



Gothenburg | Sweden 25–29 June 2018

Detailed Schedule WCERE June 25-June 29, 2018

Please note that session schedules can be subject to change. For the latest updated programme please visit the programme webpage ([programme on web](#)) or app.

Registration

Monday, 16.00-20.00

Room: Haga

Special policy lecture

Monday, 18.15-19.10

SPECIAL POLICY LECTURE

Room: Smyrna

Gina McCarthy presents Environmental Policy and the Assault on Science

Chair: Laura Taylor

Gina McCarthy served as the 13th Administrator of the US EPA from 2013 to 2017. She will address the many challenges facing the Environmental Protection Agencies and in particular discuss their independence and strategies when subjected to adverse policy. She will focus in particular on the Assault on Science as a key ingredient in a policy designed to undo environmental regulation. She will focus on environmental economics as a discipline at the frontier of the ideological battle over environmental management.

Welcome Reception

Monday, 19.15-21.00

Room: Handels

Parallell sessions 1
Tuesday June 26, 8.30-10.15

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels: B22

Chair: Marica Valente, Humboldt University Berlin and DIW Berlin

On the relevance of income and behavioral factors for absolute and relative donations: A framed field experiment

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

Discussant: Aneeqe Javaid, Alexander-von-Humboldt Professorship of Environmental Economics, Universität Osnabrück

Sharing between me, my friends others: Common-pool resource extraction in presence of subgroups

Aneeqe Javaid, Alexander-von-Humboldt Professorship of Environmental Economics, Universität Osnabrück

Discussant: Ning LIU, Bocconi University FEEM

Unequal Past, United Future – Reaching Agreement with Responsibilities Passed by Generations

Ning LIU, Bocconi University FEEM; Valentina Bosetti, Fondazione Eni Enrico Mattei; Yu Gao, Polytechnic University of Milan; Massimo Tavoni, Polytechnic University of Milan

Discussant: Marica Valente, Humboldt University Berlin and DIW Berlin

Waste Is Money: Behavioral Changes in Waste Generation Behavior When Households Pay-As-They-Throw

Marica Valente, Humboldt University Berlin and DIW Berlin

Discussant: Amantia Simixhiu, University of Kassel

CLIMATE CHANGE: IMPACT

Room: Handels: C33

Chair: Olivier Deschenes, University of California, Santa Barbara

Mitigating the Social Impacts of Carbon Dioxide Emissions through Peatland Restoration

Emily Pindilli, United States Geological Survey; Rachel Sleeter, United States Geological Survey; Dianna Hogan, United States Geological Survey

Discussant: Aimilia Pattakou, ETH Zürich

As Bad as it Gets: How Climate Damage Functions Affect Growth and the Social Cost of Carbon

Aimilia Pattakou, ETH Zürich; Lucas Bretschger, ETH Zurich

Discussant: Olivier Deschenes, University of California, Santa Barbara

Weather, Climate Change and Death in India

Olivier Deschenes, University of California, Santa Barbara

Discussant: Emily Pindilli, United States Geological Survey

CLIMATE CHANGE: REGULATION OF CARBON

Room: Handels: C22

Chair: Hinnerk Gnutzmann, Institute for Macroeconomics, Leibniz University Hannover, Germany

Regulating Carbon in a Small Open Economy

Charles D. Kolstad, Stanford University

Discussant: Mun Ho, Harvard China Project

China Emissions Trading System and Carbon Tax Hybrid

Mun Ho, Harvard China Project; Jing Cao, Tsinghua University

Discussant: Maximilian Willner, University of Hamburg

Rushing the impatient Allowance reserves and the time profile of low-carbon investments

Grischa Perino, University of Hamburg; **Maximilian Willner**, University of Hamburg

Discussant: Hinnerk Gnutzmann, Institute for Macroeconomics, Leibniz University Hannover, Germany

Killing me Softly? Regulation and Investment Leakage in Energy-Intensive Industries

Hinnerk Gnutzmann, Institute for Macroeconomics, Leibniz University Hannover, Germany; Piotr

Śpiewanowski, Polish Academy of Sciences

Discussant: Charles D. Kolstad, Stanford University

ECOSYSTEMS

Room: Haga: B225

Chair: Seong-Hoon Cho, University of Tennessee

Strategic interactions in landscape scale market-based conservation programs

John Tisdell, University of Tasmania; Sayed Ifekhar, University of Western Australia

Discussant: Kelly Grogan, University of Florida

Prisoner's Dilemmas and Abandoned Groves: Impediments to Area-wide Pest Management

Kelly Grogan, University of Florida

Discussant: Melina Kourantidou, University of Southern Denmark

Research Agendas for Profitable Invasive Species

Melina Kourantidou, University of Southern Denmark; Brooks Kaiser, University of Southern Denmark

Discussant: Seong-Hoon Cho, University of Tennessee

Targeting Payments for Ecosystem Services Given Ecological and Economic Objectives

Moonwon Soh, University of Tennessee, Knoxville; Burton English, University of Tennessee, Knoxville; T.

Edward Yu, University of Tennessee, Knoxville; Christopher Boyer, University of Tennessee, Knoxville;

Seong-Hoon Cho, University of Tennessee

Discussant: John Tisdell, University of Tasmania

ENERGY EFFICIENCY

Room: Handels: B44

Chair: stefano verde, FSR Climate - European University Institute

IMPACT OF ENERGY-EFFICIENCY POLICIES ON INNOVATION: THE CASE OF LIGHTING TECHNOLOGIES

Yeong Jae Kim, University of East Anglia; Marilyn Brown, Georgia Institute of Technology

Discussant: Paige Weber, Yale University

Do Building Audits Save Energy? Evidence from a Natural Experiment

Paige Weber, Yale University; Kenneth Gillingham, Yale University School of Forestry and Environmental Studies

Discussant: Don Fullerton, University of Illinois

Costs of Energy Efficiency Mandates Can Reverse the Sign of Rebound

Don Fullerton, University of Illinois; Chi Ta, University of Illinois

Discussant: stefano verde, FSR Climate - European University Institute

The signaling effect of gasoline taxes and its distributional implications

stefano verde, FSR Climate - European University Institute; Silvia Tiezzi, University of Siena

Discussant: Yeong Jae Kim, University of East Anglia

ENERGY IN LOW INCOME COUNTRIES

Room: Handels: F43

Chair: Marc Jeuland, Duke University

Social networks and Household energy transition in Tanzania: Evidence from panel data

Kevin Rugaimukamu, University of Cape Town

Discussant: Anant Sudarshan, University of Chicago

The Demand for Off-grid Solar Power: Evidence from Rural India's Surprisingly Competitive Retail Power Market

Anant Sudarshan, University of Chicago; Michael Greenstone, University of Chicago; Nicholas Ryan, Yale University; Robin Burgess, London School of Economics

Discussant: Mook Bangalore, London School of Economics

Assessing the benefits of cooking stove conversion: An evaluation of Indonesia's LPG Conversion Program on households in West Nusa Tenggara province

Mook Bangalore, London School of Economics

Discussant: Marc Jeuland, Duke University

Adoption and short-term impacts of improved biomass cookstoves in Udaipur, Rajasthan

Marc Jeuland, Duke University; Subhrendu Pattanayak, Duke University; Sushmita Samaddar, World Bank; Ronak Shah, Seva Mandir; Mansi Vora, Independent Consultant

Discussant: Kevin Rugaimukamu, University of Cape Town

ENERGY: BEHAVIOR

Room: Handels: B23

Chair: Claus Ghesla, ETH Zurich

Costs and benefits of climate change in Switzerland

Frank Vöhringer, Swiss Institute of Technology Lausanne (EPFL); Marc Vielle, Ecole Polytechnique Fédérale de Lausanne; Philippe Thalmann, Ecole Polytechnique Fédérale de Lausanne; Anita Frehner, FiBL, Departement für Sozioökonomie; Wolfgang Knoke, Wolfgang Knoke Forschungsagentur; Dario Stocker, Swiss Federal Institute of Technology Zürich; Boris Thurm, Swiss Federal Institute of Technology Lausanne

Discussant: Haiyan Liu, University of Waterloo

Modeling Farmers' Demand for Catastrophic Drought Risk Insurance under Climate Change Using Choice Experiments

Roy Brouwer, The Water Institute / University of Waterloo; **Haiyan Liu**, University of Waterloo;

Mohamed El Otmani, Hassan II Agronomic and Veterinary Institute

Discussant: Carmelo León, Universidad de Las Palmas de Gran Canaria

CONTEXT EFFECTS IN CARBON OFFSET PROGRAMS: ATTRACTION, SIMILARITY AND COMPROMISE

Carmelo León, Universidad de Las Palmas de Gran Canaria; Jorge Araña, University of Las Palmas de Gran Canaria

Discussant: Claus Ghesla, ETH Zurich

Nudging the Poor and the Rich -- A Field Study on the Distributional Effects of Green Electricity Defaults

Claus Ghesla, ETH Zurich; Manuel Grieder, ETH Zurich; Renate Schubert, ETH Zurich

Discussant: Frank Vöhringer, Swiss Institute of Technology Lausanne (EPFL)

ENVIRONMENTAL POLICY: IMPACT

Room: Handels: D33

Chair: Jie-Sheng Tan-Soo, National University of Singapore

The vertical and horizontal distributive effects of energy taxes: A micro-simulation study of a French policy

Thomas DOUENNE, Paris School of Economics

Discussant: Liza Jabbour, University of Birmingham

On the relationship between RD and eco-innovation: An Analysis of French manufacturing firms

Liza Jabbour, University of Birmingham

Discussant: Madhu Khanna, University of Illinois, Urbana-Champaign

Does Toxic Release Information Worsen Environmental Injustice?

Xiao Wang, University of Illinois at Urbana Champaign; George Deltas, University of Illinois at Urbana Champaign; **Madhu Khanna**, University of Illinois, Urbana-Champaign; Xiang Bi, University of Florida

Discussant: Jie-Sheng Tan-Soo, National University of Singapore

How does time-of-use electricity prices affect daily reallocation of industrial pollution emissions: Evidence from a natural experiment in Anhui, China

Jie-Sheng Tan-Soo, National University of Singapore; Ping Qin, Renmin University of China; Xiao-Bing Zhang, Renmin University of China; Lunyu Xie, Renmin University of China

Discussant: Thomas DOUENNE, Paris School of Economics

ENVIRONMENTAL POLICY: REGULATION

Room: Handels: C24

Chair: Daniel Nachtigall, OECD

Regulation, Free-Riding Incentives, and RD Investment with Spillover

John Strandholm, University of South Carolina Upstate; Ana Espinola-Arredondo, Washington State University; Felix Munoz-Garcia, Washington State University

Discussant: Santiago J. Rubio, University of Valencia

Second-Best Taxation for a Polluting Monopoly with Abatement Investment

Santiago J. Rubio, University of Valencia; Guiomar Martin-Herran, Universidad de Valladolid

Discussant: Matthew Zaragoza-Watkins, Vanderbilt University

Output-based Allocation in Greenhouse Gas Cap-and-Trade Programs

Matthew Zaragoza-Watkins, Vanderbilt University

Discussant: Daniel Nachtigall, OECD

The impact of the European Union emissions trading scheme on carbon emissions

Daniel Nachtigall, OECD; Antoine Dechezlepretre, London School of Economics; Raphael Cael, Georgetown University

Discussant: John Strandholm, University of South Carolina Upstate

FISHERIES: MANAGEMENT ISSUES

Room: Haga: Dragonen

Chair: Juan Rosas, University of Nottingham

Spatial resolution in discrete choice models: An application to fishermen behavior and fishery management

Maxime Depalle, UC Davis; James Sanchirico, University of California, Davis; Olivier Thébaud, Ifremer; Shay O'Farrell, University of California, Davis; Alan Haynie, NOAA/NMFS, Alaska Fisheries Science Center

Discussant: Susmita Dasgupta, World Bank

The Socioeconomics of Fish Consumption and Child Health in Bangladesh

Susmita Dasgupta, World Bank; Md. Golam Mustafa, WorldFish bangladesh; Tapas Paul, World Bank; David Wheeler, World Resources Institute

Discussant: Miguel Quiroga, Universidad de Concepcion

The Impact of Caligus Treatments on Unit Costs of Heterogeneous Salmon Farms in Chile

Miguel Quiroga, Universidad de Concepcion; Jorge Dresdner, Universidad de Concepción; Carlos Chavez, Universidad de Talca

Discussant: Juan Rosas, University of Nottingham

Optimal Harvest Decisions under a Dynamic Context: Managing the Territorial Use Rights Fisheries (TURFs) by Chilean artisanal organisations.

Juan Rosas, University of Nottingham

Discussant: Maxime Depalle, UC Davis

FOREST POLICIES: INSTRUMENTS AND EVIDENCE

Room: Haga: B210

Chair: Eduardo Souza-Rodrigues, University of Toronto

Social Interactions in Landowners' Voluntary Participation: Evidence from a Forest Incentive Program

Hideki Shimada, Division of Natural Resource Economics, Graduate School of Agriculture, Kyoto

University; Yohei Mitani, Division of Natural Resource Economics, Graduate School of Agriculture, Kyoto University

Discussant: Katharine Sims, Amherst College

Payments for environmental services supported social capital while increasing land management

Katharine Sims, Amherst College; Jennifer Alix-Garcia, Oregon State University; Victor Orozco, World Bank Development Impact Research Group; Laura Costica, World Bank Development Impact Research Group; Sofia Romo Monroy, National Forestry Commission of Mexico; Jorge David Fernandez Medina, National Forestry Commission of Mexico

Discussant: Jimena Rico-Straffon, Banco de Mexico

Deforestation Impacts of Conservation Development in the Peruvian Amazon: evaluating land-use restrictions in combinations with rights to extraction

Jimena Rico-Straffon, Banco de Mexico; Stephanie Panlasigui, Duke University; Colby Loucks, World Wildlife Fund; Jennifer Swenson, Duke University; Alexander Pfaff, Duke University

Discussant: Eduardo Souza-Rodrigues, University of Toronto

The 'Priority List' and Optimal Environmental Targeting in the Amazon Rainforest

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

Discussant: Hideki Shimada, Division of Natural Resource Economics, Graduate School of Agriculture, Kyoto University

GREEN CONSUMPTION

Room: Handels: B32

Chair: Nicolas Treich, Toulouse School of Economics

Where does the premium go? The heterogeneous distribution of a price premium for seafood eco-labels

Lingxiao Yan, University of Delaware

Discussant: Sandra Schusser, Swedish Agricultural University

Green behavioural (in)consistencies: Are pro-environmental behaviours in different domains substitutes or complements?

Göran Bostedt, SLU Umeå University; **Sandra Schusser**, Swedish Agricultural University

Discussant: Anja Köbrich, University of Kassel

Behavioral interdependencies in sustainable consumption - An empirical note for Germany

Anja Köbrich, University of Kassel; Andreas Ziegler, University of Kassel

Discussant: Nicolas Treich, Toulouse School of Economics

An economic model of the meat paradox

Nicolas Treich, Toulouse School of Economics; Nina Hestermann, TSE; Yves Le Yaouanq, LMU

Discussant: Lingxiao Yan, University of Delaware

INTERNATIONAL AGREEMENTS

Room: Handels: D32

Chair: Michael Rauscher, Universitat Rostock

International Environmental Agreements as an Equilibrium Choice in a Differential Game

Ken-Ichi Akao, Waseda University; Kenko Uchida, Waseda University; Yasuaki Wasa, Waseda University

Discussant: Bard Harstad, Esop University Of Oslo

Pledge-and-Review Bargaining: From Kyoto to Paris

Bard Harstad, Esop University Of Oslo

Discussant: Sareh Vosooghi, University of Oxford

Information Design In Coalition Formation Games

Sareh Vosooghi, University of Oxford

Discussant: Michael Rauscher, Universitat Rostock

Economic Growth of Insiders and Outsiders of a Climate Agreement

Michael Rauscher, Universitat Rostock

Discussant: Ken-Ichi Akao, Waseda University

POLICY SESSION: ADDRESSING EMISSIONS UNCERTAINTY WITH A CARBON TAX: THREE DIFFERENT APPROACHES

Room: Handels: Volvo

Organizer(s): Gilbert Metcalf, Tufts University

Chair: Gilbert Metcalf, Tufts University

This policy session brings together leading economists to discuss, compare, and contrast various approaches to add policy certainty over emission reductions to a carbon tax. The discussion builds on three papers published in the Harvard Environmental Law Review by three of the policy session participants.

The three papers in the law review symposium focus on the United States as a case study for this important carbon tax design issue. Note, however, that political interest in adding emissions certainty to a carbon tax extends beyond the U.S. Switzerland, for example, has in place a mechanism to increase certainty about emission reductions in its carbon tax that is similar in nature to the approach described by Metcalf and his co-authors.

In describing and evaluating a variety of these options, the symposium discussants will consider both economic, administrative, and political considerations relevant for effective policy design as well as the potential for the use of such a mechanism in different carbon tax systems around the world. Ultimately, there is an unavoidable trade-off inherent in any carbon mitigation policy between uncertainty about emissions and about mitigation costs. This policy session will make clear that carbon taxes can be designed to balance those tradeoffs and enhance policy predictability.

Panelist(s): Joe Aldy, Harvard University;
Gilbert Metcalf, Tufts University;
Brian Murray, Duke University;
William Pizer, Duke University;
Christina Reichert, Duke University;
Nathaniel Keohane, Environmental Defense Fund

POLICY SESSION: MARINE PLASTIC POLLUTION IN A CIRCULAR PERSPECTIVE

Room: Handels: Aulan

Organizer(s): Lena Gipperth, ; Kristina Jonäng, Chair of the Environmental committee, Region Västra Götaland; Håkan Eggert, Univerity of Gothenburg

Chair: Lena Gipperth,

This session is devoted to the ocean plastic pollution challenge. After a brief introduction of the biophysical aspects of the problem, the panel will focus on various approaches towards solutions both on the local as well as on the international level. How can we manage plastic waste at source, eliminate unnecessary products, ensure that adequate waste management systems are in place and how to clean up existing plastic pollution? These are some examples of issues to be discussed with room for questions from the audience.

Moderators: Lena Gipperth and Håkan Eggert

Panelist(s): Bethanie Carney Almroth, Associated professor in Zoophysiology and Ecotoxicology; Rashid Sumaila, Resource Economist, Professor, University of British Columbia. Volvo Environment Prize winner 2017;
Joshua Abbott, Resource Economist, Associate Professor, Arizona State University;
Henrikke Baumann, Professor, Technology, Management and Economics, Chalmers University of Technology;
Jakob Granit, Director General, Swedish Agency for Marine and Water Management

**THEMATIC SESSION: BABY YOU CAN DRIVE MY CAR:
ENVIRONMENTAL EXTERNALITIES FROM AUTOMOBILES**

Room: Handels: E 44/GBJ-
room

Organizer(s): Anna Alberini, University of Maryland; Joshua Linn, Resources for the Future; Davide Cerruti, ETH Zürich

Chair: Cristian Huse, Stockholm School of Economics

This session is comprised of four exciting and diverse papers about the externalities created by driving. Two of them (Muehlenbachs et al., and Huse and Koptuyug) seek to identify market failures that might be addressed by appropriate policies. Three of them evaluate policies that try to address the market failures, and ask whether they fully internalize the societal costs or have unintended consequences. If there is potential for such unintended consequences, would the proposed policies still pass a benefit-cost test?

Common to all papers is the fact that they use empirical analyses, unique datasets, and creative econometric approaches to estimate the exact extent of the externalities (e.g., the risk of accidents created by an additional truck on the road in the Muehlenbachs et al. paper or by automakers reducing the weight of vehicles in an effort to meet fuel economy regulations in the Bento et al. paper).

Among other things, this session seeks to answer the much-debated question whether consumers undervalue fuel economy, in that they fail to factor in the full lifetime fuel costs of owning a vehicle.

Pricing Car Externalities: Are UK Drivers Over- or Under-paying?

Davide Cerruti, ETH Zürich; Anna Alberini, University of Maryland; Joshua Linn, Resources for the Future

The Accident Externality from Trucking

Lucija Muehlenbachs, ; Stefan Staubli, University of Calgary; Jessica Chu, Resources for the Future

The Effects of Fuel Economy Standards on Vehicle Weight Dispersion and Accident Fatalities

Antonio Bento, University of Southern California; Kenneth Gillingham, Yale University School of Forestry and Environmental Studies

Salience and Policy Instruments: Evidence from the Auto Market

Cristian Huse, Stockholm School of Economics; Nikita Koptug, Research Institute of Industrial Economics

THEMATIC SESSION: COLLECTIVE INCENTIVES GROUP

Room: Handels: CG-room

DYNAMICS FACING NATURAL RESOURCE DILEMMAS:

EVIDENCE ON COLLECTIVE ACTION FROM LAB

EXPERIMENTS IN THE FIELD

Organizer(s): Alexander Pfaff, Duke University; María Alejandra Vélez, Universidad de los Andes

Chair: Alexander Pfaff, Duke University

Decision experiments can help consider potential institutional shifts in environmental and resource management minus; in particular given limited data for comparing actual institutions minus; with tremendous control including randomization and with payoffs to mimic the incentives in actual policy settings. When done in the field, with the populations of interest for potential institutional policy changes, this has greater relevance to actual management. We offer three natural-resource-dilemmas lab experiments with field populations in the developing world (Mexico; Colombia; Indonesia, Peru, Tanzania) that test potential policy instruments for managing commons (forest, mining, fisheries). Group dynamics are the common focus minus; including members ability to coordinate their efforts. One considers collective incentives within a new local PES program in Mexico and, in particular, how sanctions to encourage up-/down-stream coordination interact with prior watershed trust. One examines impacts of collective incentives in small-scale gold mining, in Colombia, to induce compliance with an environmental policy target. It considers the effects of group composition on both efficiency and distributional outcomes minus; which are also the focus of the third paper, also on PES and forests, which considers the leadership roles of women in Peru, Tanzania and Indonesia.

Watershed Trust within Collective Institutions for Environmental Payments: downstream-upstream coordination and sanctioning in group experiments in Mexico

Alexander Pfaff, Duke University; Luz Rodriguez, Javeriana University; Elizabeth Shapiro-Garza, Duke University

Collective Incentives for Cleaner Small-Scale Production on Developing Frontiers: rewarding aggregate compliance in a lab experiment with artisanal gold miners in the Pacific region of Colombia

María Alejandra Vélez, Universidad de los Andes; Luz Rodriguez, Javeriana University; Alexander Pfaff, Duke University

Gender Quotas Facilitate More Equal Benefit-Sharing in Collective PES Programs

Nathan Cook, University of Colorado at Boulder; Krister Andersson, University of Colorado -- Boulder

THEMATIC SESSION: DEVELOPING COUNTRY FOREST

Room: Handels: SKF

POLICY IMPACT EVALUATION

Organizer(s): Allen Blackman, Inter-American Development Bank

Chair: Allen Blackman, Inter-American Development Bank

A considerable literature examines the forest conservation and reforestation interventions in developing countries. However, as numerous recent literature reviews have pointed out, there is a decided lack of rigorous experimental and quasi-experimental evidence on the effectiveness of these policies. This thematic session features paper that help fill that gap. Each uses quasi-experimental impact evaluation methods to analyze the effect of a forest policy intervention on forest cover change. The session draws on the work of the Forest Collaborative within the Environment for Development (EfD) initiative. Founded in 2007, the EfD initiative is a consortium of environmental economics research institutes in 12 developing and developed countries. The Forest Collaborative is a cross-center research community of practice hosted by EfD.

Is Collective Titling Enough to Protect Forests? Evidence from Afro-descendants Communities in the Colombian Pacific Region

Juan Robalino, Centro Agronomico Tropical de Investigacion y Ensenanza; María Alejandra Vélez, Universidad de los Andes; Juan Camilo Cardenas, Universidad de los Andes; Andrea Paz, City University of New York and Graduate Center; Eduardo Pacay, CATIE

Does Certification Change the Trajectory of Tree Cover in Working Forests in The Tropics? An Application of the Synthetic Control Method of Impact Evaluation

Erin Sills, North Carolina State University; Pushpendra Rana, University of Illinois at Urbana-Champaign

The Net Effect of Concessions on Forest Loss: Quasi-experimental Evidence from Mexico

Allen Blackman, Inter-American Development Bank; Laura Villalobos, Inter-American Development Bank

Explaining Long-term Outcome Trajectories in Social-ecological Systems

Pushpendra Rana, University of Illinois at Urbana-Champaign; Daniel Miller, University of Illinois, Champaign-Urbana

THEMATIC SESSION: ENVIRONMENTAL POLICY WITH INFORMATION ACQUISITION

Room: Handels: E45

Organizer(s): Matti Liski, Aalto University School of Economics; Aurelie Slechten, Lancaster University; Stefan Ambec, Toulouse School of Economics

Chair: Stefan Ambec, Toulouse School of Economics

Information aggregation and the efficiency of emissions markets

Aurelie Slechten, Lancaster University; Estelle Cantillon, ULB

The informational value of environmental taxes

Stefan Ambec, Toulouse School of Economics; Jessica Coria, University of Gothenburg

Global commons: a mechanism for footloose firms

Matti Liski, Aalto University School of Economics; Lassi Ahlvik, Norwegian School of Economics

THEMATIC SESSION: GREEN NUDGES AS POLICY INSTRUMENTS

Room: Handels: Malmsten

Organizer(s): Fredrik Carlsson, University of Gothenburg

Chair: Fredrik Carlsson, University of Gothenburg

There has been a growing interest in using behavioral insights to better understand individual behavior and to design interventions that reduce the environmental effects of individual behavior. In this session, the role of different behavioral interventions will be discussed. Two of the papers will present results on specific interventions on energy conservation and waste. Two papers will take a broader perspective and discuss green nudges as a policy instrument.

Optimal prosocial nudging

Fredrik Carlsson, University of Gothenburg; **Olof Johansson-Stenman**, University of Gothenburg

Green Nudging as a Policy Instrument

Christina Gravert, University of Gothenburg; Fredrik Carlsson, University of Gothenburg; Olof Johansson-Stenman, University of Gothenburg; Verena Kurz, Federal Agency for Agriculture and Food

Breaking Habits

Daan van Soest, Tillburg University; Ben Vollard, Tillburg University

Information Provision for Residential Energy Conservation

Mark Andor, RWI - Leibniz Institute for Economic Research; **Jörg Peters**, RWI Essen; Andreas Gerster, RWI - Leibniz Institute for Economic Research; Christoph Schmidt, RWI - Leibniz-Institut für Wirtschaftsforschung

THEMATIC SESSION: INTEGRATED MODELS FOR NONPOINT POLLUTION POLICY: OPTIMIZATION AND EVOLUTIONARY ALGORITHM METHODS

Room: Handels: F45

Organizer(s): Moriah Bostian, Lewis Clark; Lyubov Kurkalova, North Carolina AT State University; Bradley Barnhart, United States Environmental Protection Agency

Chair: Moriah Bostian, Lewis Clark

Bilevel Optimization of Conservation Practices for Agricultural Production

Moriah Bostian, Lewis Clark; Bradley Barnhart, United States Environmental Protection Agency; Lyubov Kurkalova, North Carolina AT State University; Manoj Jha, North Carolina AT State University; Gerald Whittaker, Oregon State University

Good Seeds Bear Good Fruit: Using Benefit-to-cost Ratios in Multiobjective Spatial Optimization under Epistasis

Catherine Kling, Iowa State/Cornell University; Sergey Rabotyagov, University of Washington

THEMATIC SESSION: JOINT IMPACTS OF ENVIRONMENTAL POLICIES ON ENVIRONMENTAL AND ECONOMIC PERFORMANCE

Room: Handels: E43

Organizer(s): Antoine Dechezlepretre, London School of Economics

Chair: Antoine Dechezlepretre, London School of Economics

Over the recent years, many studies have analysed the impact of environmental policies on economic outcomes, such as productivity, trade and foreign investment. In comparison, the literature analysing the impact of environmental policies jointly on economic and environmental performance is scarce. Analysing the joint impacts of environmental policies is important because, from a policy perspective, a desirable outcome is to achieve the greatest environmental benefits at the least possible economic costs to the economy. Implementing environmental policies that have very limited economic consequences on regulated firms cannot be considered as necessary successful if these policies in fact bring about little environmental benefits. Currently, the empirical micro-evidence on firm behaviour, firm responses and the combined economic and environmental effects of policies is largely missing, despite its crucial role in good policy design. The objective of this session is to showcase papers that have embarked in this direction by merging data on both environmental and economic performance at the micro level (i.e., firm- or facility-level). This session aims at paving the way for the integrated assessment of the effects of green policies and their design features on multiple dimensions of wellbeing economic and environmental, to create a supporting community of practice and showcase the results from analyses that have successfully combined such datasets.

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

Giovanni Marin, University of Urbino 'Carlo Bo'; Francesco Vona, OFCE-Sciences Po

Energy Prices and Manufacturing Plant Competitiveness: Empirical Evidence from Canada

Nicholas Rivers, University of Ottawa; Richard Morgenstern, Resources for the Future; Brett Dolter, University of Regina

The joint impact of the EU ETS on carbon emissions and economic performance

Antoine Dechezlepretre, London School of Economics; Frank Venmans, University of Mons; Daniel Nachtigall, OECD

Joint effects of environmental policies: A sector-level investigation

Balazs Stadler, OECD University of East Anglia; Antoine Dechezlepretre, London School of Economics

THEMATIC SESSION: SOLAR ENERGY

Room: Handels: SEB

Organizer(s): Stefano Carattini, Yale University

Chair: Stefano Carattini, Yale University

Tackling climate change requires a rapid diffusion of clean technologies and renewable energy. This session focuses on solar energy. In recent times, the adoption of solar energy has been, in many countries, strongly subsidized. Several governments are, however, currently planning to phase out subsidies for solar adoption. This session provides policy solutions for a post-subsidy (and, most likely, pre-carbon pricing) world. These solutions focus on (1) the importance of supply-side market conditions, such as competition among solar installers, for technology adoption; (2) the identification of customer preferences for solar panels of different qualities, aesthetics, and prices; (3) the analysis of information asymmetry and learning in the solar market.

Equilibrium Effects of Competition on Solar Photovoltaic Demand and Pricing

Bryan Bollinger, Duke University Fuqua School of Business; Kenneth Gillingham, Yale University School

of Forestry and Environmental Studies; **Stefan Lamp**, Toulouse School of Economics

Beauty and the budget: homeowners' motives for adopting solar panels in a post-grid parity world

Beatrice Petrovich, University of St. Gallen; Stefanie Lena Hille, DG CONNECT - Communications Network, Content and Technology, European Commission; Rolf Wüstenhagen, University of St. Gallen

The evolution of spatial spillovers in the diffusion of domestic solar photovoltaic panels

Marta Talevi, Department of Geography and Environment, London School of Economics and Political Science

Social interactions and the adoption of solar PV: Evidence from cultural borders

Stefano Carattini, Yale University; Andrea Baranzini, Haute école de gestion Genève; Martin Péclat, University of Neuchâtel

TRADE AND ENVIRONMENT

Room: Handels: F44

Chair: Tobias Udsholt, OECD

Boon or Bane? Trade Sanctions and the Stability of International Environmental Agreements

Achim Hagen, Humboldt-Universität zu Berlin; **Jan Schneider**, Carl von Ossietzky University Oldenburg
Discussant: Alaa Al Khourdajie, University of Edinburgh

Issue Linkage between Climate Change and Customs' Union Agreements under Consumers' Taste for Variety

Alaa Al Khourdajie, University of Edinburgh
Discussant: Christoph Boehringer, University of Oldenburg

Paris after Trump: An Inconvenient Insight

Christoph Boehringer, University of Oldenburg; Thomas Rutherford, University of Wisconsin-Madison
Discussant: Tobias Udsholt, OECD

Carbon Pricing, Coastal Proximity and Plant Survival: Evidence from the European Cement Sector

Tobias Udsholt, OECD; Misato Sato, London School of Economics
Discussant: Jan Schneider, Carl von Ossietzky University Oldenburg

VALUATION: HEDONIC PRICING

Room: Handels: B33

Chair: Jessica Martin, Earth Economics

Recovering Economic Values of Product Attributes via Equilibrium Price Analysis of Differentiated Product: Hedonic Method under Imperfect Competition

Ju-Chin Huang, University of New Hampshire; Min Qiang Zhao, Xiamen University; Laura Beaudin, Bryant University
Discussant: Zhaoyang Liu, Peking University

Hedonic Value of the Area of Urban Green Amenities: The Case of Beijing

Zhaoyang Liu, Peking University; Heqing Huang, Peking University; Juha Siikamäki, International Union

for Conservation of Nature; Jintao Xu, Peking University
Discussant: Timothy Hamilton, University of Richmond

Using Machine Learning and Google Street View to Estimate Visual Amenity Values

Timothy Hamilton, University of Richmond; Erik Johnson, University of Alabama
Discussant: Jessica Martin, Earth Economics

Get the Lead Out: A Hedonic Housing Price Analysis of Soil Contamination and Remediation in Washington State

Jessica Martin, Earth Economics; Toni Sipic, Central Washington University
Discussant: Ju-Chin Huang, University of New Hampshire

Coffee break

Tuesday, 10.15-10.45

Room: Handels / Haga

Opening ceremony

Tuesday, 10.45-11.15

Room: Smyrna

Plenary session

Tuesday, 11.15-12.15

PLENARY

Room: Smyrna

Lata Gangadharan presents Compliance in Social Dilemmas: Insights from Experiments

Chair: Fredrik Carlsson

Even the best designed environmental regulation can be ineffective in the absence of adequate enforcement. Improving compliance with regulations, hence continues to be a core focus of environmental policy making. This is particularly so in situations where tensions between private and social interests give rise to social dilemmas. Using economic experiments, we first examine how limited enforcement resources can be more effectively leveraged to achieve compliance, by using regulatory audit tournaments and newly emerging social information schemes. Next, we explore regulatory compliance in social dilemmas with and without an agency risk. Agents unobservable effort choices can create a negative externality as they may not take appropriate preventative actions. Our research suggests that well designed regulatory schemes and wage contracts can improve compliance and diminish the social dilemma problem. Schemes based on social pressure and reciprocity, on the other hand, provide limited benefits.

Lunch

Tuesday, 12.15-13.45

MEETINGS

Room: Handels

EAERE - Country representatives meeting* (Room: C33)

EAAERE Board meeting* (Room: C31)

AERE Board meeting* (Room: C35)

* Invitation only

Parallell sessions 2

Tuesday June 26, 13.45-15.30

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels: B22

Chair: Herbert Ntuli, University of Cape Town

Collective Punishment and Endogenous Social Norms

Simon Fan, Lingnan University; Yu Pang, Macau University of Science and Technology

Discussant: Karine Nyborg, University of Oslo

The Good, the Bad, and the Conditional: Sustaining Cooperation through Self-Sorting

Karine Nyborg, University of Oslo; Karen Hauge, Ragnar Frisch Centre for Economic Research; Kjell Arne Brekke, Ragnar Frisch Centre for Economic Research; Jo Thori Lind, Department of Economics, University of Oslo

Discussant: Jetske Bouma, Netherlands Environmental Assessment Agency (PBL)

Analysing group contract design using a lab and a lab-in the field threshold public good experiment

Jetske Bouma, Netherlands Environmental Assessment Agency (PBL); Binh Thanh Nguyen, Tilburg University; Eline van der Heijden, Department of Economics, Tilburg University; Justin Dijk, Institute for Environmental Studies, VU University

Discussant: Herbert Ntuli, University of Cape Town

An examination of Factors affecting the level of collective action using framed field experiments

Herbert Ntuli, University of Cape Town; Edwin Muchapondwa, University of Cape Town; Anne-Sophie Crepin, Beijer Institute of Ecological Economics

Discussant: Simon Fan, Lingnan University

BIODIVERSITY AND ECOSYSTEMS SERVICES: THE AGRI-ENVIRONMENT NEXUS

Room: Handels: F43

Chair: Katrina Mullan, University of Montana

Green Public Procurement: An empirical analysis of the effect of organic food policy on farmland.

Hanna Lindström, Umeå University; Sofia Lundberg, Umeå University; Pelle Marklund, The National Institute of Economic Research (NIER)

Discussant: Eric Strobl, University of Bern

THE ECONOMIC IMPACT OF CRITICAL HABITAT DESIGNATION: EVIDENCE FROM VACANT LAND TRANSACTIONS

Maximilian Auffhammer, University of California, Berkeley (ARE); David Sunding, UC Berkeley

Discussant: Katrina Mullan, University of Montana

Forest Watershed Services on an Old Frontier in the Brazilian Amazon

Katrina Mullan, University of Montana; Yu Wu, North Carolina State University; Erin Sills, North Carolina State University; Jill Caviglia-Harris, Salisbury University; Daniel Harris, Salisbury University; Trent Biggs, San Diego State University

Discussant: Hanna Lindström, Umeå University

Biodiversity and Economic Land Use

Eric Strobl, University of Bern; Matthew Cole, University of Birmingham; Robert Elliott, University of Birmingham

Discussant: Maximilian Auffhammer, University of California, Berkeley (ARE)

CLIMATE CHANGE: POLICY AND POLITICAL ECONOMY

Room: Handels: C22

Chair: Karl Zimmermann, Universidad Anahuac Mexico

Emission price, output-based allocation and consumption tax: Optimal climate policy in the presence of another climate policy

Kevin R. Kaushal, Norwegian University of Life Sciences

Discussant: Ashwin Rode, University of Chicago, Dept. of Economics

The Social Cost of Lobbying over Climate Policy

Kyle Meng, ; **Ashwin Rode**, University of Chicago, Dept. of Economics

Discussant: Reyer Gerlagh, Tilburg University

Rent seeking in climate policy

Reyer Gerlagh, Tilburg University; Matti Liski, Aalto University School of Economics

Discussant: Karl Zimmermann, Universidad Anahuac Mexico

A Chain is only as strong as its weakest Link

Hendrik Ritter, Faculty of Economics and Management, Otto-von-Guericke University Magdeburg; **Karl Zimmermann**, Universidad Anahuac Mexico

Discussant: Kevin R. Kaushal, Norwegian University of Life Sciences

ENERGY AND CLIMATE CHANGE IN CHINA

Room: Handels: C33

Chair: Hasnisah Azilah, Universiti Malaysia Terengganu

Carbon emission trading scheme and energy transition: The Case of China local pilots

Akihisa MORI, Kyoto University; Xiang LIAO, Graduate School of Global Environmental Studies, Kyoto University, Japan

Discussant: Junling Liu, Tsinghua-Berkeley Shenzhen Institute

Urbanization Process and Its Implications for the roadmap of China's Mid-Century Low Carbon Strategy

Junling Liu, Tsinghua-Berkeley Shenzhen Institute

Discussant: Xiaoli Zhang, Renmin University of China

Study on medium and long-term low carbon development pathway of China's power sector

Xiaoli Zhang, Renmin University of China; Xueqin Cui, Renmin University of China

Discussant: Hasnisah Azilah, Universiti Malaysia Terengganu

Environmental quality, renewable energy and economic development: Evidence from a panel of ASEAN countries

Hasnisah Azilah, Universiti Malaysia Terengganu; Azlina A.A, Universiti Malaysia Terengganu; Che Mohd Imran Che Taib, Universiti Malaysia Terengganu
Discussant: Akihisa MORI, Kyoto University

ENERGY: BEHAVIOR

Room: Handels: B23

Chair: Cheng Xu, George Washington University

How Cognitive Biases Affect Energy Savings in Low Energy Buildings

Lucie Martin-Bonnel de Longchamp, BETA, University of Strasbourg; Nicolas Lampach, KU Leuven
Faculty of Law, Centre for Legal Theory and Empirical Jurisprudence
Discussant: Enni Ruokamo, University of Oulu

TOWARDS FLEXIBLE ENERGY DEMAND – PREFERENCES FOR DYNAMIC CONTRACTS, SERVICES AND EMISSIONS REDUCTIONS

Enni Ruokamo, University of Oulu; Teemu Meriläinen, University of Oulu; Rauli Svento, University of Oulu; **Maria Kopsakangas-Savolainen**, Finnish Environment Institute
Discussant: Alberto Salvo, National University of Singapore

Local Pollution Drives Global Pollution: Emissions Feedback via Residential Electricity Usage

Alberto Salvo, National University of Singapore
Discussant: Cheng Xu, George Washington University

Do Chinese Drivers Respond to Gasoline Price Changes?

Cheng Xu, George Washington University
Discussant: Lucie Martin-Bonnel de Longchamp, BETA, University of Strasbourg

ENVIRONMENTAL POLICY

Room: Haga: B225

Chair: Olli-Pekka Kuusela, Oregon State University

Optimal Policy and network effects for the deployment of zero emission vehicles

Guy Meunier, INRA; Jean-Pierre Ponsard, CNRS
Discussant: Maria Chistyakova, CEE-M

Environmental regulation with price signaling

Maria Chistyakova, CEE-M
Discussant: Oliver Tietjen, Potsdam Institute for Climate Impact Research

Carbon Pricing in Electricity Markets Under Uncertainty – The Impact of Risk Aversion and Futures Markets

Oliver Tietjen, Potsdam Institute for Climate Impact Research; Kai Lessmann, Potsdam Institute for Climate Impact Research; Michael Pahle, Potsdam Institute for Climate Impact Research (PIK)
Discussant: Olli-Pekka Kuusela, Oregon State University

Prices vs. Quantities vs. Commitment with Banking

Olli-Pekka Kuusela, Oregon State University; Jussi Lintunen, Natural Resources Institute Finland (Luke)
Discussant: Guy Meunier, INRA

ENVIRONMENTAL POLICY: REGULATION

Room: Handels: D33

Chair: Alistair Munro, National Graduate Institute for Policy Studies

Discretionary Exemptions: Regulatory Flexibility for Good or for IllDietrich Earnhart, University of Kansas; Sarah Jacobson, Williams College; Yusuke Kuwayama, ; **Richard Woodward**, Texas AM University

Discussant: Rémi Morin Chassé, University of Prince Edward Island

On Environmental Accidents with a Judgment-Proof firmChuck Mason, University of Wyoming; **Rémi Morin Chassé**, University of Prince Edward Island

Discussant: Jessica Coria, University of Gothenburg

Fiscal Federalism and Interjurisdictional Externalities: The case of Air Quality Regulations in Sweden**Jessica Coria**, University of Gothenburg; Magnus Hennlock, IVL Swedish Environmental Research Institute; Thomas Sterner, University of Gothenburg

Discussant: Alistair Munro, National Graduate Institute for Policy Studies

Little Green Lies: Optimal environmental regulation with partially verifiable information**Alistair Munro**, National Graduate Institute for Policy Studies

Discussant: Richard Woodward, Texas AM University

FOSSIL FUELS: IMPACT

Room: Handels: C24

Chair: Meagan McCollum, Baruch College, City University of New York

Price Elasticity of Gasoline Smuggling: a Semi-Structural Estimation Approach**Hamed Ghoddusi**, Stevens Institute of Technology; Rafizadeh Nima, Sharif University of Technology; Rahmati Mohamad Hossein, Sharif University of Technology

Discussant: Jason Brown, Federal Reserve Bank of Kansas City

Effects of State Taxation on Investment: Evidence from the Oil Industry**Jason Brown**, Federal Reserve Bank of Kansas City; Peter Maniloff, Colorado School of Mines; Dale Manning, Colorado State University

Discussant: Thais Nunez Rocha, University of Orleans

Trade in fuels and environmental regulation: a two sided story**Thais Nunez Rocha**, University of Orleans; Camelia Turcu, University of Orleans

Discussant: Meagan McCollum, Baruch College, City University of New York

Firm Dynamics and Local Economic Shocks: Evidence from the Shale Oil and Gas Boom**Meagan McCollum**, Baruch College, City University of New York; Ryan Decker, Federal Reserve Board; Greg Upton, Louisiana State University

Discussant: Hamed Ghoddusi, Stevens Institute of Technology

GREEN CONSUMPTION

Room: Handels: B32

Chair: Jorge Araña, Univerity of Las Palmas de Gran Canaria

Does a market with green goods voluntarily internalize externalities? Evidence from a lab experiment

Maria Eduarda Fernandes, CARME, Instituto Politécnico de Leiria; Marieta Valente, NIPE and EEG, Universidade do Minho, Portugal

Discussant: Sophie Bernard, Polytechnique Montréal

Multidimensional Green Product Design and Environmental Policies

Sophie Bernard, Polytechnique Montréal

Discussant: Sebastien Houde, ETH Zurich

The Incidence of Coarse Certification: Evidence from the ENERGY STAR Program

Sebastien Houde, ETH Zurich

Discussant: Jorge Araña, University of Las Palmas de Gran Canaria

Do Experts Match Consumer' Preferences for Corporate Social Responsibility?

Jorge Araña, University of Las Palmas de Gran Canaria; Carmelo Leon, University of Las Palmas

Discussant: Maria Eduarda Fernandes, CARME, Instituto Politécnico de Leiria

POLICY SESSION: ENERGY POLICY AND CLIMATE GOALS IN DEVELOPING COUNTRIES: WHICH WAY FORWARD?

Room: Handels: Aulan

Organizer(s): Anna Creti, Université Paris Dauphine, Climate Economics Chair and Chaire Energie et Prospérité; Philippe Delacote, INRA

Chair: Anna Creti, Université Paris Dauphine, Climate Economics Chair and Chaire Energie et Prospérité

One of the future challenges in Africa is to grant widespread access to electricity. The results of a logit analysis conducted on two different samples of customers having subscribed a pay-as-you go contracts to get a solar kit or a solar panel with a battery are detailed. The impact of socio-economic characteristics on the adoption of such services is analyzed. Whether the convergence of mobile telephony, micro-finance and electricity can accelerate is discussed.

Panelist(s): Anna Creti, Université Paris Dauphine, Climate Economics Chair and Chaire Energie et Prospérité;

Frank Convery, University College Dublin;

Philippe Delacote, INRA;

Jörg Peters, RWI Essen;

Michael Toman, World Bank;

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

POLICY SESSION: FUTURE TRANSPORT IN A CLIMATE NEUTRAL WORLD: KNOWLEDGE GAPS AND NEEDED POLICIES

Room: Handels E44/GBJ room

Organizer(s): Lars Zetterberg, IVL Swedish Environmental Research Institute

Chair: Lars Zetterberg, IVL Swedish Environmental Research Institute

A future with net zero greenhouse gas emissions poses a joint challenge for policy makers and the transport and car industry. The transport system is currently witnessing several emerging trends that may either help or hinder the transition to zero CO2 emissions. Electrified vehicles are already taking

a larger share of new vehicle registrations, while car sharing is on the rise in some urban areas. Looking ahead, automation is pointed out as the next big transport revolution. These three trends give rise to opportunities that may steer the transport system towards a higher degree of energy efficiency and a reduction of congestion if potential synergies are exploited. However, they also imply many challenges since the marginal cost of transporting goods and people may be significantly reduced leading to an enhanced demand for transport and increasing problems with urban sprawl, congestion and energy use. These new challenges and opportunities need to be better understood from an economic and behavioral perspective so that business models and policy strategies can be designed in a way that make use of the opportunities and avoid the major potential problems.

Panelist(s): Lars Zetterberg, IVL Swedish Environmental Research Institute;
Daniel Johansson, Chalmers;
Frances Sprei, Associate Professor, Physical Resource Theory Chalmers;
Niklas Gustafsson, Chief Sustainability Officer, Head of Sustainability Public Affairs at Volvo Group, AB Volvo;
Axel Edh, Senior Strategic Advisor Environment, Volvo Cars;
Malin Andersson, Head of Department – Development and International Affairs, Urban Transport Administration, City of Gothenburg

**POLICY SESSION: POLICY SYNERGIES AND POLICY-MAKING:
THE CASE OF CLIMATE CHANGE**

Room: Handels: SEB

Organizer(s): Mikael Karlsson, KTH Royal Institute of Technology, Stockholm; Thomas Sterner, University of Gothenburg

Chair: Mikael Karlsson, KTH Royal Institute of Technology, Stockholm

Despite consensus on the need for stringent policy instruments to achieve climate targets, proposals tend to be watered down. One reason is a strong attention given to mitigation costs, whereas co-benefits of climate measures are often left outside the analysis. An obvious such co-benefit is improved air quality from fossil fuel phase-out. This kind of synergy, when a climate policy measure creates benefits in another area, can be called a Type 1-synergy. There are also examples of how measures in other policy areas lead to reduced greenhouse gas emissions, i.e. a Type 2-synergy. With notable exceptions, climate policy synergies are sparsely researched, in particular Type 2-synergies, as well as the issue of how synergies are considered or not in policy-making.

This session aims to highlight the significance of policy synergies and the importance of considering them in policy-making on climate change. The links between policies on climate and resource efficiency, as well as the co-benefits of climate policy at large and in specific areas will be presented, together with the results of an on-going major research review in the field. Based on this background, a stakeholder discussion will take place, with the intention to identify measures on how to better reap the fruits of climate policy synergies.

Panelist(s): Janez Potocnik, UNEP International Resource Panel - IRP;
Diana Urge-Vorsatz, Dep Environmental Sciences and Policy Central European University;
Eva Alfredsson, KTH Royal Institute of Technology;
Nils Westling, KTH Royal Institute of Technology;

Fredrik Hedenus, Department of Space, Earth and Environment, Physical Resource Theory.

RENEWABLE ENERGY: CONSTRAINTS AND IMPACTS

Room: Haga: Dragonen

Chair: Alexander Zerrahn, DIW Berlin

Electricity Taxation and Firm Competitiveness: Evidence from Renewable Energy Financing

Stefan Lamp, Toulouse School of Economics; Andreas Gerster, RWI - Leibnitz-Institute for Economic Research

Discussant: Jacob LaRiviere, Microsoft

Transmission Constraints, Intermittent Renewables and Welfare

Jacob LaRiviere, Microsoft; Xueying Lu, University of California, San Diego

Discussant: chiara Colesanti senni, ETH Zürich

Energy Transition, Technological Spillovers and the Elasticity of Substitution

chiara Colesanti senni, ETH Zürich

Discussant: Alexander Zerrahn, DIW Berlin

On the economics of electrical storage for variable renewable energy

Alexander Zerrahn, DIW Berlin; Wolf-Peter Schill, DIW Berlin; Claudia Kemfert, DIW Berlin / German Advisory Council on Environment / Hertie School of Governance

Discussant: Stefan Lamp, Toulouse School of Economics

RESOURCES: THEORY

Room: Haga: B210

Chair: Ruben Bibas, OECD

Can Intragenerational and Intergenerational Equity be Reconciled with Renewable Resources?

Stellio Del Campo, University Paris Nanterre (Economix) and University Paris-Saclay (Économie Publique)

Discussant: Justin Johnson Kakeu Kengne, Morehouse College

Concerns for Long-Run Risks and Natural Resource Policy

Justin Johnson Kakeu Kengne, Morehouse College

Discussant: Christopher Costello, University of California, Santa Barbara

Transboundary Marine Protected Areas

Christopher Costello, University of California, Santa Barbara; Renato Molina, UC Santa Barbara

Discussant: Ruben Bibas, OECD

The economic drivers of materials use to 2060: a global outlook

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

Discussant: Stellio Del Campo, University Paris Nanterre (Economix) and University Paris-Saclay (Économie Publique)

THEMATIC SESSION: CAN YOU TEACH OLD ELECTRICITY MARKETS NEW TRICKS IN A RENEWABLE FUTURE?

Room: Handels: E43

Organizer(s): Lisa Ryan, University College Dublin

Chair: Lisa Ryan, University College Dublin

The ways in which we generate, sell, deliver, and use electricity are changing at all scales, and with tremendous economic implications for all involved. Driving change at every level is the shift toward wide-scale decarbonisation through higher shares of variable renewables, decentralisation of electricity supply, electrification of heat and transport, energy efficiency improvements, and the unbundling of utilities, requiring new electricity market arrangements. At the heart of this transformation lies the fundamental question of how to structure a market framework that is aligned with a decarbonised future. Which structures should be adapted, which discarded, and which new functions must be performed to enable a world increasingly powered by renewables? The session explores the economic research on this salient and complex societal challenge that will only grow in importance in coming years.

Envisioning future markets raises interesting theoretical and empirical questions for economists that require methodological approaches from a range of perspectives. On the supply side, the historical underlying premise in wholesale electricity markets by which prices equal marginal costs begins to unravel with higher shares of renewables participating with zero fuel costs. How, then, should generation be valued, priced, and dispatched, as the cost of generation is weighted more heavily toward infrastructure assets and away from energy commodities? Likewise, conventional operation of networks on the basis of synchronous generation is giving way to more intermittent and variable renewable sources, which requires a recalibration of incentives to assure sufficient flexibility and capacity. Here, a system designed solely to allocate supply must now incorporate mechanisms that encourage efficient participation by end-use customers. Another notable shift on the demand side is the increasing instance of distributed generation. These agents reduce their consumption of grid-provided electricity and may even supply back to the grid, reducing revenue for energy suppliers and grid operators. How should retail tariffs be designed to facilitate the efficient level of distributed generation? Solutions like minimum bills or "all-you-can-eat" tariffs can help to ensure utilities are able to cover fixed costs, but they also degrade consumer incentives to engage in energy efficiency, demand response, and even distributed generation, and are thus contrary to a vision of decarbonisation.

This thematic academic session presents high-quality research on these challenging and complex questions, while keeping sight of the broader objective of decarbonisation. The first paper by Neuhoff et al. analyses how market design can deliver more efficient integration of renewables into markets. They propose a market value model to reduce financial risks for project developers and minimise costs for the integration of renewables to the electricity system. In the second paper, Ryan et al. consider the retail market and how retail electricity tariff structures can help to mitigate CO₂ emissions and improve energy efficiency and renewable energy penetration. They demonstrate the potential misalignment of price signals to achieve environmental objectives with electricity grid security requirements and propose some retail tariff recommendations. Following on, Skytte et al. analyse the network side of electricity supply and compare different grid tariff and electricity tax structures using a high renewable penetration case study, and demonstrate how such mechanisms facilitate flexible demand whilst improving the value of renewable generation. Finally, Kåberger shows how competitive markets with the right economic incentives can ensure balanced electricity markets.

With a selection of high quality scientific research on the issues of wholesale markets, financial planning, retail tariff structures, and grid tariffs in a future low-carbon, high renewables world, this session provides a 360-degree view of key challenges and analytical methods in future electricity

markets. The related policy session Smart grid for a carbon free energy future: the role of electricity pricing and distributed energy resources will provide a policy discussion on many interrelating issues and will serve as a complement to this more academic session.

Incentives for the long-term integration of renewable energies: a plea for a market value model

Karsten Neuhoff, DIW Berlin; Nils May, DIW Berlin; Joern Richstein, DIW Berlin

Harnessing electricity retail tariffs to support climate change policy

Lisa Ryan, University College Dublin; Sarah La Monaca, UCD; Linda Mastrandrea, UCD; Petr Spodniak, Economic and Social Research Institute

Electricity grid tariffs that enable flexible and environmental friendly coupling of electricity and heat markets

Klaus Skytte, DTU Management Engineering; Claire Bergaentzle, DTU; Ole Jess Olsen, DUT

Capacity and the importance of simple, basic regulation of power markets with competition

Tomas Kåberger,

THEMATIC SESSION: FINANCING ENERGY INNOVATION: WHAT WORKS AND REDIRECTS?

Room: Handels: F45

Organizer(s): Jacquelyn Pless, University of Oxford

Chair: Jacquelyn Pless, University of Oxford

Identifying and overcoming barriers to clean energy innovation will be critical for reducing greenhouse gas emissions, meeting future energy needs, and transitioning to clean energy systems globally. Several dozen countries have committed to double public research and development (R&D) spending on clean energy innovation by 2021 through "Mission Innovation". However, increased spending does not necessarily translate into successful outcomes. Equally important is spending such resources wisely, yet there is remarkably insufficient evidence in the literature so far about what works and why when it comes to driving clean energy innovation.

This session brings together cutting-edge empirical research on energy innovation, with a particular focus on the economic motivations for increasing public support for clean energy R&D and how such funding impacts innovation outcomes. The session will begin with an examination of knowledge spillovers that accrue from clean and dirty technology innovations. It will then explore financing constraints faced by small renewable energy firms, which impede innovative activity, and it will wrap-up with analyses of how R&D funding mechanisms impact firm behaviour and innovation outcomes.

Knowledge Spillovers from Clean and Dirty Technologies: A Patent Citation Analysis

Antoine Dechezlepretre, London School of Economics; Ralf Martin, Imperial College London; **Myra Mohnen**, University of Essex

Financing Energy Innovation: Financing Constraints and Directed Technical Change from Fossil-Fuel to Renewable Innovation

Joelle Noailly, Graduate Institute of International and Development Studies; Roger Smeets, Rutgers University

Do Tax Incentives for Research Increase Firm Innovation? An RD Design for RD

Ralf Martin, Imperial College London; Antoine Dechezlepretre, London School of Economics; Elias Einiö, VATT Institute for Economic Research; Kieu-Trang Nguyen, London School of Economics; John Van Reenen, Massachusetts Institute of Technology

Are 'Complementary Policies' Substitutes? Evidence from RD Subsidies in the UK

Jacquelyn Pless, University of Oxford

THEMATIC SESSION: INEQUALITY AND THE ENVIRONMENT: MEASUREMENT, VALUATION AND POLICY

Room: Handels: SKF

Organizer(s): Moritz Drupp, University of Hamburg; Ben Groom, London School of Economics

Chair: Moritz Drupp, University of Hamburg

In the 21st century, (environmental) economics faces two mega-challenges: On the one hand, the loss of environmental goods and services is widespread and accelerating, while, on the other hand, concerns about economic inequalities become more prevalent in science, policy and society. These two challenges are inter-related: Economic inequality may influence environmental valuation and policy, while environmental policy may affect economic inequality in turn. The proposed thematic session will deal with this inter-relationship by addressing a number of key questions: (i) How does the distribution of income within a society affect environmental valuation? (ii) What is the extent of inequality aversion concerning the distribution of economic resources as well as environmental quality? (iii) How are benefits of (non-market) environmental goods distributed? (iv) How are costs of environmental regulation distributed? (v) How are carbon emissions distributed and what does this imply for equitable climate finance? The session will provide a selected overview on the topic of how inequality and the environment are connected and will aim to stimulate a broader discussion. As such, the session may help participants to gain a better understanding of how inequality and environmental policy are connected and to identify knowledge gaps and promising opportunities for future research.

Panelist(s): Lucas Chancel,

Who Bears the Economic Costs of Environmental Regulations?

Don Fullerton, University of Illinois; Erich Muehlegger, University of California - Davis

Economic Inequality and the Value of Nature

Jasper Meya, University of Oldenburg; Stefan Baumgärtner, University of Freiburg; Martin Quaas, University of Kiel; **Moritz Drupp**, University of Hamburg

Inequality Aversion and the Environment

Ben Groom, London School of Economics; Frank Venmans, University of Mons

Carbon and inequality: From Kyoto to Paris. Trends in the global inequality of carbon emissions (1998-2013) prospects for an equitable adaptation fund

Lucas Chancel, ; Thomas Piketty,

**THEMATIC SESSION: INTERNATIONAL COMPETITIVENESS
AND THE DESIGN OF CLIMATE POLICY**

Room: Handels: Malmsten

Organizer(s): Raymond Kopp, Resources for the Future

Chair: Raymond Kopp, Resources for the Future

The Paris Agreement was adopted on December 2015. The Agreement signals a new era for international collaboration and cooperation on climate change, with a focus on nationally-determined contributions of emissions mitigation. These voluntary pledges and their associated domestic implementation programs may result in heterogeneous emission mitigation costs both across countries and across industries within countries. For trade-exposed industries, the heterogeneity in abatement costs evident in differential energy price impacts, for example may result in competitiveness effects: firms in high regulatory-cost countries may lose market share to firms in low regulatory-cost countries, and these may consider relocating production activities to the lower regulatory cost markets. Such adverse competitiveness effects undermine international climate policy by increasing the costs of ambitious domestic climate policy action and decreasing the environmental benefits of such action due to emission leakage. This session will review both econometric and simulation evidence on the competitiveness impacts of alternative implementations of NDCs, with particular attention to how carbon pricing versus non-carbon pricing policies may have differential effects on leakage and competitiveness.

Evaluations on emission reduction efforts of NDCs and their economic impacts by sector

Keigo Akimoto, Research Institute of Innovative Technology for the Earth (RITE); Takashi Homma, Research Institute of Innovative Technology for the Earth (RITE); Fuminori Sano, Research Institute of Innovative Technology for the Earth (RITE); Bianka Shoai-Tehrani, Research Institute of Innovative Technology for the Earth (RITE)

The economic implications of Nationally Determined Contributions: a global analysis on growth and competitiveness

Francesco Bosello, Department of Environmental Science and Policy, University of Milan and Euro-Mediterranean Center on Climate Change; Carlo Carraro, University of Venice Ca' Foscari, Euro-Mediterranean Center on Climate Change and University of Venice; Ramiro Parrado, Euro-Mediterranean Center on Climate Change and University of Venice Ca' Foscari

Evaluating the Competitiveness Effects of Global Climate Change Policy

Joe Aldy, Harvard University; William Pizer, Duke University

**THEMATIC SESSION: NEW ECONOMIC RESEARCH
SUPPORTING POLICIES FOR COMBATING EUTROPHICATION
IN INTERNATIONAL WATERS**

Room: Handels: E45

Organizer(s): Berit Hasler, Aarhus University; Ing-Marie Gren, Swedish University of Agricultural Sciences; Kari Hyytinen, University of Helsinki; Katarina Elofsson, Swedish University of Agricultural Sciences

Chair: Berit Hasler, Aarhus University

EU Directives (the water framework directive (WFD) and the marine strategy framework directive (MSFD)) require nutrient load reductions to achieve good ecological status of the coastal and open marine areas surrounding the EU member states. Similarly, policies are established to reduce nutrient loads in the US and in other parts of the world. The Baltic Sea, surrounded by 9 countries, is an example of a common, international sea area where there have been observable successes in reducing

the nutrient inflows to the Sea in line with international commitments (HELCOM, 2013), but the targets have not been met and the efforts of the surrounding countries have been largely unilateral and insufficiently coordinated. Existing policies are shown to be unnecessarily expensive in relation to the nutrient reductions achieved. Further reductions can be even more costly to reach, and socioeconomic development and climate change might make it even harder to achieve good ecological status of international sea areas, such as the Baltic Sea. There is a need for an improved design of policy instruments and institutions to ensure that the nutrient load reduction targets are met, and to achieve that there is a strong need for science-based knowledge on the role that the design of policy instruments and institutions plays for environmental, economic and social outcomes of policies for nutrient reductions. This thematic session addresses the challenges and possibilities for more stringent and effective nutrient abatement for an international sea area.

The ex-post cost-effectiveness of nitrogen load reductions from nine countries to the Baltic Sea between 1996 and 2010

Tobias Häggmark, Swedish University of Agricultural Sciences; Katarina Elofsson, Swedish University of Agricultural Sciences

Stacking of pollutant abatement credits for cost-effective achievement of climate and water targets in the Baltic Sea region

Ing-Marie Gren, Swedish University of Agricultural Sciences; Frederic Ang, SLU; Sara Säll, SLU; Abenezer Zeleke, SLU

Assessing the benefits and the efforts of reaching a good environmental status in the Baltic Sea under changing climate and society

Tuija Lankia, Natural Resources Institute Finland, LUKE; **Sampo Pihlanen**, Helsinki University; Matti Sihvonon, University of Helsinki; Eija Pouta, Natural Resources Institute Finland, LUKE; Kari Hyytinen, University of Helsinki; Heini Ahtiainen, Natural Resources Institute Finland (Luke); Barbara Bauer, Stockholm University; Markus Meier, SMHI; Christine Bertram, IfW Kiel; Marianne Zandersen, Aarhus University; Bo Gustafsson, Stockholm university; Mikołaj Czajkowski, University of Warsaw; Eva Ehrsten, Stockholm University; Jürgen Meyerhoff, TU Berlin; Alf Norkko, Helsinki University; Kristine Pakalniete, AktiVS Ltd; Katrin Rehdanz, Christian-Albrechts-University Kiel; Sofia Saraiva, SMHI; Maciej Tomczak, Stockholm University; Ioannis Angelidis, Aarhus University

Cross country comparison of AES schemes as incentives for nutrient abatement in Baltic Sea catchments - exploring farmers' preferences

Berit Hasler, Aarhus University; Mikołaj Czajkowski, University of Warsaw; Katarina Elofsson, Swedish University of Agricultural Sciences; Line Block Hansen, Aarhus University; Tobias Häggmark, Swedish University of Agricultural Sciences; Maria Konrad, Aarhus University; Helle Ørsted Nielsen, Aarhus University; Olli Niskanen, LUKE; Anders Branth Pedersen, Aarhus University; Kaja Petserson, Stockholm Environmental Institute, Estonia; Katarzyna Zagórska, University of Warsaw, Department of Economics

THEMATIC SESSION: POLITICAL ECONOMY AND CLIMATE POLICY: THE NEW ECONOMICS OF COAL

Room: Handels: Volvo

Organizer(s): Roman Mendelevitch, Humboldt-Universität zu Berlin; Franziska Holz, German Institute for Economic Research (DIW Berlin); Michael Jakob, Mercator Research Institute on Global Commons and Climate Change; Pao-Yu Oei, TU Berlin

Chair: Roman Mendelevitch, Humboldt-Universität zu Berlin

From a Western perspective, an increasing number of countries are embarking on a coal phase-out path following various rationales. They can obviously be related to environmental and climate concerns, but just as much to the increasing cost competitiveness and flexibility of renewables systems or the competition with shale gas that deteriorates the economics of coal electrification in more and more countries. At the same time, the increasing energy demand in developing and emerging economies, e.g. in South-East Asia and Africa, has been a constant driver of coal-fired power plant capacities.

In this context, this proposed session aims to make a contribution to understanding this seeming contradiction with fresh research on the new economics of coal. Characterizing the multitude and interrelatedness of (inter-)national political economy and climate policy drivers and barriers presents a major step towards the design of feasible and efficient policies to achieve international climate targets.

To this end, this session examines the dichotomy towards coal by presenting individual country cases studies, as well as a more general discussion on a political economy framework of to rationalize coal investments. Moreover, it addressed the issue of potentially stranded coal infrastructure assets and their role as inertia that governments need to take into account when designing transition policies.

The political economy of climate policy: A Theoretical Framework

Jan Steckel, MCC Berlin; Michael Jakob, Mercator Research Institute on Global Commons and Climate Change; **Christian Flachsland**, Mercator Research Institute on Global Commons and Climate Change (MCC)

Coal Phase-Out Implications for the International Steam Coal Market: The Risk of Asset Stranding in the COALMOD-World Model

Roman Mendelevitch, Humboldt-Universität zu Berlin; Franziska Holz, German Institute for Economic Research (DIW Berlin); Oliver Sartor, IDDRI; Tim Scherwarth, German Institute for Economic Research (DIW Berlin); Ivo Kafemann, German Institute for Economic Research (DIW Berlin); Thomas Spencer, IDDRI

Black Diamond or Black Death: The United Kingdom's, Germany's and Poland's diverging transition pathways towards a future without coal consumption

Pao-Yu Oei, TU Berlin; Hanna Brauers, TU Berlin

More Gas, Less Coal, and Less CO2? Unilateral CO2 Reduction Policy with More than One Carbon Energy Source

Julien Daubanes, University of Copenhagen; Fanny Henriët, PSE-CNRS; Katheline Schubert, University of Paris

THEMATIC SESSION: USING NOVEL, GRANULAR DATA IN ADDRESSING ENVIRONMENTAL IMPACTS

Room: Handels: CG room

Organizer(s): Jeremy Proville, Environmental Defense Fund

Chair: Jeremy Proville, Environmental Defense Fund

Identifying and overcoming barriers to clean energy innovation will be critical for reducing greenhouse gas emissions, meeting future energy needs, and transitioning to clean energy systems

globally. Several dozen countries have committed to double public research and development (R&D) spending on clean energy innovation by 2021 through "Mission Innovation". However, increased spending does not necessarily translate into successful outcomes. Equally important is spending such resources wisely, yet there is remarkably insufficient evidence in the literature so far about what works and why when it comes to driving clean energy innovation.

This session brings together cutting-edge empirical research on energy innovation, with a particular focus on the economic motivations for increasing public support for clean energy R&D and how such funding impacts innovation outcomes. The session will begin with an examination of knowledge spillovers that accrue from clean and dirty technology innovations. It will then explore financing constraints faced by small renewable energy firms, which impede innovative activity, and it will wrap-up with analyses of how R&D funding mechanisms impact firm behaviour and innovation outcomes.

The Low-carbon Transition: First Evidence from US Counties

Jeremy Proville, Environmental Defense Fund; **Thomas Stoerk**, Environmental Defense Fund

Sensing Methane Emissions: A Cost-Effectiveness Analysis of Remote Sensing Satellite Technologies

Alan Krupnick, Resources for the Future; Laura Zachary, Consultant; Riley Duren, NASA JPL

The Benefits of Uniform Compliance with National Air Quality Standards

Alan Krupnick, Resources for the Future; Daniel Sullivan, Resources for the Future

TRADE AND THE ENVIRONMENT

Room: Handels: D32

Chair: Natalia Zugravu-Soilita, University of Versailles Saint-Quentin-en-Yvelines

Energy prices and industrial foreign investment location: evidence from global firm level data

Aurélien Saussay, Sciences Po / CIRED; Misato Sato, London School of Economics

Discussant: Elena Verdolini, FEEM and CMCC

Environmental Policy and International Trade: New Evidence from Structural Gravity

Laura Bonacorsi, FEEM and CMCC; **Elena Verdolini**, FEEM and CMCC

Discussant: Robert Elliott, University of Birmingham

The Pollution Outsourcing Hypothesis: An Empirical Test for Japan

Robert Elliott, University of Birmingham

Discussant: Natalia Zugravu-Soilita, University of Versailles Saint-Quentin-en-Yvelines

Trade in environmental goods: empirical exploration of direct and indirect effects on pollution by country's trade status

Natalia Zugravu-Soilita, University of Versailles Saint-Quentin-en-Yvelines

Discussant: Aurélien Saussay, Sciences Po / CIRED

VALUATION: HEDONIC PRICING

Room: Handels: B33

Chair: Daniel Bigelow, Economic Research Service

Using matching methods to estimate impacts of wildfire and post-wildfire flooding on house prices

Julie Mueller, Northern Arizona University; Abraham Springer, Northern Arizona University; Ryan Lima, Northern Arizona University; Erik Schiefer, Northern Arizona University

Discussant: David Wolf, The Ohio State University

Does Heterogeneity within the Second-Stage Matter? Recovering Water Quality Demand Functions using a Nationwide Housing Database

David Wolf, The Ohio State University; Sathya Gopalakrishnan, Ohio State University; H. Allen Klaiber, The Ohio State University

Discussant: Charles Wassell, Central Washington University

Quantifying the Impact of the Kittitas County Groundwater Moratorium on Housing and Bare Land Parcel Prices

Charles Wassell, Central Washington University; Toni Sipic, Central Washington University; Kaleb Javier, Central Washington University

Discussant: Daniel Bigelow, Economic Research Service

The compatibility of farmland sales and opinion survey data

Daniel Bigelow, Economic Research Service; Jennifer Ifft, Cornell University; Todd Kuethe, University of Illinois

Discussant: Julie Mueller, Northern Arizona University

VALUATION: RESOURCES

Room: Handels: F44

Chair: Zenebe Gebreegziabher, Mekelle University

The contingent valuation study of Heiðmörk, Iceland – willingness to pay for preservation

David Cook, University of Iceland; Brnyhildur Davíðsdóttir, University of Iceland

Discussant: Gianluca Grilli, Economic and Social Research Institute

Exploring the Role Of Emotions On Stated Preferences For Wildlife Conservation

Gianluca Grilli, Economic and Social Research Institute; Sandra Notaro, Department of Economics and Management, University of Trento, Italy

Discussant: Max T. Stoeven, Kiel University

Buying information or warm-glow? The relationship between ecolabels and seafood

Max T. Stoeven, Kiel University; Julia Bronnmann, Kiel University; Martin Quaas, University of Kiel; Frank Asche, (1) Institute for Sustainable Food Systems and School of Forest Resources and

Conservation, University of Florida, Gainesville; (2) Dep. of Industrial Economics, University of Stavanger

Discussant: Zenebe Gebreegziabher, Mekelle University

Valuation of access to irrigation water in rural Ethiopia: application of choice experiment and contingent valuation methods

Zenebe Gebreegziabher, Mekelle University; Alemu Mekonnen, Addis Ababa University; Abebe Beyene, Ethiopian Development Research Institute; Fitsum Hagos, International Water Management Institute

Discussant: David Cook, University of Iceland

VALUATION: TRAVEL COST

Room: Handels: B44

Chair: John C. Bergstrom, University of Georgia

A site-portfolio model for multiple-destination recreation trips: valuing trips to national parks in the southwest USA

George Parsons, University of Delaware; Kevin Boyle, University of Maine; Nancy Bockstael, University of Maryland; Chris Leggett, Bedrock Statistics; Joe Herriges, Michigan State University; Zoe Chen, University of Delaware

Discussant: Koichi Kuriyama, Kyoto University

The Value of Leisure Time of Weekends and Long Holidays: The Multiple Discrete-Continuous Extreme Value (MDCEV) Choice Model with Triple Constraints

Koichi Kuriyama, Kyoto University; Yasushi Shoji, Hokkaido University; Takahiro Tsuge, Konan University

Discussant: George Parsons, University of Delaware

Attribute Non-attendance in a Revealed Preference Study

Kevin Boyle, University of Maine; Mark Morrison, Charles Sturt University; Weibin Xu, Analyst; George Parsons, University of Delaware; John Rose, The University of Technology Sydney

Discussant: John C. Bergstrom, University of Georgia

A Latent Class Approach for Modeling Arbitrariness in the Definition of 'Visitors' for Individual Trip Behavior

KAVITA SARDANA, TERI SCHOOL OF ADVANCED STUDIES; **John C. Bergstrom**, University of Georgia; Oleksiy Tokovenko, SAS Institute Inc.

Discussant: Kevin Boyle, University of Maine

Coffee break

Tuesday, 15.30-16.00

Room: Handels / Haga

Parallell sessions 3
Tuesday June 26, 16.00-17.45

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels: B22

Chair: Phu Nguyen-Van, BETA, CNRS Université de Strasbourg

Pro-environmental and Other Altruistic Attitudes in Malaysia: Effects of Worldviews

Naoko Okuyama, Osaka Gakuin University; Yee Keong Choy, Keio University; Masao Ogaki, Keio University; Ayumi Onuma, Keio University

Discussant: Mariangela Zoli, University of Rome Tor Vergata

Doggy bag? Yes, please. On the use of social norms and default to reduce food waste

Matilde Giaccherini, University of Rome Tor Vergata; Marianna Gilli, Università di Ferrara; Susanna Mancinelli, University of Ferrara; **Mariangela Zoli**, University of Rome Tor Vergata

Discussant: Dambala Gelo Kutela, University of Witwatersrand

Cooperation under alternative punishment institutions: Experimental evidence from commons' dilemma

Dambala Gelo Kutela, University of Witwatersrand

Discussant: Phu Nguyen-Van, BETA, CNRS Université de Strasbourg

Determinants of pro-environmental collective behavior

Phu Nguyen-Van, BETA, CNRS Université de Strasbourg; Anne Stenger, BETA, INRA Université de Strasbourg; Tuyen Tiet-Tong, BETA, CNRS Université de Strasbourg

Discussant: Naoko Okuyama, Osaka Gakuin University

CLIMATE CHANGE: EMPIRICAL MODELLING

Room: Handels: C22

Chair: Lutz Sager, London School of Economics and Political Science

A Multicointegration Model of Global Climate Change

David Stern, Australian National University; Zsuzsanna Csereklyei, Australian National University; Stephan Bruns, Göttingen University

Discussant: Bjørnar Karlsen Kivedal, Østfold University College

Optimal Scheduling of Greenhouse Gas Emissions under Carbon Budgeting and Policy Design

Elettra Agliardi, University of Bologna; Anastasios Xepapadeas, Athens University of Economics and Business University of Bologna

Discussant: David Stern, Australian National University

Investigating the Environmental Kuznets Curve for the US through the I(2) Cointegration Model

Bjørnar Karlsen Kivedal, Østfold University College

Discussant: Lutz Sager, London School of Economics and Political Science

Income Inequality and Carbon Consumption: Evidence from Environmental Engel Curves

Lutz Sager, London School of Economics and Political Science

Discussant: Elettra Agliardi, University of Bologna

CLIMATE CHANGE: POLICY

Room: Handels: C33

Chair: Brandon Schaufele, Western University

CO2 tax scenarios for Austria – impacts on households, CO2 emissions, and the economy

Mathias Kirchner, Austrian Institute of Economic Research (WIFO); Mark Sommer, Austrian Institute of Economic Research (WIFO); Claudia Kettner, Austrian Institute of Economic Research (WIFO); Daniela Kletzan-Slamanig, Austrian Institute of Economic Research (WIFO); Katharina Köberl, Austrian Institute of Economic Research (WIFO); Kurt Kratena, Austrian Institute of Economic Research (WIFO)

Discussant: Richard Jaimes, Tilburg University

Optimal climate and fiscal policy in an OLG economy**Richard Jaimes**, Tilburg University

Discussant: Marie-Catherine Riekhof, ETH Zurich

Permit Markets, Carbon Prices and the Creation of Innovation ClustersHans Gersbach, ETH Zurich; **Marie-Catherine Riekhof**, ETH Zurich

Discussant: Brandon Schaufele, Western University

Marginal Excess Burden of Unilateral Carbon Taxes: Evidence from Agriculture**Brandon Schaufele**, Western University

Discussant: Mathias Kirchner, Austrian Institute of Economic Research (WIFO)

ENERGY AND CLIMATE POLICY

Room: Handels: B33

Chair: Claudia Kettner, Austrian Institute of Economic Research (WIFO)

TECHNOLOGICAL INNOVATION, “STRANDED ASSETS,” AND ENERGY DECARBONIZATION**Michael Toman**, World Bank; Jevgenijs Steinbuks, World Bank; Alexander Golub, World Bank

Discussant: Ruediger Pethig, University of Siegen

EU-type carbon regulation and the waterbed effect of green energy promotion**Ruediger Pethig**, University of Siegen

Discussant: Levi Marks, University of California, Santa Barbara

The Abatement Cost of Methane Emissions from Natural Gas Production**Levi Marks**, University of California, Santa Barbara

Discussant: Claudia Kettner, Austrian Institute of Economic Research (WIFO)

The Status of Climate Policy Integration in EU Energy Policy

Claudia Kettner, Austrian Institute of Economic Research (WIFO); Daniela Kletzan-Slamanig, Austrian Institute of Economic Research (WIFO)

Discussant: Michael Toman, World Bank

ENERGY: BEHAVIOR

Room: Handels: B44

Chair: Timo Goeschl, Heidelberg University

A Behavioral Rebound Effect**Zack Dorner**, University of Waikato

Discussant: Neslihan Uler, University of Maryland

Behavioral Sources of the Demand for Carbon Offsets: An Experimental Study

Neslihan Uler, University of Maryland; Kai-Uwe Kuhn, University of East Anglia

Discussant: Luisa Dressler, OECD

Do alert the inert! Switching costs vs limited awareness in retail electricity markets

Luisa Dressler, OECD; Weiergraeber Stefan, Indiana University

Discussant: Timo Goeschl, Heidelberg University

Cold Case: The forensic economics of energy efficiency labels for domestic refrigeration appliances

Timo Goeschl, Heidelberg University

Discussant: Zack Dorner, University of Waikato

ENVIRONMENT AND DEVELOPMENT

Room: Handels: F44

Chair: Hailemariam Teklewold, Ethiopian Development Research Institute

Fuel poverty and residential energy demand: how fuel-poor households react to energy price fluctuations

Sondès Kahouli, University of Western Brittany (France)

Discussant: Eyoual Demeke, Gothenburg University

The Persistence of Energy Poverty: A Dynamic Probit

Eyoutal Demeke, Gothenburg University; Yonas Alem, Gothenburg University

Discussant: Elke Costanti, University of Brasilia

The Sustainable Development Goals under a Nexus Analysis: symmetries, synergies and trade-offs in Brazilian Environmental Policies

Elke Costanti, University of Brasilia; Samara Martins, University of Brasilia; Fernanda Crispim, University of Brasilia; Heloisa Dourado, University of Brasilia; Johannes Klingberg, University of Brasilia; Carlos Eduardo Silva Menezes, University of Brasilia; Jorge Madeira Nogueira, University of Brasilia

Discussant: Hailemariam Teklewold, Ethiopian Development Research Institute

Weather at different growth stages, multiple climate smart practices and farm level risks: Panel data evidence from the Nile Basin of Ethiopia

Hailemariam Teklewold, Ethiopian Development Research Institute; Alemu Mekonnen, Addis Ababa University

Discussant: Sondès Kahouli, University of Western Brittany (France)

ENVIRONMENT AND DEVELOPMENT: INTERVENTIONS

Room: Handels: F43

Chair: James Sanchirico, University of California, Davis

NGOs and the effectiveness of interventions

Faraz Usmani, Duke University; Marc Jeuland, Duke University; Subhrendu Pattanayak, Duke University

Discussant: Goytom Abraha Kahsay, University of Copenhagen

Do public work programs crowd-out pro-environmental behaviour? Empirical evidence from the Ethiopian food-for-work program

Goytom Abraha Kahsay, University of Copenhagen; Workineh Asmare Kassie, University of Gondar; Abebe Beyene, Ethiopian Development Research Institute; Lars Gårn Hansen, University of Copenhagen
Discussant: Yaniv Stopnitzky, University of San Francisco

Changing Behavior Through Experimental Games: Evidence from Sanitation and Hygiene in Tamil Nadu

Yaniv Stopnitzky, University of San Francisco
Discussant: James Sanchirico, University of California, Davis

Environmental Impacts of Cash Transfer Programs: Implications for the Welfare of Poor Communities in Developing Countries

James Sanchirico, University of California, Davis; Ted Gilliland, Department of Economics, Mount Holyoke College; J. Edward Taylor, Agricultural and Resource Economics, UC Davis
Discussant: Faraz Usmani, Duke University

ENVIRONMENTAL POLICY: IMPACT

Room: Handels: D33

Chair: Xiao-Bing Zhang, Renmin University of China

Coordination and Inequalities in Agglomeration Payments: An Experimental Analysis

Elisabeth Gsottbauer, University of Innsbruck
Discussant: Christopher Blackburn, Georgia Institute of Technology

Do Pilot Projects Alter Non-Participant Behavior? Evidence from a Green Building Standard

Christopher Blackburn, Georgia Institute of Technology; Juan Moreno-Cruz, Georgia Institute of Technology; Mallory Flowers, Erasmus University; Daniel Matisoff, Georgia Institute of Technology
Discussant: MARCO VINCENZI, UNIVERSITY OF NEW HAMPSHIRE

Environmental Justice and the Print Media During the Implementation of Superfund

Robert Mohr, University of New Hampshire; SHRAWANTEE SAHA, College of Saint Benedict - Saint John's University; **MARCO VINCENZI**, UNIVERSITY OF NEW HAMPSHIRE
Discussant: Xiao-Bing Zhang, Renmin University of China

How do firms respond to temporary emissions control policies? Evidence from a natural experiment in China

Xiao-Bing Zhang, Renmin University of China; Jie-Sheng Tan-Soo, National University of Singapore; Ping Qin, Renmin University of China; Xueying Yu, Beihang University
Discussant: Elisabeth Gsottbauer, University of Innsbruck

ENVIRONMENTAL POLICY: MARKETS

Room: Handels: C24

Chair: Giulia Pavan, Toulouse School of Economics

Optimal Stabilization in an Emission Permits Market

Roweno J.R.K. Heijmans, Tilburg University; Reyer Gerlagh, Tilburg University
Discussant: John Stranlund, Department of Resource Economics, University of Massachusetts-Amherst

Tying enforcement to prices in emissions markets: An experimental evaluation

John Stranlund, Department of Resource Economics, University of Massachusetts-Amherst; James Murphy, Department of Economics, University of Alaska Anchorage; John Spraggon, Department of Resource Economics, University of Massachusetts-Amherst; Nikolaos Zirogiannis, School of Public and Environmental Affairs, Indiana University-Bloomington
Discussant: Ian MacKenzie, University of Queensland

Permit Market Auctions with Allowance Reserves

Ian MacKenzie, University of Queensland; Peyman Khezr, University of Queensland
Discussant: Giulia Pavan, Toulouse School of Economics

The Impact of European Carbon Market on Firm Productivity:Evidences from Italian Manufacturing Firms.

Giulia Pavan, Toulouse School of Economics; Sara Calligaris, OECD; Filippo Maria D'Arcangelo, Toulouse School of Economics
Discussant: Roweno J.R.K. Heijmans, Tilburg University

ENVIRONMENTAL POLICY: THEORY

Room: Handels: D32

Chair: Lluís Granero, University of Valencia

Growth, pollution, policy!

Robert Hart, Dep. of Economics, Swedish University of Agricultural Sciences
Discussant: Chiara Ravetti, University of Oxford/Politechnic of Turin

Emissions, Exporters And Heterogeneity: Asymmetric Trade Policy And Firms' Selection

Chiara Ravetti, University of Oxford/Politechnic of Turin; Richard Baldwin, The Graduate Institute of Geneva
Discussant: Marion Dupoux, University of Gothenburg

Contextual substitutability and the nature of environmental public goods

Marion Dupoux, University of Gothenburg; Vincent Martinet, UMR Economie Publique, INRA-AgroParisTech
Discussant: Lluís Granero, University of Valencia

Sustainable Products, Market Structure, and Welfare

Begoña Casino, University of Valencia; **Lluís Granero**, University of Valencia
Discussant: Robert Hart, Dep. of Economics, Swedish University of Agricultural Sciences

FISHERIES: THEORY

Room: Haga: Dragonen

Chair: Stephanie Stefanski, Duke University

Seasonal Harvest Patterns in Multispecies Fisheries

Martin Smith, ; Anna Birkenbach, Duke University; Frank Asche, (1) Institute for Sustainable Food Systems and School of Forest Resources and Conservation, University of Florida, Gainesville; (2) Dep. of Industrial Economics, University of Stavanger; Andreea Cojocaru, Department of Industrial Economics, University of Stavanger; Atle G Guttormsen, Dep. of Economics and Resource Management, Norwegian University of Life Sciences

Discussant: Gal Hochman, Rutgers University

The Political Economy of Market Mediated Incentives: The Case of Embodied Technologies

Gal Hochman, Rutgers University; David Zilberman, University of California, Berkeley

Discussant: Florian Diekert, University of Heidelberg

Non-compliance behavior and use of extraction rights for natural resources

Yuanhao Li, Norwegian School of Economics (NHH); Linda Nostakken, NHH; **Florian Diekert**, University of Heidelberg; Andries Richter, Wageningen University

Discussant: Stephanie Stefanski, Duke University

Use it or Lose it: A Bioeconomic Model of Utilization Rules in an ITQ Fishery

Stephanie Stefanski, Duke University; Martin Smith, Duke University

Discussant: Martin Smith,

POLICY SESSION: IT TAKES TWO TO TANGO? CARBON PRICING IN THE PRESENCE OF A PRE-EXISTING CAP AND TRADE PROGRAM

Room: Handels: Aulan

Organizer(s): Burcin Unel, Institute for Policy Integrity, New York University; Jeffrey Shrader, Columbia University and New York University

Chair: Burcin Unel, Institute for Policy Integrity, New York University

Deep decarbonization goals are motivating many countries and sub-national governments to pursue more aggressive greenhouse gas mitigation policies and to use multiple policy tools at the same time. A discussion of the interaction among multiple policy tools to achieve economy wide decarbonization goals is much needed to inform various policy discussions going on around the world. This policy session, with the goal of filling this gap, will examine the issues around the overlap of a domestic carbon price floor and a pre-existing cap and trade program. The session will be formatted as a roundtable discussion on how different policies could work best together, lessons learned from different jurisdictions that have implemented dual policies, and the crucial design details with the intent of informing policymakers around the world. A central topic of discussion will be theoretical concerns about leakage as well as empirical results that can shed light on whether such leakage should practically concern policymakers. Additionally, the panel will discuss policymaking tradeoffs and concerns about additional carbon pricing policies such as a price floor in the presence of a cap-and-trade.

Panelist(s): Nicole Bouchez, New York Independent System Operator;

Cameron Hepburn, Oxford University;

Karsten Neuhoff, DIW Berlin;

Karen Palmer, Resources for the Future;

Jeffrey Shrader, Columbia University and New York University

POLICY SESSION: LINKING CARBON MARKETS: PROSPECTS AND CHALLENGES

Room: Handels: Malmsten

Organizer(s): Simone Borghesi, FSR Climate, European University Institute; Isabella Alloisio, FSR Climate, European University Institute

Chair: Simone Borghesi, University of Siena and FSR Climate - European University Institute

As countries move to implement their Nationally Determined Contributions (NDCs) under the Paris Agreement, a growing number of them and of sub-national jurisdictions are considering using carbon markets to meet their mitigation commitments. There is an emerging need to share the experiences on implementation of emissions trading systems to date, and to further promote emissions trading as a cost-effective climate policy tool. According to mainstream literature, a global carbon market would be the most cost-efficient solution to achieve the overall objective of keeping global warming below two degrees celsius. The Policy Session speakers will discuss both advantages and risks that a fully-linked market would involve.

Panelist(s): Duan Maosheng, China Carbon Market Center, Tsinghua University;
Jos Delbeke, European Political Strategy Centre, European Commission;
Gernot Wagner, Harvard University Center for the Environment, Harvard University;
Luca Taschini, The Grantham Research Institute on Climate Change, London School of Economics;
Martin Weitzman, Harvard University

POLICY SESSION: NATIONAL AND INTERNATIONAL POLICY INSTRUMENTS TO MITIGATE THE CLIMATE IMPACTS OF AVIATION

Room: Handels: E45

Organizer(s): Jonas Akerman, ; Jonathan Camuzeaux, Environmental Defense Fund; Jörgen Larsson, Chalmers University of Technology

Chair: Daniel Slunge, FRAM - The Centre for Future Chemical Risk Assessment and Management, University of Gothenburg

Aviation currently accounts for 2.4% of global energy-related carbon dioxide emissions and 4-5% of greenhouse gas emissions when contrails and cloud formation are also accounted for. At the same time, international aviation is exempted from energy tax, carbon tax and VAT, instruments that are widely used in road transport. In order for aviation to contribute to the Paris targets, there is therefore a need for policy instruments that can substitute for these taxes. International policy instruments designed to address emissions from aviation, such as contained in the EU ETS and in the International Civil Aviation Organizations market-based measure CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation) will be discussed during this Policy Session, as well as possible complementary international and national policies.

Panelist(s): Jonas Akerman, ;
Pedro Piris-Cabezas, Environmental Defense Fund

POLICY SESSION: THE IMPACTS OF CLIMATE CHANGE ACTS: EMISSIONS, POLICIES, AND PUBLIC OPINION

Room: Handels: E43

Organizer(s): Simon Matti,

Chair: Simon Matti,

As a response to the increasing pressure to mitigate climate change, several governments around the world have introduced Climate Change Acts (CCAs), thereby creating a legal framework for governmental climate activities that regulates either or both emission target-levels and processes for the government to set and reach these targets in a long-term perspective. Whereas the overall ambition of a CCA is to strengthening long-term political commitments, possibilities for cross-sectoral coordination, as well as the processes for implementation, monitoring and evaluation of domestic climate-mitigation strategies, the question of their impacts on climate mitigation remains.

This policy session will bring together scholars and practitioners for a joint discussion and exchange of experiences of the impacts of Climate Change Acts. The overall question guiding the discussing is whether CCAs been conducive to forwarding climate mitigation, why (or why not), to what extent, and in which aspects? Discussions will both concern possible direct effects on reducing emission-levels, as well as possible indirect effects on policy-making and implementation, and public attention to and opinion of climate mitigation. Furthermore, the policy session will also touch upon experiences of the pitfalls and possibilities surrounding CCAs and their implementation.

Panelist(s): Sam Fankhauser, London School of Economics/The Grantham Institute;
Sarah Louise Nash, Researcher, University of Natural Resources and Life Sciences (BOKU), Vienna, Austria;
Alejandro Lopez-Feldman, Chair, Department of Economics, Centro de Estudios y Docencia Económicas (CIDE), Mexico City, Mexico;
Ola Alterå, Swedish Climate Policy Council, Stockholm, Sweden Representative for the Swedish Government, TBC

RISK: PREFERENCES AND BEHAVIOR

Room: Handels: B23

Chair: Romain Bizet, Mines ParisTech

Capitalization of Flood Insurance and Risk Perceptions in Housing Prices: An Empirical Agent-Based Model Approach

Koen de Koning, University of Twente; **Tatiana Filatova**, University of Twente; Okmyung Bin, East Carolina University
Discussant: Hide-Fumi Yokoo, National Institute for Environmental Studies

Subjective beliefs and estimated risks: Evidence from cooking fuel choices and health in India

Hide-Fumi Yokoo, National Institute for Environmental Studies; Mriduchhanda Chattopadhyay, Graduate School of Economics, Waseda University; Toshi H Arimura, Faculty of Political Science and Economics, Waseda University; Hajime Katayama, Faculty of Commerce, Waseda University; Mari Sakudo, Research Institute of Capital Formation, Development Bank of Japan
Discussant: Arnaud Goussebaile, ETH Zurich

Prevention and Insurance in Cities Prone to Natural Disaster Risks

Arnaud Goussebaile, ETH Zurich
Discussant: Romain Bizet, Mines ParisTech

Communicating disasters

Romain Bizet, Mines ParisTech; Pierre Fleckinger, MINES ParisTech, PSL Research University, Paris School of Economics
Discussant: Tatiana Filatova, University of Twente

THEMATIC SESSION: ENVIRONMENTAL INSPECTION STORM IN CHINA: IMPACT ANALYSES

Room: Handels: SEB

Organizer(s): Min Wang, Peking Univeristy

Chair: Min Wang, Peking Univeristy

China's rapid economic growth in the last four decades has been accompanied by major increases in environmental pollution that have reached alarming levels in many areas. The local governors, however, have limited incentive to voluntarily control pollution emission as their promotions mainly depend on the local economic growth. To address this incentive compatibility issue, in recent years the central government starts to intervene local practice in the environmental protection, and implemented binding environmental policies.

The three empirical studies included in this session examine the consequences of three recent environmental policies implemented by the central government, i.e., central environmental inspection policy, temporary emission control policy and household coal reduction policy. The three studies show that 1) the central environmental inspection policy not only deters the firm entry but also triggers price fluctuations of commodity goods in inspected industries; 2) The temporary emission control policy significantly reduces the pollutant emission during the policy implementation period but induces firms to emit more pollutants than before to compensate their loss when the policy is phased out; 3) The coal reduction policy reduces the coal consumption of the households at the cost of more household expenditure in heating and lower in-door temperature in the winter season.

Battling Against Local and Global Air Pollution at Household Level -- A Cost-Benefit Analysis of the Household Coal Reduction Program in China

Lunyu Xie, Renmin University of China

Economic Impacts of Environment Inspection Storm in China

Min Wang, Peking University; Dandan Zhang, Peking University; Xiaoying Liu, Peking University; Zhou Zou, Peking University

THEMATIC SESSION: LAB AND FIELD EXPERIMENTS FOR IMPROVING THE DESIGN OF AGRI-ENVIRONMENTAL POLICIES

Room: Handels: Volvo

Organizer(s): Nicholas Hanley, University of Glasgow; Simanti Banerjee, University of Nebraska, Lincoln

Chair: Nicholas Hanley, University of Glasgow

There is great interest in both academic and policy circles in how best to design policies which encourage the supply of public goods from private land. Payment for Ecosystem Service schemes have been adapted worldwide as one way of solving this policy design problem. How land is used for agriculture exerts a powerful influence on biodiversity conservation, and farmers are now offered a range of incentives to encourage them to farm in a more biodiversity-friendly manner. This session brings together 4 papers which use lab and field experiments to investigate important policy design problems in this context, including (i) bidding by groups of farmers, rather than by individual farmers, in a conservation auction (ii) how to maintain efficiency when auctions are repeated over time (iii) the use of an agglomeration bonus to encourage spatial coordination of bids. Empirical examples are drawn from agri-environment conflicts in China, the US and Australia.

Adding Realism to the Agglomeration Bonus: How Endogenous Land Returns, Spatial Heterogeneity, and Affordability affect Pollinator Habitat Fragmentation

Jason Shogren, University of Wyoming; **Chian Ritten**, University of Wyoming

Are auctions for environmental service provision likely to suffer with repetition?

Stuart Whitten, CSIRO; Andrew Reeson, CSIRO, canberra; Tim Capon, CSIRO

Performance of agglomeration bonuses in conservation auctions: Lessons from a framed field experiment

Andreas Kontoleon, ; **Zhaoyang Liu**, Peking University

Spatial Coordination and Joint Bidding in Conservation Auctions

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

**THEMATIC SESSION: LAND SPARING VS LAND SHARING:
MINIMISING TRADE-OFFS BETWEEN AGRICULTURAL
PRODUCTION AND THE CONSERVATION OF BIODIVERSITY
AND ECOSYSTEM SERVICES?**

Room: Handels: F45

Organizer(s): Charles Palmer, London School of Economics

Chair: Charles Palmer, London School of Economics

Against a back-drop of competing land-use demands, researchers and policy-makers continue to debate strategies for minimising the impact of increasing food production on biodiversity and ecosystem services. Two in particular have been put forward as a means of reconciling trade-offs between food production and conservation aims: land sparing and land sharing (Green et al., 2005; Phalen et al., 2011; Kremen, 2015). Thus, for a given production target and area of land, some fraction of land could be intensively farmed with the residual area #39;spared#39; (maintained or restored) as a natural habitat, or biodiversity conservation could share the same land being used to produce food, i.e. using wildlife-friendly farming methods. Research on the strategies of land sparing and land sharing has, to date, been largely undertaken by ecologists and conservation scientists. This thematic session seeks to engage the community of environmental and resource economists with this important topic and in doing so, address a number of gaps and flaws in the existing literature.

The Economics of the Food versus Biodiversity Debate

Vincent Martinet, UMR Economie Publique, INRA-AgroParisTech

Land Sparing in Agricultural Landscapes

Charles Palmer, London School of Economics; Ben Groom, London School of Economics

Scarcity and Safe Operating Spaces: The Example of Natural Forests

Edward B. Barbier, Colorado State University; Joanne Burgess, Department of Economics, Colorado State University

Natural capital decision making for land use: From scenario analysis to optimisation

Ian Bateman, University of East Anglia

THEMATIC SESSION: POLITICAL ECONOMY LEVERS OF ENVIRONMENTAL COOPERATION

Room: Handels: CG-room

Organizer(s): Ralph Winkler, ; Achim Hagen, Humboldt-Universität zu Berlin; Alessandro Tavoni, Grantham Research Institute on Climate Change and the Environment, LSE

Chair: Ralph Winkler, University of Bern

Environmental problems often operate on an international or even global scale. One of the most prominent examples is the mitigation of anthropogenic climate change, which requires international coordination and cooperation in the absence of a supranational regulatory body. Yet, international cooperation is difficult to achieve, as greenhouse gas mitigation is a global public good. The economic literature studying cooperation on the provision of global public goods through international environmental agreements predominantly depicts individual countries as atomistic players in a non-cooperative game setting. This is justified by the assumption of governments acting as monolithic benevolent social planners that seek to maximise social welfare of their respective countries. In contrast, the public choice literature challenges this restrictive assumption and consistently finds that all kind of domestic political competition -- such as lobbying, electoral concerns and strategic delegation -- crucially influence international policymaking. The thematic session on Political Economy Levers of Environmental Cooperation combines four papers that advance the economic literature by modelling the influence of lobbying, concerns for re-election and strategic delegation on environmental cooperation.

The Political Economy of Weak Treaties

Marco Battaglini, Cornell University and EIEF; **Bard Harstad**, Esop University Of Oslo

The Influence of Political Pressure Groups on the Stability of International Environmental Agreements

Achim Hagen, Humboldt-Universität zu Berlin; Juan-Carlos Altamirano, World Resources Institute; Hans-Peter Weikard, Wageningen University

Strategic Delegation in the Formation of International Environmental Agreements

Sarah Spycher, University of Bern; **Ralph Winkler**, University of Bern

Delegation and Public Pressure in a Threshold Public Goods Game

Doruk Iris, Sogang University; Jungmin Lee, Seoul National University and Institute for the Study of Labor; **Alessandro Tavoni**, Grantham Research Institute on Climate Change and the Environment, LSE

THEMATIC SESSION: PROGRAM EVALUATION WITH BEHAVIORAL STRUCTURAL ECONOMETRIC MODELS: THEORY AND EVIDENCE FROM ENERGY EFFICIENCY POLICIES

Room: Handels: SKF

Organizer(s): Sebastien Houde, ETH Zurich; Cristian Huse, Stockholm School of Economics

Chair: Sebastien Houde, ETH Zurich

The goal of this thematic session is to discuss recent advances in program evaluation using behavioral structural econometric modeling. Behavioral structural econometric models consist of econometric models that are grounded in theory, but that explicitly or implicitly have to account for potential behavioral biases in the decision-makers they aim to model. The presence of behavioral biases brings several issues related to modeling, estimation and identification of structural econometric models.

Moreover, they raise new challenges in performing welfare evaluation and using the econometric model to conduct normative policy evaluation. The four papers in this session have all a methodological component and contribute to this nascent and rapidly growing field of economics. They are also closely related in terms of application, as they are all applied to energy efficiency policies. In particular, all four papers use a behavioral structural econometric model to perform a policy evaluation of energy efficiency policies in the appliance market.

The Heterogeneous Effects of Eco-labels on Internalities and Externalities

Anshuman Sahoo, Boston Consulting Group; **Nik Sawe**, Stanford University

Consumer Response to Energy Label Policies: Evidence from the Brazilian Energy Label Program*

Cristian Huse, Stockholm School of Economics; **Claudio Lucinda**, University of São Paulo; **André Ribeiro**, Heinz College, Carnegie Mellon University

Heterogeneous Misperceptions of Energy Costs: Implications for Measurement and Policy Design

Sebastien Houde, ETH Zurich; **Erica Myers**, University of Illinois

THEMATIC SESSION: THE INTERACTIONS BETWEEN FINANCE AND CLIMATE CHANGE

Room: Handels: E44/GBJ-
room

Organizer(s): **Oskar Lecuyer**,

Chair: **Oskar Lecuyer**,

Climate financial bubbles: How market sentiments shape the transition to low-carbon capital

Antoine Godin, Agence Française de Développement

Carbon Pricing and Global Warming: A Stock-flow Consistent Macro-dynamic Approach

Florent Mc Isaac, Agence Française de Développement

Playing DICE with money

Antonin Pottier, Centre d'Economie de la Sorbonne

VALUATION: METHOD

Room: Handels: B32

Chair: **Michela Faccioli**, The James Hutton Institute; the University of Exeter

Diagnosing insensitivity to scope: The case of oil spills in a pristine arctic coastal area

Ana Faria Lopes, University of Stavanger; **Gorm Kipperberg**, University of Stavanger

Discussant: **Elke D. Groh**, University of Kassel

The causal effect of religious and environmental identity on green preferences: A combined priming and stated choice experiment

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

Discussant: **Randall Bluffstone**, Portland State University

Temporal Stability of Preferences - A difference-in-difference analysis of an improved stove choice experiment from Ethiopia

Sahan Dissanayake, Portland; Abebe Beyene, Environment and Climate Research Center (ECRC); **Randall Bluffstone**, Portland State University; Shannon Kooser, Colby College; Zenebe Gebreegziabher, Mekelle University; Alemu Mekonnen, Addis Ababa University; Peter Martinsson, University of Gothenburg; Michael Toman, World Bank; George Voigt, Colby College; Dan LaFave, Colby College
Discussant: Michela Faccioli, The James Hutton Institute; the University of Exeter

Environmental attitudes and place identity as simultaneous determinants of preferences for environmental goods

Michela Faccioli, The James Hutton Institute; the University of Exeter; Mikolaj Czajkowski, University of Warsaw; Klaus Glenk, Scotland's Rural College; Julia Martin-Ortega, University of Leeds
Discussant: Ana Faria Lopes, University of Stavanger

WATER MANAGEMENT

Room: Haga: B210

Chair: Anne-Sarah chiambretto, CESAER, Experimental School of Art of Annecy

Drivers of participation in gypsum treatment of fields as an innovation for water protection

Anna-Kaisa Kosenius, University of Helsinki; Markku Ollikainen, University of Helsinki
Discussant: Sanna Lötjönen, University of Helsinki

Dairy farm management when nutrient runoff and climate emissions count

Sanna Lötjönen, University of Helsinki; Esa Temmes, University of Helsinki; Markku Ollikainen, University of Helsinki
Discussant: Ami Reznik, University of California, Riverside, School of Public Policy

Treated Wastewater Reuse: An Efficient and Sustainable Solution for Natural Water Resources Growing Scarcity

Ami Reznik, University of California, Riverside, School of Public Policy; Ariel Dinar, University of California, Riverside, School of Public Policy; Francesc Hernandez-Sancho, University of Valencia, Department of Applied Economics
Discussant: Anne-Sarah chiambretto, CESAER, Experimental School of Art of Annecy

Water quantity management in a heterogeneous landscape with strategic farmers

Anne-Sarah chiambretto, CESAER, Experimental School of Art of Annecy; Elsa Martin, CESAER, AgroSup Dijon, INRA, Univ. Bourgogne Franche-Comté, F-21000 Dijon, France
Discussant: Anna-Kaisa Kosenius, University of Helsinki

Awards

Tuesday, 18.00-18.20

Room: Smyrna

AERE Fellows Award

Special Policy Session

Tuesday, 18.20-19.40

POLICY DEBATE ON CLIMATE

Room: Smyrna

Climate policy that can live up to the Paris goals.

Panelists:

Jos Delbeke, Senior Advisor to the EU Commission President

Gina McCarthy, Former Administrator of the USEPA 2013-17

E Somanathan, Professor, Indian Statistical Institute

Hua Wang, Professor, Renmin University of China, Beijing.

Chair: Thomas Sterner

The Paris Agreement is contradictory. On the one hand, it has very radical goals such as staying as close as possible to 1.5 degrees warming. It has global unanimous participation and many NDCs are inspiring and ambitious. On the other hand it has little in the way of mandatory policy or verification - and not price on carbon. Against this background our three panelists will discuss national and international perspectives on climate policy. In particular they will address the challenges where environmental economics might help define solutions.

Parallell sessions 4,
Wednesday June 27, 8.30-10.15

Wednesday, 08.30-10.15

Parallel session 4

AGRICULTURE EXTERNALITIES

Room: Handels: F45

Chair: George Hutchinson, Queen's University Belfast

Cover crops and water quality

Elsa Martin, CESAER, AgroSup Dijon, INRA, Univ. Bourgogne Franche-Comté, F-21000 Dijon, France

Discussant: Andrew Plantinga, University of California, Santa Barbara

Unintended Effects of Environmental Policies: The Case of Urban Growth Controls and Agricultural Intensification

Andrew Plantinga, University of California, Santa Barbara; Matthew Fienup, California Lutheran University

Discussant: Raja Chakir, INRA, UMR Economie Publique

Input taxation at different spatial scales: reducing nitrogen fertilizer use in Europe when climate and land use change

Anna Lungarska, INRA, UMR Economie Publique; **Raja Chakir**, INRA, UMR Economie Publique; Pierre-Alain Jayet, INRA UMR210 Economie Publique, Avenue Lucien Brétignières, 78850 Thiverval-Grignon, France

Discussant: George Hutchinson, Queen's University Belfast

Environmental efficiency and pollution costs of nitrogen surplus in dairy farms: A parametric hyperbolic technology distance function approach

Adewale Henry Adenuga, Queen's University Belfast, UK; Agri-Food and Biosciences Institute, Belfast, UK; Teagasc, Republic of Ireland; Department of Agricultural Economics and Farm Management, University of Ilorin, Nigeria; John Davis, Agri-Food and Biosciences Institute (AFBI); **George Hutchinson**, Queen's University Belfast; Trevor Donnellan, Teagasc; Myles Patton, Agri-Food and Biosciences Institute (AFBI)
Discussant: Elsa Martin, CESAER, AgroSup Dijon, INRA, Univ. Bourgogne Franche-Comté, F-21000 Dijon, France

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels: B22

Chair: José María Grisolia, University of Nottingham Ningbo China

Experimenting on Farmer's Decision-making under Hard Uncertainty: Heuristics, Reward Type and Socioeconomic Determinants

Abrha Megos Meressa, PhD Student; Stale Navrud, Norwegian University of Life Sciences

Discussant: Anna Abatayo, Bocconi University

Thankful or thankless: does the past's altruism increase the present's public good contributions?

Anna Abatayo, Bocconi University; Bo Jellesmark Thorsen, University of Copenhagen; Lea Skreap Svenningsen, Economics and Management, COWI

Discussant: Penelope Buckley, Univ. Grenoble Alpes, CNRS, INRA, Grenoble INP, GAEL, 38000 Grenoble, France

Demand response as a common pool resource: Nudges versus prices

Penelope Buckley, Univ. Grenoble Alpes, CNRS, INRA, Grenoble INP, GAEL, 38000 Grenoble, France;
Daniel Llerena, Univ. Grenoble Alpes, CNRS, INRA, Grenoble INP, GAEL, 38000 Grenoble, France
Discussant: José María Grisolia, University of Nottingham Ningbo China

Comparing mortality risk reduction, life expectancy gains, and probability of achieving full life span, as alternatives for presenting CVD mortality risk reduction: A discrete choice study of framing risk and health behaviour change

José María Grisolia, University of Nottingham Ningbo China; Alberto Longo, Queen's University Belfast;
George Hutchinson, Queen's University Belfast; Frank Kee, Queens University in Belfast
Discussant: Abrha Megos Meressa, PhD Student

CLIMATE CHANGE: MODELLING

Room: Handels: C22

Chair: Oleg Lugovoy, Environmental Defense Fund

Ageing Impact on the Economy and Emissions in China: A Global Computable General Equilibrium Analysis

Taoyuan Wei, CICERO Center for International Climate Research; Qin Zhu, Fudan University; Solveig Glomsrød, CICERO Center for International Climate Research
Discussant: Jakob Mayer, University of Graz

Macroeconomic implications of switching to process-emission-free iron and steel production in Europe

Jakob Mayer, University of Graz; Gabriel Bachner, University of Graz; Karl Steininger, University of Graz
Discussant: Gabriel Bachner, University of Graz

The economy-wide effects of deep decarbonization and its uncertainties - The case of the European iron and steel industry

Gabriel Bachner, University of Graz; Jakob Mayer, University of Graz; Annela Anger-Kraavi, Cambridge Econometrics; Karl Steininger, University of Graz; Alistair Smith, Cambridge Econometrics
Discussant: Oleg Lugovoy, Environmental Defense Fund

Multi-model comparison of CO2 emissions peaking in China: Lessons from CEMF01 study

Oleg Lugovoy, Environmental Defense Fund; Xiangzhao Feng, Research Center for Environment and Economy, Ministry of Environmental Protection, China; Ji Gao, Environmental Defense Fund; Jifeng Li, State Information Center, China; Qiang Liu, National Center for Climate Change Strategy and International Cooperation, NDRC, China; Fei Teng, Institutes of Energy, Environment, and Economy, Tsinghua University, China; Lele Zou, Institute of Policy and Management, Chinese Academy of Sciences, China
Discussant: Taoyuan Wei, CICERO Center for International Climate Research

CLIMATE CHANGE: POLICY UNDER UNCERTAINTY

Room: Handels: D33

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

Strategic interactions and uncertainty in decisions to curb greenhouse gas emissions

Margaret Insley, University of Waterloo; Tracy Snoddon, Wilfrid Laurier University; Peter A. Forsyth, University of Waterloo
Discussant: Simon Dietz, LSE

Pricing an Unknown Climate

Svenn Jensen, Oslo Metropolitan University; Christian Traeger, University of Oslo

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

THE RISK-ADJUSTED CARBON PRICE

Frederick van der Ploeg, Dep. of Economics, University of Oxford; ton van den bremer, oxford

Discussant: Margaret Insley, University of Waterloo

The Economics of 1.5°C Climate Change

Simon Dietz, LSE; Alex Bowen, LSE; Baran Doda, LSE; Ajay Gambhir, Imperial College London; Rachel Warren, University of East Anglia

Discussant: Svenn Jensen, Oslo Metropolitan University

CLIMATE CHANGE: SOCIAL DISCOUNTING AND INTERGENERATIONAL EQUITY

Room: Handels: C24

Chair: Peter Howard, New York University School of Law

Combining discounting and distributional weights - Lessons from climate change economic assessments

Disa Asplund, VTI - Swedish National Road and Transport Research Institute

Discussant: Moritz Drupp, University of Hamburg

Relative Prices and Climate Policy: How the Scarcity of Non-Market Goods Drives Policy Evaluation

Moritz Drupp, University of Hamburg; Martin Hänsel, Kiel University

Discussant: Christian Gollier, IDEI, Université de Toulouse

Term structures of discount rates: An international perspective

Christian Gollier, IDEI, Université de Toulouse; Olivier Mahul, World Bank

Discussant: Peter Howard, New York University School of Law

Two Heads are Better than One: Using Economic Consensus to Address Positive and Normative Uncertainties in Climate-Economic Models

Peter Howard, New York University School of Law; Derek Sylvan, Institute for Policy Integrity at New York University School of Law

Discussant: Disa Asplund, VTI - Swedish National Road and Transport Research Institute

ENERGY AND CLIMATE: DISTRIBUTIONAL ISSUES

Room: Handels: D32

Chair: Da Zhang, Massachusetts Institute of Technology

Examining the Incidence of Energy Efficiency Incentives

Grant Jacobsen, University of Oregon

Discussant: Florian Landis, ETH Zürich

Cost Distribution and Equity of Climate Policy in Switzerland

Florian Landis, ETH Zürich

Discussant: Larry Goulder, Stanford University

Impacts of a Carbon Tax across US Household Groups: What Are the Equity-Efficiency Trade-Offs?

Larry Goulder, Stanford University; Marc Hafstead, Resources for the Future; GyuRim Kim, UCLA Department of Economics; Xianling Long, Department of Management Systems and Engineering

Discussant: Da Zhang, Massachusetts Institute of Technology

Share of polluting input as a sufficient statistic for burden sharing

Da Zhang, Massachusetts Institute of Technology; Lin Zhang, City University of Hong Kong

Discussant: Grant Jacobsen, University of Oregon

ENERGY POLICY

Room: Haga: B228

Chair: Marita Laukkanen, VATT

Do energy prices affect employment? Decomposed, sector-specific evidence based on international data

Erik Hille, HHL Leipzig Graduate School of Management; Patrick Möbius, HHL Leipzig Graduate School of Management

Discussant: Fanny Henriët, PSE-CNRS

A disaggregation of the fuel tax

Fanny Henriët, PSE-CNRS; Stéphane Gauthier, PSE-Univ Paris 1

Discussant: Karol Kempa, Frankfurt School of Finance Management

Clean Energy Investment and Credit Rationing

Christian Haas, Justus-Liebig University; **Karol Kempa**, Frankfurt School of Finance Management

Discussant: Marita Laukkanen, VATT

Energy tax refunds and firm competitiveness in Finland's energy intensive industries

Marita Laukkanen, VATT; Saara Tamminen, VATT Institute for Economic Research; Kimmo Ollikka, VATT

Discussant: Erik Hille, HHL Leipzig Graduate School of Management

ENERGY PRICING: THEORY AND EVIDENCE

Room: Handels: Aulan

Chair: Damien Dussaux, MINES ParisTech, PSL Research University

Pricing Reliability -- On optimal imbalance prices

Carla Mendes, University of Basel; Jan Abrell, Centre for Energy Policy and Economics (CEPE), ETH Zurich; Jonas Savelsberg, University of Basel; Hannes Weigt, University of Basel

Discussant: Michael Roberts, University of Hawaii at Manoa

Variable Pricing and the Cost of Renewable Energy

Michael Roberts, University of Hawaii at Manoa; Imelda Imelda, University of Hawaii at Manoa; Matthias Fripp, Department of Electrical Engineering, University of Hawaii at Mānoa

Discussant: Anna Alberini, University of Maryland

Response to Extreme Energy Price Changes: Evidence from Ukraine

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

Discussant: Damien Dussaux, MINES ParisTech, PSL Research University

The effects of energy price and carbon taxation on the French manufacturing sector

Damien Dussaux, MINES ParisTech, PSL Research University; Arlan Brucal, London School of Economics

Discussant: Carla Mendes, University of Basel

ENVIRONMENT AND DEVELOPMENT

Room: Handels: CG-room

Chair: Margaux Vinez, Paris School of Economics

Unintended consequences of conservation: estimating the causal effect of protected areas on violence in Colombia

Julian Diaz, World Bank

Discussant: Anam Shehzadi, University of Kassel

The Relationship between Environmental Degradation, Economic Development and Corruption: A Panel Data Cointegration Analysis of Asian Emerging and Developing Countries

Anam Shehzadi, University of Kassel; Heike Wetzel, University of Kassel

Discussant: Francois Cohen, University of Oxford

Understanding Interpersonal Violence: the Impact of Temperatures in Mexico

Francois Cohen, University of Oxford; Fidel Gonzalez, Sam Houston State University

Discussant: Margaux Vinez, Paris School of Economics

Adoption of Improved Seeds and Land Allocation, Evidence from DRC.

Margaux Vinez, Paris School of Economics; Karen Macours, PSE; Sylvie Lambert, PSE; Tanguy Bernard, IFPRI / University of Bordeaux (France)

Discussant: Julian Diaz, World Bank

ENVIRONMENT AND DEVELOPMENT: ENERGY

Room: Handels: F43

Chair: Yonas Alem, University of Gothenburg

The Consequences of Increasing Block Tariffs on the Distribution of Residential Electricity Subsidies in Addis Ababa, Ethiopia

Helena Cardenas, University of North Carolina at Chapel Hill; Dale Whittington, University of North Carolina at Chapel Hill

Discussant: Dawit Guta, Addis Ababa University

Determinants of Household Adoption of Solar Energy Technology in Rural Ethiopia

Dawit Guta, Addis Ababa University

Discussant: Sied Hassen, Environment and Development Initiative; Ethiopian Development Research Institute

Rural Households Concern for Environment and WTP for an Energy Efficient Technology

Sied Hassen, Environment and Development Initiative; Ethiopian Development Research Institute; Gunnar Kohlin, University of Gotheborg

Discussant: Yonas Alem, University of Gothenburg

Liquidity Constraint, LPG Stoves and Charcoal Consumption: A Randomized Controlled Trial in Tanzania

Yonas Alem, University of Gothenburg; Remidius Ruhinduka, University of Dar es Salaam; Peter Berck, UC Berkeley

Discussant: Helena Cardenas, University of North Carolina at Chapel Hill

ENVIRONMENTAL POLICY: EMISSIONS TRADING

Room: Handels: C33

Chair: Evangelina Dardati, Universidad Alberto Hurtado

Optimal bidding in conservation auctions when bidder costs are uncertain

Steven G. M. Schilizzi, Western Australia University; Sayed Ifekhar, University of Western Australia; Toto Olita, The University of Western Australia

Discussant: Magnus Hennlock, IVL Swedish Environmental Research Institute

Emissions Trading Subject to Kantian Preferences

Magnus Hennlock, IVL Swedish Environmental Research Institute; Asa Löfgren, University of Gothenburg; Thomas Sterner, University of Gothenburg; Peter Martinsson, University of Gothenburg

Discussant: Simon Quemin, Paris-Dauphine University, CEC

Linking Permit Markets Multilaterally

Simon Quemin, Paris-Dauphine University, CEC; Luca Taschini, The Grantham Research Institute on Climate Change, London School of Economics; Baran Doda, London School of Economics, Grantham Research Institute

Discussant: Evangelina Dardati, Universidad Alberto Hurtado

What is the cost of regulating the environment? Aggregate implications of cap-and-trade programs

Evangelina Dardati, Universidad Alberto Hurtado; Meryem Saygili, University of Texas at Tyler

Discussant: Steven G. M. Schilizzi, Western Australia University

FISHERIES: POLICY TO PROTECT STOCK

Room: Haga: B225

Chair: Eric Nævdal, Frisch Centre

Do exports of renewable resources lead to resource depletion? Evidence from fisheries

Sabrina Eisenbarth, University of Oxford

Discussant: Chenyang Xu, Drew University

Team Inspections in the Common Pool Resource Management when Corruption is Present

Chenyang Xu, Drew University; Klaas van 't Veld,

Discussant: Ngoc Quach Thi Khanh, Nha Trang University

Enforcement and Corruption in Management of Protected Areas

Ngoc Quach Thi Khanh, Nha Trang University; Claire W. Armstrong, UiT The Arctic University of Norway

Discussant: Eric Nævdal, Frisch Centre

New Insights from the Canonical Fisheries Model

Eric Nævdal, Frisch Centre; Anders Skonhoft, NTNU

Discussant: Sabrina Eisenbarth, University of Oxford

GROWTH AND TECHNICAL CHANGE

Room: Haga: Dragonen

Chair: Fabian Stöckl, DIW Berlin

Directed Technical Change and the British Industrial Revolution

David Stern, Australian National University; Yingying Lu, CSIRO; Jack Pezzey, Australian National University

Discussant: Gregor Singer, London School of Economics

Material efficiency and welfare losses from input misallocation in Indian iron and steel production

Gregor Singer, London School of Economics

Discussant: Anna Stünzi, ETH Zurich

The impact of green preferences on the relevance of history versus expectations

Anna Stünzi, ETH Zurich; Andreas Schäfer, ETH Zurich

Discussant: Fabian Stöckl, DIW Berlin

Towards an Endogenous Elasticity of Input Factor Substitution in Production - New Insights and Applications to Environmental Economics

Fabian Stöckl, DIW Berlin

Discussant: David Stern, Australian National University

POLICY SESSION: ECOSYSTEM SERVICES VALUATION AND ACCOUNTING FOR BETTER POLICIES

Room: Handels: B23

Organizer(s): Matías Piaggio, Environment for Development - Tropical Agricultural Research and Higher Education Center (EfD - CATIE), Costa Rica; Bram Edens, United Nations Statistics Division; Juha Siikamäki, International Union for Conservation of Nature; Alessandra Alfieri, Chief, Environmental Economic Accounts Section Economic Statistics Branch, Statistics Division Department of Economic and Social Affairs United Nations

Chair: Juha Siikamäki, International Union for Conservation of Nature

The CBD Aichi Targets as well as the EU Biodiversity Strategy 2020 call for mapping and assessing the state of ecosystems and their services and integrating these values into accounting and reporting systems at EU and national levels by 2020.

The System of Environmental-Economic Accounting (SEEA) provides an internationally agreed statistical standard to describe the interrelationship between the economy and environment. A novel development is the framework for ecosystem accounting (the SEEA EEA), which takes an ecosystem perspective by describing the extent and condition of ecosystems, the services they supply, and how they benefit economic activities. The valuation of ecosystem services, ecosystem assets as well as their degradation features prominently on the research agenda. A key challenge lies in reconciling the

requirements of an accounting system with its focus on exchange values with the welfare based environmental economics tradition of valuation of ecosystem services.

The objectives for this session are to introduce the SEEA and the research agenda for the revision of the SEEA EEA; showcase best practices in valuation of ecosystem services; explore and solidify links with the research communities working on ecosystem service valuation and environmental accounting; and help build bridges that will enhance the development of ecosystem accounts for informing policy.

Panelist(s): Bram Edens, United Nations Statistics Division;
Matías Piaggio, Environment for Development - Tropical Agricultural Research and Higher Education Center (EFD - CATIE), Costa Rica;
Jane Turpie, Environment for Development - University of Cape Town;
Irene Alvarado-Quesada, Central Bank of Costa Rica;
Alessandra La Notte, European Commission - Joint Research Centre

POLICY SESSION: MARKET-BASED APPROACHES FOR ENVIRONMENTAL MANAGEMENT IN ASIA

Room: Handels: SEB

Organizer(s): Dale Whittington, University of North Carolina at Chapel Hill

Chair: Dale Whittington, University of North Carolina at Chapel Hill

Strong economic growth of Asia in the last decades has increased the pressure on environmental conditions. Market-based approaches have been implemented by a number of developing countries in Asia to increase the efficiency in environmental management. This session provides an assessment of the use of various market-based policy instruments to address environmental problems in the areas of air, water and waste in Asian developing countries.

The session will focus on the applicability and potential to scale up various selected policy instruments in Asian developing countries. Panelists will assess the effectiveness, efficiency, equity, and political feasibility of the instruments as well as requirements for the successful application of each instrument.

Panel mode: (1) each panellist presents his or her own topic in 15 minutes; and (2) Questions from moderator/chair and from audiences.

Panelist(s): Jintao Xu, national school of development;
Nam Pham, University of Economics Ho Chi Minh City;
Nils-Axel Braathen, OECD;
Gunnar Kohlin, University of Gotheborg;
David Raitzer, Economist, Economic Research and Regional Cooperation Department,
Asian Development Bank

POLICY SESSION: POLICIES TO SHIFT URBAN DEVELOPMENT TO MORE ENVIRONMENTALLY SUSTAINABLE PATHWAYS

Room: Handels: B44

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

Chair: Walid Oueslati, OECD

Taking policy action at the urban level is pivotal for tackling major environmental problems, such as climate change and air pollution. Cities are responsible for the majority of CO2 emissions worldwide and are the locations where air pollution has the most important consequences for human health. The form of urban development is a major determinant of cities environmental footprint. It determines to a large extent how urban transport and mobility patterns evolve and how car-dependent and congested cities are. Furthermore, it is a critical factor for population exposure to air pollution, because it essentially shapes population density and its distribution over space.

This session aims to provide an opportunity to experts to discuss different policy options to shift the form of urban development to more environmentally sustainable pathways. The session will attempt to answer the following questions:

*What are the main manifestations of currently unsustainable urban development patterns and what are the primary drivers of these patterns?

*How do different policy instruments and policy packages to induce more environmentally sustainable forms of urban development compare in terms of their (potential) environmental, economic and social impacts?

*What are the key knowledge gaps in the design, implementation and evaluation of such policy instruments and what research avenues can environmental and resource economists follow to close these gaps?

Panelist(s): Walid Oueslati, OECD;

JunJie Wu, Oregon State University;

Antonio Bento, University of Southern California;

Frédéric Saliez, Human Settlements Officer at UN-HABITAT;

Anna Ledin, City of Gothenburg;

Alexandros Dimitropoulos, OECD

POLICY SESSION: POLITICAL ECONOMY CONSTRAINTS FOR ENVIRONMENTAL POLICY

Room: Handels: SKF

Organizer(s): Antoine Dechezlepretre, London School of Economics

Chair: Antoine Dechezlepretre, London School of Economics

Climate change policies and in particular carbon pricing have been expanding in recent years, but despite the growing share of emissions covered, carbon prices still tend to be too low to induce the required large-scale decarbonization of the economy. Traditionally, economists have been obsessed with the efficiency of policy instruments and less concerned with their political acceptability, which they tend to leave to policy makers to sort out. This session will argue that wide adoption of meaningful climate change policies globally - a goal shared both by environmental economists and policy makers - might require economists to reverse their priorities, and to focus more on acceptability and equity issues. More precisely, the aims of the proposed Policy Session are to:

- Examine what major issues prevent climate change policies, or some specific policy instruments, from being implemented (such as competitiveness concerns, distributional consequences, behavioural biases, citizens buy-in into environmental policy)
- Discuss possible ways forward (e.g. earmarking, household compensation, double dividend)
- Identify knowledge gaps and possible research avenues

Panelist(s): Cameron Hepburn, Oxford University;
Carolyn Fischer, Resources for the Future;
Frank Convery, University College Dublin;
Aldo Ravazzi, Italian Ministry of Environment;
Per Stromberg, Swedish Environmental Protection Agency;
Martine Visser, University of Cape Town;
Ger Klaassen, European Commission

**POLICY SESSION: THE FUTURE ROLE OF BIOFUELS IN
TRANSPORT FOR REACHING GLOBAL CLIMATE TARGETS**

Room: Handels: E 44/GBJ-
room

Organizer(s): Rolf Golombek, Frisch Centre

Chair: Mads Greaker, Statistics Norway

Key questions to be discussed in this policy session:

- Is there still a future role for first-generation biofuels? Do the current sustainability certification schemes deliver as promised?
- Could cellulosic biofuels and use of degraded land avoid the competition with food production and eliminate the negative effects of direct and indirect land use change?
- Is there a potential for scaling up the use of forest biomass, and at what time scales could we expect climate benefits?
- For what modes of transport is the prospects for biofuels most promising? Are current policies in line with this?
- How should biofuels policies be designed to cope with both need for technological development and the danger of creating carbon debt?

Panelist(s): Timothy Searchinger, Princeton University;
Hugo Valin, IIASA;
Bjart Holtsmark, Statistics Norway;
Arne Lind, IFE;
Ronald Steenblik, OECD;
Mads Greaker, Statistics Norway

**POLICY SESSION: THE TRAGEDY OF THE HORIZON: A
MANDATE FOR FINANCIAL SECTOR REGULATIONS?**

Room: Handels: E43

Organizer(s): Ulf Moslener, Frankfurt School of Finance Management; Oliver Schenker, Frankfurt School of Finance Management; Ashish Tyagi, Frankfurt School of Finance Management

Chair: Ulf Moslener, Frankfurt School of Finance Management

Given these pressing and ambitious investment demands, concerns have been raised on the ability of the financial sector to provide and allocate the necessary capital efficiently. This is particularly important for many low carbon technologies such as renewable energy generation which are characterized by relatively high capital demand. Even with a credible pricing of carbon externalities, financial markets may face barriers in its task to allocate capital efficiently to low-carbon projects. Investors may face difficulties to infer ex-ante the profitability of low carbon investment projects, either due to agency problems or because of the risks and uncertainties that are inherent to these long term projects. Mark Carney, the governor of the Bank of England, called this the "tragedy of the horizon". Thus, incentives of investors might be misaligned with policy goals such as the 2 degree target of the Paris Agreement. This raises the concern that financial markets underprice the risk associated with the transition to a low-carbon economy, which can even lead to a "carbon bubble" and "stranded assets" with current investments turning unprofitable in a low-carbon policy environment.

Panelist(s): Ulf Moslener, Frankfurt School of Finance Management;
Jean Boissinot, Direction générale du Trésor (French Treasury);
Mats Andersson, Global Challenges Foundation;
Dirk Schoenmaker, Rotterdam School of Management;
Sandra Batten, Bank of England

**POLICY SESSION: TRADE AND CLIMATE POLICIES IN THE
CONTEXT OF THE PARIS AGREEMENT**

Room: Handels: Volvo

Organizer(s): ZhongXiang Zhang, Tianjin University; Ma Yinchu, School of Economics, Tianjin University, Tianjin, China; Director, China Academy of Energy, Environmental and Industrial Economics

Chair: ZhongXiang Zhang, Tianjin University

The Paris Agreement is built on a bottom-up approach. This decentralized nature of the climate agreement means that countries have considerable flexibility in determining their own climate targets and instruments incorporated in their nationally determined contributions (NDCs). Moreover, under the Paris Agreement, countries will be mandated to submit an updated NDCs every five years, with parties expected to progress in the levels of ambition in each round in line with their national circumstances. In order to meet their existing and future targets with minimum adverse effects on their own, countries with differentiated legal and political systems are highly likely to pursue wide-ranging climate-related policies. This will increase interactions between the climate and trade regimes, likely generating increasing spillover effects on trade and in some cases testing the limits of trade rules.

To enhance synergies between the climate change and trade regimes, this policy session will address issues that include but are not limited to: climate change and international trade regulation; the contribution of trade agreements to climate governance; trade elements in countries climate contributions; climate contribution of the environmental goods agreement; carbon leakage and border adjustment measures; inclusion of consumption of carbon intensive materials in carbon pricing; climate clubs at the intersection of pricing, technology investment and trade; strategic subsidies for renewable energy technologies; and WTO perspective for climate-related policies. This session will provide the audience with (a) a very informed and focused insights into trade and climate change policies, and (b) an opportunity to engage in the debate.

Panelist(s): Scott Barrett, Columbia University;
Jos Delbeke, European Political Strategy Centre, European Commission;

Ingrid Jegou, Senior Adviser, 2050, Stockholm;
Jean-Frédéric Morin, Canada Research Chair in International Political Economy,
University of Laval, Québec;
Karsten Neuhoff, DIW Berlin

RENEWABLE ENERGY: POLICY MODELLING

Room: Haga: B210

Chair: Hidemichi Yonezawa, ETH Zurich

The Economics of Renewable Energy Support

Sebastian Rausch, ETH Zurich; Jan Abrell, Centre for Energy Policy and Economics (CEPE), ETH Zurich;
Clemens Streitberger, ETH Zurich

Discussant: Keith Williges, Wegener Center for Climate and Global Change

Using carbon revenues to support renewable energy: how this can reduce the benefit of exemption rules for energy-intensive sectors.

Claire Gavard, Centre for European Economic Research (ZEW); Sebastian Voigt, Centre for European Economic Research (ZEW); Aurélien Genty, DG GROW, European Commission

Discussant: Keith Williges, Wegener Center for Climate and Global Change

Economy-wide effects of the Austrian Green Electricity Act: A computable general equilibrium evaluation

Keith Williges, Wegener Center for Climate and Global Change; Jana Vass, University of Graz; Jakob Sporer, University of Graz

Discussant: Hidemichi Yonezawa, ETH Zurich

Intergenerational Preferences for Renewable Energy Subsidies

Sebastian Rausch, ETH Zurich; **Hidemichi Yonezawa**, ETH Zurich

Discussant: Clemens Streitberger, ETH Zurich

THEMATIC SESSION: COOKING ENERGY TRANSITIONS AND THEIR ENVIRONMENTAL AND HEALTH IMPACTS

Room: Handels: Malmsten

Organizer(s): Katherine Dickinson, Colorado School of Public Health

Chair: Katherine Dickinson, Colorado School of Public Health

Nearly 40% of the world's population relies on biomass (e.g., wood, charcoal) to meet their daily cooking needs, with far-reaching impacts on household air quality and respiratory health, time use and gender dynamics, deforestation, and regional to global climate. Transitioning to cleaner cooking solutions is a policy priority, yet progress has been slow in many regions.

The papers in this session illustrate the contributions that environmental economics is making to this pressing challenge. Specifically, these papers study cooking energy transitions and their impacts in Africa and South Asia. The studies use a combination of experimental and quasi-experimental approaches, as well as innovative and interdisciplinary data sources. They examine determinants of household fuel and technology choices, including peer effects and gender dynamics, and the impacts of these choices on environmental and health outcomes, including household air quality, personal exposures, and health endpoints like blood pressure and shortness of breath. In this session, presenters will draw on their results and collective experience in this sector to reflect on the role of

environmental economics in understanding and tackling the household energy challenge, including successes, failures, and future directions.

Prices, Peers, and Perceptions: Field experiments on improved cookstove adoption in Ghana

Katherine Dickinson, Colorado School of Public Health; Zachary Brown, North Carolina State University; Maxwell Dalaba, Navrongo Health Research Center; Rex Alirigia, University of Colorado Boulder; Evan Coffey, University of Colorado Boulder; Elise Mesenbring, University of Colorado Boulder; Desmond Agao, Navrongo Health Research Center; Michael Hannigan, University of Colorado Boulder; Abraham Oduro, Navrongo Health Research Center

Effects of information on energy related choices: Experimental evidence from rural Uttar Pradesh and Kerala

P.P. Krishnapriya, Indian Statistical Institute; Rohini Somanathan, Delhi School of Economics

LPG Adoption in Rural Communities of South India

Robert Bailis, Stockholm Environment Institute; Puneet Dwivedi, University of Georgia; Andrew Grieshop, North Carolina State University; Abhishek Kar, University of British Columbia; Julian Marshall, University of Washington; Hisham Zerriffi, University of British Columbia

Early adoption of an improved household energy system in urban Rwanda

Pamela Jagger, University of North Carolina; Ipsita Das, The University of North Carolina at Chapel Hill; Sudhanshu Handa, University of North Carolina; Leena A. Nylander-French, University of North Carolina; Karin Yeatts, University of North Carolina

THEMATIC SESSION: FORTHCOMING JAERE PAPERS ON AIR QUALITY REGULATION

Room: Handels: E45

Organizer(s): Don Fullerton, University of Illinois

Chair: James Archsmith, University of Maryland

The control and reduction of air pollution are among the most important functions of modern governments. Required abatement imposes costs on firms and consumers that are important to estimate carefully, and it provides important benefits to health and productivity. It also has other indirect effects on incentives, prices, activity in various sectors, technology, and consumer welfare. This session will present four papers on these topics that are forthcoming in the Journal of the Association of Environmental and Resource Economists (JAERE). Among other aspects of air quality regulations, these papers study the impacts on total jobs, and on green jobs, but especially on jobs related to technical and engineering tasks. They include some focus on the effects of these regulations on power plant employment, on electricity generation, and on technical change. They calculate welfare gains from emissions trading at a single price compared to differentiated prices with uncertainty. And they study the effects of air pollution exposure on work performance.

Market-based emissions regulation when damages vary across sources: What are the gains from differentiation?

Meredith Fowlie, University of California, Berkeley; Nicholas Muller, Carnegie Mellon University

Environmental regulation and green skills: An empirical exploration

Giovanni Marin, University of Urbino 'Carlo Bo'; Francesco Vona, OFCE-Sciences Po; Davide Consoli,

Ingenio CSIC-UPV, Spain; David Popp, Syracuse University

How did air quality standards affect employment at US power plants? The importance of timing, geography, and stringency

Ann Ferris, U.S. EPA; Ron Shadbegian, U.S. EPA; **Glenn Sheriff**, Arizona State University

Air Quality and Error Quantity: Pollution and Performance in a High-skilled, Quality-focused Occupation

Anthony Heyes, University of Ottawa; Soodeh Saberian, University of Ottawa; **James Archsmith**, University of Maryland

THEMATIC SESSION: LAND TRANSPORT AND SUSTAINABLE MOBILITY

Room: Handels: B32

Organizer(s): Jean-Pierre Ponssard, CNRS

Chair: Jean-Pierre Ponssard, CNRS

Land transport is a major source of greenhouse gas emissions (approximately 24 % for the EU28). Urban pollution, in particular particulate matter (PM2.5) and ground level ozone, is causing 3 millions of premature deaths yearly. Not to mention problems arising from congestion (loss of time and money, accidents, noise, pollution, etc.). Due to the increasing demand for transport and the intensive use of fossil fuels these issues require urgent public policies.

This session will focus on the impact of driving restrictions, urban tolls and subsidies for zero emission vehicles at national levels and at the level of the major metropolises. Theoretical and empirical analysis are welcome.

The Geneva congestion charge: rationale, design, and acceptability

Stefano Carattini, Yale University

Efficiency and distributional implications of combining road pricing and driving restrictions

Juan Pablo Montero, Pontificia Universidad Catolica del Chile

Transportation Policies and Equilibrium Sorting: Evidence from Beijing

Shanjun Li,

Optimal Policy and Network Effects for the Deployment of Zero Emission Vehicles

Guy Meunier, INRA

THEMATIC SESSION: OBJECTIVES AND STRATEGIES OF ENVIRONMENTAL NGOS

Room: Handels: B33

Organizer(s): Mireille Chiroleu-Assouline, PSE, University Paris 1 Pantheon-Sorbonne

Chair: Mireille Chiroleu-Assouline, PSE, University Paris 1 Pantheon-Sorbonne

Green Non-governmental Organizations (NGOs) now constitute prominent levers for transforming markets, society and public policies. They are central actors of policy-making processes as well as

initiators of public debates about the needs of environmental policies. They play a critical role in public politics by providing people with information about the environmental state of the world, bringing social and environmental issues to public awareness, and mobilizing support for political action on these issues. They also strongly influence corporate incentives to self-regulate. Understanding their role and their power to change firms and market structures is crucial.

This thematic session provides complementary analysis of these interactions and contributes to constructing a theory of environmental NGO behaviour. It highlights the complementarity of NGO strategies with public policy, the role of informal regulatory pressure jointly produced by governmental and non-governmental actors, and their power to influence both the firms environmental behaviour and the market structure.

Component-free strategy of firms under pressure from the NGOs

Mireille Chiroleu-Assouline, PSE, University Paris 1 Pantheon-Sorbonne; Dorothee Brécard, Université de Toulon, LEAD

Linking Public and Private Politics: NGO Strategies for Industry Transformation

Thomas Lyon, University of Michigan; Steve Salant, University of Michigan

The Optimal NGO Chief: Strategic Delegation in Social Advocacy

Anthony Heyes, University of London; **Marcel Oestreich**, Brock University

TROPICAL FORESTS AND DEFORESTATION

Room: Handels: F44

Chair: Ariaster Chimeli, University of São Paulo

Agricultural Development and Efforts to Prevent Deforestation in the Amazon

Suhyun Jung, University of Michigan School of Natural Resources Environment; Steve Polasky, University of Minnesota

Discussant: Karlygash Kuralbayeva, LSE

Environmental regulation and commodity prices: evidence from deforestation in Brazil

Karlygash Kuralbayeva, LSE

Discussant: Nicolas Koch, Mercator Research Institute on Global Commons and Climate Change (MCC)

Agricultural Productivity and Forest Conservation: Evidence from the Brazilian Amazon

Nicolas Koch, Mercator Research Institute on Global Commons and Climate Change (MCC); Erasmus K.H.J. zu Ermgassen, University of Cambridge; Johanna Wehkamp, Mercator Research Institute on Global Commons and Climate Change (MCC); Francisco Oliveira, University of Cambridge; Gregor Schwerhoff, Mercator Research Institute on Global Commons and Climate Change (MCC)

Discussant: Ariaster Chimeli, University of São Paulo

Protecting the rainforest? The case of mahogany prohibition and deforestation.

Ariaster Chimeli, University of São Paulo; Rodrigo Soares, Columbia University

Discussant: Suhyun Jung, University of Michigan School of Natural Resources Environment

Coffee break

Wednesday, 10.15-10.45

Room: Handels / Haga

Awards

Wednesday, 10.45-11.15

Room: Smyrna

- European Lifetime Achievement Award in Environmental Economics

- European Practitioner Achievement Award in Applying Environmental Economics

Plenary session

Wednesday, 11.15-00.15

PLENARY

Room: Smyrna

David Hendry: Climate Econometrics

Chair: Måns Söderbom

CO₂ and other greenhouse gas emissions since the Industrial Revolution have been primarily anthropogenic. While the climate responses to anthropogenic emissions are governed by a range of physical processes, often modelled in process-based numerical models, alternative empirically-based modelling approaches can provide corroboration and assist communication. Further, the interaction of climate with socio-economic aspects inevitably requires empirical evidence. Consequently, Climate Econometrics has emerged as a field using empirical methods to disentangle complex relationships between human actions and climate responses and their associated economic effects.

The talk will explain how we model the non-stationary climate and economic time series involved, which have both stochastic trends and distributional shifts, using cointegration to tackle stochastic trends, and indicator saturation to tackle (often unexpected) distributional shifts from volcanic eruptions to policy interventions. The main tools are [a] a new approach to model selection which retains any theory information while selecting over potential rival candidate variables, and can handle more variables, N , than observations, T , by expanding and contracting multi-path block searches; and [b] indicator saturation, which includes as many indicators as observations in the candidate set, designed for a range of potential contaminations, including outliers (impulse-indicator saturation, IIS), location shifts (step-indicator saturation, SIS), both (IIS+SIS), changes in model parameters (multiple-indicator saturation, MIS), and (e.g.) indicators for volcanic impacts on temperatures (VIS). Despite $N > T$ (often several fold), research has established that the costs of selection are small relative to other likely problems of mis-specification, and such methods are applicable to panels, possibly with a spatial dimension.

As a live illustration, I explain the formulation, selection, evaluation and forecasting for an econometric model of the UK's highly non-stationary CO₂ emissions over the last 150 years. Many major shifts and outliers require to be handled to develop a viable model. The empirical analysis confirms the key roles of coal use and of the capital stock, which embodies the vintage of technology at its construction. Following the Climate Change Act of 2008, the UK's CO₂ emissions per capita are already below 1860s levels, yet this large reduction has come with little aggregate economic cost.

POSTER SESSION

Room: Handels: C34

Chair: Gengyang TU, Grenoble School of Management

“Comply or Explain” Type Meta-regulation as an Alternative of Conventional Regulation

Takuro Miyamoto, Tohoku Gakuin University; Ryo Ishida, Policy Research Institute, Ministry of Finance Japan

Addressing the institutional challenges of groundwater management in semi-arid areas with rapid urbanization – Results of a Framed Field Experiment

Johannes Wegmann, University of Goettingen; Oliver Mußhoff, Georg-August-University Göttingen

An economic comparison of adaptation strategies towards a drought-induced risk of forest decline: financial vs. carbon balance

Sandrine Brêteau-Amores, Bureau for Economic Theory and Applications BETA (INRA); Marielle Brunette, INRA; Hendrik Davi, Écologie des Forêts Méditerranéennes (INRA)

Are households' residential preferences consistent with biodiversity potential of different urban contexts?

Gengyang TU, Grenoble School of Management; Camille Regnier, Université de Bourgogne-Franche-Comté; Mohamed Hilal, INRA; Sophie Legras, INRA; Cecile Detang-dessendre, INRA

The value of wild pollination services to crop productivity: What does gender of the smallholder farmer got to do with it?

Byela Tibesigwa, Environment for Development (EfD), University of Dar es Salaam, Tanzania; Juha Siikamäki, International Union for Conservation of Nature; Razack Lokina, University of Dar es Saalam; Jessica Alvsilver, EPA

Bioenergy Prospects in Mexico: Biorefineries at the West Region

Hector Nuñez, CIDE

Flood risk perception and housing prices. A hedonic analysis for Boulder County, Colorado

Hannah Hennighausen, University of Graz / Wegener Center; Jordan Suter, Colorado State University

Green Nudge in Practice: Application to Municipal Solid Waste (MSW)

Catherine Boulatoff, Dalhousie University; Mevlude Akbulut-Yuksel, Dalhousie University, IZA and HICN

Green, yellow or red lemons? An experiment on the perception of houses energy labels.

Edouard Civel, Paris-Nanterre University; Nathaly Cruz, Paris-Nanterre University

Household Electricity Demand Under Mixed Price System

YANG ZHOU, Fudan university

Insurance and forest rotation decisions under storm risk

Marielle Brunette, INRA; Stéphane COUTURE, INRA MIAT; Patrice Loisel, MISTEA

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

Hsiao-Chi CHEN, Dept. of Economics, National Taipei University; Yunshyong Chow, Institute of Mathematics, Academia Sinica; Shi-Miin Liu, National Taipei University

Investigating the preferences of remote beneficiaries for sustainable tourism development: the case of Fiji

Gaetano Grilli, Centre for Environment Fisheries and Aquaculture Science - Cefas

Land Resource Utilization System and Risk-coping Strategies on the Mongolian Plateau

Shunji Oniki, Japan International Research Center for Agricultural Sciences; Kadirbyek Dagys, Mongolian University of Life Sciences; Fulin Du, Inner Mongolia Agricultural University; Gensuo B, Inner Mongolia Agricultural University

Market-level implications of regulating forest carbon storage and albedo for climate change mitigation

Aapo Rautiainen, Natural Resources Institute Finland (Luke); Jussi Lintunen, Natural Resources Institute Finland (Luke); Jussi Uusivuori, Natural Resources Institute Finland

Migrant remittances can reduce the potential of forest transitions

Daniel Ospina, Stockholm University; Garry Peterson, Stockholm university; Anne-Sophie Crepin, Beijer Institute of Ecological Economics

Optimal energy mix under uncertainty for Ghana

MICHAEL OWUSU APPIAH, City University of Hong Kong

Reallocating Water along a River: A Multilateral Bargaining Experiment with a Veto Player

Zhi Li, Xiamen University; Xin Zhang, Xiamen University; Wenchao Xu, Xiamen University

Repeated Conservation Auctions and the (In)efficiency of Withholding Information

Greg Smith, LEEP, University of Exeter; Brett Day, LEEP, University of Exeter; Amy Binner, University of Exeter

Subjective well-being, energy poverty and the combination of objective and subjective indicators

Rinaldo Brau, University of Cagliari; Erica Delugas, University of Cagliari

The effects of forest change on agricultural productivity: Evidence from Indonesia

Yuki Yamamoto, Nagasaki University; Yuichi Ishimura, Osaka International University; Yosuke Shigetomi, Nagasaki University; Mitsuru Hattori, Nagasaki University

The effects of migration and pollution externality on cognitive skills in Caribbean SIDS: a Theoretical analysis

Lesly Cassin, Université Paris Nanterre

The Impact of the Crisis-Induced Reduction in Air Pollution on Infant Mortality in India: A Policy Perspective

Olexiy Kyrychenko, CERGE-EI

The Stick and the Carrot: Explaining the decision to participate in the Water Producer Programme (Brazil)

Leidimari Neves do Prado, Institut National de la Recherche Agronomique (INRA) - France; Serge Garcia, Bureau for Economic Theory and Applications (BETA); Pablo Andrés-Domenech, AgroParisTech

Value of Statistical Life connected with seismic risk. Empirical evidence from Italy

Andrea Rampa, IRCrES-CNR; Massimiliano Mazzanti, University of Ferrara; Anna Montini, Università di Bologna; Nicolò Barbieri, University of Ferrara

A panel analysis on the relationship between urbanization, economic growth and the water-for-energy nexus in China

Yu Jiang, Wageningen University Research; Xiawei Liao, Environmental Change Institute, Oxford University; Jing Zhang, Department of Economics, Konkuk University

Lunch

Wednesday, 12.15-13.45

MEETINGS

Room: Handels / Haga

EAAERE General Assembly (Room: C33)

EAERE Annual General Assembly of Members (Room: D33)

AERE Members Lunch (Room: Kafé Haga)

Parallell sessions 5
Wednesday June 27, 13.45-15.30

Wednesday, 13.45-15.30

Parallel session 5

AGRICULTURE AND WATER MANAGEMENT

Room: Handels: F45

Chair: Simon de Bonviller, University of Strasbourg

Developing improved methods for identifying the cost-efficient abatement set in the water protection of the Baltic Sea region

Janne Helin, Natural Resources Institute Finland

Discussant: Mikael Skou Andersen, Aarhus University (DK)

Catchment specific indicators of economic benefits when reducing nitrogen leaching from fertilizers to surface waters

Mikael Skou Andersen, Aarhus University (DK); Gregor Levin, Aarhus University; Mette Vestergaard Odgaard, Aarhus University

Discussant: Kelly Jones, Colorado State University

An integrated modeling and evaluation of the impact of payments for watershed services on ecosystem services outcomes

Kelly Jones, Colorado State University

Discussant: Simon de Bonviller, University of Strasbourg

Insider Trading? The case of the Goulburn water allocation market in the Murray-Darling Basin, Australia

Simon de Bonviller, University of Strasbourg; Sarah Ann Wheeler, GFAR Center, University of Adelaide; Alec Zuo, GFAR Center, University of Adelaide

Discussant: Janne Helin, Natural Resources Institute Finland

CLIMATE POLICY

Room: Handels: Malmsten

Chair: Tobias Pfrommer, Heidelberg University

Climate financial bubbles: How market sentiments shape the transition to low-carbon capital

Emanuele Campiglio, Vienna University of Economics and Business; **Antoine Godin**, Agence Française de Développement; Eric Kemp-Benedict, Stockholm Environment Institute

Discussant: Nils Ohlendorf, MCC Berlin

Distributional Impacts of Climate Mitigation Policies - a Meta-Analysis

Nils Ohlendorf, MCC Berlin; Michael Jakob, Mercator Research Institute on Global Commons and Climate Change; Jan Steckel, MCC Berlin; Jan Minx, MCC Berlin; Carsten Schröder, DIW Berlin

Discussant: Steven Sexton, Duke University Sanford School of Public Policy

Model Uncertainty and the Effect of Climate Change on Aggregate GDP

Steven Sexton, Duke University Sanford School of Public Policy; Richard Newell, Resources for the Future; Brian Prest, Duke University

Discussant: Tobias Pfrommer, Heidelberg University

A Simple Model to Account for Diverging Regional Climate Preferences in the Assessment of Solar Radiation Management

Tobias Pfrommer, Heidelberg University

Discussant: Antoine Godin, Agence Française de Développement

ECOSYSTEM SERVICES AND BIODIVERSITY II

Room: Handels: F44

Chair: Karl Steininger, University of Graz

Welfare and Biodiversity Tradeoffs in Urban Open Space Protection

Liaila Tajibaeva, Augsburg University; Robert Haight, USDA Forest Service; Steve Polasky, University of Minnesota

Discussant: Alan Randall, Ohio State University

Governance Regimes and the Production and Value of Forest Ecosystem Services in Vietnam

Alan Randall, Ohio State University; Tiho Ancev, University of Sydney; Nguyen Minh Duc, Vietnam National University of Agriculture

Discussant: Andy Choi, National Institute of Ecology

The spatially explicit amenity value of urban greenspaces in Seoul: A choice experiment approach

Andy Choi, National Institute of Ecology; Seung Gyu Kim, Kyungpook National University; Y.S. Eom, Chonbuk National University

Discussant: Karl Steininger, University of Graz

Spring frost risk for regional fruit production under a warmer climate

Karl Steininger, University of Graz; Christian Unterberger, University of Graz; Lukas Brunner, University of Graz; Stefan Nabernegg, University of Graz; Andrea Steiner, University of Graz; Edith Stabentheiner, University of Graz; Stephan Monschein, University of Graz; Heimo Truhetz, University of Graz

Discussant: Liaila Tajibaeva, Augsburg University

ENERGY AND CLIMATE POLICY: DEMAND AND SUPPLY SIDE ISSUES FOR FOSSIL FUELS

Room: Handels: C33

Chair: Andrew Leach, University of Alberta

Competition and Regulation as a Means of Reducing CO₂ Emissions: Experience from U.S. Fossil Fuel Power Plants

Christian Growitsch, Center for Economics of Materials, Fraunhofer IMWS; Simon Paulus, Institute of Energy Economics, University of Cologne, Germany; **Heike Wetzel**, University of Kassel

Discussant: Thomas Eichner, University of Hagen

Supply-side climate policy: on the role of exploration and asymmetric information

Thomas Eichner, University of Hagen; Ruediger Pethig, University of Siegen

Discussant: Mark Schopf, University of Hagen

Buying versus leasing fuel deposits for preservation

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

Discussant: Andrew Leach, University of Alberta

Carbon pricing, resource royalties, and emissions

Andrew Leach, University of Alberta; Chuck Mason, University of Wyoming; Branko Boskovic, University of Alberta

Discussant: Heike Wetzel, University of Kassel

ENVIRONMENT AND DEVELOPMENT: WATER

Room: Handels: F43

Chair: Georg Meran, Technical University Berlin

Opening the 'black-box' of a water and sanitation intervention

Jie-Sheng Tan-Soo, National University of Singapore; Subhrendu Pattanayak, Duke University

Discussant: David Fuente, University of South Carolina

ASSESSING THE PERFORMANCE OF ALTERNATIVE WATER AND SANITATION TARIFFS: THE CASE OF NAIROBI, KENYA

David Fuente, University of South Carolina; Jane Mariara, PEP; Peter Kimuyu, University of Nairobi; Mbutu Mwaura, Nairobi City Water and Sewer Co., LTD; Dale Whittington, University of North Carolina at Chapel Hill

Discussant: Yazhen Gong, Renmin University

Roads and Resources: Groundwater Depletion in the North China Plains

Martino Pelli, University of Sherbrooke; Ujjayant Chakravorty, Tufts University; **Yazhen Gong**, Renmin University; Qian Zhang, Chinese Academy of Sciences; Xiangzheng Deng, Chinese Academy of Sciences

Discussant: Georg Meran, Technical University Berlin

Pipes, Taps and Vendors: Managing and Regulating the Unconnected Water Market

Georg Meran, Technical University Berlin; Markus Siehlow, Technical University Berlin; Christian von Hirschhausen, DIW Berlin / TU Berlin

Discussant: Jie-Sheng Tan-Soo, National University of Singapore

ENVIRONMENTAL POLICY: CARBON PRICING

Room: Handels: D33

Chair: Lucia Rotaris, University of Trieste (Italy)

Strategic Environmental Policy under Emissions Leakage and Firm Mobility

Robert Schmidt, TU Kaiserslautern; Philipp Richter, TU Dresden; Marco Runkel, TU Berlin

Discussant: Olga Chiappinelli, DIW Berlin

Time-consistent carbon pricing

Olga Chiappinelli, DIW Berlin; Karsten Neuhoff, DIW Berlin

Discussant: Joern Richstein, DIW Berlin

Project-Based Carbon Contracts: A Way to Finance Innovative Low-Carbon Investments

Joern Richstein, DIW Berlin

Discussant: Lucia Rotaris, University of Trieste (Italy)

The willingness to pay for a carbon tax in Italy

Lucia Rotaris, University of Trieste (Italy); Romeo Danielis, University of Trieste

Discussant: Robert Schmidt, TU Kaiserslautern

ENVIRONMENTAL POLICY: IMPACT

Room: Handels: C24

Chair: APARAJITA SINGH, Indian Institute of Technology (IIT) Bombay, Mumbai, India

Fighting Climate Change with Disclosure? The Real Effects of Mandatory Greenhouse Gas Emission Disclosure

Aleksandar Zaklan, DIW Berlin; Jürgen Ernstberger, TU Munich; Hannes Rettenbacher, TU Munich; Sebastian Schwenen, TU Munich

Discussant: Jan Abrell, Centre for Energy Policy and Economics (CEPE), ETH Zurich

Impacts of the UK Carbon Price Floor: A Machine Learning Approach

Jan Abrell, Centre for Energy Policy and Economics (CEPE), ETH Zurich; Mirjam Kosch, ETH Zurich; Sebastian Rausch, ETH Zurich

Discussant: Thomas Lyon, University of Michigan

DO FOR-PROFIT FIRMS DEGRADE QUALITY?: EVIDENCE FROM DRINKING WATER SYSTEMS IN THE U.S.

Thomas Lyon, University of Michigan; Wren Montgomery, Ivey School of Business; Dan Zhao, University of Michigan

Discussant: APARAJITA SINGH, Indian Institute of Technology (IIT) Bombay, Mumbai, India

Technical Efficiency in Indian Leather Industry: A Pre-cursor to achieve Sustainable Development

APARAJITA SINGH, Indian Institute of Technology (IIT) Bombay, Mumbai, India; Haripriya Gundimeda, Indian Institute of Technology Bombay

Discussant: Aleksandar Zaklan, DIW Berlin

ENVIRONMENTAL POLICY: REGULATION

Room: Handels: D32

Chair: Carmen Arguedas, Universidad Autónoma de Madrid

On the Regulatory Problem of Limiting Growth When Production is Highly Profitable

Atle Oglend, University of Stavanger

Discussant: Guojun He, Hong Kong University of Science and Technology

Environmental Regulation and Firm Productivity in China: Estimates from a Regression Discontinuity Design

Shaoda Wang, University of California, Berkeley; **Guojun He**, Hong Kong University of Science and Technology; Bing Zhang, Nanjing University

Discussant: Pedro Guimaraes Naso, Graduate Institute of Geneva

The Porter Hypothesis Goes to China: Spatial Development, Environmental Regulation and Productivity

Pedro Guimaraes Naso, Graduate Institute of Geneva; Timothy Swanson, Graduate Institute of Geneva; Huang Yi, Graduate Institute of Geneva

Discussant: Carmen Arguedas, Universidad Autónoma de Madrid

Enforcing Regulatory Standards in Stock Pollution Problems

Carmen Arguedas, Universidad Autónoma de Madrid; Francisco Cabo, Universidad de Valladolid;
Guiomar Martin-Herran, Universidad de Valladolid
Discussant: Atle Oglend, University of Stavanger

FORESTS AND FOREST VALUES

Room: B228

Chair: Luat Do, Environment for Development in Vietnam (EfD_Vietnam)

Valuing non-market private amenities in Mediterranean forests: a contingent valuation application in Andalucía, Spain

José L. Oviedo, Consejo Superior de Investigaciones Científicas (CSIC); Pablo Campos, Spanish National Research Council (CSIC)-Institute of Public Goods and Policies (IPP); Alejandro Caparros, CSIC
Discussant: Blair Logan, Northern Economics

Economics of boreal conifer species in continuous cover and rotation forestry

Vesa-Pekka Parkatti, University of Helsinki; Aino Assmuth, University of Helsinki; Janne Rämö, University of Helsinki; Olli Tahvonen, University of Helsinki
Discussant: Luat Do, Environment for Development in Vietnam (EfD_Vietnam)

The Economic Impacts of Forest Pathogens in Washington State: A Hedonic Approach

Toni Sipic, Central Washington University; **Blair Logan**, Northern Economics
Discussant: Vesa-Pekka Parkatti, University of Helsinki

Mangrove forests and Aquaculture in the Mekong River Delta

Luat Do, Environment for Development in Vietnam (EfD_Vietnam); Thuy Truong, University of Economics Ho Chi Minh City
Discussant: José L. Oviedo, Consejo Superior de Investigaciones Científicas (CSIC)

GROWTH AND TECHNICAL CHANGE

Room: Haga: B210

Chair: Julien Wolfersberger, AgroParisTech

Dirty Asset Stranding, Clean Capital Accumulation, and Transition to Green Growth

Wei Jin, University of New South Wales; Alan Woodland, School of Economics, University of New South Wales
Discussant: Patrick Tomberger, World Trade Institute, University of Bern

Economic Growth and Methane Emissions in the Context of Globalization

Joseph Francois, University of Bern; Doris Oberdabernig, World Trade Institute; Octavio Fernández-Amador, World Trade Institute; **Patrick Tomberger**, World Trade Institute, University of Bern
Discussant: Adam Lampert, Arizona State University

Over-exploitation of natural resources is followed by an inevitable decline in economic growth and discount

Adam Lampert, Arizona State University

Discussant: Julien Wolfersberger, AgroParisTech

Structural transformation and the environment: the composition effect

Julien Wolfersberger, AgroParisTech

Discussant: Wei Jin, University of New South Wales

INTERNATIONAL AGREEMENTS

Room: Handels: C22

Chair: Elisabeth Isaksen, London School of Economics

International Environmental Agreements - Stability with Transfers among Heterogeneous Countries

Eftichios Sartzetakis, University of Macedonia; Stefania Strantz, Concordia University; Effrosyni Diamantoudi, Concordia University

Discussant: Jorge H Garcia, Los Andes

Negative Leakage: The Key Role of Forest Management Regimes

Jorge H Garcia, Los Andes; Anton Orlov, Cicero; Asbjørn Aaheim, Cicero

Discussant: Astrid Dannenberg, University of Kassel

Coercive Trade Agreements for Supplying Global Public Goods

Astrid Dannenberg, University of Kassel; Scott Barrett, Columbia University

Discussant: Elisabeth Isaksen, London School of Economics

Have international pollution protocols made a difference?

Elisabeth Isaksen, London School of Economics

Discussant: Eftichios Sartzetakis, University of Macedonia

POLICY SESSION: BEST PRACTICES AND POLICY REQUIREMENTS TO ACHIEVE CIRCULAR ECONOMY OBJECTIVES

Room: Handels: E 44/GBJ-room

Organizer(s): Green Budget Europe and the Finnish Innovation Fund (Sitra),

Chair: Janez Potocnik, UNEP International Resource Panel - IRP

Many countries have pledged to promote circular economy objectives and to aim for a low-carbon and resource-efficient economy. However, much remains to be done as current policies do not provide the necessary framework for a decisive, systemic change that this would require. There is a need for an exchange of best practices to learn from each others experiences in order to formulate the necessary regulatory and economic measures to achieve these objectives.

In view of the wide scope of the topic, GBE and Sitra have gathered a number of specialists from the international community to discuss the challenges lying ahead and how they could be overcome. Matti Kahra will introduce the extensive work that Sitra has done so far in Finland in the field of circular economy. Sarianne Tikkanen will present preliminary results from a European project, which aims to provide recommendations on best practices that could be introduced in the Finnish context to promote circular economy objectives. Susanne Aakerfeldt will discuss Swedish experiences in promoting circular economy objectives. Aldo Ravazzi-Douvan will give an overview on the potential and use of market-based instruments at international level to enhance environmental sustainability.

Paul Ekins will provide an outlook on current experiences and main challenges in introducing circular economy measures in Europe.

Panelist(s): Susanne Aakerfeldt, Ministry of Finance (Sweden);
Aldo Ravazzi Douvan, Italian Ministry of Environment - Sogesid AT - University Luiss
Roma;
Sarianne Tikkanen, Green Budget Europe;
Paul Ekins, UCL Institute for Sustainable Resources;
Matti Kahra, Finnish Innovation Fund Sitra;
Janez Potocnik, UNEP International Resource Panel - IRP

**POLICY SESSION: CONNECTING POLICY AND RESEARCH FOR
A SUCCESSFUL LOW-CARBON TRANSITION**

Room: Handels: SKF

Organizer(s): Florens Flues, OECD; Luisa Dressler, OECD

Chair: Kurt Van Dender, OECD

Reducing the risks of climate change and transitioning to a low-carbon growth path requires low-carbon investment at an unprecedented scale. Both researchers and policy makers are actively looking for the right policy designs, including keystone policies such as carbon pricing and other fiscal policies, to efficiently encourage the necessary investments. However, priorities and constraints may differ across both communities. This policy session investigates ways to improve connections between policy and research agendas for effective and efficient policy design. How to strengthen dialogues between policy making and research? What are the success factors that enable a fruitful exchange? The session brings together key players from research, government, policy institutions and the private sector to discuss the policy designs needed to enable low-carbon investment as well as the demand for research that comes with it.

Panelist(s): Andreas Loeschel, University of Muenster;
Henrik Hammar, Swedish Ministry of Finance;
Meredith Fowlie, University of California, Berkeley;
Anne C. Bolle, Statkraft

**POLICY SESSION: COST-BENEFIT ANALYSIS AND THE
ENVIRONMENT**

Room: Handels: B33

Organizer(s): Nils-Axel Braathen, OECD

Chair: Nils-Axel Braathen, OECD

This presentation will give an overview of the new OECD publication titled Cost-Benefit Analysis and the Environment: Further Developments and Policy Use focusing in particular on the most policy-relevant issues and on the political economy of the use of CBA.

This presentation will present the discussion of the social cost of carbon and discounting in cost-benefit analyses in the new OECD book on Cost-Benefit Analysis and the Environment.

Panelist(s): Giles Atkinson, London School of Economics and Political Science (LSE);
Ben Groom, London School of Economics;
Susana Escaria, Ministry of Environment;

Sibylle Anwander, Federal Ministry of Environment;
Nils-Axel Braathen, OECD

**POLICY SESSION: MULTILEVEL GOVERNANCE OF THE
ENERGY TRANSITION: EUROPEAN UNION, GERMANY,
FRANCE, CHINA AND THE UNITED STATES**

Room: Handels: E43

Organizer(s): Shanti Gamper-Rabindran, University of Pittsburgh; Karen Pittel, ETH Zurich

Chair: Shanti Gamper-Rabindran, University of Pittsburgh

This policy session brings together five energy scholars who are involved in policy advising and in national and international policy debates on the energy transition in the European Union, Germany, France, China and the US. We focus on multilevel governance aspects of the energy transition. State or provincial governments operate with some autonomy in their energy pursuits and these policies interact with those of local governments, national governments, and in the case of European countries, the supranational EU. This governance structure, with sufficient powers at the state and local powers allow for policy innovations tailored to local conditions and decentralized schemes that benefit households and communities, thereby winning their political buy-in. However, greater coordination across these government levels to streamline policies can enhance their effectiveness. At the same time, the multilevel governance structure creates windows of opportunities for renewables to advance when fossil fuel incumbents block national level policies.

The session focuses on recent efforts to enhance efficiencies in renewable energy adoption through coordination across multiple governance levels in the EU by means of the recently proposed Energy Union Governance system, in Germany, France, and China, and on how decentralized efforts at the state-level in the US had enabled renewable energy adoption to forge ahead in the US despite barriers at the federal level. Our focus on governance is in line with environmental and resource economists attention to the institutional framework, the reality within which economic instruments and policies need to be designed if they are to succeed (Ostrom, 1990, 1995 ; Burtraw, 2012).

Panelist(s): Shanti Gamper-Rabindran, University of Pittsburgh;
Karen Pittel, ETH Zurich;
Niels Anger, Federal Ministry for Economic Affairs and Energy, Germany, and formerly,
Policy Officer at the European Commission's Directorate-General for Energy;
Patrice Geoffron, University of Paris Dauphine;
Jing Cao, Tsinghua University

**POLICY SESSION: REACH AND BEYOND—EFFECTIVE POLICY
INSTRUMENTS TO REGULATE HAZARDOUS CHEMICALS**

Room: Handels: Aulan

Recent decades have seen a rapid increase in the volumes and range of chemicals produced and put on the market, some of which pose substantial risks to humans and the environment. A major challenge in the regulation of chemicals is that not all substances or substance uses pose the same risk: some are benign, some are disruptive and some have long-term effects that are difficult to fully characterize because of confounders. Today, chemicals regulation relies mainly on direct controls such as bans, permits and standards because these tools are thought to provide certainty in regulatory outcomes. However, alternative policy formulations such as information disclosure and taxation schemes might provide more flexibility and increase the incentives for chemical substitution. In this session we will look at the effectiveness of the European chemicals regulation REACH and the U.S. chemicals regulation (TSCA) and discuss possible policy options for improvements. The session coincides with the publication of a stream of reports taking stock of the first 10 years of implementation of REACH.

Organizer(s): Daniel Slunge, The Centre for Future Chemical Risk Assessment and Management, University of Gothenburg, (www.fram.gu.se)

Chair: Daniel Slunge

Panelists: Karolina Skog, Environment minister, Sweden, "Towards a more ambitious and effective chemicals policy"

Bjorn Hansen, Director, European Chemicals Agency, "The effectiveness of European Chemicals Policy lessons learned from 10 years of REACH"

Matti Vainio, European Chemicals Agency, "REACH Authorisation effectiveness and socioeconomic impacts"

Al McGartland, US EPA, "Informing decision making under REACH and TSCA: Challenges for Risk Assessors and Economists"

Jessica Coria, Department of Economics, University of Gothenburg, "The Economics of Toxic Substance Control Implications for REACH and Beyond"

RENEWABLE ENERGY: EFFICIENCY AND ADOPTION

Room: Haga: B225

Chair: Till Requate, University of Kiel

Drivers of Energy Efficiency in German Manufacturing: A Firm-level Stochastic Frontier Analysis

Philipp Massier, Centre for European Economic Research (ZEW); Andreas Loeschel, University of Muenster; Katrin Sommerfeld, Centre for European Economic Research (ZEW); IZA; Benjamin J. Lutz, Centre for European Economic Research (ZEW)

Discussant: Justin Kirkpatrick, Duke University Program in Environmental Policy

Household Discount Rates and Net Energy Metering Incentives for Rooftop Solar Adoption

Justin Kirkpatrick, Duke University Program in Environmental Policy; Steven Sexton, Duke University Sanford School of Public Policy; Bryan Bollinger, Duke University Fuqua School of Business; Kenneth Gillingham, Yale University School of Forestry and Environmental Studies

Discussant: Jacquelyn Pless, University of Oxford

Solar Endowment Salience and Electricity Consumption Substitution

Jacquelyn Pless, University of Oxford; Eoghan McKenna, University of Oxford

Discussant: Till Requate, University of Kiel

Who Gains from Removing Price Volatility Risk from RES-E Operators?

Till Requate, University of Kiel; Daiju Narita, University of Tokyo

Discussant: Philipp Massier, Centre for European Economic Research (ZEW)

RENEWABLE ENERGY: EXTERNALITIES AND SPILLOVERS

Room: Haga: Dragonen

Chair: Anna Bartczak, University of Warsaw, Faculty of Economic Sciences, Warsaw Ecological Economics Center

Drivers of people's preferences for spatial proximity to energy infrastructure technologies: a cross-country analysis

Jason Harold, Economic and Social Research Institute; Valentin Bertsch, Economic and Social Research Institute; Thomas Lawrence, University of Georgia; Magie Hall, University of Nebraska Omaha
Discussant: Daniel Kaffine, University of Colorado Boulder

Emissions, Transmission, and the Environmental Value of Wind Energy: Evidence from Texas

Daniel Kaffine, University of Colorado Boulder; Harrison Fell, North Carolina State University; Kevin Novan, University of California, Davis
Discussant: Erik Johnson, Carthage College

Renewable Generation Capacity and Wholesale Electricity Price Variance

Erik Johnson, Carthage College; Matthew Oliver, Georgia Institute of Technology
Discussant: Anna Bartczak, University of Warsaw, Faculty of Economic Sciences, Warsaw Ecological Economics Center

Externalities of renewable energy production sites in Germany and Poland: a cross-country comparison using stated preference data.

Anna Bartczak, University of Warsaw, Faculty of Economic Sciences, Warsaw Ecological Economics Center; Jürgen Meyerhoff, TU Berlin; Bernadeta Gołębiowska, University of Warsaw, Faculty of Economic sciences; Malte Oehlmann, adelphi
Discussant: Jason Harold, Economic and Social Research Institute

THEMATIC SESSION: BEYOND OSTROM: PRECONDITIONS FOR LARGE SCALE COLLECTIVE ACTION

Room: Handels: SEB

Organizer(s): Sverker Jagers, University of Gothenburg

Chair: Sverker Jagers, University of Gothenburg

Large-scale collective action problems are at the heart of humanity's most pressing challenges, including climate change, large-scale natural resource depletion, nuclear proliferation, antibiotic resistance due to overconsumption of antibiotics, and pollution. In this session we discuss a conceptual framework to contribute to the theoretical understanding of preconditions for large-scale collective action and thus setting the stage for future research. More specifically, we define and describe the main characteristics of a large-scale collective action problem; explain why voluntary large-scale collective action becomes more improbable as the collective action problem becomes larger, thus demanding interventions by an external authority (a third party) for such action to be generated; and outline a conceptual model of the connection between third party interventions and large-scale collective action. This enables us to identify a number of factors affecting the prospects for third party interventions to successfully generating and sustaining large-scale collective action behaviour. These mechanisms are to be found at different levels from individual, via national, to the international level. This implies that third-party interventions are sensitive to a number of factors ranging from individuals' social preference to the quality of single countries' political institutions, which reduces the probability of finding universal silver-bullet interventions.

On the preconditions for large-scale collective action

Niklas Harring, University of Gothenburg; Francisco Alpizar, EfD Central America at CATIE; Sverker Jagers, University of Gothenburg; **David Langlet**, University of Gothenburg

**THEMATIC SESSION: ECONOMETRIC MODEL SELECTION
AND BREAK DETECTION IN RESOURCE AND CLIMATE
ECONOMICS**

Room: Handels: Volvo

Organizer(s): Felix Pretis, University of Oxford; David F Hendry, University of Oxford

Chair: Samson Mukanjari, University of Gothenburg

The session focuses on econometric applications in environmental and climate economics with an emphasis on model selection and the detection of structural breaks and outliers. Papers concentrate on empirical model discovery when there are more candidate variables than observations while embedding and testing theory. Questions addressed range from whether trends in resource extraction are stable over time, how to determine the channel of economic impacts of climate change, how future scenarios projections can be evaluated, how climate treaties influence future markets, and how econometric models can be used to study the interaction of ice sheets to guide projections of future sea level rise.

On the Inexhaustibility of Exhaustible Resources

Cameron Hepburn, Oxford University; Alexander Pfeiffer, University of Oxford; Felix Pretis, University of Oxford; Alexander Teytelboym, University of Oxford

**Beyond Temperatures: An Econometrically-Estimated Damage Function of 21st Century
Climate Impacts using Extreme Climate Indicators**

Moritz Schwarz, University of Oxford; Felix Pretis, University of Oxford

Analyzing Differences Between Scenarios

Felix Pretis, University of Oxford; David F Hendry, University of Oxford

Modelling the Interconnectivity between the Greenland and Antarctic Ice Sheets

Katarina Juselius, University of Copenhagen; Andrew Martinez, University of Oxford; **Felix Pretis**, University of Oxford

Climate Policy, Trump Election and Anticipation in Coal Futures

Samson Mukanjari, University of Gothenburg

**THEMATIC SESSION: HETEROGENEITY IN CLIMATE
CHANGE INDUCED MIGRATION**

Room: Handels: CG-room

Organizer(s): Barbora Sedova, Mercator Research Institute on Global Commons and Climate Change (MCC) gGmbH; Matthias Kalkuhl, MCC Berlin; Katrin Millock, Paris School of Economics, CNRS

Chair: Barbora Sedova, Mercator Research Institute on Global Commons and Climate Change (MCC) gGmbH

This thematic session aims at exploring the role of heterogeneity in migrant characteristics for analyzing climate change induced migration. The overall goal of the session is to move from the large strand of research that looks at evidence of climate change migration to the questions: Who are the climate change migrants? and What does heterogeneity in migrant characteristics imply for welfare and policy analysis? Contributions in this thematic session will include empirical as well as conceptual and theoretical work. In her presentation, Cristina Cattaneo discusses the current state of evidence on the heterogeneous implications of climate change for human mobility. The meta-analysis

of Barbora Sedova and Matthias Kalkuhl summarizes the effects of different types of climate shocks on migration and explains the variation in the existing research with focus on the importance of study context and design. The empirical analysis by Anouk Missirian and Wolfram Schlenker delivers new evidence of the specific demographic characteristics (gender, age) of asylum applicants in the European Union, driven by temperature fluctuations. Lastly, Valerie Mueller will present an innovative theoretical model and empirical evidence of heterogeneous implications of temperature increases on out-migration from urban areas using a worker time allocation model.

Human Migration in the Era of Climate Change

Cristina Cattaneo, Fondazione Eni Enrico Mattei (FEEM); Michel Beine, University of Luxembourg; Christiane J. Fröhlich, German Institute of Global and Area Studies; Dominic Kniveton, University of Sussex; Inmaculada Martínez-Zarzoso, University of Göttingen and University Jaume I; Marina Mastroiello, Trade and Market Division, Food and Agriculture Organization of the United Nations (FAO); Katrin Millock, Paris School of Economics, CNRS; Etienne Piguet, University of Neuchâtel; Benjamin Schraven, German Development Institute

Reexamining the Temperature - Asylum Relationship

Wolfram Schlenker, School of International and Public Affairs (SIPA) and Earth Institute, Columbia University; **Anouch Missirian**, School of International and Public Affairs (SIPA), Columbia University

Labor Response to Climate Variation in Eastern Africa

Valerie Mueller, School of Politics and Global Studies, Arizona State University; International Food Policy Research Institute; Glenn Sheriff, School of Politics and Global Studies, Arizona State University; Xiaoya Dou, Department of Agricultural and Resource Economics, University of Maryland; Clark Gray, Department of Geography, University of North Carolina

Does Climate Change Induce Migration? Evidence from a Meta-Regression Analysis

Barbora Sedova, Mercator Research Institute on Global Commons and Climate Change (MCC) gGmbH; Matthias Kalkuhl, MCC Berlin

THEMATIC SESSION: IMPACT ANALYSIS OF FOREST CONSERVATION POLICIES AND PROJECTS

Room: Handels: E45

Organizer(s): Philippe Delacote, INRA; Jessica Coria, University of Gothenburg

Chair: Rodrigo Arriagada, Pontificia Universidad Catolica de Chile

High rates of deforestation and forest degradation has led to the emergence of REDD+ projects and to an increasing number of policies intended to reduce deforestation, based on instruments such as payments for environmental services, forest certification and diverse types of protected areas. Those interventions require proper impact evaluation, in order to assess their additionality in terms of avoided deforestation, as well as possible co-benefits such as rural development. Those evaluations are made possible by the increasing access to reliable satellite data on forest resources and land-use change at local and global levels.

The aim of this session (supported by the research program BECC) is to have an overview of current impact evaluations of forest policies and REDD+ projects by leading researchers from the field: Gwenole Le Velly (SUPRAGRO), Rodrigo Arriagada (Pontificia Universidad Católica de Chile), Jessica Coria (University of Gothenburg) and Daan van Soest (Tilburg University).

A tale of REDD+ projects. How do location and certification impact additionality?

Gwenolé Le Velly, CEE-M, Montpellier SupAgro; Gabriela Simonet, CIFOR

Has forest certification improved habitat quality for avian diversity in Sweden?

Jessica Coria, University of Gothenburg; Ake Lindstrom, Department of Ecology, Lund University, Sweden; **Laura Villalobos**, Inter-American Development Bank

Can Uniform Price Auctions inform the design of Payments for Ecosystem Services schemes? Evidence from the lab and field

Daan van Soest, Tilburg University

Additionality in Communal PES programs: evidence from Ecuador's Socio Bosque

Rodrigo Arriagada, Pontificia Universidad Catolica de Chile

**THEMATIC SESSION: INTEGRATING ECONOMICS INTO
LANDSCAPE-SCALE MODELS OF COUPLED HUMAN-
NATURAL SYSTEMS**

Room: Handels: B44

Organizer(s): William Jaeger, Oregon State University

Landscape-scale models of coupled natural and human systems have great potential for increasing understanding of complex systems and for generating policy-relevant results. Economists have much to contribute to these analyses however, there are also significant challenges to developing models of complex systems with multi-disciplinary teams. The three studies presented in this session involve spatially-explicit integrated models of large regional landscapes. They include high resolution models of economic processes as well as biophysical processes, and were developed in close collaboration with researchers in the natural sciences. Each study is motivated to address one or more policy questions related to large scale water resources where the market or other institutions do not internalize all the benefits of managing water. All involve large data sets due to their spatial scale and high resolution. The three studies in this session emphasize large-scale water resource management: ecological infrastructure in Panama, agricultural runoff and water quality in the U.S. Great Lakes, and water scarcity and drought in western Oregon, USA.

Assessing Ecological Infrastructure Investments

Eli Fenichel, Yale School of Forestry and Environmental Studies; Wiktor (Vic) Adamowicz, University of Alberta; Laura Calderon-Etter, Yale University; Alicia Entem, University of Alberta; Patrick Lloyd-Smith, University of Saskatchewan; Fred Odgen, University of Wyoming; Mani Rouhi Rad, Yale School of Forestry and Environmental Studies; Robert Stallard, U.S. Geological Survey; Jefferson Hall, Smithsonian Tropical Research Institute

Payment for Best Management Practice and Downstream Water Quality: A Spatially Integrated Economic-Ecological Model of Lake Erie watershed

Elena Irwin, Ohio State University; Hongxing Liu, Lafayette College; Wendong Zhang, Iowa State University; Noel Aloysius, University of Missouri; Jay Martin, The Ohio State University

Understanding the Scope and Limitations of Drought Management Using Human-Natural System Models

William Jaeger, Oregon State University; Adell Amos, University of Oregon Law School; David Conklin,

Freshwater Simulations, Inc; Christian Langpap, Oregon State University; Kathleen Moore, University of Washington; Andrew Plantinga, University of California, Santa Barbara

VALUATION AND CBA

Room: Handels: B22

Chair: Johanna Jussila Hammes, National Institute of Economic Research

Policy context as a factor of bias in the valuation of environmental goods – a dual-process theories perspective.

Ekaterina Nikitina, UiT The Arctic University of Norway

Discussant: Mesfin Tilahun, Norwegian University of Life Sciences/Mekelle University

The economics of agricultural land degradation in Africa: a cost benefit analysis

Mesfin Tilahun, Norwegian University of Life Sciences/Mekelle University; Pushpam Kumar, Economic Division, UN Environment, Nairobi; Ashbindu Singh, Environmental Pulse Institute, Washington DC; Eric Mungatana, University of Pretoria, Pretoria, South Africa; Eugene Apindi, Environmental Pulse Institute; Mark Schauer, ELD Seretariete, Bonn, Germany; Aaron Vuola, UN Environment; Zinta Zommers, UN Environment; Jane Barr, Environmental Pulse Institute; Gyde Lund, Environmental Pulse Institute
Discussant: Johannes Friedrich Carolus, University of Copenhagen

A bottom-up approach to environmental Cost-Benefit Analysis

Johannes Friedrich Carolus, University of Copenhagen; Søren Bøye Olsen, University of Copenhagen; Nick Hanley, University of Glasgow; Søren Marcus Pedersen, University of Copenhagen
Discussant: Johanna Jussila Hammes, National Institute of Economic Research

The influence of individual characteristics and institutional norms on bureaucrats use of CBA: theory and a choice experiment

Johanna Jussila Hammes, National Institute of Economic Research; Lena Nerhagen, Swedish National Road and Transport research institute (VTI); Heather Congdon Fors, Department of Economics, University of Gothenburg
Discussant: Ekaterina Nikitina, UiT The Arctic University of Norway

VALUATION: RESOURCES

Room: Handels: B23

Chair: Ping Li, Institute of Grassland Research, Chinese Academy of Agricultural Sciences

Comparing spatial patterns of WTP clusters: The case of estuarine ecosystem services in Scotland.

Valeria Toledo-Gallegos, University of St Andrews; Jed Long, University of St Andrews; Danny Campbell, Queen's University Belfast; Tobias Börger, University of St Andrews; Nick Hanley, University of Glasgow
Discussant: Ikhothatseng Greffiths, Centre for Environmental Economics and Policy in Africa (CEEPA)

Influence of management institution on households' willingness-to-pay for wetland resource conservation in Khalong-la-Lithunya wetland area in Lesotho

Ikhothatseng Greffiths, Centre for Environmental Economics and Policy in Africa (CEEPA); Eric Mungatana, Centre for Environmental Economics and Policy in Africa (CEEPA)
Discussant: Rabore Lebabo, Centre for Environmental Economics and Policy in Africa (CEEPA)

Influence of water source points location on households' willingness to pay for water supply reliability in Maseru, Lesotho

Rabore Lebabo, Centre for Environmental Economics and Policy in Africa (CEEPA); Eric Mungatana, University of Pretoria, Pretoria, South Africa
Discussant: Ping Li, Institute of Grassland Research, Chinese Academy of Agricultural Sciences

Using Choice Modelling to assess grassland management policy options in Inner Mongolia

Jeff Bennett, Australian National University; **Ping Li**, Institute of Grassland Research, Chinese Academy of Agricultural Sciences; Bao Zhang, College of Economics and Management, Inner Mongolia Agricultural University

Discussant: Valeria Toledo-Gallegos, University of St Andrews

VALUATION: WATER

Room: Handels: B32

Chair: Silvia Ferrini, DISPI, University of Siena CSERGE, University of East Anglia

Eliciting values for complex marine ecological features: an integrated choice experiment

Katrina Davis, University of Exeter; Michael Burton, University of Western Australia; Abbie Rogers, University of Western Australia; Alaya Spencer-Cotton, University of Western Australia; Ram Pandit, University of Western Australia

Discussant: Milan Scasny, Charles University in Prague

Nature-based, structural, or soft measures of adaptation? Preferences for climate change adaptation measures to limit damages from droughts

Milan Scasny, Charles University in Prague; Iva Zverinova, Charles University; Alistair Hunt, University of Bath

Discussant: Amy Ando, University of Illinois

Homeowner Willingness to Pay for a Pre-Flood Agreement for a Post-Flood Buyout

Amy Ando, University of Illinois; Collin Reeser, University of Illinois, Granular

Discussant: Silvia Ferrini, DISPI, University of Siena CSERGE, University of East Anglia

The role of economic valuation in ecosystem services accounting. The case of outdoor recreation and water purification in Europe

Alessandra La Notte, European Commission - Joint Research Centre; **Silvia Ferrini**, DISPI, University of Siena CSERGE, University of East Anglia

Discussant: Katrina Davis, University of Exeter

Coffee break

Wednesday, 15.30-16.00

Room: Handels / Haga

Parallell sessions 6
Wednesday June 27, 16.00-17.45

Parallel session 6

Wednesday, 16.00-17.45

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels: B22

Chair: Mark Andor, RWI - Leibniz Institute for Economic Research

Pro-environmental behavior, positive self-signaling, and the design of informational interventions

Bruno Lanz, University of Neuchâtel; Linda Lemarié, University of Neuchâtel; Valéry Bezençon, University of Neuchâtel

Discussant: Christophe Charlier, Université Côte d'Azur, CNRS, GREDEG, France

Under pressure! Nudging electricity consumption within firms. Feedback from a field experiment

Ankinée Kirakozian, Université de Valenciennes et Hainaut-Cambrésis, Institut du Développement et de la Prospective - IDP; **Christophe Charlier**, Université Côte d'Azur, CNRS, GREDEG, France; Sandrine Selosse, MINES ParisTech, Centre de Mathématiques Appliquées; Gilles Guerrassimoff, MINES ParisTech, Centre de Mathématiques Appliquées

Discussant: Yu Gao, Polytechnic University of Milan

It's So Hot in Here: Information Avoidance, Moral Wiggle Room, and High Air Conditioning Usage

Giovanna D'Adda, Università degli Studi di Milano; **Yu Gao**, Polytechnic University of Milan; Massimo Tavoni, Polytechnic University of Milan; Russell Golman, Carnegie Mellon University

Discussant: Mark Andor, RWI - Leibniz Institute for Economic Research

Social Norms and Energy Conservation Beyond the US

Mark Andor, RWI - Leibniz Institute for Economic Research; Andreas Gerster, RWI - Leibniz Institute for Economic Research; Christoph M. Schmidt, RWI; Jörg Peters, RWI Essen

Discussant: Bruno Lanz, University of Neuchâtel

CARBON POLICY

Room: Handels: Aulan

Chair: Jingbo Cui, Wuhan University

Energy Performance Certificates and Investments in Building Energy Efficiency: A Theoretical Analysis

Matthieu Glachant, MINES ParisTech and PSL Research University; Paul Hervé Tamokoué Kamga, MINES ParisTech and PSL Research University; Pierre Fleckinger, MINES ParisTech, PSL Research University, Paris School of Economics

Discussant: Markus Zimmer, Ifo Institute - Leibniz Institute for Economic Research at the University of Munich

How Effective Has Climate Policy Been? A Company-Level Analysis

Markus Zimmer, Ifo Institute - Leibniz Institute for Economic Research at the University of Munich; Ana Maria Montoya Gómez, Ifo Institute - Leibniz Institute for Economic Research at the University of Munich

Discussant: Michael Pahle, Potsdam Institute for Climate Impact Research (PIK)

What stands in the way becomes the way: Sequencing in climate policy to ratchet up stringency

Michael Pahle, Potsdam Institute for Climate Impact Research (PIK); Dallas Burtraw, Resources for the Future; Christian Flachsland, Mercator Research Institute on Global Commons and Climate Change (MCC); Nina Kelsey, George Washington University; Eric Biber, University of California–Berkeley; Jonas Meckling, University of California–Berkeley; Ottmar Edenhofer, Potsdam Institute for Climate Impact Research, Mercator Research Institute on Global Commons and Climate Change, Berlin Institute of Technology; John Zysman, University of California–Berkeley
Discussant: Jingbo Cui, Wuhan University

Carbon Pricing Induces Innovation: Evidence from China's Regional Carbon Market Pilots

Jingbo Cui, Wuhan University; Junjie Zhang, Duke University; Yang Zheng, Wuhan University
Discussant: Matthieu Glachant, MINES ParisTech and PSL Research University

CLIMATE CHANGE: POLICY AND COMPETITIVENESS

Room: Handels: C22

Chair: Florens Flues, OECD

Catching up and falling behind: Cross-country evidence on the impact of the EU ETS on productivity growth

Michael Themann, RWI - Leibniz Institute for Economic Research; Nicolas Koch, Mercator Research Institute on Global Commons and Climate Change (MCC)
Discussant: Alexander Golub, American University

Business responses to climate policy uncertainty: Theoretical analysis of a twin deferral strategy and the risk-adjusted price of carbon

Alexander Golub, American University; Ruben Lubowski, Environmental Defense Fund; Pedro Piris-Cabezas, Environmental Defense Fund
Discussant: Misato Sato, London School of Economics

Does climate change pose a risk to competitiveness? - Global firm level evidence

Misato Sato, London School of Economics; Antoine Dechezlepretre, London School of Economics; Ralf Martin, Imperial College London; Stefania Lovo, University of Reading
Discussant: Florens Flues, OECD

Permit allocation rules and investment incentives in emissions trading systems

Florens Flues, OECD; Kurt Van Dender, OECD
Discussant: Michael Themann, RWI - Leibniz Institute for Economic Research

ENERGY: TRANSITION TO RENEWABLES

Room: Handels: D33

Chair: Mauricio Rodriguez, Universidad del Rosario

Energy transition with variable and intermittent renewable electricity generation

Katheline Schubert, University of Paris; Aude Pommeret, Université Savoie Mont Blanc
Discussant: Adrien Fabre, Paris School of Economics and University Paris 1

Mineral Resources for Renewable Energy: Optimal Timing of Energy Production

Adrien Fabre, Paris School of Economics and University Paris 1; Mouez Fodha, Paris School of Economics and University Paris 1; Francesco Ricci, University of Montpellier

Discussant: Alex Schmitt, ifo Institute

Modeling the Transition to Clean Power Generation Under Uncertainty

Alex Schmitt, ifo Institute

Discussant: Mauricio Rodriguez, Universidad del Rosario

The cost of the status quo: Exploration or innovation in the face of scarcity

Mauricio Rodriguez, Universidad del Rosario; Inge van den Bijgaart, University of Gothenburg

Discussant: Katheline Schubert, University of Paris

ENVIRONMENT AND DEVELOPMENT

Room: Handels: F44

Chair: Wisdom Akpalu, UNU-WIDER, University of Ghana, Legon-Accra

Open access post-harvest grazing and farmers' preferences for forage production incentives: A choice experiment study in Ethiopia

Alemu Mekkonen, Addis Ababa University; Hailemariam Teklewold, Ethiopian Development Research Institute; Tagel Gebrehiwot, Ethiopian Development Research Institute; Mintewab Bezabih, LSE

Discussant: Kewan Mertens, KU Leuven

The interaction between land markets and social norms: too often overlooked?

Kewan Mertens, KU Leuven; Liesbet Vranken, Departement of Earth and Environmental Sciences, KU Leuven

Discussant: Tim Capon, CSIRO

Measuring, Defining and Valuing Economic Resilience: Understanding the Dynamics of Deforestation in Laos

Todd Sanderson, CSIRO; **Tim Capon**, CSIRO; Greg Hertzler, University of Western Australia CSIRO

Discussant: Wisdom Akpalu, UNU-WIDER, University of Ghana, Legon-Accra

Food access and subjective welfare in a developing country

Wisdom Akpalu, UNU-WIDER, University of Ghana, Legon-Accra; Aaron Christian, University of Ghana; Samuel Codjoe, University of Ghana

Discussant: Alemu Mekkonen, Addis Ababa University

ENVIRONMENT AND DEVELOPMENT: FIRMS

Room: Handels: F45

Chair: Biswo Poudel, Kathmandu University

The Social Cost of "Blue Sky": The Impact of Environmental Regulation on Labor Demand in China

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

Discussant: Anca Baliatti, Harvard University

Public Hearings for Cleaner Mines? Evidence from the Environmental Clearance Process in India

Anca Baliatti, Harvard University; Rohini Pande, Harvard University; Anant Sudarshan, University of Chicago; Kevin Rowe, Harvard University

Discussant: Tewodros Tesemma, University of Gothenburg

Cost of Power Outages for Manufacturing Firms in Ethiopia: A Stated Preference Study

Tewodros Tesemma, University of Gothenburg; Fredrik Carlsson, University of Gothenburg; Eyoual Demeke, Gothenburg University; Peter Martinsson, University of Gothenburg

Discussant: Biswo Poudel, Kathmandu University

Rationalization of Group Lending in Electricity Market: Evidence from Nepalese Cooperatives

Biswo Poudel, Kathmandu University; Amisha Rauniyar, Kathmandu University

Discussant: Bing Zhang, Nanjing University

ENVIRONMENTAL POLICY: IMPACT

Room: Handels: C24

Chair: Jacek Lipiec, Warsaw School of Economics

Is Incineration Replacing Recycling?

Masashi Yamamoto, University of Toyama; Thomas Kinnaman, Bucknell University

Discussant: Spencer Banzhaf, Georgia State University

Capitalization as a Two-Part Tariff: The Role of Zoning

Spencer Banzhaf, Georgia State University; Kyle Mangum, Georgia State University

Discussant: Edson Severnini, Carnegie Mellon University

Short- and Long-Run Impacts of Environmental Regulations on Firm Productivity: Evidence from the U.S. Electricity Sector, 1938-1999

Edson Severnini, Carnegie Mellon University; Karen Clay, Carnegie Mellon University; Akshaya Jha, Carnegie Mellon University; Joshua Lewis, University of Montreal

Discussant: Jacek Lipiec, Warsaw School of Economics

Sovereign Green Bonds in Poland. Policy Recommendations

Jacek Lipiec, Warsaw School of Economics; Piotr Nowak, Ministry of Finance; Robert Zima, Ministry of Finance

Discussant: Masashi Yamamoto, University of Toyama

ENVIRONMENTAL POLICY: REGULATION

Room: Handels: D32

Chair: Sunbin YOO, The University of Tokyo

Green Alliances and the Role of Taxation

Eleni Stathopoulou, Nottingham Business School, Nottingham Trent University; Luis Gautier, University of Texas at Tyler

Discussant: Ana Espinola-Arredondo, Washington State University

Greenwashing and Perceptions Towards Innovation: A Signaling Approach

Ana Espinola-Arredondo, Washington State University; Felix Munoz-Garcia, Washington State University; Dolores Garrido, Washington State University

Discussant: Antung Liu, Indiana University

Are Carbon Taxes More Efficient in Industrializing Countries? Comparing China and India to the United States

Antung Liu, Indiana University; Richard Carson, University of California, San Diego; Mark Jacobsen, UC San Diego

Discussant: Sunbin YOO, The University of Tokyo

Evaluating Japanese Energy Policies through Automobile Industries: A Discrete-Choice with Product Differentiation Approach

Sunbin YOO, The University of Tokyo; Yoshikuni Yoshida, The University of Tokyo

Discussant: Eleni Stathopoulou, Nottingham Business School, Nottingham Trent University

FISHERIES: STRATEGIC MANAGEMENT

Room: Haga: B210

Chair: Martin Quaas, University of Kiel

Optimal Fishery with Coastal Catch

Thorsten Upmann, Helmholtz-Institute for Functional Marine Biodiversity at the Oldenburg University (HIFMB); Hannes Uecker, Oldenburg University

Discussant: Michael R. Springborn, University of California Davis

Beyond biomass: valuing genetic diversity in natural resource management

Michael R. Springborn, University of California Davis; Amanda Faig, Aquatic and Fisheries Sciences, University of Washington; Marissa Baskett, University of California Davis; Allison Dedrick, University of California Davis

Discussant: Irmelin Helgesen, Norwegian University of Science and Technology

Maximum yield fishing and optimal fleet composition: A stage structured model analysis with an example from the Norwegian North-East Arctic cod fishery

Irmelin Helgesen, Norwegian University of Science and Technology; Anders Skonhoft, NTNU; Arne Eide, University of Tromsø

Discussant: Martin Quaas, University of Kiel

Strategic harvesting of age-structured populations

Martin Quaas, University of Kiel; Olli Tahvonen, University of Helsinki

Discussant: Thorsten Upmann, Helmholtz-Institute for Functional Marine Biodiversity at the Oldenburg University (HIFMB)

FOREST AND PROTECTED AREAS

Room: Haga: B228

Chair: Merlin Hanauer, Sonoma State University

Urban greenery management as an economic problem

Tomasz Zyllicz, Warsaw University; Zbigniew Szkop, University of Warsaw

Discussant: Julia Berazneva, Middlebury College

IMPACTS OF ENVIRONMENTAL DEGRADATION: FOREST LOSS, MALARIA, AND CHILD OUTCOMES IN NIGERIA

Julia Berazneva, Middlebury College; Tanya Byker, Middlebury College

Discussant: frank lupi, Michigan State University, USA

Identifying the effect of fire on the value of forest recreation services

frank lupi, Michigan State University, USA; Cloe Garnache, Michigan State University

Discussant: Merlin Hanauer, Sonoma State University

Civil conflict reduced the impact of Colombia's protected areas

Gustavo Canavire-Bacarreza, Universidad EAFIT; **Merlin Hanauer**, Sonoma State University

Discussant: Tomasz Zylicz, Warsaw University

FORESTRY: THEORY AND EMPIRICS

Room: Haga: B225

Chair: Elizabeth Whalley, University of Warwick

Economics of mixed species forestry with amenities

Olli Tahvonen, University of Helsinki; Janne Rämö, University of Helsinki; Mikko Mönkkönen, University of Jyväskylä

Discussant: Julika Herzberg, RWTH Aachen University

Protection and Profit: Spill-over effects of governmental and market-based forest policies

Julika Herzberg, RWTH Aachen University

Discussant: Astrid Zabel, Bern University of Applied Sciences

Policies for forest landscape management – A conceptual approach with an empirical application for Swedish conditions

Astrid Zabel, Bern University of Applied Sciences; Göran Bostedt, SLU Umeå University; Hans Ekvall, SLU Umeå

Discussant: Elizabeth Whalley, University of Warwick

The effects of variation in management objectives on responses to invading diseases under uncertainty: Forest Pathogens

Elizabeth Whalley, University of Warwick; Ciara Dangerfield, University of Cambridge; Nick Hanley, University of Glasgow; John Healey, University of Bangor; Christopher Gilligan, University of Cambridge

Discussant: Olli Tahvonen, University of Helsinki

GROWTH AND TECHNICAL CHANGE

Room: Haga: Dragonen

Chair: Andri Brenner, MCC Berlin

Environmental Regulation Stringency and the Allocation between RD and Physical Capital: A Two-Engine Growth Model

Yibai Yang, University of Macau; Juin-Jen Chang, Academia Sinica; Chien-Yu Huang, Nanjing Audit University

Discussant: ZhongXiang Zhang, Tianjin University

China's Pursuit of Environmentally Sustainable Development: Harnessing the New Engine of Technological Innovation

Wei Jin, University of New South Wales; **ZhongXiang Zhang**, Tianjin University

Discussant: Jan Witajewski-Baltvilks, Institute for Structural Research

Green Innovation and Economic Growth in a North-South Model

Jan Witajewski-Baltvilks, Institute for Structural Research; Carolyn Fischer, Resources for the Future

Discussant: Andri Brenner, MCC Berlin

Density and the Environment

Andri Brenner, MCC Berlin

Discussant: Yibai Yang, University of Macau

POLICY SESSION: BALANCING SHORT- AND LONG-LIVED GREENHOUSE GAS MITIGATION IN CLIMATE POLICIES

Room: Handels: B33

Organizer(s): Jonathan Camuzeaux, Environmental Defense Fund; Gokce Akin Olcum, Environmental Defense Fund; Ruben Lubowski, Environmental Defense Fund

Chair: Frank Convery, University College Dublin

Our best chance of curbing climate change in both the near- and long-term is reducing emissions of both short- and long-lived climate pollutants. However, evaluating climate effects of pollutants with different radiative effects and atmospheric longevities requires an approach to inter-compare the relative effect each pollutant has on warming. While every greenhouse gas (GHG) warms the climate, each GHG has a different warming effect and warming capacity over different timeframes. For example, methane decays more rapidly than carbon dioxide in the atmosphere, but it is a more potent GHG, so that its influence on the climate is significant on decadal timeframes. On the other hand, carbon dioxide is less potent but decays more slowly, so that avoiding the build-up of carbon dioxide in the atmosphere is essential to avoiding increases in temperature over longer time horizons.

In this session, speakers will discuss the need for clearer metrics to characterize the climate trade-offs between short- and long-lived GHGs in policy settings; present preliminary research on a novel approach to establish fungibility between GHGs in emissions trading systems; and look at the case of New Zealand, where establishing fungibility between gases is crucial, since methane emissions from agriculture represent a large share of the country's emissions.

Panelist(s): Ilissa Ocko, Environmental Defense Fund;
Jonathan Camuzeaux, Environmental Defense Fund;
Ruben Lubowski, Environmental Defense Fund;
Gokce Akin Olcum, Environmental Defense Fund;
Zack Dorner, University of Waikato

POLICY SESSION: MAINSTREAMING NATURAL CAPITAL FOR GREEN GROWTH

Room: Handels: SKF

Organizer(s): Carlo Carraro, University of Venice Ca' Foscari, Euro-Mediterranean Center on Climate Change and University of Venice

Chair: Carlo Carraro, University of Venice Ca' Foscari, Euro-Mediterranean Center on Climate Change and University of Venice

Numerous organizations around the world, including the World Bank, the Organisation for Economic Co-operation and Development (OECD), and the African Development Bank, are actively supporting countries in achieving green growth. This policy session will focus on how to better mainstream natural capital in these institutions' project activities and financing mechanisms, in order to strengthen natural capital implementation in national and sub-national green growth plans.

In particular, the session will stimulate debate among representatives of these institutions and the academic community on the need for action around natural capital and the practicalities of mainstreaming natural capital in international organizations and on the ground.

Debate questions will include:

bull;How do the World Bank, OECD and African Development Bank structure green growth projects and financing?

bull;What would mainstreaming look like and how could it be achieved in each institution?

bull;What knowledge, measurement or data gaps remain to convince key stakeholders in each organization and on the ground to mainstream natural capital and implement their commitments?

bull;What is the strongest entry point for improving natural capital implementation in-country through improved measurement, policy support, infrastructure, business and finance, or others?

bull;How can leading green growth institutions better coordinate to mainstream natural capital and increase their collective impact on the ground?

bull;What are the truly influential stories or case studies of successful natural capital mainstreaming and how can they be replicated in other contexts?

Panelist(s): Katia Karousakis, OECD;

Paul Ekins, UCL Institute for Sustainable Resources;

Carlo Carraro, University of Venice Ca' Foscari, Euro-Mediterranean Center on Climate Change and University of Venice

POLICY SESSION: POLICIES FOR SUSTAINABLE DEVELOPMENT AT THE LOCAL LEVEL

Room: Handels: C33

Organizer(s): Annika Lindskog,

Chair: Anna Norden, Chalmers

This session is named in gratitude to our sponsor Adlerbertska forskningsstiftelsen that has supported the researchers presenting and projects presented as well as the conference in general. The foundation fund research on sustainable development in an overall perspective and wish to support research that can lead to societal change and improve living conditions for all life on earth. In accordance with this overall objective, the research projects presented study policies that can potentially make societies develop in a more sustainable way. The first presentation is about reducing urban congestion and pollution, the second and third about improved management of natural and common pool resources, and the fourth about fighting the HIV epidemic.

Chair: Anna Nordeacute;n: "Sustainable Forest Management and Forest Certification in Sweden"

Zhang Xiao-Bing: "Optimal environmental road pricing and policies to reduce congestion in Beijing"

Haileselassie Mehdin: "Cooperation in the management o common pool resources: Building institutions for sustainable development"

Annika Lindskog: "Structural intervention to eradicate the HIV epidemic: the role of education"

Panelist(s): Haileselassie Medhin, Environment and Climate Research Center/ECRC;
Xiao-Bing Zhang, Renmin University of China;
Anna Norden, Chalmers;
Annika Lindskog,

STATED PREFERENCES: METHOD

Room: Handels: B23

Chair: Ewa Zawojkska, University of Warsaw

Point – Interval Payment Card versus Classic Payment Card: A Convergent Validity test within the Payment Card format

Louinord Voltaire, Université du Littoral Côte d'Opale; P. Wilner Jeanty, School of Business

Discussant: Jorge Araña, University of Las Palmas de Gran Canaria

Model Uncertainty in Stated Preference Methods

Jorge Araña, University of Las Palmas de Gran Canaria

Discussant: Daniel Engler, University of Kassel

Mixed Logit estimation of willingness to pay: A Monte Carlo experiment

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

Discussant: Ewa Zawojkska, University of Warsaw

Disentangling the effects of policy and payment consequentiality and risk attitudes on stated preferences

Ewa Zawojkska, University of Warsaw; Anna Bartczak, University of Warsaw, Faculty of Economic Sciences, Warsaw Ecological Economics Center; Mikołaj Czajkowski, University of Warsaw

Discussant: Louinord Voltaire, Université du Littoral Côte d'Opale

**THEMATIC SESSION: AIR POLLUTION IN BEIJING:
EMPIRICAL ANALYSES OF CAUSES AND SOCIAL COST**

Room: Handels: SEB

Organizer(s): Jintao Xu, Peking University

Curbing aggravating air pollution is a battle at the peak for many large cities in China. In Beijing case, driving factors of air pollution and its social cost attract many researches but remain unanswered and hotly debated. This thematic session aims at introducing a set of new studies which, utilizing some unique datasets and analytical methods, provide new estimates of sources of air pollution, at both local and regional scale, and evaluation of various social costs of air pollution.

Pollution Haven Attacks Back? -- Evidence from Air Quality Daily Variation in the Jing-Jin-Ji Region

Lunyu Xie, Renmin University of China; Jintao Xu, Peking University; Shuai Chen, Zhejiang University; Yingwei Dong, Peking University

Traffic congestion and air pollution in Beijing: Utilizing taxis trajectory data

Fan Xia, National School of Development, Peking University; Ximeng Cheng, Peking University; Yu Liu,

Peking University; Zhen Lei, Pennsylvania State University

Recency and projection biases in air quality valuation by Chinese residents

Shuai Chen, Zhejiang University; Ping Qin, Renmin University of China; **Jie-sheng Tan-Soo**, National University of Singapore; Chu Wei, Renmin University of China

Air Pollution and Consumption: Evidence from a Comprehensive Tracking Record of Prisoners

Shuai Chen, Zhejiang University; **Min Wang**, Peking University; Dandan Zhang, Peking University

THEMATIC SESSION: BEYOND HEAT: NEW DIMENSIONS OF ENVIRONMENTAL MIGRATION

Room: Handels: E45

Organizer(s): Valerie Mueller, School of Politics and Global Studies, Arizona State University; International Food Policy Research Institute; Joyce Chen, Ohio State University

Chair: Valerie Mueller, School of Politics and Global Studies, Arizona State University; International Food Policy Research Institute

This session considers environmental stressors and heterogeneity that shape the climate change-migration nexus but are rarely considered in the literature. Novel data sources and methods from labor and development economics are applied. The first paper finds flooding affects internal and international migration patterns in Bangladesh through increases in soil salinity (rather than inundation) in opposing ways. Transitory income fluctuations motivate internal moves, while long-term diversification underlies international migration. Households substitute foreign labor market participation with diversification into aquaculture at home. The next paper turns to the role of air pollution on migration patterns in China. Utilizing thermal inversions as an IV for air quality, the authors find migration rates react quite strongly to increases in pollution. Reductions in air quality are capable of reducing county-level net out-migration by 5 percent and inflows of informal (floating) migrants by up to 50 percent. The final paper examines the impact of travel costs on environmental migration decisions in Brazil. The authors estimates show that travel costs, as proxied by road infrastructure, significantly dampen the migration response to adverse climate conditions. The effects are particularly pronounced for poor households and agricultural producers, who likely face the greatest losses and the most stringent liquidity constraints.

The Effect of Air Pollution on Migration: Evidence from China

Peng Zhang, School of Accounting and Finance, The Hong Kong Polytechnic University

Salt of the Earth: Migration, Adaptation, and Soil Salinity in Coastal Bangladesh

Valerie Mueller, School of Politics and Global Studies, Arizona State University; International Food Policy Research Institute

Climate Change and Internal Migration in Brazil: The Role of Road Infrastructure

Maggie Liu, Smith College

THEMATIC SESSION: BEYOND SUBSIDIZED WATER TARIFFS: STRATEGIES FOR ASSISTING POOR HOUSEHOLDS DURING TARIFF REFORMS

Room: Handels: E 44/GBJ-room

Organizer(s): Dale Whittington, University of North Carolina at Chapel Hill; Joe Cook, Washington State University

Chair: Dale Whittington, University of North Carolina at Chapel Hill

A key strategy for adapting to changing water availability and rapid urbanization is a move towards full cost recovery tariffs for water and sanitation services. Because these services are substantially underpriced in most places, this strategy implies that careful attention must be directed at programs to help the poor manage water affordability. The first paper in this session describes how Chile's innovative subsidy program has evolved since its introduction in 1990, with a specific focus on its ability to accurately target support to the poor. The second paper reviews the global experience with "non-tariff" customer assistance programs. The third paper examines why the poor in Cape Town, South Africa responded differently to non-price, social norm nudges than the non-poor. The final paper reports on surveys from Kathmandu, Nepal and Addis Ababa, Ethiopia where researchers asked households which type of tariff structure (increasing block or uniform volumetric) they would prefer.

Heterogeneous responses to behavioural messages: evidence from a large-scale randomised control trial in Cape Town

Martine Visser, University of Cape Town; Johanna Bruehl, University of Cape town

Revisiting the distributional impacts of water subsidy policy in Chile: A historical analysis from 1998-2015

Andres Gomez-Lobo, University of Chile; Dante Contreras, University of Chile; Isidora Palma Carvajal, Ministry of Social Development

Unraveling Households' Preferences for Increasing Block Tariff Structures in Addis Ababa, Ethiopia and Kathmandu, Nepal

Jane Zhao, University of North Carolina at Chapel Hill; Dale Whittington, University of North Carolina at Chapel Hill; Helena Cardenas, University of North Carolina at Chapel Hill

A global assessment of non-tariff customer assistance programs in water supply and sanitation

Dale Whittington, University of North Carolina at Chapel Hill; David Fuente, University of South Carolina; Michael Matichich, Jacobs Engineering

THEMATIC SESSION: DESIGNING CONSERVATION AUCTIONS TO IMPROVE BIDDER PARTICIPATION

Room: Handels: B44

Organizer(s): John Rolfe, Central Queensland University

Chair: John Rolfe, Central Queensland University

A major limitation of conservation tenders (and some Payment for Ecosystem Service) schemes are low participation rates of potential bidders, particularly for schemes targeting farmers and rural landholders, with implications on both efficiency and effectiveness dimensions. This thematic session is focused on how to address problems of low participation rates and bid formation issues in conservation auctions by focusing on landholder uncertainty over their own costs of management changes as a potential cause. The workshop involves some of the leading academics in this field, including expertise in the theory underpinning conservation auctions, expertise in running laboratory experiments, and expertise in running field experiments and auctions.

The session will involve the presentation of four key papers on:

- * An international review of participation in conservation auctions as well as a conceptual model to explain participation drivers.
- * The impact of auction design on participation, drawing on case study material from Canada.
- * Experimental results about the effects of bidder cost uncertainty on participation and bidding behaviour.
- * Experimental results about how bidders' perceptions of competition intensity affects participation in a type of Nash-equilibrium setting.

Identifying the causes of low participation rates in Conservation Tenders

John Rolfe, Central Queensland University; Steven G. M. Schilizzi, Western Australia University; Peter Boxall, University of Alberta; Uwe Latacz-Lohmann, Department of Agricultural Economics, University of Kiel; Sayed Ifekhar, University of Western Australia; Megan Star, CQUniversity; Patrick O'Connor, University of Adelaide

Information Rent Seeking in Conservation Auctions Using Uniform and Discriminatory Pricing: Field Experiments in Wetland Restoration

Peter Boxall, University of Alberta; Anna Kauffman, University of Alberta

Does cost uncertainty affect the performance of conservation auctions?

Steven G. M. Schilizzi, Western Australia University; Sayed Ifekhar, University of Western Australia; John Rolfe, Central Queensland University; Peter Boxall, University of Alberta

How does cost uncertainty affect bidding behaviour and willingness to participate in conservation auctions?

Sayed Ifekhar, University of Western Australia; Steven G. M. Schilizzi, Western Australia University; Peter Boxall, University of Alberta

THEMATIC SESSION: POLICY DESIGN WITH THE END IN MIND: NEW RESEARCH ON U.S. CARBON PRICING OPTIONS

Room: Handels: E43

Organizer(s): Adele C. Morris, Brookings

Chair: Adele C. Morris, Brookings

The United States is facing tremendous uncertainty around the future direction of climate policy. This session explores alternative U.S. policy options in light of different potential goals and priorities of policymakers. Each paper focuses on a particular outcome or objective of a carbon pricing policy and explores tradeoffs across alternative policy designs. Using computable general equilibrium models and other tools, the papers explore how different carbon pricing policies can result in different levels of revenue; uncertainties across emissions, price, and other outcomes; information revelation; and power generation.

Taxes vs. Tradable Permits: Information Asymmetry and Dynamic Adjustment Mechanisms
Robert Harris, Duke University; **William Pizer**, Duke University

The Revenue Implications of A Carbon Tax

Gilbert Metcalf, Tufts University; **Mei Yuan**, MIT Joint Program on the Science and Policy of Global Change; **John Reilly**, Massachusetts Institute of Technology; **Sergey Paltsev**, Massachusetts Institute of Technology

Controlling Carbon Emissions from U.S. Power Plants: How a Tradable Performance Standard Compares to a Carbon Tax

Warwick McKibbin, Australian National University; **Adele C. Morris**, Brookings; **Peter Wilcoxon**, Syracuse University

Mechanisms to Reduce Emissions Uncertainty under a Carbon Tax

Marc Hafstead, Resources for the Future; **Roberton Williams**, University of Maryland and Resources for the Future

THEMATIC SESSION: REGULATORY INSTRUMENTS UNDER UNCERTAINTY

Room: Handels: Volvo

Organizer(s): **Richard Newell**, Resources for the Future

Chair: **Richard Newell**, Resources for the Future

Regulatory instruments must cope with real-world uncertainties. For example, cap-and-trade programs have features that enable flexibility: regulated firms can bank permits for future use but do so recognizing the regulator can adjust the cap in either direction. Further, changes in factor prices and the presence of overlapping policies will affect market outcomes. The first paper in this session (Salant et al.) investigates an unnoticed effect of price floors the mechanism most existing programs use to limit the supply of permits to affect the market outcome even when the price floor is not binding and tests theoretical predictions experimentally. The second paper (Weitzman) steps back and investigates the welfare effects of intertemporal decision making by firms under cap and trade in comparison with an emissions tax. The third paper examines, in simulation modeling and experimentally, a novel mechanism that makes the supply of allowances in a market responsive to the equilibrium price, a feature of commodity markets and one that is recently evident in practice. Taken together, the three papers would comprise a tight and high-level session at the World Congress.

The Effect of Non-Binding Price Floors on the Price of Bankable Emissions Permits

Stephen Salant, University of Maryland; **William Shobe**, University of Virginia; **Neslihan Uler**, University of Maryland

Prices or Quantities Dominate Banking and Borrowing

Martin Weitzman, Harvard University

Quantities with Prices

Dallas Burtraw, Resources for the Future; **Charles Holt**, University of Virginia; **Karen Palmer**, Resources for the Future; **Anthony Paul**, Resources for the Future; **William Shobe**, University of Virginia

THEMATIC SESSION: VALUING RECREATION: METHODS, EMPIRICS, AND CLIMATE CHANGE APPLICATIONS

Room: Handels: CG-room

Organizer(s): Casey Wichman, Resources for the Future; Nathan Chan, University of Massachusetts Amherst

Chair: Casey Wichman, Resources for the Future

Valuing nonmarket goods and services has long been a central tenet of environmental and resource economics. Currently, novel data sources and pressing environmental issues are providing challenges and opportunities for the inclusion of environmental benefits in policy decisions. In this thematic session we integrate four papers at the intersection of using novel data sources and methods to inform the value of recreational opportunities and complementary environmental resources. Collectively, these papers provide both methodological and empirical insights on valuing recreational opportunities, with an eye towards understanding potential impacts of climate change.

Blending Supplementary Surveys with Citizen Science Data to Estimate Representative Use Values for Non-market Environmental Goods: An eBird example

Sonja Kolstoe, Salisbury University; Trudy Ann Cameron, University of Oregon

The Effects of Weather on Recreational Fishing Demand and Adaptation: Implications for a Changing Climate

Steven Dundas, Oregon State University; **Roger von Haefen**, North Carolina State University

Valuing Nonmarket Impacts of Climate Change: From Reduced Form to Welfare

Nathan Chan, University of Massachusetts Amherst; Casey Wichman, Resources for the Future

The Effects of Climate on Leisure Demand: Evidence from North America

Nathan Chan, University of Massachusetts Amherst; **Casey Wichman**, Resources for the Future

TRANSPORT

Room: Handels: F43

Chair: VINISH KATHURIA, IIT BOMBAY

Clearing the Air: Restricting Vehicle Use or Adopting Cleaner Vehicles?

Xiaoguang Chen, Southwestern University of Finance and Economics; Jingjing Ye, Southwestern University of Finance and Economics

Discussant: Karolina Safarzynska, Warsaw University

A higher rebound effect under bounded rationality: Interactions between car mobility and electricity generation

Karolina Safarzynska, Warsaw University

Discussant: Benjamin Leard,

The Effect of Fuel Price Changes on Fleet Demand for New Vehicle Fuel Economy

Benjamin Leard, ; Virginia McConnell, Resources for the Future; Yichen Christy Zhou, Clemson University

Discussant: VINISH KATHURIA, IIT BOMBAY

Investigating the Effect of Mumbai Metro on pollution – A Preliminary Analysis

VINISH KATHURIA, IIT BOMBAY; Neeraj Sanghi, Doctoral Student, IIT Bombay

Discussant: Xiaoguang Chen, Southwestern University of Finance and Economics

VALUATION: HEDONIC PRICING

Room: Handels: B32

Chair: Michele Baggio, University of Connecticut

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

Allan Beltran, LSE Fellow in Environmental Economics (Department of Geography and Environment);

David Maddison, University of Birmingham; Robert Elliott, University of Birmingham

Discussant: Toni Sipic, Central Washington University

The Economic Impacts of Forest Timber Methods in Washington State: A Hedonic Approach

Toni Sipic, Central Washington University; Kaleb Javier, Central Washington University

Discussant: Ivan Petrov, University College Dublin

Information Asymmetry, Split Incentives and Energy Efficiency in the Residential Rental Market

Ivan Petrov, University College Dublin; Lisa Ryan, University College Dublin

Discussant: Michele Baggio, University of Connecticut

The Housing Market Impacts of Noise Pollution: Evidence from a Natural Experiment

Michele Baggio, University of Connecticut; Charles Towe, University of Connecticut

Discussant: Allan Beltran, LSE Fellow in Environmental Economics (Department of Geography and Environment)

Congress dinner

Wednesday, 18.30-02.00

Room: Eriksbergshallen

Parallell sessions 7
Thursday June 28, 8.30-10.15

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels: B22

Chair: Kennet Uggedahl, University of Copenhagen

How Do Emotional States Impact Monetary Donation to Environmental NGOs?

Sébastien Roussel, CEE-M Université Paul Valéry Montpellier 3 (UPVM3); Lisette Ibanez, CEE-M INRA

Discussant: Tim Cason, Purdue University

Subject Pools and Deception in Agricultural and Resource Economics Experiments

Tim Cason, Purdue University; Steven Wu, Purdue University

Discussant: Amare Teklay Hailu, Norwegian University of Life Sciences (NMBU)

Forest conservation and motivation crowding: a framed field experiment

Amare Teklay Hailu, Norwegian University of Life Sciences (NMBU)

Discussant: Kennet Uggedahl, University of Copenhagen

What the eye does not admire, the mind cannot desire – An eye tracking study applying gaze-contingency to measure information and choice attribute non-attendance in stated choice experiments

Kennet Uggedahl, University of Copenhagen; Chris N.H. Street, Department of Psychology, University of Huddersfield; Thomas Lundhede, Department of Food and Resource Economics, University of

Copenhagen; Søren Bøye Olsen, University of Copenhagen

Discussant: Sébastien Roussel, CEE-M Université Paul Valéry Montpellier 3 (UPVM3)

CLIMATE CHANGE: IMPACT

Room: Handels: D33

Chair: Michael Berlemann, Helmut-Schmidt-Universität Hamburg

Distribution of Global Temperature Effects on Downscaled Economic Activity

Shouro Dasgupta, Centro Euro-Mediterraneo sui Cambiamenti Climatici and Università Ca' Foscari Venezia; Francesco Bosello, Department of Environmental Science and Policy, University of Milan and Euro-Mediterranean Center on Climate Change; Enrica De Cian, Centro Euro-Mediterraneo sui Cambiamenti Climatici and Università Ca' Foscari Venezia; Malcolm Mistry, Centro Euro-Mediterraneo sui Cambiamenti Climatici

Discussant: Kine Josefine Aurland-Bredesen, NMBU

Averting catastrophes in a more complex world

Kine Josefine Aurland-Bredesen, NMBU

Discussant: Aurélie Méjean, CIRED - CNRS

Catastrophic climate change, population ethics and intergenerational equity

Aurélie Méjean, CIRED - CNRS; Antonin Pottier, Centre d'Economie de la Sorbonne; Stéphane Zuber, Paris School of Economics - CNRS; Marc Fleurbaey, Woodrow Wilson School of Public and International Affairs, Princeton University

Discussant: Michael Berlemann, Helmut-Schmidt-Universität Hamburg

Hurricanes, Economic Growth and Transmission Channels - Empirical Evidence for Countries on Differing Levels of Development

Michael Berlemann, Helmut-Schmidt-Universität Hamburg; Daniela Wenzel, Helmut-Schmidt-Universität Hamburg
Discussant: Shouro Dasgupta, Centro Euro-Mediterraneo sui Cambiamenti Climatici and Università Ca' Foscari Venezia

CLIMATE CHANGE: SOCIAL COST OF CARBON AND CARBON PRICING

Room: Handels: C24

Chair: Chuan-Zhong Li, Uppsala University

Climatic cost-benefit analysis under uncertainty and learning on climate sensitivity and damages

Tommi Ekholm, Aalto University

Discussant: Maddalena Ferranna, Princeton University

Intergenerational equity, risk aversion and the social cost of carbon

Maddalena Ferranna, Princeton University

Discussant: Samuel Okullo, Potsdam Institute for Climate Impact Research

Determining the social cost of carbon under damage and climate sensitivity uncertainty

Samuel Okullo, Potsdam Institute for Climate Impact Research

Discussant: Chuan-Zhong Li, Uppsala University

An explicit formula for optimal carbon taxes under general economic settings

Chuan-Zhong Li, Uppsala University

Discussant: Tommi Ekholm, Aalto University

CLIMATE POLICY

Room: Handels: Malmsten

Chair: Antonio Bento, University of Southern California

Siting Solar PV Capacity to Maximize Environmental Benefits

Steven Sexton, Duke University Sanford School of Public Policy; Justin Kirkpatrick, Duke University Program in Environmental Policy; Robert Harris, Duke University; Nicholas Muller, Carnegie Mellon University

Discussant: Jean-Philippe Nicolai, ETH Zurich

North-South diffusion of climate-mitigation technologies: The crowding-out effect on relocation

Jean-Philippe Nicolai, ETH Zurich; Julie Ing, University of Rennes

Discussant: Hermann Held, Universität Hamburg

Replacing temperature targets by subsidiary targets: How accurate are they? - Overshooting vs. economic losses

Lukas Stein, Universität Hamburg; **Hermann Held**, Universität Hamburg; Mohammad M. Khabbazan, Universität Hamburg

Discussant: Antonio Bento, University of Southern California

A New Approach to Measuring Climate Change Impacts and Adaptation

Antonio Bento, University of Southern California

Discussant: Steven Sexton, Duke University Sanford School of Public Policy

CONSERVATION

Room: Handels: B44

Chair: François Libois, Paris School of Economics and INRA

Introducing Conservation Auctions Into an Existing PES Program

Natasha James, USDA Forest Service, North Carolina State University; **Liv Lundberg**, Chalmers University of Technology; Erin Sills, North Carolina State University

Discussant: Prasenjit Banerjee, Manchester

SOCIAL REWARDS AND THE DESIGN OF VOLUNTARY INCENTIVE MECHANISM FOR BIODIVERSITY PROTECTION ON FARMLAND

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

Discussant: Marc Conte, Fordham University

Information Access, Conservation Practice Choice, and Rent Seeking in Conservation Procurement Auctions: Evidence from a Laboratory Experiment

Marc Conte, Fordham University; Simanti Banerjee, University of Nebraska, Lincoln

Discussant: François Libois, Paris School of Economics and INRA

Government Incentives for Private Ownership of Public Goods: Theory and Evidence from Belgium

François Libois, Paris School of Economics and INRA; Astrid Similon, University of Namur; Gani Aldashev, Université Libre de Bruxelles; Joaquin Morales Belpaire, University of Namur

Discussant: Liv Lundberg, Chalmers University of Technology

ECOSYSTEM SERVICES AND BIODIVERSITY

Room: Handels: CG salen

Chair: Dawit Mulatu, Environment and Climate Research Center (ECRC) at Ethiopian Development Research Institute (EDRI)

A Green Gold Standard? Biogenic carbon accounting in the case of carbon neutral certified coffee from Costa Rica

Athena Birkenberg, University of Hohenheim; Sigrun Wagner, The Manchester Metropolitan University; Thomas Hilger, University of Hohenheim; Peter Läderach, International Center for Tropical Agriculture (CIAT); Regina Birner, University of Hohenheim

Discussant: Zachary Brown, North Carolina State University

The Price of Evolution: Applying Natural Capital Theory to Evaluate the Costs of Resistance

Zachary Brown, North Carolina State University

Discussant: Wiktor (Vic) Adamowicz, University of Alberta

Payments versus subsidized loans in payment for ecosystem services schemes under conditions of capital market failures.

Alicia Entem, University of Alberta; Patrick Lloyd-Smith, University of Saskatchewan; Mani Rouhi Rad, Yale School of Forestry and Environmental Studies; Eli Fenichel, Yale School of Forestry and Environmental Studies; **Wiktor (Vic) Adamowicz**, University of Alberta

Discussant: Dawit Mulatu, Environment and Climate Research Center (ECRC) at Ethiopian Development

Research Institute (EDRI)

Valuing Resident's preferences for improved urban ecosystem services: Recreation, economic space development and nature restoration in Addis Ababa, Ethiopia

Dawit Mulatu, Environment and Climate Research Center (ECRC) at Ethiopian Development Research Institute (EDRI); Jessica Alvsilver, UNDP; Juha Siikamäki, International Union for Conservation of Nature

Discussant: Athena Birkenberg, University of Hohenheim

ENVIRONMENT AND DEVELOPMENT: AGRICULTURE AND CLIMATE

Room: Handels: F45

Chair: Guillermo Montt, International Labour Organization

Impacts of climate change Adaptation on food security: Evidence from Semi-Arid, Kenya

S. Wagura Ndiritu, Strathmore University; Geoffrey S. Muricho, International Crops Research Institute for the Semi Arid Tropics (ICRISAT)

Discussant: Ridhima Gupta, IISER Bhopal

White Revolution in India: Estimating the Environmental Impact.

Amlan Das Gupta, Institute of Financial Management and Research; **Ridhima Gupta**, IISER Bhopal

Discussant: Jill Caviglia-Harris, Salisbury University

Averting Behavior and Climate Change in the Brazilian Amazon: Estimating the Impact of Changes in Seasonal Water Availability on Dairy Production

Jill Caviglia-Harris, Salisbury University; Trent Biggs, San Diego State University; Daniel Harris, Salisbury University; Katrina Mullan, University of Montana; Erin Sills, North Carolina State University

Discussant: Guillermo Montt, International Labour Organization

How sustainable agriculture impacts rural economies: Conservation agriculture and working conditions in sub-Saharan Africa

Guillermo Montt, International Labour Organization; Trang Luu, Graduate Institute of International and Development Studies

Discussant: S. Wagura Ndiritu, Strathmore University

ENVIRONMENTAL POLICY: IMPACT

Room: Handels: D32

Chair: Iivo Vehviläinen, Aalto University

Escalation of Scrutiny: The Gains from Dynamic Enforcement of Environmental Regulations

Wesley Blundell, California State University, East Bay; Gautam Gowrisankaran, University of Arizona, HEC Montreal, and NBER; Ashley Langer, University of Arizona

Discussant: Tobias Häggmark, Swedish University of Agricultural Sciences

The Impact of Water Quality Policies on Innovation in Nitrogen and Phosphorus Technology in Sweden

Tobias Häggmark, Swedish University of Agricultural Sciences; Katarina Elofsson, Swedish University of Agricultural Sciences

Discussant: Morten Endrikat, RWTH Aachen University

The effect of environmental quality on welfare accounting

Almut Balleer, RWTH Aachen University; **Morten Endrikat**, RWTH Aachen University

Discussant: Iivo Vehviläinen, Aalto University

Collusive Cross-ownership and Exit: Theory and Application to Nuclear

Iivo Vehviläinen, Aalto University; Matti Liski, Aalto University School of Economics

Discussant: Wesley Blundell, California State University, East Bay

ENVIRONMENTAL POLICY: MARKET-BASED INSTRUMENTS

Room: Handels: C22

Chair: Reid Dorsey-Palmateer, Western Washington University

The Rebound Effect of Food Waste Reduction Policies

Brian Roe, Ohio State University; Danyi Qi, Ohio State University

Discussant: Valeria Grippo, University of Basilicata

AN EMPIRICAL ASSESSMENT OF THE RELATION BETWEEN LANDFILL TAXATION AND HOUSEHOLD WASTE PRODUCTION IN ENGLAND

Valeria Grippo, University of Basilicata; Luca Panzone, University of Newcastle Upon Tyne, School of Natural and Environmental Sciences; Diogo Monjardino Souza Monteiro, School of Natural and Environmental Sciences, Newcastle University

Discussant: Alaz Munzur, University of Calgary

Pricing Carbon in Canada: An Analysis of the Pan-Canadian Framework on Clean Growth and Climate Change

Alaz Munzur, University of Calgary

Discussant: Reid Dorsey-Palmateer, Western Washington University

The Effect of Carbon Taxation on Cross Border Competition and Energy Efficiency Investments

Reid Dorsey-Palmateer, Western Washington University; Ben Niu, St John Fisher College

Discussant: Brian Roe, Ohio State University

FISHERIES: EMPIRICAL STUDIES OF CREDIT, RISK, CONTRACTS AND MONITORING

Room: Haga: B210

Chair: César Salazar, University of Bio-Bio

Fisher participation in monitoring: Its effect on fishers' capital investment behavior in a fishery with area-based management systems

Chi Nguyen, The University of Western Australia; Atakelty Hailu, University of Western Australia; Steven G. M. Schilizzi, Western Australia University; Sayed Ifekhar, University of Western Australia

Discussant: Ruth Beatriz Mezzalana Pincinato, Department of Industrial Economics, University of Stavanger

Production Risk in the Norwegian Fisheries

Ruth Beatriz Mezzalana Pincinato, Department of Industrial Economics, University of Stavanger; Frank Asche, (1) Institute for Sustainable Food Systems and School of Forest Resources and Conservation, University of Florida, Gainesville; (2) Dep. of Industrial Economics, University of Stavanger; Andreea Cojocaru, Department of Industrial Economics, University of Stavanger; Kristin Roll, (1) School of Business, University College of Southeast Norway; (2) Department of Industrial Economics, University of

Stavanger

Discussant: Frederik Noack, University of British Columbia

Credit Market Development and Resource Extraction: Evidence from Global Fisheries

Frederik Noack, University of British Columbia; Christopher Costello, University of California, Santa Barbara

Discussant: César Salazar, University of Bio-Bio

The impact of collective use rights on share contracts. The case of the Extractive Artisanal Regime (RAE) in the Chilean hake fisheries.

César Salazar, University of Bio-Bio; Jorge Dresdner, Universidad de Concepción

Discussant: Chi Nguyen, The University of Western Australia

HEALTH AND ENVIRONMENT

Room: Handels B23

Chair: Cristobal Ruiz-Tagle, University of Maryland

Health co-benefits from air pollution and mitigation costs of the Paris Agreement: a modelling study

Jon Sampedro, Basque Centre for Climate Change (BC3); Anil Markandya, BC3 Basque Centre for Climate Change, University of Bath; Steven Smith, Joint Global Change Research Institute, Pacific Northwest National Laboratory; Rita Van Dingenen, Joint Research Centre, Energy, Transport and Climate Directorate; Cristina Pizarro-Irizar, Basque Centre for Climate Change (BC3); Iñaki Arto, Basque Centre for Climate Change (BC3); Mikel Gonzalez-Eguino, Basque Centre for Climate Change (BC3)

Discussant: Yana Jin, College of William Mary

Valuing Health Risk Reductions from Air Quality Improvement: Evidence from a New Discrete Choice Experiment in China

Yana Jin, College of William Mary; Henrik Andersson, TSE; Zhang Shiqiu, Peking University

Discussant: Cristobal Ruiz-Tagle, University of Maryland

Ambient Air Pollution and Infant Mortality in Emerging Economies: Evidence from Santiago, Chile

Cristobal Ruiz-Tagle, University of Maryland; Sebastian Miller, Inter-American Development Bank

Discussant: Balazs Stadler, OECD University of East Anglia

The economic cost of air pollution: Evidence from Europe

Antoine Dechezlepretre, London School of Economics; Nicholas Rivers, University of Ottawa; **Balazs Stadler**, OECD University of East Anglia

Discussant: Jon Sampedro, Basque Centre for Climate Change (BC3)

NATURAL DISASTERS

Room: Handels: F43

Chair: Avichal Mahajan, Institute of Economics and Econometrics, University of Geneva

Coastal Wetlands Reduce Property Damage During Tropical Cyclones

Richard Carson, University of California, San Diego; Fanglin Sun, University of California, San Diego

Discussant: Can Askan Mavi, University Paris 1 Panthéon Sorbonne- Paris School of Economics

What Can Abrupt Events Tell Us About Sustainability?

Can Askan Mavi, University Paris 1 Panthéon Sorbonne- Paris School of Economics

Discussant: Niko Jaakkola, Ifo Institut

Sea level rise and the social cost of flood insurance subsidies

Niko Jaakkola, Ifo Institut; Terrence Iverson, Colorado State University

Discussant: Avichal Mahajan, Institute of Economics and Econometrics, University of Geneva

Adaptation to Negative Rainfall Shocks: Evidence from Ethiopia

Avichal Mahajan, Institute of Economics and Econometrics, University of Geneva; Salvatore Di Falco, University of Geneva

Discussant: Richard Carson, University of California, San Diego

POLICY SESSION: BEST PRACTICES IN REVEALED PREFERENCE APPROACHES FOR NONMARKET VALUATION METHODS THAT INFORM ENVIRONMENTAL POLICY

Room: Handels: B33

Organizer(s): Catherine Kling, Iowa State/Cornell University

Chair: Catherine Kling, Iowa State/Cornell University

The results from hedonic property value studies, hedonic wage studies, and recreation demand modeling are a critical component of the benefit estimates used by national and state government to guide policy design. Yet, unlike a key alternative, stated preference methods, professionally accepted guidance identifying the best practices that researchers should follow when generating benefit estimates to inform policy analyses is lacking. In this session, three papers that have been commissioned by REEP to develop best practice guidance in these three areas will be presented. Session attendees will be encouraged to provide constructive input to paper authors for them to incorporate in subsequent revisions. Final papers will be formally peer reviewed and, subject to review, published in REEP.

Panelist(s): Nicolai V. Kuminoff, Arizona State University NBER;

Kelly Bishop, Arizona State University;

Spencer Banzhaf, Georgia State University;

Kevin Boyle, University of Maine;

Jaren Pope, Brigham young University;

Chris Timmins, Duke University;

Kathrine vonGravenitz, University of Mannheim;

Catherine Kling, Iowa State/Cornell University;

Mary Evans, Claremont McKenna;

Laura Taylor, North Carolina State University;

frank lupi, Michigan State University, USA;

Daniel Phaneuf, University of Wisconsin;

Roger von Haefen, North Carolina State University

POLICY SESSION: ECONOMIC EXPERIMENTS FOR THE DESIGN OF PAYMENTS FOR ECOSYSTEM SERVICES

Room: Handels: E 44/GBJ-
room

Organizer(s): Elisabeth Gsottbauer, University of Innsbruck; Stefanie Engel, Institute of Environmental Systems Research, Osnabrueck University

Chair: Elisabeth Gsottbauer, University of Innsbruck

Given the growing trend of proposing Payments for Ecosystem Services (PES) schemes to counteract biodiversity and ecosystem loss and the fact that PES are a fairly new instrument, many open questions remain concerning the optimal design of PES programs. This policy session will explore the efforts to incorporate insights from economic experiment into a more effective design of PES policies. In particular, methodological challenges associated with the use of experimental approaches to evaluate PES will be discussed, including both lab and field experiments as well as randomized control trials (RCT). The session is comprised of researchers and people working close to policy makers to present their experimental and behavioural research and shed some light on how their results can enhance the design and implementation of PES programs.

Panelist(s): Jetske Bouma, Netherlands Environmental Assessment Agency (PBL);
Stefanie Engel, Alexander-von-Humboldt Professorship of Environmental Economics,
Universität Osnabrück;
Daan van Soest, Tilburg University;
Anna Norden, Chalmers;
Maria Alejandra Velez, Universidad de los Andes

POLICY SESSION: GLOBAL-LOCAL INTERACTIONS IN WATER
POLICY: LEARNING FROM COUNTRY EXPERIENCES

Room: Handels: E43

Organizer(s): Ariel Dinar, University of California, Riverside; Jose Albiac, CITA

Chair: Ariel Dinar, University of California, Riverside, School of Public Policy

Many countries around the world face endemic water scarcity problems. Some even face extreme droughts and floods, as well as degraded water quality, which affect multiple sectors of the economy and the natural environment. Current climate change research predicts episodes of drought to become longer, more frequent, and more extreme. Therefore the pressure on existing water resources would further be exacerbated. Countries are considering and developing policies to deal with the immediate and long-term implications of water scarcity and deteriorated quality in their countries. Policymakers of water resources look into a long-term set of policies that change the way water is valued, allocated and used in the country.

While the policies that are developed for the purpose of a given country may serve the conditions of that country, still those may also be relevant for reforms considered by and conditions in other countries. Conversely, the use of policy interventions to influence efficient and equitable water allocation and use, which is developed in one country may also benefit from looking at lessons learned elsewhere.

The proposed session will convene international experts to share experience from their countries in policy reforms in the water sector. Scholars and policy analysts from Canada, Israel, Mexico, South Africa, and Spain will present and contrast their country experiences, which illustrate how water policies were designed to address a set of problems in each country and how some of the policy interventions experienced in one country can be considered in other countries. These presentations will lead to discussion of how economic incentives and other policy instruments might be used to address some of the challenges faced by water economies in various countries.

Panelist(s): Ariel Dinar, University of California, Riverside, School of Public Policy;
Diane Dupont, Brock University;

Nir Becker, Tel-Hai College;
Hilda R. Guerrero García-Rojas, Universidad Michoacana de San Nicolás de Hidalgo,
Mexico;
Jose Albiac, CITA;
Derek Weston, Pegasys

**RENEWABLE ENERGY POLICY: DIFFUSION AND
CONSTRAINTS**

Room: Haga: B225

Chair: Javier López Prol, University of Graz

Accelerating diffusion of climate-friendly technologies: a network perspective

Solmaria Halleck Vega, Paris School of Economics; Antoine Mandel, Paris School of Economics, University
Paris 1 Panthéon-Sorbonne; **Katrin Millock**, Paris School of Economics, CNRS

Discussant: Hyeongyul Roh, North Carolina State University

**Wind Generation, Inefficiency, and Market Power in Electricity Markets: Counterfactual
Prediction with Dynamic Neural Networks for Causal Inference**

Hyeongyul Roh, North Carolina State University

Discussant: Nils May, DIW Berlin

Too good to be true? How time-inconsistent renewable energy policies deter investments

Nils May, DIW Berlin; Chiappinelli Olga, DIW Berlin

Discussant: Javier López Prol, University of Graz

The cannibalization effect of wind and solar in the California wholesale electricity market

Javier López Prol, University of Graz; Karl Steininger, University of Graz; David Zilberman, University of
California, Berkeley

Discussant: Katrin Millock, Paris School of Economics, CNRS

RESOURCES: THEORY

Room:

Chair: Gardner Brown, University of Washington

**Local and Global Market Interactions between Aquaculture and Multi-species Fisheries: a
Theoretical and Empirical Analysis**

Christian Bogmans, International Monetary Fund; Daan van Soest, Tilburg University

Discussant: Nori Tarui, University of Hawaii at Manoa

**Open-Access Renewable Resources and Urban Unemployment: Dual Institutional Failures in
a Small Open Economy**

Nori Tarui, University of Hawaii at Manoa; Daitoh Ichiroh, Keio University

Discussant: Scott Barrett, Columbia University

The Malaria Eradication Game

Scott Barrett, Columbia University

Discussant: Gardner Brown, University of Washington

Variable Forest Rotation Times with Leaves Swept and Carbon Credits

Zhi Li, Xiamen University; **Gardner Brown**, University of Washington; Gunnar Kohlin, University of
Gotheborg; Wisdom Akpalu, University of Ghana; David Ragozin, University of Washington

Discussant: Christian Bogmans, International Monetary Fund

**THEMATIC SESSION: ADAPTATION TO CLIMATE CHANGE IN
THE DEVELOPING WORLD: EVIDENCES AND CHALLENGES**

Room: Handels: SEB

Organizer(s): Peter Berck, UC Berkeley; Cyndi Berck, Berck Editorial; Salvatore Di Falco, University of Geneva

Chair: Salvatore Di Falco, University of Geneva

This session will present an overview of existing empirical evidence on the economics of adaptation to climate change. A set of micro empirical studies from the developing world will be presented. The emphasis is placed on the lessons learnt and the future scientific and policy challenges.

**Good Things Come in Packages: Sustainable Intensification Systems in Smallholder
Agriculture**

Hailemariam Teklewold, Ethiopian Development Research Institute; Cyndi Berck, Berck Editorial

**Ambiguity Aversion and Demand for Weather Information in Agricultural Technology
Adoption; Case of Namibia**

Martine Visser, University of Cape Town; **Chalmers Mulwa**, University of Cape Town

Climate Change Adaptation and Livestock Activity Choice in the Nile Basin of Ethiopia
Zenebe Gebreegziabher, Mekelle University

THEMATIC SESSION: CATASTROPHES AND LEARNING

Room: Handels: E45

Organizer(s): Matti Liski, Aalto University School of Economics; David Martimort, PSE; Tuomas Laiho, University of Oslo

Chair: Matti Liski, Aalto University School of Economics

Information Acquisition in Common Pool Problems

Olli-Pekka Kuusela, Oregon State University; **Tuomas Laiho**, University of Oslo

Tipping points, delays, and the control of catastrophes

Matti Liski, Aalto University School of Economics; Francois Salanie, Toulouse School of Economics

**Precaution, Information and Time-Consistency: A Few Thoughts on the Precautionary
Principle**

David Martimort, PSE

**THEMATIC SESSION: DEEP UNCERTAINTY, RATIONALITY
AND CLIMATE CHANGE ECONOMICS**

Room: Handels: C33

Organizer(s): Loïc Berger, ; Daniel Heyen, London School of Economics and Political Science; Phoebe Koundouri, School of Economics, Athens University of Economics and Business, Greece; CCCEP, London School of Economics and Political Science, UK; International Center for Research on the Environment and the Economy (ICRE8), Greece

Chair: Loïc Berger,

Uncertainty is pervasive. If this assertion is true for most problems implying a decision to be made, it is of particular importance when considering decisions with global, long-lasting and potentially irreversible consequences. Among a variety of other examples, the environmental challenge faced by humanity concerning global climate change illustrates particularly well the importance of considering deep uncertainty when making a decision.

Specifically, climate change policy whether at a local, national or international scale requires dealing with the presence of uncertainty on many dimensions. Although it is now fully recognized that the presence of these uncertainties represents an essential datum of the climate change issue, the way they should be treated and integrated in the models we use to make predictions, or to design public policies remains an open issue.

In this session, we explore and critically assess new ways of dealing with deep uncertainty in the context of environmental decision-making and climate change economics in particular.

Model Uncertainty in Climate Change Economics

Loïc Berger, ; Massimo Marinacci, Bocconi University

Ambiguity Aversion, Modern Bayesianism and Small Worlds

Phoebe Koundouri, School of Economics, Athens University of Economics and Business, Greece; CCCEP, London School of Economics and Political Science, UK; International Center for Research on the Environment and the Economy (ICRE8), Greece; Nikitas Pittis, University of Piraeus; Panagiotis Samartzis, zDepartment of Banking and Financial Management, University of Piraeus, Greece; School of Economics, Athens University of Economics and Business, Greece; International Center for Research on the Environment and the Economy, Greece; Nikolaos Englezos, Department of Banking and Financial Management, University of Piraeus, Greece; International Center for Research on the Environment and the Economy (ICRE8), Greece; Andreas Papandreou, Athens University

Managing the precaution-efficiency trade-off with a flexible margin of safety

Daniel Heyen, London School of Economics and Political Science

THEMATIC SESSION: NEW DIRECTIONS IN SOCIAL DISCOUNTING: FROM FINANCE TO PHILOSOPHY

Room: Handels: Aulan

Organizer(s): Antony Millner, London School of Economics and Political Science

Chair: Antony Millner, London School of Economics and Political Science

The social discount rate converts the future costs and benefits of public projects into present values, and thus has a substantial impact on the evaluation of policies with long-run consequences, e.g. climate change mitigation. This thematic session will discuss recent developments in the theory and practice of social discounting, with an emphasis on environmental applications. The session will have a pedagogical flavour, drawing on the expertise of researchers who approach the study of social discount rates from a variety of perspectives, including finance, philosophy, social choice, and policy practice.

Ethical asset valuation and the good society

Christian Gollier, IDEI, Université de Toulouse

Discounting and the Social Cost of Carbon

Maureen Cropper, University of Maryland

Separability, discounting, and population ethics

John Broome, University of Oxford

Discounting, disagreement, and social choice

Antony Millner, London School of Economics and Political Science

THEMATIC SESSION: REFORMING THE EU ETS WITH A MINIMUM AUCTION PRICE

Room: Handels: Volvo

Organizer(s): Cameron Hepburn, Oxford University

Chair: Cameron Hepburn, Oxford University

The EU Emissions Trading System has been characterized by chronically low allowances prices that are below the level necessary to drive new investment, leaving some member states to pursue overlapping policies. The European Commission has introduced a market stability reserve, but thus far the introduction of a minimum auction (reserve) price has been avoided. This collection of papers examines the arguments for and against a minimum price in emissions trading programs, with focus on the EU. The first paper provides a sweeping review of the need for a price floor in trading programs, especially in view of intertemporal efficiency. The second provides a deep engagement with the arguments against a minimum price from the perspective of law and economics. The third examines the influence that a minimum price would have, measured from a welfare perspective and with respect to distributional outcomes. The fourth examines the properties of coalitions that might form within the EU to implement a minimum price through actions taken at the member state level. Together, these papers provide a rigorous and comprehensive treatment of an important potential reform of the EU trading program, with theoretical and practical relevance.

Decarbonization and EU ETS Reform: The role of a carbon price floor

Christian Flachsland, Mercator Research Institute on Global Commons and Climate Change (MCC); Ottmar Edenhofer, Potsdam Institute for Climate Impact Research, Mercator Research Institute on Global Commons and Climate Change, Berlin Institute of Technology; Nicolas Koch, Mercator Research Institute on Global Commons and Climate Change (MCC); Ulrike Kornek, Mercator Research Institute on Global Commons and Climate Change (MCC); Michael Pahle, Potsdam Institute for Climate Impact Research (PIK); Christoph Wolff, European Climate Foundation; Lisa Katharina Schmid, Ecologic; Anna Leipprand, Mercator Research Institute on Global Commons and Climate Change (MCC)

Preserving the integrity of the EU ETS under unilateral action

Michael Pahle, Potsdam Institute for Climate Impact Research (PIK); Dallas Burtraw, Resources for the Future; Oliver Tietjen, Potsdam Institute for Climate Impact Research; Christian Flachsland, Mercator Research Institute on Global Commons and Climate Change (MCC); Ottmar Edenhofer, Potsdam Institute for Climate Impact Research, Mercator Research Institute on Global Commons and Climate Change, Berlin Institute of Technology

The Legal and Economic Case for an Auction Reserve Price in the EU Emissions Trading System

Carolyn Fischer, Resources for the Future; Leonie Reins, Tilburg University; Dallas Burtraw, Resources for the Future; Asa Löfgren, University of Gothenburg; Lars Zetterberg, IVL Swedish Environmental Research Institute; Michael Mehling, MIT; Stefan Weishaar, University of Groningen; Kati Kulovesi, University of Eastern Finland; Harro van Asselt, University of Eastern Finland

Emissions reserve price options for EU member states

Carolyn Fischer, Resources for the Future; Christoph Böhringer, University of Oldenburg

THEMATIC SESSION: SUSTAINABLE ELECTRICITY FOR ALL

Room: Handels: SKF

Organizer(s): Shoibal Chakravarty, Ashoka Trust for Research in Ecology and the Environment; Eswaran Somanathan, Indian Statistical Institute

Chair: Shoibal Chakravarty, Ashoka Trust for Research in Ecology and the Environment

Determinants of Enterprises Use of Energy Efficient Technologies: Evidence from Urban Ethiopia

Sied Hassen, Environment and Development Initiative; Ethiopian Development Research Institute; Tagel Gebrehiwot, Ethiopian Development Research Institute; Tiruwork Arega, Ethiopian Development Research Institute

Preferences for Improved Electricity Services in Developing Countries

Tensay Hadush Meles, Mekelle University and University College Dublin

The Levelized Costs of Electricity Generation by the CDM Power Projects

Shaikh Rahman, Texas Tech University; Randall Spalding-Fecher, Carbon Limits A/S; Erik Haites, Margaree Consultants; Grant Kirkman, United Nations Climate Change Secretariat

TRANSPORT

Room: Handels: F44

Chair: Snorre Kverndokk, Frisch Centre

The Impact of High Occupancy Vehicle Lanes on Vehicle Miles Traveled

Sharon Shewmake, Western Washington University

Discussant: Davide Cerruti, ETH Zürich

The impact of policy awareness: Evidence from vehicle registration taxes in Switzerland

Davide Cerruti, ETH Zürich; Claudio Daminato, ETH Zürich; Massimo Filippini, ETH Zürich

Discussant: Jorge Bonilla, Universidad de los Andes

Should we blame buses? Bus strikes and air quality

Jorge Bonilla, Universidad de los Andes

Discussant: Snorre Kverndokk, Frisch Centre

Will I change my driving habits if a neighbor buys an emissions-free car? Unintended effects of environmental policies

Snorre Kverndokk, Frisch Centre; Jon Hovi, Department of Political Science, University of Oslo; Erik Figenbaum, Institute of Transport Economics

Discussant: Sharon Shewmake, Western Washington University

VALUATION: METHOD

Room: Handels: B32

Chair: Roy Brouwer, The Water Institute / University of Waterloo

A multiple indicator solution approach to endogeneity in discrete-choice models for environmental valuation

David Hoyos, University of the Basque Country (UPV/EHU); Petr Mariel, University of the Basque Country (UPV/EHU); Alaitz Artabe, University of the Basque Country (UPV/EHU); Angelo Guevara, Universidad de Chile

Discussant: Klaus Glenk, Scotland's Rural College

Are Willingness to Pay Estimates Derived from Discrete Choice Experiments Plausible? An Investigation of Overshooting Using a Simple Criterion

Klaus Glenk, Scotland's Rural College; Jürgen Meyerhoff, TU Berlin; Sergio Colombo, Institute of Agricultural Research and Training (IFAPA); Michela Faccioli, The James Hutton Institute; the University of Exeter

Discussant: Roy Brouwer, The Water Institute / University of Waterloo

Income inequality and benefit transfers: Evidence and counter-evidence

Mehmet Kutluay, IVM, VU University Amsterdam; **Roy Brouwer**, The Water Institute / University of Waterloo; Richard Tol, Department of Economics, University of Sussex

Testing Hypothetical Bias in a Field Experiment

Roy Brouwer, The Water Institute / University of Waterloo; Solomon Tarfasa, Hawassa University

Discussant: David Hoyos, University of the Basque Country (UPV/EHU)

WATER: BEHAVIOR

Room: Haga: Dragonen

Chair: Philippe Le Coënt, Center of Environmental Economics of Montpellier, INRA

Spreading the word: Effects from a nudge on residential water conservation. A field experiment in small urban villages in Colombia

Jose David Lopez, Los Andes University

Discussant: Daniel Brent, Louisiana State University

Price Perceptions in Water Demand

Daniel Brent, Louisiana State University; Michael Ward, Monash University

Discussant: Noemi Padrón-Fumero, Universidad de La Laguna

The impact of smart meters on water consumption: evidence from Canary Islands

Noemi Padrón-Fumero, Universidad de La Laguna; Eugenio Diaz Farina, Universidad de la Laguna; Claudio Daminato, ETH Zürich; Massimo Filippini, ETH Zurich

Discussant: Philippe Le Coënt, Center of Environmental Economics of Montpellier, INRA

Heterogeneous Impacts of Social Comparison Nudges on Farmer's Water Consumption: Evidence from a Randomized Control Trial using Smart Meters

Philippe Le Coënt, Center of Environmental Economics of Montpellier, INRA; Sylvain Chabé-Ferret, Toulouse School of Economics; Arnaud Reynaud, Toulouse School of Economics; Julie Subervie, French

National Institute for Agricultural Research (INRA)
Discussant: Jose David Lopez, Los Andes University

Coffee break

Thursday, 10.15-10.45

Room: Handels / Haga

Awards

Thursday, 10.45-11.15

Room: Smyrna

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- AERE Publication of Enduring Quality
 - The Ralph C. dArge and Allen V. Kneese Award for Outstanding Publication in the Journal of the Association of Environmental and Resource Economists
 - EAERE Award for Outstanding Publication in the Journal Environmental and Resource Economics
 - European Achievement Award for Researchers in Environmental Economics under the Age of Forty
 - EAERE Award for ERC Grants Laureates in the field of environmental and resource economics

Thursday, 11.15-12.15

Plenary

PLENARY

Room: Smyrna

Meredith Fowlie: Carbon Pricing in the Real World

Chair: Carolyn Fischer

Economists generally agree that carbon pricing should be a core component of any policy response to climate change. But this compelling economic idea has not been easy to translate into politically feasible policy. Over the past two decades, experimentation around the world has been progressing slowly and with mixed results. A growing body of empirically-motivated research is helping us to understand how these carbon pricing programs are working. I will unpack some of the empirical evidence on carbon pricing impacts across a range of economic outcomes. Recent research also focuses our attention on some enduring challenges. I will consider, in particular, the challenges inherent in carbon pricing programs that regulate only a subset of the sources contributing to the global climate change problem. The tenuous link between economic research on emissions "leakage" and the real-world policy response raises some important questions about our role as economists in moving the policy implementation ball forward.

Lunch

Thursday, 12.15-13.45

MEETINGS

Room: Handels

IAERE meeting (Room: D32)

EDE Editorial Board Meeting* (Room: C31)

ERE Editorial Board Meeting* (Room: C32)

JAERE Editorial Board Meeting* (Room: C35)

REEP Editorial Board Meeting* (Room: C33)

*Invitation only

POSTER SESSION

Room: Handels: C34

"Comply or Explain" Type Meta-regulation as an Alternative of Conventional Regulation

Takuro Miyamoto, Tohoku Gakuin University; Ryo Ishida, Policy Research Institute, Ministry of Finance Japan

Addressing the institutional challenges of groundwater management in semi-arid areas with rapid urbanization – Results of a Framed Field Experiment

Johannes Wegmann, University of Goettingen; Oliver Mußhoff, Georg-August-University Göttingen

An economic comparison of adaptation strategies towards a drought-induced risk of forest decline: financial vs. carbon balance

Sandrine Brêteau-Amores, Bureau for Economic Theory and Applications BETA (INRA); Marielle Brunette, INRA; Hendrik Davi, Écologie des Forêts Méditerranéennes (INRA)

Are households' residential preferences consistent with biodiversity potential of different urban contexts?

Gengyang TU, Grenoble School of Management; Camille Regnier, Université de Bourgogne-Franche-Comté; Mohamed Hilal, INRA; Sophie Legras, INRA; Cecile Detang-dessendre, INRA

The value of wild pollination services to crop productivity: What does gender of the smallholder farmer got to do with it?

Byela Tibesigwa, Environment for Development (Efd), University of Dar es Salaam, Tanzania; Juha Siikamäki, International Union for Conservation of Nature; Razack Lokina, University of Dar es Saalam; Jessica Alvsilver, EPA

Bioenergy Prospects in Mexico: Biorefineries at the West Region

Hector Nuñez, CIDE

Flood risk perception and housing prices. A hedonic analysis for Boulder County, Colorado

Hannah Hennighausen, University of Graz / Wegener Center; Jordan Suter, Colorado State University

Green Nudge in Practice: Application to Municipal Solid Waste (MSW)

Catherine Boulatoff, Dalhousie University; Mevlude Akbulut-Yuksel, Dalhousie University, IZA and HICN

Green, yellow or red lemons? An experiment on the perception of houses energy labels.

Edouard Civel, Paris-Nanterre University; Nathaly Cruz, Paris-Nanterre University

Household Electricity Demand Under Mixed Price System

YANG ZHOU, Fudan university

Insurance and forest rotation decisions under storm risk

Marielle Brunette, INRA; Stéphane COUTURE, INRA MIAT; Patrice Loisel, MISTEA

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

Hsiao-Chi CHEN, Dept. of Economics, National Taipei University; Yunshyong Chow, Institute of Mathematics, Academia Sinica; Shi-Miin Liu, National Taipei University

Investigating the preferences of remote beneficiaries for sustainable tourism development: the case of Fiji

Gaetano Grilli, Centre for Environment Fisheries and Aquaculture Science - Cefas

Land Resource Utilization System and Risk-coping Strategies on the Mongolian Plateau

Shunji Oniki, Japan International Research Center for Agricultural Sciences; Kadirbyek Dagys, Mongolian University of Life Sciences; Fulin Du, Inner Mongolia Agricultural University; Gensuo B, Inner Mongolia Agricultural University

Market-level implications of regulating forest carbon storage and albedo for climate change mitigation

Aapo Rautiainen, Natural Resources Institute Finland (Luke); Jussi Lintunen, Natural Resources Institute Finland (Luke); Jussi Uusivuori, Natural Resources Institute Finland

Migrant remittances can reduce the potential of forest transitions

Daniel Ospina, Stockholm University; Garry Peterson, Stockholm university; Anne-Sophie Crepin, Beijer Institute of Ecological Economics

Optimal energy mix under uncertainty for Ghana

MICHAEL OWUSU APPIAH, City University of Hong Kong

Reallocating Water along a River: A Multilateral Bargaining Experiment with a Veto Player

Zhi Li, Xiamen University; Xin Zhang, Xiamen University; Wenchao Xu, Xiamen University

Repeated Conservation Auctions and the (In)efficiency of Withholding Information

Greg Smith, LEEP, University of Exeter; Brett Day, LEEP, University of Exeter; Amy Binner, University of Exeter

Subjective well-being, energy poverty and the combination of objective and subjective indicators

Rinaldo Brau, University of Cagliari; Erica Delugas, University of Cagliari

The effects of forest change on agricultural productivity: Evidence from Indonesia

Yuki Yamamoto, Nagasaki University; Yuichi Ishimura, Osaka International University; Yosuke Shigetomi, Nagasaki University; Mitsuru Hattori, Nagasaki University

The effects of migration and pollution externality on cognitive skills in Caribbean SIDS: a Theoretical analysis

Lesly Cassin, Université Paris Nanterre

The Impact of the Crisis-Induced Reduction in Air Pollution on Infant Mortality in India: A Policy Perspective

Olexiy Kyrychenko, CERGE-EI

The Stick and the Carrot: Explaining the decision to participate in the Water Producer Programme (Brazil)

Leidimari Neves do Prado, Institut National de la Recherche Agronomique (INRA) - France; Serge Garcia, Bureau for Economic Theory and Applications (BETA); Pablo Andrés-Domenech, AgroParisTech

Value of Statistical Life connected with seismic risk. Empirical evidence from Italy

Andrea Rampa, IRCrES-CNR; Massimiliano Mazzanti, University of Ferrara; Anna Montini, Università di Bologna; Nicolò Barbieri, University of Ferrara

Parallell sessions 8
Thursday June 28, 13.45-15.30

AGRICULTURE

Room: Haga: B228

Chair: Paolo Agnolucci, University College London

A Viable and Cost-Effective Weather Index Insurance for Rice in Indonesia

Aditya Kusuma, Victoria University of Wellington; Ilan Noy, Victoria University of Wellington; Bethanna Jackson, School of Geography, Environment and Earth Sciences, Victoria University of Wellington

Discussant: Haochi Zheng, University of North Dakota

CRP or No-till? Carbon Storage in Agricultural land, a case study in Minnesota, U.S.

Haochi Zheng, University of North Dakota

Discussant: Louise Kessler, Grantham Research Institute, LSE

What are the impacts of droughts on economic growth? Evidence from U.S. states

Louise Kessler, Grantham Research Institute, LSE

Discussant: Paolo Agnolucci, University College London

The growing impact of climate change on European crops

Vincenzo De Lipsis, University College London; **Paolo Agnolucci**, University College London

Discussant: Aditya Kusuma, Victoria University of Wellington

AGRICULTURE AND WATER

Room: Handels: F45

Chair: Anita Chaudhry, California State University, Chico

Fertilizer Use and Water Quality in the United States

Jayash Paudel, University of Massachusetts Amherst; Christine Crago, University of Massachusetts Amherst

Discussant: Julie Subervie, French National Institute for Agricultural Research (INRA)

Do European agri-environment measures help reduce herbicide use? Evidence from viticulture in France

Julie Subervie, French National Institute for Agricultural Research (INRA); Laure Kuhfuss, University of St Andrews - James Hutton Institute

Discussant: Linda Fernandez, Virginia Commonwealth University

Water Quality Decisions and Policy for an Interstate Watershed

Linda Fernandez, Virginia Commonwealth University; Daniel Macgarvey, Virginia Commonwealth University

Discussant: Anita Chaudhry, California State University, Chico

Agricultural water trading restrictions and drought resilience

Anita Chaudhry, California State University, Chico; Daniel Bigelow, Economic Research Service; Jennifer Ifft, Cornell University; Steven Wallander,

Discussant: Jayash Paudel, University of Massachusetts Amherst

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels: B22

Chair: Benjamin Ouvrard, INRA

Tragedy of the Commons and Evolutionary Games in Social Networks: The Economics of Social Punishment

Jorge marco, University of Girona; Renan Goetz, University of Girona

Discussant: Greer Gosnell, London School of Economics and Political Science

Communicating Resourcefully: A Natural Field Experiment on Environmental Framing and Cognitive Dissonance in Going Paperless

Greer Gosnell, London School of Economics and Political Science

Discussant: Ann-Kathrin Koessler, Institute for Environmental Systems Research Osnabrueck

Setting new behavioural standards: Sustainability pledges and how conformity influences their outreach

Ann-Kathrin Koessler, Institute for Environmental Systems Research Osnabrueck

Discussant: Benjamin Ouvrard, INRA

Nudging with heterogeneity in terms of environmental sensitivity : a public goods experiment in networks

Anne Stenger, BETA, INRA Université de Strasbourg; **Benjamin Ouvrard**, INRA

Discussant: Jorge marco, University of Girona

CLIMATE CHANGE: IMPACT

Room: Handels: D33

Chair: Andrew Crane-Droesch, US Department of Agriculture/Economic Research Service

The Effect of Temperature on High-stakes Decision Making: Evidence from the National College Entrance Examination in China

Qu Tang, Jinan University; Peng Zhang, School of Accounting and Finance, The Hong Kong Polytechnic University; Joshua Graff Zivin, University of California, San Diego; Yingquan Song, Peking University

Discussant: Susana Ferreira, University of Georgia

Well-being Effects of Extreme Weather Events in the United States

Susana Ferreira, University of Georgia; Mona Ahmadiani, University of Georgia

Discussant: Soheil Shayegh, Fondazione Eni Enrico Mattei

Climate change impact on labor supply

Soheil Shayegh, Fondazione Eni Enrico Mattei; Vasiliki Manousi, Athens University of Economics and Business (AUEB); Shouro Dasgupta, Centro Euro-Mediterraneo sui Cambiamenti Climatici and Università Ca' Foscari Venezia

Discussant: Andrew Crane-Droesch, US Department of Agriculture/Economic Research Service

Machine Learning Approaches to Crop Yield Prediction and Climate Change Impact Assessment

Andrew Crane-Droesch, US Department of Agriculture/Economic Research Service

Discussant: Qu Tang, Jinan University

ENVIRONMENTAL POLICY

Room: Handels: C24

Chair: Dean Lueck, Indiana University

Measuring efficiency when producing intended outputs and unintended ones

Finn Forsund, University of Oslo

Discussant: Dietrich Earnhart, University of Kansas

Transboundary Pollution and Municipal Investments

Manuel Pulido-Velasquez, University of Kansas; **Dietrich Earnhart**, University of Kansas

Discussant: Simone Borghesi, University of Siena and FSR Climate - European University Institute

With or without you: A network analysis of Brexit implications for the EU ETS

Simone Borghesi, University of Siena and FSR Climate - European University Institute; Andrea Flori, IMT, School for Advanced Studies, Lucca

Discussant: Dean Lueck, Indiana University

The Origins and Size and Environmental Agencies

Dean Lueck, Indiana University; Dominic Parker, University of Wisconsin

Discussant: Finn Forsund, University of Oslo

ENVIRONMENTAL POLICY: GAMES

Room: Handels: B33

Chair: Iddo Kan, Hebrew University of Jerusalem

Asymmetric Innovation Agreements under Environmental Regulation

Emilson Silva, University of Alberta; Naoto Aoyama, Aomori Public University

Discussant: Felix Munoz-Garcia, Washington State University

Common Pool Resources with Endogenous Equity Shares

Kiriti Kanjilal, Washington State University; **Felix Munoz-Garcia**, Washington State University

Discussant: Amrita Ray Chaudhuri, University of Winnipeg

Green Technology and Patents in the Presence of Green Consumers

Amrita Ray Chaudhuri, University of Winnipeg; Corinne Langinier, University of Alberta

Discussant: Iddo Kan, Hebrew University of Jerusalem

A Two-Pronged Control of Natural Resources: Prices and Quantities with Lobbying

Iddo Kan, Hebrew University of Jerusalem; Israel Finkelshtain, Hebrew University of Jerusalem; Yoav Kislev, Hebrew University of Jerusalem

Discussant: Emilson Silva, University of Alberta

ENVIRONMENTAL POLICY: IMPACT

Room: Handels: D32

Chair: V. Brian Viard, Cheung Kong Graduate School of Business

Does Road Expansion Help Mitigate Congestion in China? An Evaluation of Vehicle-Kilometers Traveled

H. Allen Klaiber, The Ohio State University; Wei Chen, The Ohio State University

Discussant: Corbett Grainger, University of Wisconsin

The Impact of Air Pollution on Labor Supply in China

Corbett Grainger, University of Wisconsin; Mingxuan Fan, University of Wisconsin - Madison

Discussant: Hussain Alshammasi, Duke University

Air Pollution and Averting Behavior Disparities: Evidence from NYC Transportation

Hussain Alshammasi, Duke University

Discussant: V. Brian Viard, Cheung Kong Graduate School of Business

Air Pollution and Manufacturing Firm Productivity: Nationwide Estimates for China

Shihe Fu, Xiamen University; **V. Brian Viard**, Cheung Kong Graduate School of Business; Peng Zhang, School of Accounting and Finance, The Hong Kong Polytechnic University

Discussant: H. Allen Klaiber, The Ohio State University

ENVIRONMENTAL POLICY: REGULATION

Room: Handels: C22

Chair: Pauli Lappi, Ca' Foscari University

Optimality of Environmental Policy Mixes in the Presence of More than One Externality and of Strategic Firms

Nahid Masoudi, Memorial University of Newfoundland

Discussant: Chuck Mason, University of Wyoming

Transboundary Externalities and Reciprocal Taxes: A Differential Game Approach

Chuck Mason, University of Wyoming

Discussant: Philipp Richter, TU Dresden

Environmental Policy and Firm Selection in the Open Economy

Philipp Richter, TU Dresden; Udo Kreickemeier, TU Dresden

Discussant: Pauli Lappi, Ca' Foscari University

A model of optimal extraction and rehabilitation

Pauli Lappi, Ca' Foscari University

Discussant: Nahid Masoudi, Memorial University of Newfoundland

HEALTH AND ENVIRONMENT

Room: Handels: B23

Chair: Menuka Karki, Kathmandu University

The Economic Benefits versus Environmental Costs of India's Coal-Fired Power Plants

Geoffrey Barrows, Ecole Polytechnique; Teevrat Garg, University of California, San Diego; Akshaya Jha, Carnegie Mellon University

Discussant: Emily Pakhtigian, Duke University

Joint impacts of indoor and outdoor air pollution on health in Indonesia

Emily Pakhtigian, Duke University; Subhrendu Pattanayak, Duke University; Jie-Sheng Tan-Soo, National University of Singapore

Discussant: Menuka Karki, Kathmandu University

Impact of Outdoor Air Pollution on People's Respiratory Health in Kathmandu, Nepal – A Geo-Spatial Analysis

Menuka Karki, Kathmandu University; Alok Bohara, University of New Mexico; Keshav Bhattarai, University of Central Missouri

Discussant: Maureen Cropper, University of Maryland, Resources for the Future

The Global Economic Costs of Pollution and Pollution-related Diseases

Alan Krupnick, Resources for the Future; **Maureen Cropper**, University of Maryland, Resources for the Future

Discussant: Geoffrey Barrows, Ecole Polytechnique

NATURAL CAPITAL AND GREEN NATIONAL ACCOUNTING

Room: Handels: F44

Chair: Silvia Ferrini, University of Siena

How to assess sustainability by merging ecosystem service accounts with economic accounts. The case of water purification in Europe

Alessandra La Notte, European Commission - Joint Research Centre; Silvana Dalmazzone, University of Torino

Discussant: Jasper Meya, Humboldt-Universität zu Berlin

Inter- and Intragenerational Distribution and the Valuation of Natural Capital

Jasper Meya, Humboldt-Universität zu Berlin; Moritz Drupp, University of Hamburg; Stefan Baumgärtner, University of Freiburg; Martin Quaas, University of Kiel

Discussant: Joshua Abbott, Resource Economist, Associate Professor, Arizona State University

Valuing Multiple Natural Capital Stocks Under Correlated Volatility

Joshua Abbott, Resource Economist, Associate Professor, Arizona State University; Eli Fenichel, Yale School of Forestry and Environmental Studies; Seong Do Yun, Mississippi State University

Discussant: Silvia Ferrini, University of Siena

National trends and regional differences in an enhanced Genuine Savings indicator for Italy

Paola Biasi, University of Siena; **Silvia Ferrini**, University of Siena; Simone Borghesi, University of Siena and FSR Climate - European University Institute; Massimo Di Matteo, University of Siena; Benedetto Rocchi, University of Florence

Discussant: Alessandra La Notte, European Commission - Joint Research Centre

NATURAL DISASTERS

Room: Handels: F43

Chair: Daniel Osberghaus, Centre for European Economic Research (ZEW)

Weather Shocks and Labor Allocation: Evidence from Northeastern Brazil

Danyelle Branco, Universidade Federal de Viçosa; José Gustavo Feres, Institute for Applied Economic Research

Discussant: Hajare EL HADRI, Laboratoire d'Economie d'Orléans

Natural Disaster and Exports of Agricultural Products in Developing Countries

Hajare EL HADRI, Laboratoire d'Economie d'Orléans; daniel mirza, Laboratoire d'Economie d'Orléans; ISABELLE RABAUD, Laboratoire d'Economie d'Orléans

Discussant: Marcella Veronesi, University of Verona and ETH Zurich

EXTREME WEATHER EVENTS, MORTALITY, AND ENERGY PRICES: A NATURAL EXPERIMENT FROM JAPAN

Marcella Veronesi, University of Verona and ETH Zurich; Shinsuke Uchida, Nagoya City University

Discussant: Daniel Osberghaus, Centre for European Economic Research (ZEW)

The causal effect of flood experience on climate engagement: evidence from search requests for green electricity

Daniel Osberghaus, Centre for European Economic Research (ZEW); Christina Demski, School of Psychology, Cardiff University

Discussant: Danyelle Branco, Universidade Federal de Viçosa

NUCLEAR POWER

Room: Handels: C33

Chair: Sebastian Wegel, Berlin Institute of Technology (TU Berlin)

How is internal radiation exposure risk evaluated at the markets? Perceived quality degradation of Fukushima peach

SHIGERU MATSUMOTO, Aoyama Gakuin University; Hoang Viet Ngu, Senior Lecturer

Discussant: David Adler, Carnegie Mellon University

Considering the Nuclear Option: Hidden Benefits and Internalized Social Costs of Nuclear Power in the U.S. Since 1970

David Adler, Carnegie Mellon University; Akshaya Jha, Carnegie Mellon University; Edson Severnini, Carnegie Mellon University

Discussant: Tim Scherwath, German Institute for Economic Research

Identifying bottlenecks for an efficient nuclear decommissioning – An integrated view on the logistics of the German Nuclear Phase-Out

Roman Mendelevitch, Humboldt-Universität zu Berlin; **Tim Scherwath**, German Institute for Economic Research; Ben Wealer, Technische Universität Berlin

Discussant: Sebastian Wegel, Berlin Institute of Technology (TU Berlin)

Processing high-level radioactive waste in the U.S. - A mathematical model

Victoria Czempinski, Berlin Institute of Technology (TU Berlin); **Sebastian Wegel**, Berlin Institute of Technology (TU Berlin); Christian von Hirschhausen, DIW Berlin / TU Berlin; Pao-Yu Oei, TU Berlin; Ben Wealer, Technische Universität Berlin

Discussant: SHIGERU MATSUMOTO, Aoyama Gakuin University

POLICY SESSION: CONSERVATION EVALUATION 3.0: WHAT'S NEXT FOR POLICY ANALYSIS?

Room: Handels: E43

Chair: Katharine Sims, Amherst College

The last decade has seen a rapid increase in research devoted to understanding how conservation policies across the globe impact both natural resources and the economic well-being of affected communities. Researchers have applied the best available econometric tools to estimate plausibly causal effects of protected areas, payments for ecosystem services, sustainable forest certification, community-based management, deforestation-free supply chains and other policies. In 2012, researchers called for "Conservation Evaluation 2.0": a research agenda with more focus on

understanding causal mechanisms, context and heterogeneity in impacts, spillovers, and the joint analysis of economic and environmental impacts. This panel will take stock of progress towards these goals and identify key directions for the future of conservation evaluation. Audience participation is welcome, particularly by practitioners engaged in conservation policy. Invited panelists are: Erin Sills (NC State University), Renzo Giudice (University of Bonn and formerly at the Ministry of Environment, Peru), Jan Börner (University of Bonn), Daniela Miteva (The Ohio State University), Juan Robalino (CATIE-Tropical Agricultural Research and Higher Education Center-Costa Rica), and Alex Pfaff (Duke University).

Panelist(s): Katharine Sims, Amherst College;
Erin Sills, North Carolina State University;
Renzo Giudice, University of Bonn / formerly Ministry of Environment, Peru;
Jan Börner, Center for Development Research /ILR - University of Bonn;
Daniela Miteva, The Ohio State University;
Juan Robalino, Centro Agronomico Tropical de Investigacion y Ensenanza;
Alexander Pfaff, Duke University

**POLICY SESSION: PRESSING ENVIRONMENTAL PROBLEMS
IN LATIN AMERICA: KNOWLEDGE GAPS AND RESEARCH
NEEDS TO INFORM BETTER POLICY--MAKIN**

Room: Handels: E45

Organizer(s): Alejandro Lopez-Feldman, Chair, Department of Economics, Centro de Estudios y Docencia Económicas (CIDE), Mexico City, Mexico

Chair: Alejandro Lopez-Feldman, Chair, Department of Economics, Centro de Estudios y Docencia Económicas (CIDE), Mexico City, Mexico

The session will provide a forum in which researchers and policy-makers will be able to have a dialogue about the most important environmental problems that Latin America currently faces. More importantly, it will provide an opportunity to identify knowledge gaps as well as to discuss ways in which policy-makers and researchers can interact in order to achieve the implementation of evidence-based environmental policies in the region. Finally, this session will be a perfect opportunity to present the recently created Latin American Association of Environmental and Resource Economists (LAERE) to a broad audience. One of LAERE's objectives is precisely to foster the collaboration between policy-makers and researchers in Latin America to design better environmental policies.

Panelist(s): Alejandro Lopez-Feldman, Chair, Department of Economics, Centro de Estudios y Docencia Económicas (CIDE), Mexico City, Mexico;
Francisco Alpizar, Efd Central America at CATIE;
Rodrigo Arriagada, Pontificia Universidad Catolica de Chile;
Allen Blackman, Inter-American Development Bank;
Carlos Chavez, Universidad de Talca;
Santiago Guerrero, OECD;
José Luis Samaniego, CEPAL;
María Alejandra Vélez, Universidad de los Andes

**POLICY SESSION: REAL OPTIONS AND POLICY RESPONSES:
CASES FOR GAIN AND LOSE FROM DELAYED DECISIONS**

Room: Handels: B44

Organizer(s): Justus Wesseler, Wageningen University; David Zilberman, University of California, Berkeley

Chair: David Zilberman, University of California, Berkeley

The presentation discusses the effects of irreversibility on policy decisions and shows why stressing uncertainty can be an effective strategy to delay technical change which has further economic as well as policy implications. The case of Vitamin-A enriched rice (Golden Rice) is used as an illustrative example. The model presented assumes uncertainty about Angst in response to a policy decision, which has negative consequences for the decision maker (e.g. not being reelected). This provides incentives for postponing the decision. Solving the model using standard real option methods shows that one unit of Angst requires much more than one unit of benefit to compensate for. The provides an explanation why it is easier to lobby against a new technology by raising uncertainties about possible negative implications than to lobby in favor of a specific technology. This is a challenge for implementing appropriate policies to reduce potential biases as the costs can be high as illustrated by the example of Golden Rice .

Panelist(s): Justus Wesseler, Wageningen University;
David Zilberman, University of California, Berkeley;
Jinhua Zhao, Michigan State University;
Aart de Zeeuw, Tilburg University

POLICY SESSION: REGULATORY ANALYSIS AND THE TRUMP ADMINISTRATION

Room: Handels: Malmsten

Organizer(s): Alan Krupnick, Resources for the Future; Richard Morgenstern, Resources for the Future

Chair: Alan Krupnick, Resources for the Future

Description of the theme: In its first year, the Trump Administration has introduced several new measures designed to modify or change the emphasis from the well-established practices for regulatory analysis of new rules in the US. This panel will explore in depth the issues posed by these new measures and identify some of the challenges that lie ahead. Specific topics to include: how to define and estimate benefits and costs for rules being repealed; how to conduct retrospective analysis of current and future rules; the use of whole economy modeling in regulatory analysis; improving benefit-cost analysis of toxic chemicals.

Panelist(s): Alan Krupnick, Resources for the Future;
Gilbert Metcalf, Tufts University;
Richard Morgenstern, Resources for the Future;
Christoph Rheinberger, TSE

POLICY SESSION: SUSTAINING THE HUMAN WELL-BEING THROUGH ADDRESSING POLICY REBOUNDS AND FAILURES FOR HEALTHY NATURAL CAPITAL - STRATEGIES AND WAY FORWARD

Room: Haga: B225

Organizer(s): Haripriya Gundimeda, Indian Institute of Technology Bombay

Chair: Haripriya Gundimeda, Indian Institute of Technology Bombay

The importance of effective natural capital policies to enhance the human well-being has been well-argued and established by several international assessments and initiatives. The policy makers have initiated several policies as they recognize the important role played by the natural capital. However, several policy failures due to spatial and temporal nature of the problem and spatial rebounds lead to ineffectiveness of policies for some natural resources (for e.g. in case of biodiversity, forests, etc).

There is a need for coordinated policies and several examples illustrate that a lack of coordination could negatively impact the well-being. Examples of some such in-congruent policies include- inadequate recognition of the role of natural capital in the GDP, underestimation of the real value of protected areas, food security policies impacting the human health, non-recognition of the negative externalities from agriculture and food systems among others. In this session, we argue the need for policy coordination that takes into account the cross-sectoral spill overs so as to minimize the rebound effect on natural capital. We bring various perspectives on how lack of spatially coordinated and misaligned policies impact natural capital and hence the human well-being through experiences from the project on The economics of ecosystems and Biodiversity” (TEEB), the TEEB for agricultural and food systems and the Inclusive Wealth Report. The discussion would be centered around sharing policy experiences from agriculture, ecosystems, industry, measuring wealth and also the country specific studies on the economics of ecosystems and biodiversity. The session would be highly relevant to the debate on effective policies for resources and environment.

Panelist(s): Haripriya Gundimeda, Indian Institute of Technology Bombay;
Pavan Sukhdev, President, WWF International Board;
Alexander Mueller, Study Leader TEEB agrifood;
Pushpam Kumar, Economic Division, UN Environment, Nairobi;
Shunsuke Managi, Kyushu University

**POLICY SESSION: THE EXPANDING SCOPE OF CARBON
PRICING: DESIGN ISSUES AND IMPLEMENTATION
CHALLENGES**

Room: Handels: Aulan

Organizer(s): Meredith Fowlie, University of California, Berkeley

Chair: Meredith Fowlie, University of California, Berkeley

When the European Emission Trading System (ETS) was introduced in 2005, approximately 5% of global carbon emissions were subject to some form of carbon pricing. When China introduces its national ETS in 2018, the scope of carbon pricing cover almost a quarter of the world's carbon emissions. This panel will bring together leading scholars who have been actively involved with the design and implementation of carbon pricing policies in Europe, the northeastern United States, California, Canada, and China. Panelists will comment on the sequence of events that laid the foundation for these carbon pricing programs, the role that economic evidence has or has not played, and policy durability concerns. The discussion will emphasize lessons learned, research priorities, and the policy challenges ahead.

Panelist(s): Dallas Burtraw, Resources for the Future;
Larry Goulder, Stanford University;
Ottmar Edenhofer, MCC Berlin and PIK Potsdam;
Andrew Leach, University of Alberta;
Xiliang Zhang, Institute of Energy, Environment, and the Economy, Tsinghua University

RESOURCES: THEORY

Room: Haga: Dragonen

Chair: Yacov Tsur, Hebrew University of Jerusalem

The misreporting of oil reserves in the Organization of Petroleum Exporting Countries during the 'fight for quotas'

Mathias Berthod, Paris School of Economics

Discussant: Jussi Lintunen, Natural Resources Institute Finland (Luke)

Competitive harvest in age-structured forests

Jussi Lintunen, Natural Resources Institute Finland (Luke)

Discussant: Cees Withagen, Vrije Universiteit Amsterdam

An oligopoly fringe non renewable resource game in the presence of a renewable substitute

Hassan Bencheikroun, McGill University; Gerard van der Meijden, Vrije Universiteit Amsterdam; **Cees**

Withagen, Vrije Universiteit Amsterdam

Discussant: Yacov Tsur, Hebrew University of Jerusalem

Resource Windfalls and Public Debt: The Role of Political Myopia

Yacov Tsur, Hebrew University of Jerusalem; Ohad Raveh, Hebrew University of Jerusalem

Discussant: Mathias Berthod, Paris School of Economics

STATED PREFERENCES: METHOD

Room: Handels: B32

Chair: Jürgen Meyerhoff, TU Berlin

Choice Certainty, Consistency, and Monotonicity in Discrete Choice Experiments

Ivana Logar, Eawag, Swiss Federal Institute of Aquatic Science and Technology; Matteo Mattmann,

Eawag, Swiss Federal Institute of Aquatic Science and Technology; Roy Brouwer, The Water Institute / University of Waterloo

Discussant: Susan Chilton, Newcastle University

Using the veil of ignorance to incorporate citizen preferences in willingness-to-pay values.

Morgan Beeson, Newcastle University; **Susan Chilton**, Newcastle University; Hugh Metcalf, Newcastle University; Jytte Seested Nielsen, Newcastle University

Discussant: Petr Mariel, University of the Basque Country (UPV/EHU)

A more flexible model or simply more effort: on the use of correlated random parameters in applied choice studies

Petr Mariel, University of the Basque Country (UPV/EHU); Jürgen Meyerhoff, TU Berlin

Discussant: Jürgen Meyerhoff, TU Berlin

Can cheap talk scripts in combination with opt-out reminders nail down fat yes-tails in choice experiments?

Jürgen Meyerhoff, TU Berlin; Christine Bertram, IfW Kiel; Klaus Glenk, Scotland's Rural College; Katrin Rehdanz, Christian-Albrechts Universität zu Kiel

Discussant: Ivana Logar, Eawag, Swiss Federal Institute of Aquatic Science and Technology

THEMATIC SESSION: CLIMATE AND DEMOGRAPHIC CHANGE

Room: Handels: SKF

Organizer(s): Thang Dao, Mercator Research Institute on Global Commons and Climate Change; Matthias Kalkuhl, MCC Berlin

Chair: Thang Dao, Mercator Research Institute on Global Commons and Climate Change

Population growth is documented as one of the main causes of natural resource depletion and environmental problems, as well as one of key driving forces of global emissions. Integrated assessment models as primary tool for guiding policymakers assume exogenous population trajectories. An emerging although small empirical literature provides evidence that fertility, however, is affected by environmental factors as well. Beyond Malthus, there is surprisingly little

analytical research integrating these two issues environment and endogenous demographic change when discussing the long run development. This thematic session consists of four fresh research papers: Bruno Lanz and Simon Dietz present on economic growth, population and agriculture in a changing climate; Reyer Gerlagh, Veronica Lupi and Marzio Galeotti discuss on family planning under the context of climate change; Jaimes, Reyer Gerlagh, and Ali Motavasseli discuss on global demographic change and climate policy; Thang Dao and Matthias Kalkuhl focus on gender biases of environmental impacts and their implications for fertility and development.

Climate change, local resource, and the slow demographic transition in stagnant Africa

Thang Dao, Mercator Research Institute on Global Commons and Climate Change; Matthias Kalkuhl, MCC Berlin

Family Planning and Climate Change

Reyer Gerlagh, Tilburg University; **Veronica Lupi**, University of Milan; Marzio Galeotti, University of Milan

Economic growth, population growth and agriculture in a changing climate

Bruno Lanz, University of Neuchâtel; Simon Dietz, LSE

Global demographic change and climate policies

Richard Jaimes, Tilburg University; Reyer Gerlagh, Tilburg University; Ali Motavasseli, Institute for Management and Planning Studies

THEMATIC SESSION: COAL, GROWTH AND ENVIRONMENTAL EXTERNALITIES: UNDERSTANDING THE SOCIAL COSTS OF CONTINUOUS COAL INVESTMENTS

Room: Handels: SEB

Organizer(s): Jan Steckel, MCC Berlin; Eswaran Somanathan, Indian Statistical Institute; Xiao-Bing Zhang, Renmin University of China; Marc Jeuland, Duke University

Chair: Jan Steckel, MCC Berlin

Optimal policy for a polluting energy: A joint consideration of flow and stock externalities

Jing Xu, School of Public Finance and Taxation, Southwestern University of Finance and Economics; **Xiao-Bing Zhang**, Renmin University of China

Social Costs of Power from Coal and Renewables in India

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

Coal Investments and Economic Development - An Econometric Analysis

Lorenzo Montrone, Mercator Research Institute on Global Commons and Climate Change; Matthias Kalkuhl, MCC Berlin; Jan Steckel, MCC Berlin

THEMATIC SESSION: DIMENSIONS OF ADAPTATION AND ITS POTENTIAL TO MITIGATE HARM TO AGRICULTURE

Room: Handels: E 44/GBJ-room

Organizer(s): Michael Roberts, University of Hawaii at Manoa

Chair: Michael Roberts, University of Hawaii at Manoa

A number of studies have documented crop sensitivity to extreme events, like heat waves and flooding, extremes that will become increasingly frequent with climate change. At the same time, higher carbon dioxide concentrations could improve water use efficiency and grow yield potential. Holding land use management practices constant, production will likely become more variable and may decline on average, but there is considerable uncertainty. Land use and management, however, is likely to change with climate, responding both directly to the climate itself and indirectly to the way climate change affects prices. This session will consider different aspects of behavioral response to climate change, and how much these actions have the potential to reduce harm and take better advantage of beneficial aspects of change, like higher carbon dioxide concentrations.

Climate Change Vulnerability of Future Calorific Supply

Ian Sue Wing, Boston University; Malcolm Mistry, Centro Euro-Mediterraneo sui Cambiamenti Climatici; **Enrica De Cian**, Centro Euro-Mediterraneo sui Cambiamenti Climatici and University of Venice Ca' Foscari

Commodity Prices and Volatility in Response to Anticipated Climate Change

Wolfram Schlenker, School of International and Public Affairs (SIPA) and Earth Institute, Columbia University; Michael Roberts, University of Hawaii at Manoa; David Lobell, Stanford University; Ahn Nam Tran, Allstate; Jarrod Welch, Charles River Associates

Adaptation to Climate Change: Disentangling Revenue and Crop Choice Responses in Long Panel

A. John Woodill, University of Hawai'i at Mānoa; Michael Roberts, University of Hawaii at Manoa

THEMATIC SESSION: INTEGRATED ASSESSMENT MODELING – ANALYTIC AND NUMERIC ADVANCES, LESSONS LEARNED, AND OPPORTUNITIES

Room: Handels: Volvo

Organizer(s): Christian Traeger, University of Oslo

Chair: Christian Traeger, University of Oslo

Integrated Assessment Modeling – Analytic and Numeric Advances, Lessons Learned, and Opportunities

David Anthoff, Economic and Social Research Institute; Valentina Bosetti, Fondazione Eni Enrico Mattei; John Hassler, IIES, Stockholm University; Christian Traeger, University of Oslo

THEMATIC SESSION: SOLAR GEOENGINEERING: PERSPECTIVES FROM ECONOMIC THEORY

Room: Handels: CG-room

Organizer(s): Gernot Wagner, Harvard University Center for the Environment, Harvard University; Juan Moreno-Cruz, Georgia Institute of Technology

Chair: Gernot Wagner, Harvard University Center for the Environment, Harvard University

Optimal geoengineering experiments

Lassi Ahlvik, Norwegian School of Economics; Antti Iho, Natural Resources Institute Finland (Luke)

Strategic Implications of Counter-Geoengineering: Clash, Cooperation, or Nonuse?

Daniel Heyen, London School of Economics and Political Science; Joshua Horton, Harvard University;

Juan Moreno-Cruz, Georgia Institute of Technology

Compensating Harms from Solar Geoengineering: Index-Based Insurance as an Alternative to Liability

Joshua Horton, Harvard University

An Economic Anatomy of Optimal Climate Policy

Juan Moreno-Cruz, Georgia Institute of Technology; Gernot Wagner, Harvard University Center for the Environment, Harvard University; David Keith, Harvard School of Engineering and Applied Sciences

WATER USE

Room: Haga: B210

Chair: Peter Christensen, University of Illinois

Impacts of irrigation efficiency improvement on water use and water consumption: a microeconomic approach.

Alfonso Expósito, University of Seville; Julio Berbel, University of Cordoba; Carlos Gutierrez-Martín, Department of Agricultural Economics, University of Córdoba

Discussant: Marie-estelle BINET, GAEL CNRS

THE INCIDENCE OF COMPLEX TARIFF SCHEMES AND INFORMATION ON WATER CONSUMPTION: A LABORATORY ECONOMIC EXPERIMENT

Marie-estelle BINET, GAEL CNRS; Laurent DENANT-BOEMONT, CREM CNRS; Sabrina HAMMICHE, CREM CNRS

Discussant: Henrique Monteiro, ISCTE - Instituto Universitário de Lisboa

Are ill-informed residential water consumers less price-responsive?

Henrique Monteiro, ISCTE - Instituto Universitário de Lisboa; Rita Martins, CeBER and Faculty of Economics, University of Coimbra; Esmeralda A. Ramalho, Department of Mathematics and CEMAPRE, ISEG, Universidade de Lisboa; Joaquim J. S. Ramalho, Department of Economics and BRU-IUL, Instituto Universitário de Lisboa (ISCTE-IUL)

Discussant: Peter Christensen, University of Illinois

Economic Effects of Environmental Crises: Evidence from Flint, Michigan

Peter Christensen, University of Illinois; David Keiser, Iowa State University; Gabriel Lade, Iowa State University

Discussant: Alfonso Expósito, University of Seville

Coffee break

Thursday, 15.30-16.00

Room: Handels / Haga

Egg-timer sessions
Thursday June 28, 16.00-16.40

EGG-TIMER: AGRICULTURE

Room: Handels: C24

Chair: Lauren Rhodes, Escuela Superior Politécnica del Litoral

Agri-environmental policy decentralization: theoretical analysis and application to abandoned wetland in Brittany

Francois Bareille, INRA, SMART-LERECO; Matteo Zavalloni, Unibo

Nudging farmers to comply with water protection rules – Experimental evidence from Germany

Denise Peth, Georg-August-University Göttingen; Oliver Mußhoff, Georg-August-University Göttingen; Katja Funke, Martin Luther University Halle-Wittenberg; Norbert Hirschauer, Martin Luther University Halle-Wittenberg

The Effect of Climate Change on Irrigated Agriculture: Water-Temperature Interactions and Adaptation in the Western U.S.

Xinde Ji, Virginia Tech; Kelly M. Cobourn, Virginia Tech; Weizhe Weng, Virginia Tech

The Value of Decadal Climate Variability Information to U.S. Agriculture

Lauren Rhodes, Escuela Superior Politécnica del Litoral; Bruce McCarl, Texas AM University

EGG-TIMER: BEHAVIOR AND ENVIRONMENT

Room: Handels: B22

Chair: Marius Alt, Centre for European Economic Research (ZEW)

Does proclaimed doubt in media spill over to doubt in science? A laboratory experiment in the context of climate change

Hendrik Bruns, International Max-Planck Research School on Earth System Modelling University of Hamburg

The Effect of Culture on Energy Efficient Vehicle Ownership

Tobias Wekhof, ETH Zürich; Massimo Filippini, ETH Zürich

How much are forest owners' social preferences worth for society? An analysis of forest owners' autonomous motivations and willingness to provide ecosystem services

Suzanne Vedel, University of Copenhagen; Jette Bredahl Jacobsen, University of Copenhagen; Bo Jellesmark Thorsen, University of Copenhagen

Match Point – Experimental analyses on different matching rates

Marius Alt, Centre for European Economic Research (ZEW); Carlo Gallier, Centre for European Economic Research (ZEW); Christiane Reif, Centre for European Economic Research (ZEW)

EGG-TIMER: CHOICES

Room: Handels: B32

Chair: Irene Jacqz, University of Wisconsin - Madison

What Drives Property Owners Shoreline Management Choices? A Case Study of Gloucester, Virginia

Sarah Stafford,

Closing nutrient cycles through wood-ash recycling in Sweden

Benjamin Ouvrard, INRA; **Jens Abildtrup**, INRA; Göran Bostedt, SLU Umeå University; Anne Stenger, BETA, INRA Université de Strasbourg

Commuting, Labor, and Housing Market Effects of Mass Transportation: Welfare and Identification

Christopher Severen, Federal Reserve Bank of Philadelphia

Toxic Test Scores: The Impact of Chemical Releases on Standardized Test Performance within U.S. Schools

Irene Jacqz, University of Wisconsin - Madison

EGG-TIMER: CONSERVATION

Room: Handels: F43

Chair: David Wolf, The Ohio State University

Is there any impact of learning environment on conservation auctions?: An experimental analysis

Md Sayed Iftekhar, University of Western Australia; Uwe Latacz-Lohmann, Department of Agricultural Economics, University of Kiel

The influence of a conservation insurance mechanism on optimal bidding in risky conservation auctions

Toto Olita, The University of Western Australia; Steven G. M. Schilizzi, Western Australia University; Sayed Ifekhar, University of Western Austrlia

Bioeconomic modelling of coastal cod and kelp forest interactions - habitat services, fisheries and carbon sinks

Godwin Kofi Vondolia, UiT The Arctic University of Norway; Wenting Chen, Norwegian Institute for Water Research; Claire W. Armstrong, UiT The Arctic University of Norway; Magnus D. Norling, Norwegian Institute for Water Research

The Cost of Algae Contamination in Fresh Water Lakes: Identification of Demand Functions for Environmental Quality

David Wolf, The Ohio State University; H. Allen Klaiber, The Ohio State University; Sathya Gopalakrishnan, Ohio State University

EGG-TIMER: ECOSYSTEMS

Room: Handels: Aulan

Chair: Ashley Camhi, Arizona State University

Has wild biodiversity a value to arable farming through its input of intermediate ecosystem services?

Mark Brady, Swedish University of Agricultural Sciences; Ullrika Sahlin, Lund University, Centre for Environmental and Climate Research; Yann Clough, Lund University, Centre for Environmental and Climate Research; Katarina Hedlund, Lund University, Department of Biology; Ola Olsson, Lund University, Department of Biology; Henrik Smith, Lund University, Centre for Environmental and Climate

Research

Turning inside-out: spillovers from collective conservation incentives in the Peruvian Amazon

Renzo Giudice, Center for Development Research (ZEF) University of Bonn

Land Cover and the Conservation Reserve Program: Water Quality in Iowa's Lakes

Ashley Camhi, Arizona State University; Charles Perrings, Arizona State University; Joshua Abbott, Resource Economist, Associate Professor, Arizona State University

EGG-TIMER: EMPIRICAL ANALYSIS OF POLICIES

Room: Handels: C33

Chair: Jamie Hansen-Lewis, Brown University

Causes and consequences of open space conservation in U.S. urban areas

JunJie Wu, Oregon State University; **Jialing Yu**, Renmin University of China; Walid Oueslati, OECD

The Influence of Environmental Quality Incentives Program on Local Water Quality: Evidence from Monitoring Station Level Data

pengfei liu, University of Connecticut; **yu wang**, China Agricultural University; wei zhang, Connecticut College

Quantifying Biogas Plant Externalities Using Well-Being and Hedonic Price Data

Julia Rechlitz, DIW Berlin; Christian Krekel, London School of Economics and Political Science; Johannes Rode, TU Darmstadt; Alexander Zerrahn, DIW Berlin

Does Air Pollution Lower Productivity? Evidence from Manufacturing in India

Jamie Hansen-Lewis, Brown University

EGG-TIMER: ENERGY

Room: Handels: SKF

Chair: Alessandro Mistretta, Banca d'Italia

Can climate mitigation help the poor? Measuring impacts of the CDM in rural China

Yimeng Du, Kobe University; Kenji Takeuchi, Kobe University

Does the Stick make the Carrot more Attractive? State Mandates and Uptake of Renewable Heating Technologies

Robert Germeshausen, Centre for European Economic Research (ZEW) Mannheim; Kathrine von Graevenitz, Centre for European Economic Research (ZEW) Mannheim; Martin Achtnicht, IOER Dresden

Climate Agreement and Technology Transfer: Impact of Kyoto Protocol on International Patent Applications of Renewable Energy Technologies

Mai MIYAMOTO, Kobe University; Kenji Takeuchi, Kobe University

Energy costs and competitiveness in Europe

Alessandro Mistretta, Banca d'Italia; Ivan Faiella, Banca d'Italia

EGG-TIMER: ENERGY

Room: Handels: CG room

Chair: Levan Elbakidze, WVU

To Trade or not to Trade: Oil Leases, Information Asymmetry, and Coase**Paul Brehm**, Oberlin College; Eric Lewis, US Department of Justice**Investigating the Effects of Energy Efficient Technology on Household Energy Security: A Stochastic Production Frontier Approach****Amanda Harker Steele**, University of Georgia; John C. Bergstrom, University of Georgia**Who bears the costs of environmental mandates? Evidence from the Top 10,000 Enterprise Energy Saving Program in China****Jing Cao**, Tsinghua University; Rong Ma, Tsinghua University**Regional Adjustment Heterogeneity in Electricity Generation: Evidence from the US****Levan Elbakidze**, WVU; gulnara zaynutdinova, WVU; Douglas Mugabe, WVU

EGG-TIMER: ENERGY AND CARBON

Room: Handels: Volvo

Chair: Claudia Aravena-Novielli, Heriot Watt University

Economic and Environmental Interactions between Alternative Carbon Pricing Policies in New York**Gokce Akin Olcum**, Environmental Defense Fund; Christoph Boehringer, ZEW - Zentrum für Europäische Wirtschaftsforschung GmbH; Thomas Rutherford, University of Wisconsin-Madison; Andrew Schreiber, University of Wisconsin-Madison**Carbon Trading Scheme in China: Evaluating Performance of the Seven Pilot Projects****Xing Chen**, Peking University; Jintao Xu, national school of development**Home energy audit effects on investment decisions: A quasi-natural experiment approach**Thomas Broberg, Umeå university; **Alejandro Egüez**, Umeå University; Andrius Kazukauskas, Umeå University**Financing Energy Efficiency Retrofits in Chilean Households - The Role of financial instruments, savings and uncertainty****Claudia Aravena-Novielli**, Heriot Watt University; Alejandra Schueftan, Instituto Forestal; Rene Reyes, Instituto Forestal (INFOR)

EGG-TIMER: ENERGY POLICY

Room: Handels: SEB

Chair: Lin Zhang, City University of Hong Kong

Policy implications of a world with renewables, limited dispatchability, and fixed load**Mathias Mier**, ifo Institute

A Subsidy Inversely Related to the Price of a Product

Takahiko Kiso, University of Aberdeen

Driven up the wall? Role of environmental regulation in innovation along the automotive global value chain

Suchita Srinivasan, ETH Zurich

Energy Efficiency transitions in China: How persistent are the movements to/from the frontier?

Lin Zhang, City University of Hong Kong; Philip Adom, City University of Hong Kong

EGG-TIMER: ENVIRONMENT AND DEVELOPMENT

Room: Handels: F45

Chair: Anomitra Chatterjee, Georgia State University

Can land rights prevent deforestation? Evidence from a large-scale titling initiative in the Brazilian Amazon

Benedict Probst, University of Cambridge; Andreas Kontoleon, ; Ariel BenYishay, Department of Economics, College of William Mary; Tiago Reis, Instituto de Pesquisa Ambiental da Amazônia (IPAM), Brazil

Green total factor productivity: a re-examination of quality of growth for provinces in China

Fan Xia, National School of Development, Peking University; Jintao Xu, Peking University

Incentivizing Corporate Social Responsibility (CSR) in India: Effectiveness of the CSR Act

Sangeeta Bansal, Jawaharlal Nehru University; Madhu Khanna, University of Illinois, Urbana-Champaign

The Effect of Community Based Management on Elephant Populations in Africa

Anomitra Chatterjee, Georgia State University

EGG-TIMER: ENVIRONMENTAL POLICY

Room: Handels: E44

Chair: Dietrich Earnhart, University of Kansas

Clear Skies: Multi-Pollutant Climate Policy in the Presence of Global Dimming

Frans de Vries, University of Stirling; Matthew McGinty, University of Wisconsin-Milwaukee; Dominique Throncker, Zero Waste Scotland

Negotiating a Uniform Emissions Tax in International Environmental Agreements

David McEvoy, Appalachian State University; Matthew McGinty, University of Wisconsin-Milwaukee

Free-riders and free-drivers: Non-cooperative public good provision by heterogeneous agents

Daniel Heyen, London School of Economics and Political Science; Alessandro Tavoni, Grantham Research Institute on Climate Change and the Environment, LSE

The Effect of Regulatory Enforcement on Facility-level Employment

Dietrich Earnhart, University of Kansas; Zach Raff, University of Wisconsin - Stout

EGG-TIMER: EXPERIMENT

Room: Handels: B33

Chair: David McEvoy, Appalachian State University

Are we losing sociability? A deliberative content analysis approach on intergenerational sustainability dilemma

Raja Rajendra Timilsina, Kochi University of Technology; Koji Kotani, Kochi University of Technology; Tatsuyoshi Saijo, Research Institute for Future Design, Kochitech; Yoshinori Nakagawa, Kochi University of Technology

MONITORING AND PUNISHMENT NETWORKS IN A COMMON POOL RESOURCE DILEMMA: EXPERIMENTAL EVIDENCE

Ganga Shreedhar, London School of Economics and Political science; Alessandro Tavoni, Grantham Research Institute on Climate Change and the Environment, LSE; Carment Marchiori, Department of Economics and Management, Università Degli Studi di Brescia

Nudging and environmental corporate responsibility: A natural experiment

Leonardo Becchetti, University of Rome Tor Vergata; **Francesco Salustri**, University of Turin University of Rome Tor Vergata; Pasquale Scaramozzino, SOAS University of London

The Role of Non-Binding Pledges in Social Dilemmas with Mitigation and Adaptation

David McEvoy, Appalachian State University; Tobias Haller, University of Innsbruck; Esther Blanco, University of Innsbruck

EGG-TIMER: EXTERNALITIES AND INFORMATION

Room: Handels: D32

Chair: Adam Daigneault, University of Maine

Can Information Disclosure be an Effective Policy Tool for Climate Change Mitigation?

Donna Ramirez Harrington, University of Vermont; Keith Brouhle, Grinnell College

Is airborne lead pollution salient and costly to homeowners? National evidence from sales near US airports

Adam Theising, University of Wisconsin-Madison

Are Lawyers Worth the Cost? Legal Counsel in Environmental Criminal Court Cases

Dietrich Earnhart, University of Kansas; **Sandra Rousseau**, KU Leuven, CEDON

How tax reform can affect investments in natural resources and public goods

Adam Daigneault, University of Maine; Brent Sohngen, The Ohio State University

EGG-TIMER: FOSSIL ENERGY

Room: Handels: D33

Chair: Andrew Boslett, University of Rochester Medical Center

Measuring the Cost-effectiveness of Clean Vehicle Subsidies

Tamara Sheldon, University of South Carolina; Rubal Dua, KAPSARC

VALUE OF FOSSIL-FUEL COMPANIES IN A DECARBONIZED FUTURE WORLD: AN ECONOMETRIC APPROACH

Pablo Neudorfer, University of Queensland

Energy and the Direction of Growth: Will Autonomous Energy Efficiency Improvements Continue?

Akshay Shanker, Australian National University; David Stern, Australian National University

The impact of shale development on light pollution

Andrew Boslett, University of Rochester Medical Center; Elaine Hill, University of Rochester Medical Center; Lala Ma, University of Kentucky; Lujia Zhang, University of Rochester

EGG-TIMER: GAMES AND POLICY

Room: Handels: C22

Chair: YIN CHU, Zhongnan University of Economics and Law

A Budget-Balanced Mechanism for Siting Noxious Facilities with Identity-Dependent Externalities

Younghwan In, KAIST College of Business; Yunkyeong Seo, KAIST College of Business

Effects of heterogeneity of countries on stability and effectiveness of international environmental agreements under different coalition decision making rules.

Irina Bakalova, KU Leuven; Johan Eyckmans, KU Leuven

When does private ownership of a congestible resource lead to under-congestion?

Julian Gomez-Gelvez, University of Maryland

Political Stability: an Impetus for Spatial Environmental Spillovers?

YIN CHU, Zhongnan University of Economics and Law; Chun-Ping Chang, Xi'an Jiaotong University; Boying Li, Shanghai Jiao Tong University; Bo Sui, Xi'an Jiaotong University

EGG-TIMER: GROWTH AND CGE

Room: Haga: Dragonen

Chair: Anna Ciesielski, ifo Institute, Munich

Can Degrowth Overcome the Leakage Problem of Unilateral Climate Policy?

Mario Larch, University of Bayreuth; Markus Löning, University College London; **Joschka Wanner**, University of Bayreuth

A Bayesian re-calibration of economic growth in the DICE model: An assessment of growth uncertainty

Anna Ciesielski, ifo Institute, Munich; David Anthoff, Economic and Social Research Institute

Hydroeconomic optimization of regional water - power systems under cooling constraints and climate change

Raphaël Payet-Burin, Technical University of Denmark (DTU); Peter Bauer-Gottwein, DTU; Federica

Bertoni, Politecnico di Milano; Claus Davidsen, DTU

A Bayesian approach towards the calibration of deterministic models of economic growth
Anna Ciesielski, ifo Institute, Munich; David Anthoff, Economic and Social Research Institute

EGG-TIMER: NATURAL DISASTERS

Room: Handels: F44

Chair: Carina Fugger, Centre for European Economic Research (ZEW)

Floods and Exports: An Empirical Study on Natural Disaster Shocks in Southeast Asia
Kaori Tembata, Kobe University; Kenji Takeuchi, Kobe University

When Your View Goes Up In Flames: Effect of Wildfires on Property Values
Cloe Garnache, Michigan State University; Todd Guilfoos, University of Rhode Island

Living on the Stormy Side? Tropical Cyclones and Human Settlements
Sven Kunze, Heidelberg University; Eric Strobl, University of Bern

Effects of personal experience of extreme weather events on climate change belief
Carina Fugger, Centre for European Economic Research (ZEW); Daniel Osberghaus, Centre for European Economic Research

EGG-TIMER: POLICY

Room: Handels: E43

Chair: Qingran Li, Duke University

When Do Firms Shift Production Across States to Avoid Environmental Regulation?
Wayne Gray, Clark University; Ronald Shadbegian, U.S. E.P.A., National Center for Environmental Economics and Kyung Hee University

Assessing transition risk at microeconomic level with a stress test methodology
Alessandro Ravina, Universite Paris 1 Pantheon-Sorbonne; Chair EnergyProsperity

Three Types of Interaction in Multi-Species Fisheries and When They Need to be Considered
Benjamin Blanz, University of Hamburg

Impact of tariff change on residents' decision: evidence from Arizona's unbundling solar rates
Qingran Li, Duke University

EGG-TIMER: POLLUTION

Room: Handels: E45

Chair: Anders Fremstad, Colorado State University

Air Pollution, Health, and Avoidance Behavior: Evidence from South Korea
Moon Joon Kim, Duke Kunshan University

Feel the burn: Effects of agricultural straw burning on health in China
Tong Liu, Hong Kong University of Science and Technology; Guojun He, Hong Kong University of Science

and Technology; Joshua Graff Zivin, University of California, San Diego

What's Mine is Yours: Transboundary Pollution from Abandoned Coal Mines

Alexey Kalinin, University of Wisconsin-Madison

The Impact of a Carbon Tax on Inequality

Anders Fremstad, Colorado State University; Mark Paul, Duke University

EGG-TIMER: RECREATION

Room: Handels: B44

Chair: Tafesse Estifanos, PhD student at the University of Western Australia and a staff at Hawassa University, Ethiopia

Assessing coastal recreational values across Japan: Applications of Travel Cost Model with mobile phone network data

Takahiro Kubo, National Institute for Environmental Studies (NIES); Shiya Uryu, National Institute for Environmental Studies (NIES); Takahiro Tsuge, Konan University; Hiroya Yamano, National Institute for Environmental Studies (NIES); Take Yamakita, Japan Agency for Marine-Earth Science and Technology (JAMSTEC); Yoshihisa Shirayama, Japan Agency for Marine-Earth Science and Technology (JAMSTEC)

The Influence of Weather on Outdoor Recreation: Forecasting the Implications of Climate Change

Carlo Fezzi, University of Trento; Silvia Ferrini, DISPI, University of Siena CSERGE, University of East Anglia; Richard Carson, University of California, San Diego; Amii Harwood, University of East Anglia

Preserving natural habitat quality and/or recreational attractiveness? Spatial tools for management planning

Léa Tardieu, INRA, UMR BETA; Laetitia Tuffery, AgroParisTech, UMR BETA

Estimating willingness to pay for a rare canid species in Africa: Analysis of tourists' preference for the protection of the Ethiopian wolf

Tafesse Estifanos, PhD student at the University of Western Australia and a staff at Hawassa University, Ethiopia; Atakelty Hailu, University of Western Australia; Ram Pandit, University of Western Australia; Maksym Polyakov, Agriculture and Environment, University of Western Australia, Crawley, WA 6009, Australia; Michael Burton, University of Western Australia

EGG-TIMER: RESOURCES

Room: Haga: B210

Chair: Karen Maguire, Oklahoma State University

Shale Gas Boom in the US: Productivity Shock and Price Responsiveness

Yan Chen, Peking University; Jintao Xu, Peking University

Cleaning the air for the 2008 Beijing Olympic Games: An empirical study of China's thermal power sector

Teng Ma, ASIA PACIFIC INSTITUTE OF RESEARCH; Kenji Takeuchi, Kobe University

Long Run Effects of Resource Booms on Individuals: Evidence from Longitudinal Data

Justin Winikoff, University of Wisconsin-Madison; Grant Jacobsen, University of Oregon; Dominic

Parker,

Pecking Order? Energy Development and Bird Species Richness on the High Plains of Colorado and Kansas

Karen Maguire, Oklahoma State University; Monica Papes, University of Tennessee, Knoxville

EGG-TIMER: RESOURCES

Room: Haga: B225

Chair: Peggy Schrobback, The University of Queensland

Backward- and forward-looking shadow prices in inclusive wealth accounting: an example of renewable energy capital

Rintaro Yamaguchi, National Institute for Environmental Studies (NIES)

Benefits from water related ecosystem services in Africa and climate change.

Laetitia Pettinotti, BC3 Basque Centre for Climate Change; Amaia de Ayala, BC3 and UPV-EHU; Elena Ojea, University of Vigo

Estimation of experts' subjective probabilities regarding future carbon dioxide emissions

Valentina Bosetti, Fondazione Eni Enrico Mattei; EMILY HO, FORDHAM UNIVERSITY; David Budescu, Fordham University; Detlef van Vuuren, Utrecht University; Klaus Keller, Penn State

Market integration and demand for prawns in Australia

Peggy Schrobback, The University of Queensland; Sean Pascoe, CSIRO Oceans and Atmosphere; Rui Zhang, The University of Queensland

EGG-TIMER: VALUATION

Room: Handels: B23

Chair: Emmi Haltia, Pellervo Economic Research PTT

Effects of the Number of Alternatives in Choice Experiment Questions

Weizhe Weng, Virginia Tech; Mark Morrison, Charles Sturt University; Kevin Boyle, University of Maine; Peter Boxall, University of Alberta; John Rose, The University of Technology Sydney

Advantages of using partial profile choice experiment: Examining preference for forest ecosystem services

Yasushi Shoji, Hokkaido University; **Takahiro Tsuge**, Konan University; Takahiro Kubo, National Institute for Environmental Studies (NIES); Kohei Imamura, The University of Tokyo; Koichi Kuriyama, Kyoto University

Using best-worst scaling to assess climbers' preferences regarding the use of entrance fees

Kentaro Yoshida, Kyushu University; Mitsu Yamamoto, Otaru University of Commerce

Demand and supply of agricultural ecosystem services: participation in results based policy

Emmi Haltia, Pellervo Economic Research PTT; Annika Tienhaara, Natural Resources Institute Finland, LUKE; Eija Pouta, Natural Resources Institute Finland, LUKE; Kyösti Arovuori, Pellervo Economic Research PTT; IOANNA GRAMMATIKOPOULOU, Natural Resources Institute Finland, LUKE; Antti Miettinen, Natural Resources Institute Finland, Luke; Kauko Koikkalainen, Natural Resources Institute Finland, LUKE; Heini Ahtiainen, Natural Resources Institute Finland (Luke); Janne Artell, Natural

Resources Institute Finland, LUKE

EGG-TIMER: WATER

Room: Haga: B228

Chair: Jane Zhao, University of North Carolina at Chapel Hill

Floodplain Designation and Property Sale Prices in an Urban Watershed

Noelwah Netusil, Reed College; Maya Jarrad, Reed College; Klaus Moeltner, Virginia Tech

Cost function approach to water protection in forestry

Jenni Miettinen, University of Helsinki; Markku Ollikainen, University of Helsinki; Mika Nieminen, Natural Resources Institute Finland; Lauri Valsta, University of Helsinki

Agricultural Groundwater Markets: Understanding the Gains from Trade and the Role of Market Power

Ellen Bruno, University of California, Davis

Hedonic market premiums for better water connections: Using network data in Kathmandu, Nepal

Jane Zhao, University of North Carolina at Chapel Hill; Dale Whittington, University of North Carolina at Chapel Hill

SPECIAL SESSION: RESEARCH TRENDS IN ENVIRONMENTAL AND RESOURCE ECONOMICS

Room: Handels: Malmsten

Chair: Roland Kube, University of Muenster

Research trends in environmental and resource economics: Insights from four decades of JEEM

Roland Kube, University of Muenster; Andreas Loeschel, University of Muenster; Till Requate, University of Kiel; Henrik Mertens, University of Kiel

Parallell sessions 9
Thursday June 28, 16.45-18.30

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels: B22

Chair: Fabian Thomas, Institute of Environmental Systems Research, Osnabrueck University

Does Culture Affect Soil Erosion? Empirical Evidence from Europe

David Wuepper, ETH Zurich

Discussant: Benoit Cheze, IFPEN; EconomiX, University of Paris-Nanterre

Farmers' motivations to reduce their use of pesticides: a choice experiment analysis in France

Benoit Cheze, IFPEN; EconomiX, University of Paris-Nanterre; Maia David, UMR Economie Publique, INRA-AgroParisTech; Vincent Martinet, UMR Economie Publique, INRA-AgroParisTech

Discussant: Sophie Thoyer, Montpellier Supagro - Center for Environmental Economics of Montpellier

Do farmers follow the herd? the influence of social norms in the participation to agri-environmental schemes

Sophie Thoyer, Montpellier Supagro - Center for Environmental Economics of Montpellier; Philippe Le Coënt, Center of Environmental Economics of Montpellier, INRA; Raphaelé Préget, INRA Montpellier

Discussant: Fabian Thomas, Institute of Environmental Systems Research, Osnabrueck University

Greening the Common Agricultural Policy – Insights from a field experiment in Lower Saxony, Germany

Fabian Thomas, Institute of Environmental Systems Research, Osnabrueck University; Estelle Midler, Policy Evaluation Economic Analysis, French Ministry of Agriculture; Marianne Lefebvre, Economics Management Research Angers, University of Angers; Stefanie Engel, Institute of Environmental Systems Research, Osnabrueck University

Discussant: David Wuepper, ETH Zurich

CLIMATE CHANGE: AGREEMENTS

Room: Handels: D33

Chair: Vedunka Kopečna, Charles University

International Environmental Agreements: Empirical Evidence of a Hidden Success

Nada Maamoun, University of Hamburg

Discussant: Alejandro Caparros, CSIC

A model of the (incomplete) Paris Agreement on climate change

Alejandro Caparros, CSIC

Discussant: Andre Francisco J, Universidad Complutense de Madrid

Endogenous Learning to Reduce Uncertainty in Climate Change: The Role of Knowledge Spillovers and the Degree of Cooperation in International Environmental Agreements

Andre Francisco J, Universidad Complutense de Madrid; Michael Finus, University of Bath; Leyla Sayin, University of Bath

Discussant: Vedunka Kopečna, Charles University

Modelling Electric Vehicles as an Abatement Technology in a Hybrid CGE Model

Vedunka Kopečna, Charles University; Milan Scasny, Charles University in Prague; Stefan Schmelzer,

Institute for Advanced Studies Vienna; Michael Miess, Institute for Advanced Studies
Discussant: Nada Maamoun, University of Hamburg

CLIMATE CHANGE: IMPACT

Room: Handels: C24

Chair: Jinhua Zhao, Michigan State University

Climate Change Experience and Beliefs; Investigating the Scope of Effects

Patrick Walsh, Manaaki Whenua-Landcare Research; Pike Brown, Manaaki Whenua Landcare Research;
Pamela Booth, Manaaki Whenua Landcare Research
Discussant: Hongliang Zhang, University of Neuchatel

Weather, Climate and Production Risk

Hongliang Zhang, University of Neuchatel
Discussant: Antoine Leblois, INRA

How may climate change influence farmers' demand for index-based insurance?

Antoine Leblois, INRA
Discussant: Jinhua Zhao, Michigan State University

Adaptation to Climate Change: Extreme Events versus Gradual Changes

Jinhua Zhao, Michigan State University; Sangjun Lee, Korea Energy Economics Institute
Discussant: Patrick Walsh, Manaaki Whenua-Landcare Research

CONSERVATION

Room: Handels: F43

Chair: Anca Voia, Toulouse School of Economics

Land use policies for biodiversity

Jun Yoshida, Tohoku University; Tatsuhito Kono, Tohoku University
Discussant: Juan Ignacio Zoloa, UNLP

Price Premium for Green Open Space and Tree Cover in the City of Buenos Aires

Juan Ignacio Zoloa, UNLP; Mariano Rabassa, UCA; Federico Barra, World Bank
Discussant: Martin Drechsler, Helmholtz Centre for Environmental Research - UFZ

The impact of conservation payments and landowner behaviour on conservation when conservation costs at the local level but pays at the regional level

Martin Drechsler, Helmholtz Centre for Environmental Research - UFZ
Discussant: Anca Voia, Toulouse School of Economics

Are Conservation Programs Additional? Evidence from the French Grassland Conservation Program

Sylvain Chabé-Ferret, Toulouse School of Economics; **Anca Voia**, Toulouse School of Economics
Discussant: Jun Yoshida, Tohoku University

ENERGY: GENERAL EQUILIBRIUM AND WELFARE ISSUES

Room: Handels: C33

Chair: Luis Alejandro Sarmiento, German Institute of Economic Research (DIW BERLIN)

Designing a Model for the Global Energy System—GENeSYS-MOD: An Application of the Open-Source Energy Modeling System (OSEMOSYS)

Konstantin Löffler, TU Berlin / DIW Berlin; Karlo Hainsch, TU Berlin; Thorsten Burandt, TU Berlin / DIW Berlin; Pao-Yu Oei, TU Berlin; Claudia Kemfert, DIW Berlin / German Advisory Council on Environment / Hertie School of Governance; Christian von Hirschhausen, DIW Berlin / TU Berlin
Discussant: David Comerford, University of Strathclyde

The Energy Trap

David Comerford, University of Strathclyde
Discussant: Nic Rivers, University of Ottawa

The energy efficiency rebound effect in general equilibrium

Nic Rivers, University of Ottawa; Christoph Boehringer, University of Oldenburg
Discussant: Luis Alejandro Sarmiento, German Institute of Economic Research (DIW BERLIN)

The Impact of Electricity Transmission Infrastructure on Households' Well-Being

Luis Alejandro Sarmiento, German Institute of Economic Research (DIW BERLIN); Aleksandar Zaklan, DIW Berlin; Alexander Zerrahn, DIW Berlin; Christian von Hirschhausen, DIW Berlin / TU Berlin
Discussant: Konstantin Löffler, TU Berlin / DIW Berlin

ENVIRONMENT AND DEVELOPMENT

Room: Handels: F45

Chair: hailu elias, Addis Ababa University

Drivers of Deforestation in Indonesia: A Spatial Panel Data Analysis

Arild Angelsen, Norwegian University of Life Sciences; **Amare Teklay Hailu**, School of Economics and Business, Norwegian University of Life Sciences; Arief Wijaya Wijaya, World Resources Institute
Discussant: Branko Boskovic, University of Alberta

Forest cover and the market for fuelwood in rural India

Branko Boskovic, University of Alberta; Ujjayant Chakravorty, Tufts University; Martino Pelli, University of Sherbrooke; Anna Risch, University of Grenoble
Discussant: Rhita Simorangkir, CERGE-EI

Environmental Consequences of Poverty Alleviation Programs: Evidence from Conditional Cash Transfers in Indonesia

Rhita Simorangkir, CERGE-EI; Paul Ferraro, Johns Hopkins University
Discussant: hailu elias, Addis Ababa University

The impact of Credit Constraints and Climatic factors on choice of Adaptation Strategies: Evidence from rural Ethiopia

mintewab bezabih, Environment and Climate Research Center; **hailu elias**, Addis Ababa University
Discussant: Amare Teklay Hailu, School of Economics and Business, Norwegian University of Life Sciences

ENVIRONMENTAL POLICY: FIRM BEHAVIOR

Room: Handels: D32

Chair: Kiet Nguyen, Can Tho University

Environmental quality provision by a multi-product monopolist

Pim Heijnen, University of Groningen

Discussant: Binish Rijal, Binghamton University

High Priority Violations and Intra-firm Pollution Substitution

Binish Rijal, Binghamton University; Neha Khanna,

Discussant: Jingbo Cui, Wuhan University

Does Environmental Regulation Induce Firm Green Innovation and Enhance Firm Competitiveness? Evidence from a Quasi-Natural Experiment in China

Jingbo Cui, Wuhan University; Junjie Zhang, Duke University

Discussant: Kiet Nguyen, Can Tho University

A CENTRALISED GOVERNING SYSTEM VS A SELF-GOVERNING SYSTEM TO A NONPOINT SOURCE POLLUTION WITH EXTERNALITY: EXPERIMENTAL EVIDENCE

Kiet Nguyen, Can Tho University

Discussant: Pim Heijnen, University of Groningen

ENVIRONMENTAL POLICY: INSTITUTIONS

Room: Handels: E43

Chair: Tiho Ancev, University of Sydney

Environmental Policy Diffusion: The influence of market structure and lobbying

Markus Ohndorf, University of Innsbruck

Discussant: Stephan Wolf, University of Freiburg

Intergenerational Sharing of Non-Renewable Resources: An Experimental Study Using Rawls's Veil of Ignorance

Stephan Wolf, University of Freiburg; Cameron Dron, University of Freiburg

Discussant: Juan F. Garcia, KU LEUVEN

The small open circular economy

Juan F. Garcia, KU LEUVEN; Johan Eyckmans, KU Leuven; Sandra Rousseau, KU Leuven, CEDON

Discussant: Tiho Ancev, University of Sydney

Size matters: Optimal Management of Dynamic Systems with Varying Size

Tiho Ancev, University of Sydney; Karunakaran Madhavan, School of Accounting and Finance, Charles Sturt University Study Centres

Discussant: Markus Ohndorf, University of Innsbruck

ENVIRONMENTAL POLICY: OIL

Room: Handels: E45

Chair: Benjamin Gilbert, Colorado School of Mines

Climate Policy and Resource Extraction with Variable Markups and Imperfect Substitutes

Malik Curuk, Bogazici University; **Suphi Sen**, ifo Institute

Discussant: Johan Gars, GEDB, Royal Swedish Academy of Sciences

International business cycles: quantifying the effects of a world market for oil

Johan Gars, GEDB, Royal Swedish Academy of Sciences; Conny Olovsson, Sveriges Riksbank

Discussant: Felix Meier, University of Kiel

Booming gas – A resource-economic theory of technological change and the order of resource extraction

Felix Meier, University of Kiel; Martin Quaas, University of Kiel

Discussant: Benjamin Gilbert, Colorado School of Mines

Drill-bit parity: Supply-side links in oil and gas markets

Benjamin Gilbert, Colorado School of Mines; Gavin Roberts, Weber State University

Discussant: Suphi Sen, ifo Institute

ENVIRONMENTAL POLICY: POLITICAL ECONOMY

Room: Handels: C22

Chair: Rolf Golombek, Frisch Centre

Special interests and public opinion in American environmental politics

Elise Grieg, ETHZ

Discussant: Hélia Costa, Toulouse School of Economics

Political economy of environmental regulation: the role of lobbying and elections in the US Senate

Hélia Costa, Toulouse School of Economics

Discussant: Rolf Golombek, Frisch Centre

Should environmental RD be supported more than other RD projects?

Rolf Golombek, Frisch Centre; Mads Greaker, Statistics Norway; Michael Hoel, University of Oslo

Discussant: Elise Grieg, ETHZ

ENVIRONMENTAL POLICY: REGULATION

Room: Handels: E 44/GBJ-room

Chair: Yu Pang, Macau University of Science and Technology

Trust, Compliance and International Regulation

Ara Jo, London School of Economics

Discussant: Patrick Möbius, HHL Leipzig Graduate School of Management

Environmental policy, innovation, and productivity growth: Controlling the effects of regulation and endogeneity

Patrick Möbius, HHL Leipzig Graduate School of Management; Erik Hille, HHL Leipzig Graduate School of Management

Discussant: Jevan Cherniwchan, University of Alberta

Do Environmental Regulations Affect the Decision to Export?

Jevan Cherniwchan, University of Alberta; Nouri Najjar, University of British Columbia

Discussant: Yu Pang, Macau University of Science and Technology

Command-and-Control Regulation, Incentive for Pollution Abatement, and Market Structure

Yu Pang, Macau University of Science and Technology; Ping Lin, Lingnan University

Discussant: Ara Jo, London School of Economics

FORESTRY: THEORY AND EMPIRICS

Room: Haga: B228

Chair: Jonah Busch, Center for Global Development

Hedging with Trees: Tail-Hedge Discounting of Long-Term Forestry Returns

Lars Hultkrantz, Örebro University

Discussant: Aino Assmuth, University of Helsinki

Optimal carbon storage in uneven-aged mixed-species stands

Aino Assmuth, University of Helsinki; Janne Rämö, University of Helsinki; Olli Tahvonen, University of Helsinki

Discussant: Katherine Lee, University of Idaho

Optimal control of land conversion in Brazil: impacts of malaria as an externality of deforestation

Katherine Lee, University of Idaho; David Finnoff, University of Wyoming

Discussant: Jonah Busch, Center for Global Development

Does Deforestation Increase Malaria Prevalence? Evidence from Satellite Data and Health Surveys

Jonah Busch, Center for Global Development; Sebastian Bauhoff, Center for Global Development

Discussant: Lars Hultkrantz, Örebro University

GROWTH AND TECHNICAL CHANGE

Room: Haga: Dragonen

Chair: Ida A. B. Sognnaes, University of Cambridge, CEENRG/Department of Land Economy

Green Technology Adoption and the Business Cycle

Jean-Marc Bourgeon, INRA and Ecole Polytechnique

Discussant: Erin Baker, University of Massachusetts, Amherst

Finding common ground when experts disagree: Robust Portfolio Decision Analysis

Erin Baker, University of Massachusetts, Amherst; Valentina Bosetti, Fondazione Eni Enrico Mattei; Ahti Salo, Aalto University

Discussant: Saheli Das, PhD Scholar, Center for International Trade and Development, Jawaharlal Nehru University, New Delhi, India.

Ability-Biased Technical Change, Economic Growth and the Environment

Saheli Das, PhD Scholar, Center for International Trade and Development, Jawaharlal Nehru University, New Delhi, India.; Meeta Mehra, Jawaharlal Nehru University

Discussant: Ida A. B. Sognnaes, University of Cambridge, CEENRG/Department of Land Economy

Systems Innovation, Inertia and Pliability: A mathematical exploration with implications for climate change abatement

Michael Grubb, University College London; Jean-François Mercure, Radboud University; Pablo Salas, University of Cambridge, CEENRG/Department of Land Economy; Rutger-Jan Lange, Professor in

Quantitative Finance, Erasmus School of Economics, Erasmus University Rotterdam; **Ida A. B. Sognaes**, University of Cambridge, CEENRG/Department of Land Economy
Discussant: Jean-Marc Bourgeon, INRA and Ecole Polytechnique

HEALTH AND ENVIRONMENT

Room: Handels: B44

Chair: Xavier Pautrel, University of Angers GRANEM, France

The Mortality and Medical Costs of Air Pollution: Evidence from Changes in Wind Direction
Garth Heutel, Georgia State University; Tatyana Deryugina, ; Nolan Miller, University of Illinois; David Molitor, University of Illinois; Julian Reif, University of Illinois
Discussant: Shuai Chen, Zhejiang University

The Effect of Air Pollution on Mental Health: Evidence from China
Shuai Chen, Zhejiang University; Paulina Oliva, Department of Economics, University of Southern California, NBER and BREAD; Peng Zhang, School of Accounting and Finance, The Hong Kong Polytechnic University
Discussant: Alex Hollingsworth, Indiana University

Estimating the Health Impacts of Excess Emissions
Alex Hollingsworth, Indiana University; Nikolaos Zirogiannis, School of Public and Environmental Affairs, Indiana University-Bloomington; David Konisky, Indiana University School of Public and Environmental Affairs
Discussant: Xavier Pautrel, University of Angers GRANEM, France

Environment, Health and Labor Market
Xavier Pautrel, University of Angers GRANEM, France
Discussant: Garth Heutel, Georgia State University

NATURAL DISASTERS

Room: Handels: F44

Chair: Sathya Gopalakrishnan, Ohio State University

Long-Run Growth Impacts of Natural Disasters and the Connection to the Spatial Pattern of the Natural Hazard
Stephanie Lackner, Princeton University
Discussant: Saudamini Das, Institute of Economic Growth

Resilience to natural disasters: Role of socio-economic factors and coastal ecosystems in enabling resilience of coastal communities post natural disasters.
Saudamini Das, Institute of Economic Growth; Nisha Maria D'Souza, International Union for Nature Conservation, Delhi Office; J R Bhatt, Ministry of Environment Forest and Climate Change, Government of India
Discussant: Helene Ollivier, PSE - CNRS

Trade-Induced Spillovers from Natural Disasters
Helene Ollivier, PSE - CNRS; Geoffrey Barrows, Ecole polytechnique - CNRS; Raphael Calel, Georgetown University
Discussant: Sathya Gopalakrishnan, Ohio State University

Dredging the sand commons: Examining tradeoffs in the timing of shoreline stabilization
Sathya Gopalakrishnan, Ohio State University; H. Allen Klaiber, The Ohio State University; Yun Qiu, Jinan University
Discussant: Stephanie Lackner, Princeton University

**POLICY SESSION: SMART GRID FOR A CARBON FREE
ENERGY FUTURE: THE ROLE OF ELECTRICITY PRICING AND
DISTRIBUTED ENERGY RESOURCES**

Room: Handels: SEB

Organizer(s): Kristina Mohlin, Environmental Defense Fund; Beia Spiller, Environmental Defense Fund

Chair: Kristina Mohlin, Environmental Defense Fund

Advances in digital technology is transforming the electricity grid at the same time as we are seeing fast reductions in the cost of renewable energy and energy storage technologies. While large utility scale renewables and energy storage are already making significant headways into our energy systems in many parts of the world, distributed energy resources (DERs) such as customer-scale photovoltaics (PV), electric vehicles and batteries as well as programmable home energy technologies are only starting to become more commonplace. These DERs have the potential to play a significant role in the transitions to a carbon free energy system by making electricity demand responsive to the fluctuations in electricity supply from intermittent renewable sources and by offsetting generation from fossil fuel resources. But currently, electricity markets and utility regulation are typically still designed for a system with central generators and passive energy customers. This session will discuss the following questions: what is the current state of affairs of DER adoption in the US and Europe, what has contributed to this level of adoption, and what is the outlook for the future? How large a role will DERs play in the transition to a carbon free electricity system? What are the roles of technology companies, the electric distribution utilities and regulators in creating smart energy homes? From an environmental perspective, are there reasons to be cautious in making this transition? What role will market design play in shaping advances for clean energy technologies at the distribution edge? And finally, what is the role of cost-reflective electricity pricing in advancing DER adoption?

Panelist(s): Therése Hindman Persson, Swedish Energy Markets Inspectorate;
Tim Schittekatte, Florence School of Regulation;
Marcus Törnqvist, Ericsson

**POLICY SESSION: THE SOCIAL COST OF CARBON: CLIMATE
POLICY DRIVERS AND RESEARCH NEEDS**

Room: Handels: Volvo

Organizer(s): Richard Newell, Resources for the Future

Chair: Richard Newell, Resources for the Future

This session will explore the historic and current role of the social cost of carbon (SCC) in the United States at the federal and state level and in other countries, as well as the potential for incorporating the SCC into policy analysis to support European decisionmaking. The social cost of carbon quantifies both the benefits to society of reducing carbon dioxide emissions from the atmosphere and the harm to society from emitting more carbon dioxide. The SCC informs billions of dollars of policy and investment decisions in the United States and abroad. At the request of the US federal government, in January 2017 the National Academy of Sciences, Engineering, and Medicine (NAS) released a comprehensive report that made a number of important recommendations for updating the methodology for estimating the SCC to ensure that the estimates reflect the best available science and to enhance their transparency. The session will discuss how the SCC has been estimated in the U.S., the set of recommendations by the NAS for improving the estimation methodology, and the efforts

that are currently underway to improve the estimates and their use in decisionmaking. It will highlight key aspects of the estimation methodology that present practical and conceptual challenges in the generation of the estimates and also strongly influence the resulting values. The session will also compare the SCC approach to others that have been employed to value carbon reductions in policy analysis.

Panelist(s): Dallas Burtraw, Resources for the Future;
Karen Palmer, Resources for the Future;
Maureen Cropper, University of Maryland;
Joe Aldy, Harvard University;
Ottmar Edenhofer, Potsdam Institute for Climate Impact Research, Mercator Research
Institute on Global Commons and Climate Change, Berlin Institute of Technology;
Kevin Rennert, Resources for the Future

RESOURCES

Room: Haga: B210

Chair: Pierre Courtois, INRA

Preservation Value in Socio-Ecological Systems

Arnaud Dragicevic, IRSTEA; Jason Shogren, University of Wyoming

Discussant: Nicolas Clootens, University of Tours

Growth in OLG Economies with Non-Renewable and Polluting Resources

Nicolas Clootens, University of Tours

Discussant: Janne Helin, Natural Resources Institute Finland

How to account for the value of nitrogen retained by eelgrass: a substitute cost study

Janne Helin, Natural Resources Institute Finland

Discussant: Pierre Courtois, INRA

A tale of two diversities

Pierre Courtois, INRA

Discussant: Arnaud Dragicevic, IRSTEA

RESOURCES: PROTECTED AREAS

Room: Haga: B225

Chair: Claudia Berg, International Monetary Fund

Wildlife conflicts: Wolves vs. moose

Anders Skonhoft, Norwegian University of Science and Technology; Ja Tore Solstad, NTNU Business School

Discussant: Claudia Berg, International Monetary Fund

How to Conserve Wildlife? The Economics of Protected Areas

Christian Bogmans, International Monetary Fund; **Claudia Berg**, International Monetary Fund

Discussant: Jean Hugues NLOM, The University of Maroua

A Bio-economics analysis of conflicts between illegal hunting and wildlife management in Cameroun: The case of Campo-Ma'an national park

Jean Hugues NLOM, The University of Maroua

Discussant: Nick Hanley, University of Glasgow

Incentivising participation and spatial coordination in Payment for Ecosystem Service schemes: invasive pests and diseases in private forests.

Nick Hanley, University of Glasgow; Artti Juutinen, University of Oulu, Natural Resources Institute Finland (Luke); Enni Ruokamo, University of Oulu; Oleg Sheremet, University of Stirling; Rauli Svento, University of Oulu

Discussant: Anders Skonhoft, Norwegian University of Science and Technology

RISK

Room: Handels: B33

Chair: Salvatore Di Falco, University of Geneva

Public Safety under Imperfect Taxation

Nicolas Treich, Toulouse School of Economics, INRA; **Yuting Yang**, Toulouse School of Economics

Discussant: Shan ROUX HU, CRESE EA 3190, University Bourgogne Franche-Comté, 45 D Avenue de l'Observatoire, F-25000 Besancon, France

The role of information disclosure in a revelation contract model

Shan ROUX HU, CRESE EA 3190, University Bourgogne Franche-Comté, 45 D Avenue de l'Observatoire, F-25000 Besancon, France

Discussant: Klaas van 't Veld,

Information Avoidance and Private Provision of Public Goods

Yuanhao Li, Norwegian School of Economics (NHH); **Klaas van 't Veld**, ; Jason Shogren, University of Wyoming

Discussant: Salvatore Di Falco, University of Geneva

Shocks and Risk Preferences Revisited New Evidence from Ethiopian Panel Data

Salvatore Di Falco, University of Geneva; Ferdinand Vieider, Reading University

Discussant: Yuting Yang, Toulouse School of Economics

THEMATIC SESSION: ENDOGENOUS POPULATION DYNAMICS AND CLIMATE CHANGE

Room: Handels: SKF

Organizer(s): Johannes Emmerling, Fondazione Eni Enrico Mattei; Soheil Shayegh, Fondazione Eni Enrico Mattei

Chair: Soheil Shayegh, Fondazione Eni Enrico Mattei

The role of population growth for climate change has been at the heart of the sustainability debate since decades. Notably, high population growth in some world regions accelerates resource use and global environmental issues, in turn, global and local externalities affect global population dynamics by affecting mortality, but also fertility rates, reproductive choices, and international migration flows. Moreover, these population dynamics interact with other socioeconomic dimensions including education and settlement patterns. In this session, we will discuss some of the recent contributions to model different population dynamics conceptually, consider recent projections and data findings, and view the findings in the light of climate change scenarios and their including in numerical models such as IAMs.

The Role of Education in the Relationship between Population and CO2 Emissions

Marina Andrijevic, Humboldt University in Berlin; Jesus Crespo Cuaresma, Vienna University of Economics and Business; Erich Striessnig, IIASA; Alexia Fürnkranz-Prskawetz, Vienna Institute of

Demography

Integrated assessment of climate and population change: A first pass

Antonin Pottier, CES Maison des Sciences Économique; Marc Fleurbaey, Woodrow Wilson School of Public and International Affairs, Princeton University; Aurélie Méjean, CIRED - CNRS; Stéphane Zuber, Paris School of Economics - CNRS

Male Reproductive Health Inequalities and Fairness issues

Natacha Raffin, University Rouen Normandie; Johanna Etner, EconomiC, UPL, Univ Paris Nanterre; Thomas Seegmuller, Aix-Marseille University, CNRS, EHESS, Centrale Marseille, AMSE

International Migration and Climate Change: Projections across the Shared Socioeconomic Pathways

Soheil Shayegh, Fondazione Eni Enrico Mattei; Johannes Emmerling, Fondazione Eni Enrico Mattei; Massimo Tavoni, Polytechnic University of Milan

TRANSPORT

Room: Handels: CG-room

Chair: Junming Zhu, Tsinghua University

The Effectiveness of Air Quality Warnings and Temporary Driving Bans: Evidence from Air Pollution and Urban Transit Flows in Santiago

Nathaly Rivera, Michigan State University
Discussant: Sarah Fluchs, RWTH Aachen University

The Influence of Government Incentives on Electric Vehicle Adoption: Cross-national Comparison

Sarah Fluchs, RWTH Aachen University; Garnet Kasperk, RWTH Aachen University
Discussant: Linda Cohen, University of California, Irvine

A Second-best Dilemma: Freight Trucks, Externalities and the Dispatch Effect

Linda Cohen, University of California, Irvine; Kevin Roth, Christensen Associates
Discussant: Junming Zhu, Tsinghua University

Ships at ports and inland air pollution: Evidence from enforcing a fuel standard in China

Junming Zhu, Tsinghua University
Discussant: Nathaly Rivera, Michigan State University

VALUATION: INCENTIVES AND BEHAVIOR

Room: Handels: B32

Chair: Christian Vossler, University of Tennessee

Preferences for Improved Electricity Services in Developing Countries: Households' Defensive Behavior and Willingness to Pay

Tensay Hadush Meles, Mekelle University and University College Dublin
Discussant: Nick Hanley, University of Glasgow

Nudging Participation and Spatial Agglomeration in Payment for Environmental Service Schemes

Laure Kuhfuss, University of St Andrews - James Hutton Institute; Raphaelé Préget, INRA Montpellier; Frans de Vries, University of Stirling; **Nick Hanley**, University of Glasgow; Sophie Thoyer, Montpellier Supagro - Center for Environmental Economics of Montpellier
Discussant: Michael Sinclair, The University of Haifa

Recreational ecosystem services of tropical wetlands in Kerala, India: a crowdsourced spatial analysis

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

Discussant: Christian Vossler, University of Tennessee

Can alternative non-market value-elicitation methods reveal the same values?

Christian Vossler, University of Tennessee; Ewa Zawojka, University of Warsaw

Discussant: Tensay Hadush Meles, Mekelle University and University College Dublin

VALUATION: STATED AND REVEALED PREFERENCES

Room: Handels: B23

Chair: Paramita Sinha, RTI International

Do attribute cut-offs make a difference? The effects of eliciting and incorporating cut-off values in choice models

Malte Oehlmann, adelphi; Jürgen Meyerhoff, TU Berlin; Klaus Glenk, Scotland's Rural College; Patrick Lloyd-Smith, University of Saskatchewan

Discussant: Erlend Dancke Sandorf, Swedish University of Agricultural Sciences

Assessing the Impact of Professional Respondents using an Integrated Choice and Latent Variable Model

Erlend Dancke Sandorf, Swedish University of Agricultural Sciences; Lars Persson, Umeå university;

Thomas Broberg, Umeå university

Discussant: bianca van der Kroon, Vrije Universiteit

Combining revealed and stated preference data to estimate urban demand for improved cook stoves and modern fuels in Mozambique

bianca van der Kroon, Vrije Universiteit

Discussant: Paramita Sinha, RTI International

Do Discrete Choice Approaches to Valuing Urban Amenities Yield Different Results than Hedonic Models?

Paramita Sinha, RTI International; Maureen Cropper, University of Maryland; Martha Caulkins, The Brattle Group

Discussant: Malte Oehlmann, adelphi

Social Event

Thursday, 18.30-23.00

Room: Handels

Parallell sessions 10
Friday June 29, 8.30-10.15

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels B22

Chair: Natacha Raffin, University Rouen Normandie

The role of social ties and knowledge-sharing for the adoption of precision farming technologies – A farmer survey and choice experiment in Italy

Julia Blasch, Vrije Universiteit Amsterdam; bianca van der Kroon, Vrije Universiteit

Discussant: Sylvain Chabé-Ferret, Toulouse School of Economics

Can We Nudge Farmers to Adopt Green Practices? Evidence from a Randomized Controlled Trial with French Winegrowers

Sylvain Chabé-Ferret, Toulouse School of Economics; Julie Subervie, French National Institute for Agricultural Research (INRA); Philippe Le Coënt, French National Institute for Agricultural Research (INRA) and CEE-M; Sophie Thoyer, Montpellier Supagro - Center for Environmental Economics of Montpellier; Raphaelae Préget, INRA Montpellier; Caroline Lefevre, VPE

Discussant: Robertson Khataza, Lilongwe University of Agriculture and Natural Resources (LUANAR)

Information acquisition, learning and the adoption of conservation agriculture in Malawi: a discrete-time duration analysis

Robertson Khataza, Lilongwe University of Agriculture and Natural Resources (LUANAR)

Discussant: Natacha Raffin, University Rouen Normandie

Corporate Social Responsibility and workers' motivation at the industry equilibrium

Natacha Raffin, University Rouen Normandie; Victor Hiller, LEMMA, Université Panthéon Assas

Discussant: Julia Blasch, Vrije Universiteit Amsterdam

CLIMATE CHANGE AND AGRICULTURE

Room: Handels C33

Chair: Thiago Morello, UFABC

The effects of climate change on crop and livestock choices

Saul Basurto Hernandez, University of Birmingham; **David Maddison**, University of Birmingham; Anindya Banerjee, University of Birmingham

Discussant: Stefaniya Veljanoska, FAO

Can Land Fragmentation Reduce the Exposure of Rural Households to Weather Variability?

Stefaniya Veljanoska, FAO

Discussant: Andrew Stevens, Mississippi State University

Temperature, Wages, and Agricultural Labor Productivity

Andrew Stevens, Mississippi State University

Discussant: Thiago Morello, UFABC

Fire, tractors and health in the Amazon: a cost-benefit analysis of fire policy

Thiago Morello, UFABC; Rubicleis Silva, UFAC; Sonaira Silva, UFAC; Simone Martino, Scottish Marine Science Association; Alejandro Duarte, UFAC; Raimundo Maciel, UFAC; Demerval Moreira, UNESP; Liana Anderson, Oxford; Vera Reis, UFAC; Foster Brown, UFAC/WHRC; Ian Bateman, University of East Anglia

Discussant: David Maddison, University of Birmingham

CLIMATE CHANGE: IMPACT

Room: Handels: D33

Chair: Yating Li, Duke University

Cross-Country Variability in Impact of Climate Change on Total Factor Productivity

Surender Kumar, Delhi School of Economics, University of Delhi; Madhu Khanna, University of Illinois, Urbana-Champaign

Discussant: Balasubramanian Rudrasamy, Tamil Nadu Agricultural University

CLIMATE CHANGE IMPACT ON GROUNDWATER SYSTEMS AND FARM INCOME – A HYDRO-ECONOMIC ANALYSIS IN SOUTH INDIA

Balasubramanian Rudrasamy, Tamil Nadu Agricultural University; Saravanakumar Venkatachalam, Tamil Nadu Agricultural University

Discussant: Jacob Hochard, East Carolina University

Mangroves shelter coastal economic activity from cyclones

Jacob Hochard, East Carolina University; Edward B. Barbier, Colorado State University; Stuart Hamilton, Salisbury University

Discussant: Yating Li, Duke University

The impact of climate change on the residential electricity demand in China

Yating Li, Duke University; William Pizer, Duke University; Libo Wu, Fudan University

Discussant: Surender Kumar, Delhi School of Economics, University of Delhi

ENERGY

Room: Handels: F45

Chair: Louis-Gaëtan Giraudet, CIRED

Power outages and firm performance: The case of Vietnam

Robert Elliott, University of Birmingham; **Viet Nguyen-Tien**, University of Birmingham; Eric Strobl, University of Bern

Discussant: Mary Karumba, Government of Kenya

Co-operation, institutional quality and management outcome in community based micro hydro schemes in Kenya

Mary Karumba, Government of Kenya; Edwin Muchapondwa, University of Cape Town

Discussant: Maria Apergi, London School of Economics and Political Science

The effect a time-varying tariff on expenditure patterns for prepaid electricity: evidence from a solar hybrid mini-grid in Guinea-Bissau

Maria Apergi, London School of Economics and Political Science

Discussant: Louis-Gaëtan Giraudet, CIRED

How do lenders price energy-efficiency loans? Evidence from France

Louis-Gaëtan Giraudet, CIRED; Anna Petronevich, CIRED; Laurent Fauchaux, CIRED

Discussant: Viet Nguyen-Tien, University of Birmingham

ENVIRONMENT AND DEVELOPMENT: FOREST

Room: Handels F43

Chair: Yuanyuan Yi, World Bank

Welfare and Environmental Impact of Incentive Based Conservation: Evidence from Kenyan Community Forest Associations**Boscow Okumu**, University of Nairobi; Edwin Muchapondwa, University of Cape Town

Discussant: Kenneth Hounghbedji, Agence Francaise de Développement

The Impact of Formalizing Land Rights on Deforestation: Experimental Evidence from BeninLiam Wren-Lewis, Paris School of Economics; **Kenneth Hounghbedji**, Agence Francaise de

Développement; Luis Becerra Valbuena, Paris School of Economics

Discussant: Dimitri Szerman, CPI and PUC-Rio

Property Rights and Deforestation: Evidence from the Amazon**Dimitri Szerman**, CPI and PUC-Rio; Juliano Assunção, PUC-Rio; Marco Gonzalez-Navarro, UC Berkeley

Discussant: Yuanyuan Yi, World Bank

Triggers and Outcomes of Collective Action in Common-Pool Resources Management: The Case of Devolution of Collective Forests in China**Yuanyuan Yi**, World Bank; Gunnar Kohlin, University of Gotheborg

Discussant: Boscow Okumu, University of Nairobi

ENVIRONMENTAL POLICY: CLIMATE

Room: Handels: C24

Chair: Grischa Perino, University of Hamburg

Turning the Global Thermostat: Prospects and Limitation of Demand Revelation for the Governance of Solar Radiation Management**Wilfried Rickels**, Kiel Institute for the World Economy; Martin Quaas, University of Kiel

Discussant: Maximilian Kellner, Technische Universität Berlin

Climate Policy and Optimal Public Debt**Maximilian Kellner**, Technische Universität Berlin; Marco Runkel, TU Berlin

Discussant: Sjak Smulders, Tilburg University

Solar Radiation Management Termination: knowing when to start by knowing when to stop**Sjak Smulders**, Tilburg University; Martin Quaas, University of Kiel; Wilfried Rickels, Kiel Institute for the World Economy; Juan Moreno-Cruz, Georgia Institute of Technology

Discussant: Grischa Perino, University of Hamburg

On cap-wearing windmills, frugal refrigerators, and off-taking Teslas: General equilibrium impacts of overlapping climate policy instruments**Grischa Perino**, University of Hamburg; Johannes Jarke, University of Hamburg

Discussant: Wilfried Rickels, Kiel Institute for the World Economy

ENVIRONMENTAL POLICY: GAMES

Room: Handels: D32

Chair: Philippe Mahenc, University of Montpellier (CEE-M)

The Tipping Game

Florian Wagener, Universiteit van Amsterdam; Aart de Zeeuw, Tilburg University

Discussant: Andries Richter, Wageningen University

The resilience of social norms of cooperation under resource scarcity and inequality – an agent-based model on sharing water over two harvesting seasons

Andries Richter, Wageningen University; Tum Nhim, Wageningen University; Xueqin Zhu, Wageningen University

Discussant: Philippe Mahenc, University of Montpellier (CEE-M)

Recycling: Is it a Threat or an Opportunity for the Extractor of an Exhaustible Resource?

Philippe Mahenc, University of Montpellier (CEE-M); Bocar Ba, University of Montpellier (CEE-M)

Discussant: Florian Wagener, Universiteit van Amsterdam

ENVIRONMENTAL POLICY: IMPACT

Room: Handels: B33

Chair: Sangeeta Bansal, Jawaharlal Nehru University, New Delhi

The Spatial-temporal Characteristics and influential factors of NO_x Emissions in China: a Spatial Econometric Analysis

Beidi Diao, China University of Geosciences; Jinhua Cheng, China University of Geosciences(Wuhan)

Discussant: Ligu Lin, Shanghai University of Finance and Economics

Enforcing Environmental Regulations with Technologies: Evidence from Establishing Automatic Surface Water Quality Monitoring Stations in China

Ligu Lin, Shanghai University of Finance and Economics; Wei Sun, Shanghai University of Finance and Economics

Discussant: Piotr Śpiewanowski, Polish Academy of Sciences

Market Structure and Supply Shocks: Evidence from Mining Disasters

Hinnerk Gnutzmann, Institute for Macroeconomics, Leibniz University Hannover, Germany; Oskar Kowalewski, IÉSEG School of Management and LEM CNRS (UMR 9221); **Piotr Śpiewanowski**, Polish Academy of Sciences

Discussant: Sangeeta Bansal, Jawaharlal Nehru University, New Delhi

Effect of Perform-Achieve-Trade Policy on Energy Efficiency of Indian Industries: Evidence from Fertilizer Industry

Hena Oak, Jawaharlal Nehru University, New Delhi, India; **Sangeeta Bansal**, Jawaharlal Nehru University, New Delhi

Discussant: Beidi Diao, China University of Geosciences

ENVIRONMENTAL POLICY: INSTITUTIONS

Room: Handels: C22

Chair: Joanna Poyago-Theotoky, Department of Economics and Finance, La Trobe University

Resource management with costly capacity adjustment under endogenous risk

Bruno Nkuiya, University of Alberta

Discussant: maria arvaniti, CERE, UMEA UNIVERSITY

Strategic Delegation and Centralised Climate Policy

maria arvaniti, CERE, UMEA UNIVERSITY; Wolfgang Habla, Department of Environmental and Resource Economics, Environmental Management, Centre for European Economic Research (ZEW)
Discussant: Kerry Krutilla, Indiana University

Environmental Rights Conflict and Institutional Choice

Kerry Krutilla, Indiana University; Alexander Alexeev, Indiana University; David Good, Indiana University
Discussant: Joanna Poyago-Theotoky, Department of Economics and Finance, La Trobe University

Green Innovation under Uncertainty - Cooperation and Information Sharing

Joanna Poyago-Theotoky, Department of Economics and Finance, La Trobe University; Jorge Pereira, University of Queensland; Heiko Gerlach, The University of Queensland, School of Economics
Discussant: Bruno Nkuiya, University of Alberta

FISHERIES: DETAILS OF POLICY MAKING

Room: Haga: B210

Chair: Håkan Eggert, University of Gothenburg

Access fees, efficiency, selectivity and latent classes: Falkland Islands fisheries

Stefano Mainardi, Technical University of Ostrava, Czech Rep.
Discussant: Yaqin Liu, Georgia State University

Non-Parametric Tests of the Tragedy of the Commons

Spencer Banzhaf, Georgia State University; **Yaqin Liu**, Georgia State University; Frank Asche, (1) Institute for Sustainable Food Systems and School of Forest Resources and Conservation, University of Florida, Gainesville; (2) Dep. of Industrial Economics, University of Stavanger; Martin Smith, Duke University
Discussant: Anna Birkenbach, Duke University

Discrete Choice Modeling of Fishermen's Landing Locations

Anna Birkenbach, Duke University; Martin Smith, Duke University; Frank Asche, (1) Institute for Sustainable Food Systems and School of Forest Resources and Conservation, University of Florida, Gainesville; (2) Dep. of Industrial Economics, University of Stavanger
Discussant: Håkan Eggert, University of Gothenburg

Bringing equity and distributional concerns into fisheries management

Håkan Eggert, University of Gothenburg; Lisa Björk, Alfred Weber Institute of Economics, Heidelberg University, Germany; Thomas Sterner, University of Gothenburg
Discussant: Stefano Mainardi, Technical University of Ostrava, Czech Rep.

GROWTH AND EFFICIENCY

Room: Haga: B225

Chair: Francesca Diluio, FEEM-Fondazione Eni Enrico Mattei

Resource Efficiency, Environmental Policy and Eco-Innovations for a Circular Economy: Evidence from EU Firms

Alessio D'Amato, University of Rome Tor Vergata; Massimiliano Mazzanti, University of Ferrara; Giulio Cainelli, University of Padova

Discussant: arsham reisinezhad, PhD candidate in Economics

Economic Growth and Income Inequality in Resource Countries: Theory and Evidence

arsham reisinezhad, PhD candidate in Economics

Discussant: Francesca Diluio, FEEM-Fondazione Eni Enrico Mattei

International Transmission of the Business Cycle and Environmental Policy

Francesca Diluio, FEEM-Fondazione Eni Enrico Mattei; Barbara Annicchiarico, University of Rome Tor Vergata

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

POLICY SESSION: AFFORDABLE CLEAN COOKING AS PRO-POOR ENVIRONMENTAL POLICY

Room: Handels: SEB

Organizer(s): Marc Jeuland, Duke University; Michael Toman, World Bank; Jörg Peters, RWI Essen

Chair: Marc Jeuland, Duke University

The World Bank Group (WBG) has committed itself to the "twin goals" of accelerating inclusive growth and all but eliminating deep poverty by 2030. It also has committed itself to accomplishing this in a sustainable way, interpreted to reflect concern for the environment as well the economy. As part of its corporate commitment to sustainability, the WBG is actively engaged with developing countries and development partners to foster low-carbon and resilient growth. My comments will be a reflection on the progress made and challenges faced by the WBG in getting these various pieces to work well together, with particular emphasis on gaps in knowledge that I see as high priorities for environmental and resource economics research going forward.

Panelist(s): Yabei Zhang, World Bank ESMAP and SE4All;

Carsten Hellpap, GIZ and Programme Manager, Energising Development Partnership;

Heather Adair-Rohani, World Health Organisation;

Aminata Ndoeye Touré, Directorate of Hydrocarbons and Domestic Fuels, Ministry of Energy, Senegal;

Marc Jeuland, Duke University;

Jörg Peters, RWI Essen

RESOURCES: THEORY

Room: Haga: Dragonen

Chair: Sophie Lian Zhou, Tilburg University

Recycling of a Primary Resource and Market Power: The Alcoa Case

Bocar Samba BA, CERDI

Discussant: Robert Cairns, McGill University

Reconciling Hotelling Resource Models with Hotelling's Accounting Method

Robert Cairns, McGill University; John Hartwick, Queen's University

Discussant: Sara Aghakazemjourabbaf, University of Waterloo

Optimal timing of hazardous waste clean-up under an environmental bond and a strict liability rule

Sara Aghakazemjourabbaf, University of Waterloo; Margaret Insley, University of Waterloo

Discussant: Sophie Lian Zhou, Tilburg University

Closing the Loop in a Circular Economy: Saving Resources or Suffocating Innovations?

Sophie Lian Zhou, Tilburg University; Reyer Gerlagh, Tilburg University; Sjak Smulders, Tilburg University

Discussant: Bocar Samba BA, CERDI

SPATIAL ISSUES IN ENVIRONMENT

Room: Handels: F44

Chair: Rodrigo Arriagada, Pontificia Universidad Catolica de Chile

Spatial Difference-in-Differences Techniques: Autocorrelation and Interaction

Shanxia Sun, Shanghai University; Michael Delgado, Purdue University; Raymond Florax, Purdue University

Discussant: K Hervé Dakpo, INRA

Spatial aggregation of land uses allocation and pesticide efficiency at landscape level A Multi-ware production approach

K Hervé Dakpo, INRA; Vincent Martinet, UMR Economie Publique, INRA-AgroParisTech; Jean-Philippe Boussemart, IESEG

Discussant: Marcelo Caffera, University of Montevideo

Spatial Spillovers in the Implicit Market Price of Soil Erosion: an estimation

Marcelo Caffera, University of Montevideo; Felipe Vasquez, Universidad del Desarrollo; Daniel Rodriguez, University of Montevideo; Ignacio Hernandez, Universidad del Desarrollo; Leonidas Carrasco, INIA; Mariela Buonomo, MGAP

Discussant: Rodrigo Arriagada, Pontificia Universidad Catolica de Chile

What determines the effectiveness of PES? Unpacking heterogeneous responses across Costa Rica

Rodrigo Arriagada, Pontificia Universidad Catolica de Chile; Erin Sills, North Carolina State University; Subhrendu Pattanayak, Duke University; Adrian Villaseñor, York University

Discussant: Shanxia Sun, Shanghai University

THEMATIC SESSION: CHINA'S NATIONAL CO2 EMISSIONS TRADING SYSTEM: OPPORTUNITIES AND CHALLENGES

Room: Handels: Malmsten

Organizer(s): William Pizer, Duke University; Richard Morgenstern, Resources for the Future

Chair: Richard Morgenstern, Resources for the Future

There is great promise as well as uncertainty regarding Chinas national CO2 emissions trading system (ETS): Will it be effective in reducing emissions of the planets largest emitter? Will it do so cost-effectively? Can it readily expand coverage beyond the power sector? Does the ETS provide a sound model for other rapidly growing economies? This four- paper session will explore key aspects of Chinas new program, including the interaction of the ETS with complementary programs. Billy Pizer and Xiliang Zhang contrast the Chinese design with western markets along multiple dimensions and highlight implications for system performance; Larry Goulder and Dick Morgenstern focus on the rate-based structure of the new program (as opposed to the mass-based design used elsewhere), analyzing the different implications of this structure for allocation, efficiency and compliance. Valerie Karplus, Xingyao Shen, and Da Zhang examine firm non-compliance with Chinas industrial energy

efficiency program. Zhenxuan Wang and Junjie Zhang consider the interaction of China's national ETS with complementary climate policies.

China's Rate-Based Approach to Reducing CO2 Emissions: Attractions, Limitations, and Alternatives

Larry Goulder, Stanford University; Richard Morgenstern, Resources for the Future

Herding Cats: Understanding Firm Non-Compliance in China's Industrial Energy Efficiency Program

Valerie J. Karplus, Massachusetts Institute of Technology; Xingyao Shen, Massachusetts Institute of Technology; Da Zhang, Massachusetts Institute of Technology

China's New National Carbon Market

William Pizer, Duke University; Xiliang Zhang, Institute of Energy, Environment, and the Economy, Tsinghua University

The Interaction of China's National ETS with Complementary Climate Policies

Junjie Zhang, Duke University; Zhenxuan Wang, Duke University

THEMATIC SESSION: CLIMATE CHANGE AND EXTREME EVENTS: MITIGATION OF THEIR IMPACT THROUGH OPTIMAL POLICY DESIGN.

Room: Handels: Aulan

Organizer(s): Federico Castillo, University of California, Berkeley; David Zilberman, University of California, Berkeley

Chair: Federico Castillo, University of California, Berkeley

Extreme events related to climate change such as droughts, heat waves and floods are likely to increase in frequency and intensity in the short and long term. The occurrence of extreme events related to climate change is likely to have a large socio-economic impact on society, particularly on those most vulnerable. Extreme events impact humans directly via infrastructure damage and health impacts but also indirectly via impacts on agricultural, hydrological and other systems of importance for societal wellbeing. The impact of extreme events is widely distributed across geographical regions as drought occurrence in California and the Sahel region (2014-2017) and heat waves impacting Europe (2014) and Pakistan and India (2016) indicate. The topic of the session and the methods presented are of interest to a wide audience of attendees to the conference including environmental and agricultural economists, climate change modelers, those in the fields of regional planning and modeling of climate and hydrological phenomena, among others. All papers included in the session are authored by multidisciplinary teams, a necessary requirement when analyzing the extreme events.

Compliance with voluntary water use reduction measures during drought occurrence: An analysis of Executive Order B-29-15 in California

Federico Castillo, University of California, Berkeley; J. K. Gillespie, University of California, Berkeley; Michael Wehner, Lawrence Berkeley National Laboratory; Nery Barrera-Lopez, University of California, Berkeley. Department of Engineering

Vulnerability and adaptation of smallholder farmers to extreme weather events: A case study of maize and bean farmers in Central America

Milagro Saborio-Rodriguez, Adjunct professor; Francisco Alpizar, EFD Central America at CATIE; Ruth Martinez, Betty and Gordon Moore Center for Science. Conservation International; Celia Harvey, Betty and Gordon Moore Center for Science. Conservation International; Raffaele Vignola, Environmental Policy Group. Wageningen University and Research.; Leyla Aguilar-Solano, Independent Consultant; Barbara Viguera, CATIE

Simulation Model Based on Agents for Land Use Change and Cost-Benefit Analysis of Land Management Policies

Armando Sanchez, Instituto de Investigacion Economica, Universidad Autonoma de Mexico; Carlos Gay Garcia, Departamento de las Ciencias de la Atmosfera, Universidad Autonoma de Mexico; Ana Liz Herrera, Instituto de Investigaciones Economicas, Universidad Autonoma de Mexico; Debora Martinez, Instituto de Investigaciones Economicas, Universidad Autonoma de Mexico; Bernardo Olvera, Departamento de Economia, Universidad Autonoma de Mexico

Adoption of Modern Biotechnology and the Economics of Extreme Events

David Zilberman, University of California, Berkeley; Justus Wesseler, Wageningen University; Benjamin Gordon, University of California, Berkeley; Lucy Shim, University of California, Berkeley

THEMATIC SESSION: ECONOMIC CONNECTIVITY AND SPILLOVERS: INTEGRATING PEOPLE AND THEIR (RE)ACTIONS INTO ECOSYSTEM AND LANDSCAPE MANAGEMENT POLICY DESIGN

Room: Handels: B44

Organizer(s): Heidi Albers,

Chair: Heidi Albers,

Given the scale of the establishment of protected areas following the CBD, and that ecologists increasingly emphasize the interactions between protected and unprotected areas in generating conservation benefits from landscapes and ecosystems, broadening Reserve Site Selection (RSS) and Ecosystem-based Management (EBM) frameworks to incorporate both ecological and economic connectivity could improve both the socioeconomic and ecological outcomes from policy. This thematic session extends the current literature by examining how economic analysis that incorporates the actions of people across space can inform management of marine and terrestrial ecosystems. To achieve this system-wide perspective, each paper considers spatial characteristics of the ecosystem and/or resource users. Taking this broader perspective allows development of insights in policy design features that can increase landscape/seascape-level benefits. The analyses combine to comment on conservation management policy issues that play out beyond traditional management boundaries, such as leakage, impacts on multiple resources, labor and land market interactions, and incomplete enforcement. Two papers consider marine settings and two papers consider terrestrial settings.

Economic Connectivity of Fisheries and Leakage: Defining the Policy Scope for Ecosystem-Based Fishery Management

Kailin Kroetz, ; Matthew Reimer, University of Alaska; James Sanchirico, University of California, Davis; Justine Huetteman, RFF

Positioning Parks and Enforcement in the Presence of Spatial Ecosystem Service Production Functions and Multiple Non-Cooperative Extractors

Benjamin Clayton Benjamin Clayton White, University of Wyoming; Heidi Albers, ; Elizabeth Robinson, University of Reading; Erik Sterner, Chalmers

Reserve Site Selection with Enforcement Costs and Illegal Harvest

Heidi Albers, ; Charlotte Chang, NIMBioS; Sahan Dissanayake, Portland State University; Kate Helmstedt, Queensland University; Kailin Kroetz, ; Leticia Ochoa, UNAM; Gwen Spencer, Smith College

Siting Marine Protected Areas for Artisanal Fishery and Conservation Goals with Area Targets: Costa Rica's Caribbean Coast

Tabare Capitan, CATIE; Heidi Albers, ; Louis Preonas, University of California at Berkeley; Roger Madrigal, CATIE; Benjamin Clayton Benjamin Clayton White, University of Wyoming

THEMATIC SESSION: ELECTRICITY AND ECONOMIC DEVELOPMENT

Room: Handels: E45

Organizer(s): Robyn Meeks,

The adoption of energy access targets as part of the United Nations Sustainable Development Goals has thrust energy to the fore of development policy. Universal access to reliable electricity, in particular, is often viewed as a catalyst for economic growth and development, yet the evidence on the welfare impacts of electrification remains mixed. An incomplete understanding of the microeconomic foundations of the electricity-development relationship is both a significant knowledge gap and a critical policy challenge. The papers in this proposed session bring to bear rigorous quasi-experimental methods creatively applied to both administrative and geospatial datasets to engage with these debates. They focus on two critical areas: employment and enterprise creation, and optimal energy-pricing modalities. As such, they shed light on impacts (of expanding traditional grid infrastructure as well as access to nontraditional off-grid alternatives) while at the same time informing policies that seek to ensure the sustainability of energy-services delivery.

Off-grid in Nepal: Heterogeneity in Electricity Services and Enterprise Development

Robyn Meeks,

Turning on the Lights: State Capacity in Electricity Provisioning

Meera Mahadevan, University of Michigan

Fracking, farmers, and rural electrification in India

Faraz Usmani, Duke University

THEMATIC SESSION: ENDOGENOUS PREFERENCES AND ENVIRONMENTAL POLICY

Room: Handels: SKF

Organizer(s): Linus Mattauch, ; Inge van den Bijgaart, University of Gothenburg

Chair: Linus Mattauch,

There is recent awareness among environmental economists that policy measures can change preferences. While policy-makers sometimes may even explicitly aim to change the habits of citizens, it is far more frequently the case that attempts to influence relative prices also accidentally influence the process of preference formation. For instance, recent work empirically indicates the relevance of preference changes for the success of Pigouvian policies. A more thorough understanding of how

policy should be optimally adjusted to the presence of endogenous preferences and how policy measures can change these preferences matters for accurate policy design. While this is already discussed for economic policy in general, a coherent theory within environmental economics is lacking so far. The goal of the proposed session is to present three different but related approaches to endogenous preferences in environmental policy, and encourage further discussion surrounding this new research field.

Pigou pushes preferences

Linus Mattauch, ; Cameron Hepburn, University of Oxford; Nicholas Stern, London School of Economics and Political Science

Dynamic (Environmental) Policy Choices in Presence of Social Norms

Beat Hintermann, University of Basel; Andreas Lange, University of Hamburg

Too Slow a Change? Deep Habits, Consumption Shifts and Transitory Tax Policy

Inge van den Bijgaart, University of Gothenburg

THEMATIC SESSION: FISHERIES IN LATIN AMERICA: INSIGHTS AND LESSONS FOR RESOURCE MANAGEMENT I

Room: Handels: CG-room

Organizer(s): Jorge Maldonado, Universidad de los Andes

Chair: Jorge Maldonado, Universidad de los Andes

Managing and Defending the Commons: Experimental Evidence from TURFs in Chile

Carlos Chavez, Universidad de Talca; James Murphy, Department of Economics, University of Alaska Anchorage; John Stranlund, Department of Resource Economics, University of Massachusetts-Amherst

Gender and natural resource management in the framework of a conservation agreement: Experimental evidence for the mangrove in the Colombian Pacific

Yady Marcela Barrero, Universidad de los Andes; Jorge Maldonado, Universidad de los Andes

The role of pro-social motivations in the economic valuation of strategic ecosystems: combining standard valuation techniques, participatory valuation, and experimental games

Jorge Maldonado, Universidad de los Andes; Rocio del Pilar Moreno-Sanchez, Universidad de los Andes; Juan Pablo Henao-Henao, Universidad de los Andes

THEMATIC SESSION: NETWORKS AND THE ENVIRONMENT

Room: Handels: Volvo

Organizer(s): Efthymia Kyriakopoulou, Swedish University of Agricultural Sciences; Anastasios Xepapadeas, AUEB, UNIBO

Chair: Efthymia Kyriakopoulou, Swedish University of Agricultural Sciences

Networks are important in many aspects of our lives as they determine our choices or behaviors. Most decisions that people make are affected by the decisions of their friends: the decision to buy a product, to work hard at school, to use a specific technology, to commit a crime, to behave in a specific way. The emerging empirical literature on those issues motivates the theoretical study of how network structures affect individual decisions. During the last decade, network theory has been used in different fields of economics: among others, education, crime, labor and financial economics. Despite, the critical importance of networks on environmental issues, network theory has been

neglected in environmental economics literature. However, the inherent nature of environmental economics, that deal with a great number of non-market interactions, provide a convincing argument of why networks could give a new insight in this literature. In this session, we have put together three papers with the aim to start filling in the gap by analyzing how networks can be used to give new insights in the field of environmental economics. In all papers, network effects are proved to be important in the final allocation / outcome. They also determine the policies that can be enforced in order to promote more environmentally-friendly outcomes, which explicitly depend on the associated network structures.

Location, Social Norms and Recycling

Efthymia Kyriakopoulou, Swedish University of Agricultural Sciences; Philip Ushchev, National Research University Higher School of Economics; Yves Zenou, Monash University and CEPR

Natural Resource Management: A Network Perspective

Efthymia Kyriakopoulou, Swedish University of Agricultural Sciences; **Anastasios Xepapadeas**, Athens University of Economics and Business University of Bologna

Charging of electric vehicles: To what extent does the diversity of standards prolonge the life of the gasoline car?

Mads Greaker, Statistics Norway

THEMATIC SESSION: OUTCOMES FROM FOREST COLLECTIVE ACTION AND COOPERATION

Room: Handels: E 44/GBJ-room

Organizer(s): Randall Bluffstone, Portland State University

Chair: Randall Bluffstone, Portland State University

Livelihood mushroomed: contribution of enhanced Non-timber forest products (NTFPs) management on state worker's household welfare

Jintao Xu, Peking University; Shilei Liu, Peking University

Devolution and Sustainable Management of Forests in Developing Countries: Quasi-Experimental Evidence from Household Level Data in Ethiopia

Zenebe Gebreegziabher, Mekelle University; Abebe Beyene, Ethiopian Development Research Institute; Randall Bluffstone, Portland State University; Berhanu Gebremedhin, ILRI

Cooperative Behavior and Common Pool Resources: Experimental Evidence from Community Forest User Groups in Nepal

Randall Bluffstone, Portland State University; Astrid Dannenberg, University of Kassel; Peter Martinsson, University of Gothenburg; Rajesh Bista, North Carolina State University; Prakash Jha, CMCC Bologna

Cooperation under alternative punishment institutions: Experimental evidence from commons' dilemma

Dambala Kutela, University of Johannesburg

**THEMATIC SESSION: SOLAR GEOENGINEERING:
PERSPECTIVES FROM INTEGRATED ASSESSMENT MODELS**

Room: Handels: E43

Organizer(s): Juan Moreno-Cruz, Georgia Institute of Technology; Garth Heutel, Georgia State University; Gernot Wagner, Harvard University Center for the Environment, Harvard University

Chair: Juan Moreno-Cruz, Georgia Institute of Technology

Climate Engineering under Deep Uncertainty

Anastasios Xepapadeas, Athens University of Economics and Business University of Bologna; Johannes Emmerling, Fondazione Eni Enrico Mattei; Vassiliki Manoussi, Fondazione Eni Enrico Mattei

Quantifying non-cooperative climate engineering

Johannes Emmerling, Fondazione Eni Enrico Mattei; Massimo Tavoni, Polytechnic University of Milan

Mitigation, Carbon and Solar Geoengineering Over Time

Gernot Wagner, Harvard University Center for the Environment, Harvard University; Mariia Belaia, Harvard School of Engineering and Applied Sciences; David Keith, Harvard School of Engineering and Applied Sciences

Solar Geoengineering and Learning

Garth Heutel, Georgia State University; Soheil Shayegh, Fondazione Eni Enrico Mattei; David Kelly, University of Miami; Juan Moreno-Cruz, Georgia Institute of Technology

VALUATION STATED PREFERENCE: METHODOLOGY

Room: Handels: B23

Chair: Pierre-Alexandre Mahieu, University of Nantes

Can Stated Measures of Willingness-to-Accept be Valid? Evidence from Laboratory Experiments

Patrick Lloyd-Smith, University of Saskatchewan; Wiktor (Vic) Adamowicz, University of Alberta
Discussant: Pierre-Alexandre Mahieu, University of Nantes

Rewarding truthful-telling in stated preference studies

Pierre-Alexandre Mahieu, University of Nantes; Romain Crastes, University of Leeds; Jordan Louviere, University of South Australia; Ewa Zawojcka, University of Warsaw
Discussant: Sergio Colombo, Institute of Agricultural Research and Training (IFAPA)

Ex-ante and ex-post measures to mitigate hypothetical bias. Are they alternative or complementary tools to increase the reliability and validity of DCE estimates?

Sergio Colombo, Institute of Agricultural Research and Training (IFAPA); Wiktor Budziński, University of Warsaw, Department of Economics; Mikolaj Czajkowski, University of Warsaw; Klaus Glenk, Scotland's Rural College
Discussant: Pierre-Alexandre Mahieu, University of Nantes

Open-ended format in contingent valuation: Additional evidence for the new hope

Pierre-Alexandre Mahieu, University of Nantes; Ewa Zawojcka, University of Warsaw
Discussant: Patrick Lloyd-Smith, University of Saskatchewan

Chair: Christine Bertram, IfW Kiel

What is a Non-Market Valuation Study Worth? A Demonstration Using a Meta-Analysis of Water Quality Values

Robert Johnston, Clark University; Steve Newbold, U.S. EPA National Center for Environmental Economics (NCEE)

Discussant: Nicolai V. Kuminoff, Arizona State University NBER

Revealed Preference Evidence on the VSL for Seniors

Nicolai V. Kuminoff, Arizona State University NBER; Jonathan Ketcham, Arizona State University; Nirman Saha, Arizona State University

Discussant: Sonja Köke, Kiel University

Valuation of non-market goods: the life satisfaction approach under methodological examination

Sonja Köke, Kiel University

Discussant: Christine Bertram, IfW Kiel

Contingent behavior and asymmetric preferences for Baltic Sea coastal recreation

Christine Bertram, IfW Kiel; Heini Ahtiainen, Natural Resources Institute Finland (Luke); Jürgen Meyerhoff, Technische Universität (TU) Berlin; Kristine Pakalniete, AktiivS Ltd; Eija Pouta, Natural Resources Institute Finland, LUKE; Katrin Rehdanz, Christian-Albrechts Universität zu Kiel

Discussant: Robert Johnston, Clark University

Coffee break

Friday, 10.15-10.45

Room: Handels / Haga

Plenary session

Friday, 10.45-11.45

PLENARY

Room: Smyrna

Nava Ashraf Human Nature and Human Development

Chair: Ben Groom

The outcomes we look to create: improvements in health, education, environment, are not given to people: they are co-produced together with them. The nature of this co-production requires us to understand deeply the drivers and motivators of those who interact with programs and policy to create their environment. This requires getting deeply inside the head and heart of the end-user, which can be an individual, a household or a community. This talk will explore how leveraging aspects of human nature in the design of products and programs can significantly improve welfare: work covered includes time inconsistency from behavioural economics, differing preferences within the household on fertility, and on incentive design for service providers.

Closing ceremony

Friday, 11.45-12.15

Room: Smyrna

Lunch

Friday, 12.15-13.45

MEETINGS

Room: Handels

AERE, EAAERE, EAERE joint meeting of the presidents* (Room: C33)

CAERE meeting (Room: C32)

LAERE meeting (Room: C35)

*Invitation only

Parallell sessions 11
Friday June 29, 13.45-15.30

BEHAVIORAL ECONOMICS AND THE ENVIRONMENT

Room: Handels: B22

Chair: Caroline Schill, The Beijer Institute of Ecological Economics, the Royal Swedish Academy of Sciences; Stockholm Resilience Centre, Stockholm University

Natural Disaster and Risk Sharing Behavior: Evidence from Rural Bangladesh

Minhaj Mahmud, Bangladesh Institute of Development Studies; Asadul Islam, Monash University; Paul Raschky, Monash University

Discussant: Rebecca Klege, University of Cape Town

The Power of Nudging: Using Feedback, Competition and Responsibility Assignment to Save Electricity in a Non-Residential Setting.

Rebecca Klege, University of Cape Town; Martine Visser, University of Cape Town; Saugato Datta, Ideas42; Mathew Darling, Ideas42

Discussant: Adan L. Martinez-Cruz, Assistant professor, CIDE-RC, Mexico, and Research Associate, ETH-Zurich, Switzerland.

Influence of Green Network Effect and Incentive on Choice of Star Labeled Cars in India: A Latent Class Approach based on Choice Experiment

Charu Grover, Jawaharlal Nehru University; Sangeeta Bansal, Jawaharlal Nehru University, New Delhi; **Adan L. Martinez-Cruz**, Assistant professor, CIDE-RC, Mexico, and Research Associate, ETH-Zurich, Switzerland.

Discussant: Caroline Schill, The Beijer Institute of Ecological Economics, the Royal Swedish Academy of Sciences; Stockholm Resilience Centre, Stockholm University

Uncertainty can help protect local commons in the face of climate change

Caroline Schill, The Beijer Institute of Ecological Economics, the Royal Swedish Academy of Sciences; Stockholm Resilience Centre, Stockholm University; Juan Carlos Rocha, Stockholm Resilience Centre, Stockholm University; the Beijer Institute of Ecological Economics, the Royal Swedish Academy of Sciences

Discussant: Minhaj Mahmud, Bangladesh Institute of Development Studies

CLIMATE CHANGE: IMPACT

Room: Handels: D33

Chair: Stephanie Armbruster, University of Basel, Switzerland

Adaptation to Climate Change: Evidence from US Acreage Response

Xiaomeng Cui, UC Davis

Discussant: Blake Shaffer, University of Calgary

Stretching the duck's neck: The effect of climate change on future electricity demand

Nicholas Rivers, University of Ottawa; **Blake Shaffer**, University of Calgary

Discussant: Birgit Bednar-Friedl, University of Graz

Public adaptation to climate change: The economy-wide costs and benefits and implications for government budgets

Birgit Bednar-Friedl, University of Graz; Gabriel Bachner, University of Graz; Nina Knittel, University of Graz

Discussant: Stephanie Armbruster, University of Basel, Switzerland

The effects of flood events on land and housing value: Evidence from the Swiss real estate market

Beat Hintermann, University of Basel; **Stephanie Armbruster**, University of Basel, Switzerland

Discussant: Xiaomeng Cui, UC Davis

CLIMATE CHANGE: MODELLING

Room: Handels: C22

Chair: Charles Sims,

All or nothing: Climate policy when assets can become stranded

Matthias Kalkuhl, MCC Berlin; Jan Steckel, MCC Berlin; Ottmar Edenhofer, Potsdam Institute for Climate Impact Research, Mercator Research Institute on Global Commons and Climate Change, Berlin Institute of Technology

Discussant: Marie-Theres von Schickfus, ifo Institute

Climate Policy, Stranded Assets, and Investors' Expectations

Suphi Sen, ifo Institute; **Marie-Theres von Schickfus**, ifo Institute

Discussant: Soham Baksi, University of Winnipeg

Multiple Pollutants and Cleaner Technology Adoption

Soham Baksi, University of Winnipeg

Discussant: Charles Sims,

Hurry up or wait: The effect of climate change and variability on the timing of private adaptation

Charles Sims,

Discussant: Matthias Kalkuhl, MCC Berlin

CONTINGENT VALUATION

Room: Handels: B44

Chair: Nomsa Phindile Nkosi, University of Johannesburg

Impact of projection bias on willingness to pay for better air quality: the case of Nanjing, China

Jie He, Université de Sherbrooke; Bing Zhang, Nanjing University

Discussant: Graça Manjate, Centre for Environmental Economics and Policy in Africa (CEEPA), University of Pretoria

Scope effects in contingent valuation: An application to the valuation of irrigation water quality improvements in Infulene Valley, Mozambique

Graça Manjate, Centre for Environmental Economics and Policy in Africa (CEEPA), University of Pretoria; Eric Mungatana, University of Pretoria, Pretoria, South Africa

Discussant: Thomas Broberg, Umeå university

Peak load habits for sale - Soft load control and consumer preferences on the electricity market

Lars Persson, Umeå university; **Thomas Broberg**, Umeå university; Runar Brännlund, Umeå University

Discussant: Nomsa Phindile Nkosi, University of Johannesburg

Pricing electricity blackouts among South African households

Johane Dikgang, University of Johannesburg; **Nomsa Phindile Nkosi**, University of Johannesburg

Discussant: Jie He, Université de Sherbrooke

ECOSYSTEM SERVICES AND MARINE BIODIVERSITY

Room: Handels F44

Chair: Agustin Perez-Barahona, THEMA, University of Cergy-Pontoise and Ecole Polytechnique

Consequences of Space and Species Aggregation in Welfare Estimates of Invasive Species

Stephanie Brockmann, University of Wyoming; David Finnoff, University of Wyoming

Discussant: Sunny Jardine, University of Washington

Estimating the Cost of Invasive Species Control

Sunny Jardine, University of Washington; James Sanchirico, University of California, Davis

Discussant: Paulo Santos, Department of Economics, Monash Business School, Monash University

Evaluating the impact of a fisheries conservation program on biodiversity

Declan Butorac, Monash University; **Paulo Santos**, Department of Economics, Monash Business School,

Monash University; Phousavanh Phouvin, National University of Laos; Francois Guegan, WWF-Laos

Discussant: Agustin Perez-Barahona, THEMA, University of Cergy-Pontoise and Ecole Polytechnique

The Effectiveness of Protecting Species Through Legislation: The Case of Sea Turtle Lighting Ordinances

Agustin Perez-Barahona, THEMA, University of Cergy-Pontoise and Ecole Polytechnique; Michael Brei,

The University of the West Indies (Barbados) Université Paris Ouest; Eric Strobl, University of Bern

Discussant: Stephanie Brockmann, University of Wyoming

ENERGY: HOUSEHOLD CONSUMPTION

Room: Handels: B23

Chair: Mattias Vesterberg, Umeå University

Household internal and external electricity contract switching in EU countries

Joachim Schleich, Grenoble Ecole de Management; Corinne Faure, Grenoble Ecole de Management;

Xavier Gassmann, Brest Business School

Discussant: Edward Rubin, UC Berkeley

Natural gas price elasticities and optimal cost recovery under consumer heterogeneity: Evidence from 300 million natural gas bills

Maximilian Auffhammer, University of California, Berkeley (ARE); **Edward Rubin**, UC Berkeley

Discussant: Chu Wei, Renmin University of China

A new measure of energy consumption in household surveys

Chu Wei, Renmin University of China; Shimei WU, Renmin University of China; Jin GUO, Renmin

University of China; Chuan-Zhong Li, Uppsala University

Discussant: Mattias Vesterberg, Umeå University

An empirical model of the decision to switch between electricity price contracts

Mattias Vesterberg, Umeå University; Gauthier Lanot, Umeå University

Discussant: Joachim Schleich, Grenoble Ecole de Management

ENVIRONMENT AND DEVELOPMENT: RESOURCE USE

Room: Handels: F43

Chair: Gerhard Toews, University of Oxford

Bargaining and Contract Choice: Evidence from Informal Groundwater Contracts

Yashodha Yashodha, International Rice Research Institute

Discussant: Javier Montoya, The Australian National University

The impacts of rewards for hydrological ecosystem services on land cover and household wellbeing in Moyobamba, Peru

Javier Montoya, The Australian National University; Eduardo Rojas, REDD+ Program - Ministry of the Environment Peru; Sven Wunder, CIFOR Latin America

Discussant: Victoire Girard, LEO, Univ. Orléans

The gold digger and the machine. Evidence on the distributive effect of the artisanal and industrial gold rushes in Burkina Faso

Victoire Girard, LEO, Univ. Orléans

Discussant: Gerhard Toews, University of Oxford

Boom Goes the Price: Giant Resource Discoveries and Real Exchange Rate Appreciation

Gerhard Toews, University of Oxford; Radek Stefanski, St. Andrews

Discussant: Yashodha Yashodha, International Rice Research Institute

ENVIRONMENTAL POLICY: DISTRIBUTION

Room: Handels: C24

Chair: Marcello De Maria, University of Reading (PhD student)

Carbon Emission and Economic Inequality in India: A State-level Analysis

Haimanti Bhattacharya, University of Utah

Discussant: Basanta Pradhan, Institute of Economic Growth

Climate change mitigation policies and the size distribution of income: A CGE analysis for India

Basanta Pradhan, Institute of Economic Growth; Joydeep Ghosh, Institute for Economic Modeling Studies, New Delhi

Discussant: Hiroaki Yamagami, Seikei University

Redistribution of Emission Tax Revenue between Firms and Households

Hiroaki Yamagami, Seikei University; Ryo Arawatari, Nagoya University; Takeo Hori, Tokyo Institute of Technology

Discussant: Marcello De Maria, University of Reading (PhD student)

The Economics of the Fair Compensation in Large-Scale Land Acquisition

Marcello De Maria, University of Reading (PhD student); Elizabeth Robinson, University of Reading

Discussant: Haimanti Bhattacharya, University of Utah

FISHERIES: POLICY FOR LOCAL AND SMALL SCALE ACTIVITY

Room: Haga: B210

Chair: Mihoko Wakamatsu, Kyushu University

Some distributional consequences of collective rights in artisanal fisheries

Jorge Dresdner, Universidad de Concepción; Walter Gómez, Universidad de la Frontera; Miguel Jara, Ministerio de Economía, Chile

Discussant: X. Liu, University of Vigo

The Supply Response of Small-Scale Fishers in License-controlled Mixed Fisheries

X. Liu, University of Vigo; Mikko Heino, University of Bergen; Daigee Shaw, Institute of Economics, Academia Sinica, Taiwan; Trond Bjørndal, Norwegian University of Science and Technology

Discussant: Alberto Ansuategi, University of the Basque Country

LOCAL FISHING COMMUNITIES AND NATURE-BASED TOURISM IN BAJA, MEXICO

Alberto Ansuategi, University of the Basque Country; Duncan Knowler, Simon Fraser University; Tobias Schwoerer, University of Alaska Anchorage; Salvador García-Martínez, Universidad Autónoma de Baja California Sur

Discussant: Mihoko Wakamatsu, Kyushu University

The effect of specific knowledge of fish stocks on the willingness to pay for ecolabelled seafood: a choice experiment in Japan

Mihoko Wakamatsu, Kyushu University; Shunsuke Managi, Kyushu University

Discussant: Jorge Dresdner, Universidad de Concepción

FOSSIL FUEL: IMPACT

Room: Handels: D32

Chair: brock smith, montana state university

Earthquake alley: Unconventional oil and gas development, induced seismic activity, and housing price impacts

Wesley Burnett, Department of Economics, College of Charleston; Christopher Mothorpe, Department of Economics, College of Charleston; Steven Jaume', Department of Geology and Environmental Geosciences, College of Charleston

Discussant: Kangil Lee, Oklahoma State University

The Impact of Unconventional Drilling on House Prices in Central Oklahoma

Kangil Lee, Oklahoma State University; Brian Whitacre, Oklahoma State University

Discussant: Chin-Hsien Yu, Southwestern University of Finance and Economics

Chinese Local Residents' Attitudes toward Shale Gas Exploitation: The Role of Energy Poverty, Environmental Awareness, and Benefit and Risk Perceptions

Chin-Hsien Yu, Southwestern University of Finance and Economics; Ping Qin, Renmin University of China; Huimin Tan, Southwestern University of Finance and Economics; Xiaolan Chen, Sichuan University

Discussant: brock smith, montana state university

The long Run Effects of Oil Discoveries and the Role of Amenity Value

brock smith, montana state university; Alex James, University of Alaska, Anchorage; Kevin Berry,

University of Alaska, Anchorage; Brett Jordan, University of Alaska, Anchorage
Discussant: Wesley Burnett, Department of Economics, College of Charleston

**POLICY SESSION: ADAPTING TO CLIMATE CHANGE OR
ADAPTING TO DEVELOP? CHALLENGES AND
OPPORTUNITIES FOR A POLICY VIABLE AND EFFECTIVE
CLIMATE CHANGE ADAPTATION ACTION**

Room: Handels: SKF

Organizer(s): Francesco Bosello, Department of Environmental Science and Policy, University of Milan and Euro-Mediterranean Center on Climate Change

Chair: Francesco Bosello, Department of Environmental Science and Policy, University of Milan and Euro-Mediterranean Center on Climate Change

Adaptation is not only essential to contrast adverse consequences of climate change, but also increasingly intertwined with countries social economic development and sustainability prospects. The fact that all developing countries Nationally Determined Contributions presented at the Paris COP 21 include explicit adaptation targets is just one amongst the many examples of the policy relevance of this strategy. The centrality of adaptation to policy decision making is further strengthened considering that a large majority of planned adaptation actions fall within the boundaries of standard public sector planning and management practices. However, mainstreaming climate change and adaptation into the policy decision process encounters many barriers. Adaptation actions take place across evolving scales and contexts under large uncertainties making evolutionary planning, monitoring and learning at the same time important and very challenging to achieve. Adaptation, cross cutting by nature, imposes a difficult synthesis and potential tension across different policy domains, administrative and responsibility levels. Similarly, it has also to reconcile legitimate differences in social actors view about how adaptation resources are distributed and the values that adaptation seeks to protect.

This session gathers a high level panel of policy experts and scientist from major international institutions working at the interface between adaptation science, policy design and implementation, to highlight the peculiar challenges and opportunities adaptation poses and to exchange experiences, best practices, findings on innovative solutions to increase the factual support from the science to the policy making community and make adaptation not only more effective but also politically and institutionally viable.

Panelist(s): Sergio Castellari, European Environment Agency;
Michael Mullan, Organisation for Economic Cooperation and Development;
Paul Watkiss, Paul Watkiss Associated;
Francesco Bosello, Department of Environmental Science and Policy, University of Milan and Euro-Mediterranean Center on Climate Change

RESOURCES: THEORY

Room: Haga: Dragonen

Chair: Carolyn Fischer, Resources for the Future

Development of a small closed economy: the role of preferences, technology and environmental externalities

Gala Sipos, University of Bern

Discussant: Rafael González-Val, Universidad de Zaragoza IEB

Natural resources, economic growth and geography

Rafael González-Val, Universidad de Zaragoza IEB; Fernando Pueyo, Universidad de Zaragoza

Discussant: Rachel Ruslana Palatnik, the Max Stern Yezreel Valley College

Time to dare and endure: case study of macroalgae two-stage supply chain with co-products

Rachel Ruslana Palatnik, the Max Stern Yezreel Valley College; Mikhail Freer, Department of Economics, University of Leuven (KU Leuven), Belgium; Alexander Golberg, Porter School of Environmental Sciences, Tel Aviv University, Israel; David Zilberman, University of California, Berkeley; Mark Levin, Moscow School of Economics

Discussant: Carolyn Fischer, Resources for the Future

When the Tail Can Wag the Dog: Common-Pool Risk Management and Market Power

Carolyn Fischer, Resources for the Future

Discussant: Gala Sipos, University of Bern

RISK: PREFERENCES AND BEHAVIOR

Room: Handels: B32

Chair: Gunther Bensch, RWI Leibniz Institute for Economic Research

Risk attitudes and their influence on flood protection decisions

Markus Glatt, EAWAG; Roy Brouwer, The Water Institute / University of Waterloo; Ivana Logar, Eawag, Swiss Federal Institute of Aquatic Science and Technology

Discussant: Claudia Schwirplies, University of Hamburg

The risks that farmers take: An experiment on externalities with individual thresholds inspired by fertilizer use

Claudia Schwirplies, University of Hamburg; Andreas Lange, University of Hamburg

Discussant: Francisco Alpizar, Efd Central America at CATIE

Measuring farmers risk attitudes: comparing stated preference methods and incentivized experiments

Maria Naranjo, Efd Central America at CATIE; **Francisco Alpizar**, Efd Central America at CATIE; Peter Martinsson, University of Gothenburg

Discussant: Gunther Bensch, RWI Leibniz Institute for Economic Research

Understanding Behavioral Constraints of Technology Uptake at the Base of the Pyramid

Gunther Bensch, RWI Leibniz Institute for Economic Research; Michael Grimm, University of Passau and IZA

Discussant: Markus Glatt, EAWAG

THEMATIC SESSION: CLIMATE POLICY IN A WORLD WITH FACTOR MOBILITY: STRATEGIC ASPECTS OF POLICY-MAKING

Room: Handels: F45

Organizer(s): Wolfgang Habla,

Climate policies are plagued by various constraining factors. First, all uncoordinated policies suffer from the typical free-rider problem inherent in the provision of all public goods. Second, with fossil fuels being traded on world markets, it is feared that unilateral mitigation efforts are undermined by market reactions in other countries ("carbon leakage"). Third and related, countries have incentives to distort the allocation of mobile factors of production, such as capital and resources/energy, in their

favor. For example, they can boost domestic production by levying taxes on resource use that are lower than their Pareto-optimal rates (and may even be negative), or by subsidizing capital, which will not only lead to an increase in investment but, due to complementarity of capital and resources in production, to an increase in resource use and emissions. Fourth, often several different levels of government levy taxes on the same tax base, leading to further inefficiencies. This session will shed light on the interactions of international markets for production inputs as well as on the strategic interactions among governments when competing for mobile factors of production. It binds together various papers that address the strategic concerns mentioned above.

Tax competition with asymmetric endowments in fossil resources

Max Franks, Potsdam Institute for Climate Impact Research; Kai Lessmann, Potsdam Institute for Climate Impact Research

Multi-tier tax competition on Gasoline

Marie-Laure Breuillé, French National Institute for Agricultural Research; **Emmanuelle Taugourdeau**, University of Paris-Saclay, CREST

Capital Tax Competition under a Centralized Emissions Cap

Wolfgang Haba, Department of Environmental and Resource Economics, Environmental Management, Centre for European Economic Research (ZEW); Ralph Winkler, University of Bern

Assessing EU ETS minimum prices and commonly used transfers from a multilevel policy perspective

Christina Roelfs, Potsdam Institute for Climate Impact Research; Beatriz Gaitan, Potsdam Institute for Climate Impact Research; Ottmar Edenhofer, Potsdam Institute for Climate Impact Research, Mercator Research Institute on Global Commons and Climate Change, Berlin Institute of Technology

THEMATIC SESSION: ELECTRIC VEHICLES: DEMAND ESTIMATION AND POLICY IMPLICATIONS

Room: Handels: E45

Organizer(s): David Rapson,

Chair: David Rapson,

The world is attempting to shift rapidly towards an electrified transportation sector, with the primary aspiration to reduce greenhouse gas emissions. However, despite declines in battery costs, electric vehicles (EVs) require large subsidies to be cost-competitive with conventional vehicles. In this session we explore the effectiveness of EV subsidies in spurring EV adoption, and estimate the potential GHG benefit in the form of which vehicles are displaced by EVs. One paper exploits a quasi-experiment that targets low- and middle-income households in California with massive subsidies (up to \$9500 per EV) in order to estimate the price elasticity of demand among this mass-market segment. Another estimates a structural model of demand to retrieve substitution patterns between EVs and traditional vehicles. We find that demand for EVs is highly elastic within the low- and middle-income segment. On the other hand, EVs tend to displace more fuel efficient cars, which tempers the benefits under current substitution patterns. The results from both studies are relevant to policy in any state or country attempting to spur GHG emissions reductions via EVs.

Estimating Demand for Electric Vehicles in Low- and Middle-income Households

David Rapson, ; Erich Muehlegger, University of California - Davis

What Does an Electric Vehicle Replace?

Shanjun Li, ; Jianwei Xing, Cornell University; Benjamin Leard,

Informational Spillover Effects When Clean Vehicle Rebates Are Rationed: Evidence from California's Low-Income Rebate Program

J.R. DeShazo, University of California, Los Angeles; Rongzhang Wang, UCLA

THEMATIC SESSION: ENERGY EFFICIENCY IN BUILDINGS: BARRIERS AND POLICY SOLUTIONS IN EUROPE

Room: Handels: E43

Organizer(s): Louis-Gaëtan Giraudet, CIRED

Chair: Louis-Gaëtan Giraudet, CIRED

The notion that energy-efficiency levels are economically suboptimal a phenomenon known as the energy-efficiency gap has gained renewed interest in recent years. Candidate explanations are usually classified into three categories: market failures, behavioural anomalies and modelling errors. While market failures have been studied the earliest, with mixed results, behavioural anomalies are receiving most attention. In contrast, modelling errors are often invoked when alternative explanations fail, yet they are rarely identified per se. Whatever their nature, the multiplicity of problems at the source of the energy-efficiency gap has motivated implementation of an array of policies throughout Europe, without systematically seeking coordination between them.

The proposed session will discuss new explanations for the energy-efficiency gap on the one hand, policy effectiveness when multiple instruments are combined on the other. The gathered contributions will share a European perspective on these topics.

First, Schleich et al. will discuss the role played by risk aversion in the diffusion of low-energy houses. Second, McCoy et al. will discuss the role played by modelling errors in engineering predictions of energy savings, which an increasing body of literature suggests are overstated. Third, Oacute; Broin et al. will discuss the effectiveness of energy-efficiency policies implemented across the European Union in response to the Energy Performance of Buildings Directive (EPBD) enacted in most countries around 2009.

Exploring the diffusion of low energy houses: An empirical study in the European Union

Joachim Schleich, Grenoble Ecole de Management; Mark Olsthoorn, Grenoble Ecole de Management; Corinne Faure, Grenoble Ecole de Management

Why the energy efficiency gap is smaller than we think: quantifying heterogeneity, model error and persistence in the returns to energy efficiency measures

Daire McCoy, Grantham Research Institute on Climate Change and the Environment, LSE; Raphaela Kotsch, Grantham Research Institute, London School of Economics, UK; The Department of Geography and Environment, London School of Economics, UK

An ex post evaluation of energy-efficiency policies across the European Union

Eoin Ó BROIN, EnvEcon; Frank Nadaud, CIRED; Erika Mata, Chalmers; Magnus Hennlock, IVL Swedish Environmental Research Institute; Jens Ewald, University of Gothenburg; Louis-Gaëtan Giraudet, CIRED

THEMATIC SESSION: ENVIRONMENTAL POLICY ANALYSIS FOR TRANSPORT: A FOCUS ON STAKEHOLDERS AND TRANSITION

Room: Handels: E 44/GBJ-
room

Organizer(s): Gunnar Eskeland, Norwegian School of Economics; Joshua Linn, Resources for the Future; Antonio Bento, University of Southern California; Jessica Coria, University of Gothenburg

Chair: Gunnar Eskeland, Norwegian School of Economics

New Evidence on Consumer Substitution Between New and Used Vehicles, and Implications for the Distributional Effects of Vehicle Fuel Economy Standards and Fuel Taxes

Joshua Linn, Resources for the Future; Xiaoya Dou, Department of Agricultural and Resource Economics, University of Maryland

Avoiding Traffic Congestion Externalities? The Value of Urgency

Antonio Bento, University of Southern California; Kevin Roth, ; Andrew Waxman,

Optimal environmental road pricing and daily commuting patterns

Jessica Coria, University of Gothenburg; Xiao-Bing Zhang, Renmin University of China

THEMATIC SESSION: HOW FLOOD RISK SEEPS INTO HOUSING MARKETS

Room: Handels: Volvo

Organizer(s): Katherine Zipp, Pennsylvania State University

Chair: Katherine Zipp, Pennsylvania State University

Flooding is the costliest natural disaster, causing on average US\$50 billion per year in global damages (over the last ten years). From an economic efficiency perspective, flood risk needs not pose any problems as rational agents balance the benefits of locating in a floodplain with the costs of increased flood risk and damages. However, there is ample evidence that homeowners and developers underestimate flood risk and expected damages, thereby stimulating inefficient development.

In this session four papers will address the extent to which flood risk and flood damages are internalized by housing markets. In the first paper, results from a hedonic model indicate that flood damages are immediately internalized into housing prices after a flood, but attenuate rapidly within 2-4 years. The second paper finds that distant severe flooding events generally do not decrease high risk coastal housing prices except for houses located in areas with high public awareness of flood risk, suggesting information campaigns are an important policy instrument for inducing efficient housing market outcomes. The third paper uses a residential sorting model to identify heterogeneous marginal willingness to pay for reduced flood risk across income and race; an important contribution to understanding how flood risk policy can differentially affect households according to socioeconomic status. The fourth paper applies a hedonic housing price model to estimate the impact of flood zone status on sale prices, and uses the estimated price impacts in a user cost of housing framework to predict long-term floodplain housing stocks. Together these papers show how perceived flood risk (accurate or not) affects housing prices across space and over time, who lives in flood prone areas, and floodplain housing stocks.

The impact of flooding on property prices: A repeat-sales approach

Allan Beltran, LSE Fellow in Environmental Economics (Department of Geography and Environment);
David Maddison, University of Birmingham; Robert Elliott, University of Birmingham

The Role of Information in Homeowners' Response to Flood Risk: Evidence from New Jersey

Caroline Hopkins, Carnegie Mellon University; Nicholas Muller, Carnegie Mellon University

Sorting Across Flood Risk: Implications for Insurance Reform and Disaster Exposure

Laura Bakkensen, University of Arizona; Lala Ma, University of Kentucky

Floodplain Housing Stock Dynamics

Katherine Zipp, Pennsylvania State University; Scott Colby, Pennsylvania State University

**THEMATIC SESSION: INNOVATIVE WAYS TO COMMUNICATE
ENVIRONMENTAL ECONOMICS**

Room: Handels: SEB

Organizer(s): Lynne Lewis,

Chair: Lynne Lewis,

For environmental and resource economics to be policy-relevant, we must be able to communicate with non-economists, both with policy-makers and the public more broadly. We share three papers that showcase different ways of engaging these constituencies with nuanced, but policy-relevant, ideas from our fields. Sarah Jacobson shares an interactive game that teaches complex concepts in payment for ecosystem services (PES) to students and professionals, one in a series of such games she's developed with coauthors. Selma Karuaihe provides guidance on using blended learning from a collaborative graduate program among 13 African universities to communicate with both students and professionals about environmental economics. Laura Blythe Liu explains how children's books on academic subjects can be an effective way for experts to communicate with the public while also fostering a sense of purpose for busy academics. These papers each use different approaches, but all involve innovative communication modes and an effort to increase knowledge about environmental economics. Lynne Lewis adds her expertise in communicating environmental economics issues, acting in the role of session moderator.

Carbon Taxes for Kids: Engaging the Public with Environmental Economic Topics via Children's Books

Laura Blythe Liu, Indiana University-Purdue University, Columbus; Sharon Shewmake, Western Washington University

Ecosystem-Based Adaptation Practice Adoption under Uncertainty: A Classroom Game

Sarah Jacobson, Williams College; Sahan Dissanayake, Portland; Babatunde Abidoye, Yale School of Forestry and Environmental Studies

Blended Learning Techniques to Facilitate Interactive Learning: Lessons from a Collaborative Graduate Program in Africa

Selma Karuaihe, University of Pretoria; Charles Nhemachena, International Water Management Institute (IMWI),

THEMATIC SESSION: PERSPECTIVES ON POLICIES FOR THE ANTHROPOCENE

Room: Handels: Aulan

Organizer(s): Gustav Engstrom, ; Johan Gars, GEDB, Royal Swedish Academy of Sciences; Chandra Kiran, Beijer institute; Anne-Sophie Crepin, Beijer Institute of Ecological Economics

Chair: Gustav Engstrom,

Planetary Boundaries in the Anthropocene: New policy challenges in a world of rising global risks

Johan Rockström, Stockholm Resilience Center

Policies for the Anthropocene

Thomas Sterner, University of Gothenburg

Complexity, resilience and economics

Anne-Sophie Crepin, Beijer Institute of Ecological Economics

Policies for planetary boundaries

Chandra Kiran, Beijer institute

THEMATIC SESSION: UNEMPLOYMENT EFFECTS OF CLIMATE POLICY

Room: Handels: CG-room

Organizer(s): Garth Heutel, Georgia State University

Chair: Garth Heutel, Georgia State University

The Impact of Carbon Trading on Industry: Evidence from German Manufacturing Firms

Ulrich Wagner, Mannheim; Sebastian Petrick, German Institute for Economic Research

Environmental Policy, Full-Employment Models, and Employment: A Critical Analysis

Marc Hafstead, Resources for the Future; Robertson Williams, University of Maryland and Resources for the Future; Yunguang Chen, Resources for the Future

Unemployment, Labor Mobility, and Climate Policy

Garth Heutel, Georgia State University; Kenneth Castellanos, Georgia State University

THEMATIC SESSION: WATER, SANITATION, AND DEVELOPMENT

Room: Handels: C33

Organizer(s): Jennifer Meyer, Franklin and Marshall College

Chair: Jennifer Meyer, Franklin and Marshall College

Poor water and sanitation has large negative impacts on environmental quality, health, and well-being. While there is a growing epidemiological literature documenting the health effects of poor water and sanitation in developing countries, the literature studying the economic impacts of and preferences for water and sanitation infrastructure is still fairly sparse. The first two papers in this session focus on previously unmeasured economic impacts of water and sanitation infrastructure. Orgill-Meyer shows that exposure to improved sanitation in early childhood contribute to long-term human capital development. Cook shows that the lack of accessible water sources contributes to

decreased utility for households collecting water. Given these (and other) costs to the lack of water and sanitation infrastructure, the last two papers in the session explore demand for improved water and sanitation. Jeuland et al examines the dynamic nature of demand for sanitation and shows that one-time investments in sanitation are insufficient in stimulating lasting demand for improvements. Stopnitzky shows how playing experimental games that highlight the collective action nature of sanitation behaviors can change preferences for water and sanitation improvements. Taken together, these four papers shed light on the economic costs of poor water and sanitation as well as on ways to increase demand for improvements.

Long-Term Human Capital Impacts of a Community-Led Total Sanitation Campaign

Jennifer Meyer, Franklin and Marshall College; Subhrendu Pattanayak, Duke University

Happy Collecting Water? Measuring Hedonic Well-Being among Water Carriers in Rural Kenya using the Experience Sampling Method

Joe Cook, Washington State University

VALUATION: PREFERENCES

Room: Handels: B33

Chair: Melody LEPLAT, BREST BUSINESS SCHOOL

Which private investors are willing to pay for sustainable investments? A stated choice experiment

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

Discussant: Maimouna Yokessa, Université Paris-Saclay, Agroparistech, INRA

Consumers' preferences and environmental tax: results from an experiment with milk

Maimouna Yokessa, Université Paris-Saclay, Agroparistech, INRA; Stephan Marette, INRA, Université Paris-Saclay, UMR Economie Publique

Discussant: Yoonmo Koo, Seoul National University

Location decision for environmental public facilities to maximize social benefit

Yoonmo Koo, Seoul National University; Hyunhong Choi, Seoul National University

Discussant: Melody LEPLAT, BREST BUSINESS SCHOOL

REGULATING CONGESTION WITH PRICES AND NON-PRICES MEASURES: AN APPLICATION OF A REPEATED RANDOM UTILITY MODEL TO OUTDOOR RECREATION

Melody LEPLAT, BREST BUSINESS SCHOOL; Carole Ropars-collet, Agrocampus Ouest; Philippe Le Goffe, Agrocampus Ouest

Discussant: Gunnar Gutsche, University of Kassel

WATER AND PROPERTY RIGHTS

Room: Haga: B225

Chair: Kimberly Rollins, University of Nevada, Reno

Political Economy of Railroad Land Grants: Legal Uncertainty Development of Irrigation in Colorado and Montana

Eric Alston, University of Colorado; **Steven Smith**, Colorado School of Mines

Discussant: Encarna Esteban, University of Zaragoza

The Political Economy of Water Policy Reform: Estimating and interpreting lobbying efforts and effectiveness functions

Encarna Esteban, University of Zaragoza; Ariel Dinar, University of California, Riverside, School of Public Policy; Jose Albiac, CITA

Discussant: Andrew Ayres, University of California, Santa Barbara

The Economic Value of Secure Water: Landowner Returns to Defining Groundwater Property Rights

Andrew Ayres, University of California, Santa Barbara; Kyle Meng, ; Andrew Plantinga, University of California, Santa Barbara

Discussant: Kimberly Rollins, University of Nevada, Reno

An Empirical Analysis of the Influence of Permitted Place of Use Transfers on the Performance of Prior Appropriations Water Rights

Kimberly Rollins, University of Nevada, Reno; Gi-Eu Lee, University of Nevada; Loretta Singletary, University of Nevada

Discussant: Steven Smith, Colorado School of Mines



Programme Overview 2018

25 June - MONDAY	26 June - TUESDAY	27 June - WEDNESDAY	28 June - THURSDAY	29 June - FRIDAY
08.00-18.00 Pre-congress events	8.30-10.15 Parallel sessions	8.30-10.15 Parallel sessions	8.30-10.15 Parallel sessions	8.30-10.15 Parallel sessions
	10.15-10.45 Coffee break	10.15-10.45 Coffee break	10.15-10.45 Coffee break	10.15-10.45 Coffee break
	10.45-11.15 Opening ceremony	10.45-11.15 AWARDS: EAERE Lifetime / Practitioner Achievement Awards	10.45-11.15 AWARDS: AERE Publ. Of Enduring Quality & Best Article in JAERE EAERE: Young Economist Award & Outstanding Publication ERE and EU ERC award	10.45-11.45 Plenary session Keynote: Nava Ashraf
	11.15-12.15 Plenary session Keynote: Lata Gangadharan	11.15-12.15 Plenary session Keynote: Sir David F. Hendry	11.15-12.15 Plenary session Keynote: Meredith Fowlie	11.45-12.15 Closing ceremony
	12.15-13.45 Lunch EAERE - Country representatives meeting* EAAERE Board meeting* AERE Board meeting*	12.15-13.45 Lunch AERE Members Lunch EAAERE General assembly EAERE Annual General Assembly of Members POSTER SESSION	12.15-13.45 Lunch IAERE meeting EDE Editorial Board Meeting* ERE Editorial Board Meeting* JAERE Editorial Board Meeting* REEP Editorial Board Meeting* POSTER SESSION	12.15-13.45 Lunch AERE, EAAERE, EAERE joint meeting of the presidents CAERE meeting LAERE meeting
12.30-17.00 EAERE Council Meeting*				
	13.45-15.30 Parallel sessions	13.45-15.30 Parallel sessions	13.45-15.30 Parallel sessions	13.45-15.30 Parallel sessions
	15.30-16.00 Coffee break	15.30-16.00 Coffee break	15.30-16.00 Coffee break	
16.00-20.00 Registration	16.00-17.45 Parallel sessions	16.00-17.45 Parallel sessions	16.00-16.40 Egg-timer sessions	Optional Post-congress tour to Marstrand Island Dinner and Party
	18.00-18.20 AWARDS: AERE Fellows		16.45-18.30 Parallel sessions	
18.15-19.10 Special Policy Lecture by Gina McCarthy	18.20-19.40 Special Policy Session: Jos Delbeke, Gina McCarthy, Hua Wang, E. Somanathan			
19.15 - 21.00 Welcome Reception at Handels		18.30 - 02.00 Congress dinner ** at Eriksbergshallen	18.30 - 23.00 Social event at Handels	

*Invitation only ** The Congress Dinner is included in the standard registration fee only
 At Smyrna: all plenary sessions, opening and closing ceremony, awards, the special policy lecture and special policy session