clustered Data**

**Pamela Katic**, University of Greenwich

Discussant: Julien Lefèvre, CIRED

**Macroeconomic and social impacts of Brazilian land-use related NDCs under a climate change scenario**

**Julien Lefèvre**, CIRED; William Wills, COPPE/UFRJ; Martin Obermaier, COPPE/UFRJ; Marcelo Moreira, Agroicone

Discussant: Elizavetta Dorinet, EconomiX University Paris Nanterre INRA AgroParisTech

**The Impact of Extractive Resources on Agriculture Modernisation and Structural Transformation in Sub-Saharan Africa**

**Elizavetta Dorinet**, EconomiX University Paris Nanterre INRA AgroParisTech; Pierre-André Jouvét, EconomiX CEC UPL Univ. Paris Nanterre CNRS; Julien Wolfersberger, AgroParisTech INRA UMR Economie Publique Université Paris-Saclay

Discussant: Ludovic Bequet, UNamur

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**CLIMATE CHANGE: MARKET-BASED INSTRUMENTS II**

Room: Room 3.210

Chair: Suphi Sen, ifo Institute at the University of Munich, Germany

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**Quantifying the air pollution co-benefits of CO2 emissions trading scheme**

**Jie-Sheng Tan-Soo**, National University of Singapore; Lili Li, National University of Singapore; Ping Qin, Renmin University of China; Xiaobing Zhang, Renmin University

Discussant: Nicolas Koch, Mercator Research Institute on Global Commons and Climate Change (MCC)

**Lobbying, relocation risk and allocation of free allowances in the EU ETS**

**Nicolas Koch**, Mercator Research Institute on Global Commons and Climate Change (MCC); Kerstin Burghaus, Mercator Research Institute on Global Commons and Climate Change (MCC); Julian Bauer, Mercator Research Institute on Global Commons and Climate Change (MCC); Ottmar Edenhofer, Mercator Research Institute on Global Commons and Climate Change (MCC), Potsdam Institute for Climate Impact Research (PIK), and Technische Universität Berlin (TU-Berlin)

Discussant: Piotr Śpiewanowski, Institute of Economics, Polish Academy of Sciences

**Cost Pass-through and International Linkages**

**Piotr Śpiewanowski**, Institute of Economics, Polish Academy of Sciences; Hinnerk Gnutzmann, University of Hanover

Discussant: Suphi Sen, ifo Institute at the University of Munich, Germany

**Carbon taxes and stranded assets: Evidence from Washington state**

Stefano Carattini, Georgia State University; **Suphi Sen**, ifo Institute at the University of Munich, Germany

Discussant: Jie-Sheng Tan-Soo, National University of Singapore

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**CLIMATE FINANCE**

Room: Room 4.205

Chair: Florian Egli, ETH Zurich

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**Understanding the greenium in a corporate structure model with multiple risk factors**

**Elettra Agliardi**, Department of Economics, University of Bologna; Rossella Agliardi, Department of Mathematics, University of Bologna

Discussant: Christos Karydas, ETH Zurich

**Pricing climate change risks: CAPM with rare disasters and stochastic probabilities**

**Christos Karydas**, ETH Zurich; Anastasios Xepapadeas, Athens University of Economics and Business

Discussant: Elettra Agliardi, Department of Economics, University of Bologna

**Testing the Emission Reductions Claims of CDM Projects using Benford's Law**

David Maddison, University of Birmingham; **Matthew Cole**, University of Birmingham; Liyun Zhang, University of Birmingham

Discussant: Florian Egli, ETH Zurich

**A dynamic climate finance allocation mechanism reflecting the Paris Agreement**

**Florian Egli**, ETH Zurich; Anna Stünzi, ETH Zurich

Discussant: Matthew Cole, University of Birmingham

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**ELECTRICITY MARKET AND RENEWABLES: THEORETICAL MODELLING**

Room: Room 3.212

Chair: Johannes Jarke-Neuert, Universität Hamburg

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**Electricity Interconnection with Intermittent Energy Sources**

**Yuting Yang**, Toulouse School of Economics

Discussant: Paul Neetzow, Humboldt-Universität Berlin

**How to go green? The effects of power system flexibility on the efficient transition to renewable generation**

**Paul Neetzow**, Humboldt-Universität Berlin

Discussant: Johannes Jarke-Neuert, Universität Hamburg

**Understanding Sector Coupling: The General Equilibrium Emissions Effects of Electro-Technology and Renewables Deployment**

**Johannes Jarke-Neuert**, Universität Hamburg; Grischa Perino, Universität Hamburg  
Discussant: Yuting Yang, Toulouse School of Economics

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**EMPIRICAL ANALYSIS OF FISHERIES**

Room: Room 3.205

Chair: François Libois, INRA Paris School of Economics

**The role of production factors on catches inequality across European countries**

María José Gutiérrez, University of the Basque Country; **Belén Inguanzo**, University of the Basque Country  
Discussant: Carlos Chávez, Universidad de Talca

**Sustainability through diversification: marine resources based activities as livelihood alternatives for coastal communities in southern Chile**

**Carlos Chávez**, Universidad de Talca; Heidi Albers, University of Wyoming, Laramie; Jorge Dresdner, Universidad de Concepción; Yanina Figueroa, Interdisciplinary Center for Aquaculture Research (INCAR)  
Discussant: Robbert Schaap, Heidelberg University

**Prudence and Precautionary Saving by Natural Resource Users**

**Robbert Schaap**, Heidelberg University  
Discussant: François Libois, INRA Paris School of Economics

**Man Overboard! Industrial Fishing as Driver of Out-Migration in Africa**

**François Libois**, INRA Paris School of Economics; Irene Hu, Paris School of Economics  
Discussant: Belén Inguanzo, University of the Basque Country

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**ENERGY DEMAND AND EFFICIENCY IV**

Room: Room 2.218

Chair: Stephan Sommer, RWI – Leibniz Institute for Economic Research

**Willingness to Pay for Electricity Access in Extreme Poverty: Evidence from Sub Saharan Africa**

**Maximiliane Sievert**, RWI-Leibniz Institute for Economic Research; Jevgenijs Steinbuks, Development Research Group, the World Bank  
Discussant: Matthieu Glachant, MINES ParisTech

**The Industrial Organization of Utility Demand Side Management**

**Matthieu Glachant**, MINES ParisTech; Jean-Philippe Nicolai, ETH Zurich; Louis-Gaetan Giraudet, Ecole des Ponts ParisTech, CIRED  
Discussant: Achim Voss, University of Hamburg

**The Adverse Effect of Energy-Efficiency Policy**

**Achim Voss**, University of Hamburg  
Discussant: Stephan Sommer, RWI – Leibniz Institute for Economic Research

**Cognitive Reflection and the Valuation of Energy Efficiency**

**Stephan Sommer**, RWI – Leibniz Institute for Economic Research; Mark Andor, RWI - Leibniz Institute for Economic Research; Andreas Gerster, University of Mannheim; Manuel Frondel, Reinisch-Westfaelisches Institut fuer Wirtschaftsforschung  
Discussant: Maximiliane Sievert, RWI-Leibniz Institute for Economic Research

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**ENERGY TRANSITION - DYNAMIC MODELLING**

Room: Room 3.211

Chair: Emmanuel Bovari, University Paris 1 Panthéon Sorbonne and Chair Energy and Prosperity

**Climate policy and endogeneous economic growth with poor substitution possibilities**

**Matthias Kalkuhl**, MCC Berlin  
Discussant: Prudence Dato, SCCER CREST, University of Basel

**Energy transition under the risk of an environmental catastrophe: a two-sector approach in a rigid economy**

**Prudence Dato**, SCCER CREST, University of Basel  
Discussant: Emmanuel Bovari, University Paris 1 Panthéon Sorbonne and Chair Energy and Prosperity

**Energy, knowledge, and demo-economic development in the long run: a unified growth model**

**Emmanuel Bovari**, University Paris 1 Panthéon Sorbonne and Chair Energy and Prosperity; Victor Court, University of Sussex

Discussant: Discussant: Matthias Kalkuhl, MCC Berlin

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**ENVIRONMENT AND BEHAVIOURAL ECONOMICS III**

Room: Room 4.204

Chair: Ann-Kathrin Koessler, University Osnabrück

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**Cooperation under alternative punishment institutions: Experimental evidence from commons' dilemma**

**Dambala Gelo**, Public and Environmental Economics Research Centre (PEERC), School of Economics, University of Johannesburg, Johannesburg, South Africa; Johane Dikgang, University of Johannesburg

Discussant: Hendrik Bruns, University of Hamburg

**Are vulnerable people more susceptible to nudges? An experiment on the interaction of cognitive scarcity and defaults in a public goods game**

**Hendrik Bruns**, University of Hamburg; Claudia Schwirplies, University of Hamburg

Discussant: Giulio Galdi, University of Florence

**Five Shades of Green: Heterogeneous Environmental Attitudes in an Evolutionary Game Model**

Simone Borghesi, European University Institute; Angelo Antoci, University of Sassari; **Giulio Galdi**, University of Florence

Discussant: Ann-Kathrin Koessler, University Osnabrück

**Policies as information carriers: How environmental policies may change beliefs and consequent behavior**

**Ann-Kathrin Koessler**, University Osnabrück

Discussant: Dambala Gelo, Public and Environmental Economics Research Centre (PEERC), School of Economics, University of Johannesburg, Johannesburg, South Africa

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**ENVIRONMENT AND DEVELOPMENT III**

Room: Room 3.204

Chair: Côme Billard, University of Paris Dauphine - Climate Economics Chair

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**Returns to Grid Electricity on Conservation: Mechanisms and Household Technology**

**Ngawang Dendup**, Graduate School of Economics, Waseda University, Japan

Discussant: Randall Bluffstone, Portland State University

**Impacts of Improved Biomass Cookstoves on Child and Adult Health: Experimental Evidence from Rural Ethiopia**

**Randall Bluffstone**, Portland State University; Daniel LaFave, Colby College; Abebe Damtie Beyene, Ethiopian Development Research Institute, Ethiopia; Zenebe Gebreegziabher, Mekelle University; Alemu Mekonnen Getnet, Addis Ababa University; Michael Toman, World Bank; Sahan Dissanayake, Portland State University

Discussant: Daniele Malerba, German Development Institute (DIE)/ University of Manchester

**Poverty alleviation, environmental degradation and the mediating effects of the local context**

**Daniele Malerba**, German Development Institute (DIE)/ University of Manchester

Discussant: Côme Billard, University of Paris Dauphine - Climate Economics Chair

**Technological Contagion in Networks**

**Côme Billard**, University of Paris Dauphine - Climate Economics Chair

Discussant: Ngawang Dendup, Graduate School of Economics, Waseda University, Japan

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**INTEGRATED ASSESSMENT MODELLING**

Room: Room 4.209

Chair: Kai Lessmann, Potsdam Institute for Climate Impact Research

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**When opposites attract: averting a climate catastrophe despite differing ethical views**

**Aurélie Méjean**, CNRS-CIRED; Antonin Pottier, EHESS-CIRED; Stéphane Zuber, CNRS-PSE; Marc Fleurbaey, Princeton University

Discussant: Koji Tokimatsu, Tokyo Institute of Technology



## **Beyond aggregated damage functions in integrated assessment models**

**Koji Tokimatsu**, Tokyo Institute of Technology

Discussant: Kai Lessmann, Potsdam Institute for Climate Impact Research

## **Financial intermediation and climate policy**

**Kai Lessmann**, Potsdam Institute for Climate Impact Research

Discussant: Aurélie Méjean, CNRS-CIRED

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## **NATURAL DISASTERS**

Room: Room 4.206

Chair: Patrick Walsh, Manaaki Whenua - Landcare Research

### **The measurement of resilience**

**Geir Asheim**, University of Oslo; Walter Bossert, University of Montreal; Conchita D'Ambrosio, University of Luxembourg; Claus Vögele, University of Luxembourg

Discussant: Miguel Tovar Reanos, The Economic and Social Research Institute

### **Distributional effects of floods and flood policies: Microeconomic evidence from Germany**

**Miguel Tovar Reanos**, The Economic and Social Research Institute

Discussant: Robert Elliott, University of Birmingham

### **Natural Disasters and Voting Behaviour: Evidence from Environmental Legislation in the US Senate**

**Robert Elliott**, University of Birmingham; Eric Strobl, University of Bern; Viet Nguyen-Tien, University of Birmingham; Thomas Tveit, University of Bern

Discussant: Patrick Walsh, Manaaki Whenua - Landcare Research

### **Flood Mitigation Schemes in New Zealand: How is Protection Distributed?**

**Patrick Walsh**, Manaaki Whenua - Landcare Research; Thomas Robertson, Coco Analytics; Ryan Paulik, NIWA

Discussant: Geir Asheim, University of Oslo

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## **SOCIAL NORMS II**

Room: Room 2.219

Chair: Ann-Kathrin Blankenberg, University of Goettingen

### **The Scope of Cooperation: Values, Moral Ties and the Emergence of a Social Norm**

Renan Goetz, University of Girona; **Jorge Marco**, Universidad de los Andes

Discussant: Florian Diekert, Heidelberg University

### **Groups discipline resource use under scarcity**

**Florian Diekert**, Heidelberg University; Kjell Arne Brekke, Ragnar Frisch Centre for Economic Research

Discussant: Tillmann Eymess, Heidelberg University

### **Dissecting Social Norms of Cooperation: A Conditional Process Analysis**

**Tillmann Eymess**, Heidelberg University; Florian Diekert, Heidelberg University

Discussant: Ann-Kathrin Blankenberg, University of Goettingen

### **Pro-environmental norms and subjective well-being: panel evidence from the UK**

**Ann-Kathrin Blankenberg**, University of Goettingen; Binder Martin, Bard College Berlin; Heinz Welsch, Oldenburh

Discussant: Jorge Marco, Universidad de los Andes