

A photograph of a rock sample, likely a thin section or a polished surface, showing various mineral inclusions and textures. The rock is primarily light-colored (off-white to light beige) with several dark, irregularly shaped inclusions. A prominent feature is a large, elongated, brownish-tan inclusion in the center. The texture of the rock appears somewhat crystalline or fibrous. The word "CERE" is overlaid in the top left corner, and "2017" is overlaid in the bottom right corner.

CERE

2017

2017

1

book

2

book chapters

20

seminars

13

reports

30

journal articles

563

unique visitors on web each month

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Research Directors Welcome

“Time passes slowly up here in the mountains” sings Bob Dylan in a 1970 song, but up here at CERE, time passes quickly and it’s already time to wrap up 2017. While 2016 was the year of PhD-defenses, 2017 has been the year of successful applications. When Runar Brännlund and I launched CERE in 2009, a basic idea was to create a platform and an attractive research environment. This platform is proving its worth because several applications were granted, I believe, on the strength of the platform. There are too many to list here, but I want to highlight co-operative ventures such as Peichen Gong’s €2,5 million “Baltic ForBio” project, our Wallenberg grant (together with Umeå and Stockholm University) and several grants from Handelsbanken, including one for research exchange. There are several other projects, they are listed on our web, and I think it is clear that the platform makes our center attractive for those who support cutting edge research in our fields.

There has been inflow and outflow of staff. For example, Kelly de Bruin got a prestigious job at ESRI in Dublin, while Amin Karimu returned on a post-doc position. And the prizes keep coming in to CERE researchers. Tommy Lundgren (Nordea Scientific Award), Andrius Kazuakuskas (USBE scientific award) and Erlend Dancke Sandorf (Best paper award, WONV). Congratulations to all.

Another important tenet of CERE’s philosophy is intellectual flow. We had our yearly Ammarnäs and Ulvön meetings and a lively seminar series. CERE also promotes interdisciplinary research and to that end Göran Bostedt has together with professor Göran Ericsson, SLU, launched a new research school called ECOS. The idea is to “teach economics to ecologists” and vice versa. We believe that this school could pave the way for really important co-operative work, whence it is very useful to understand the basic concepts of ecology to co-operate (and symmetrically for the ecologists). The research school is an investment, a risky one at that, but the benefits can be substantial as young researchers from two different disciplines start, in a way, to talk to each other in a more structured way than is common.

The CERE board and the CERE advisory board are instrumental in shaping our center into an even stronger research unit, and I am very grateful for their support and strong commitment. 2018 will be an exciting year for several reasons, with the new professor in forest economics in place. And, to be sure, time will pass quickly here at CERE. For all the right reasons.

Bengt Kriström



Top: Baltic ForBio.

Middle: The Research school,
Kelly de Bruin and Amir Karimu.

Bottom left from the left:
Erland Dancke Sandorf,
Andrius Kazukauskas and
Tommy Lundgren.

photos: Mona Bonta Bergman

About CERE

Umeå Campus has for decades been one of the national and international nodes for research and education in environmental and natural resource economics, mainly revolving around two academic departments that have worked in close cooperation with each other, the Department of Forest Economics at the Swedish University of Agricultural Sciences (SLU), and the Department of Economics, Umeå School of Business and Economics (USBE), at Umeå University (UmU). After many years of consideration, it was finally decided in 2009, to further strengthen this collaboration by joining these two separate, but interlinked, research groups in resource and environmental economics by creating a research centre.

The main objectives of CERE are to:

Link research groups from different departments and the two universities

Provide seminars and workshops within the field of environmental, energy and resource economics

Establish a platform for a creative and strong research environment within the field

Develop higher education in environmental, energy and resource economics

The creation of CERE, the Centre for Environmental and Resource Economics, was achieved by pooling researchers from the two above mentioned departments, along with economic historians from the Department of Geography and Economic History, UmU, who have focused their research on the historical aspects of resource and energy usage, and environmental

impacts. Together, the researchers at CERE embrace research areas as diverse as non-market valuation, climate policy, forest economics, historical analysis of sustainable development, environmental and energy efficiency analysis, just to mention a few examples of recent research.

CERE is headed by its two founders: research director Professor Bengt Kriström, who is also head of the Department of Forest Economics, SLU Umeå, and deputy research director Professor Runar Brännlund, USBE, Umeå University. The scientific secretary is Associate Professor Tommy Lundgren. Over the course of the year; 5 professors, 5 CERE associates (3 professors and 2 doctors), 3 associate professors, 14 assistant professors or post-docs, 10 graduate students, and one communication officer – in total 37 persons belonged to CERE. About 40 % of the CERE personnel are employed by SLU, the remainder being employed by UmU.

Important external funding sources for CERE have been Energiforsk - Swedish Electrical Utilities' R&D Company, the Swedish Environmental Protection Agency, the Swedish Energy Agency, Formas - The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning, the Swedish Agency for Marine and Water Management, and Mistra – The Swedish Foundation for Strategic Environmental Research. Recruitment of post-doc's, PhD's and CERE's guest researcher program, has been generously funded by Handelsbanken Research Foundations.



photo: Mona Bonta Bergman

CERE Meetings

CERE organises two meetings each year in accordance with the CERE main objectives. That is, to link research groups, provide seminars and workshops within the field, constitute a platform for a creative and strong research environment, and develop higher education.

The Ulvön Conference

An international conference on Environmental Economics always held adjacent to the Swedish midsummer celebration in June. The key purpose of the annual conference is to allow PhD students to present their work and to create a forum for research in environmental economics. The conference is always held at Ulvön, a small old fishing hamlet located at the Swedish east-coast, about 140 km south of Umeå. The island has about 40 around the year residents, but is a popular destination for tourists during the summer.

The 24th Ulvön Conference hosted about 30 participants. Keynote speakers included Ing-Marie Gren, SLU, Sweden, who talked about the role of the forest in climate policy; Olivier Deschenes, UCSB, USA, gave a talk about the social cost of adapting to climate change; Jason Shogren, UWY, USA, gave a talk about commitment and truth-telling.

The weather gods were once again on our side and contributed to a beautiful first evening with barbeque and many economic-related discussions. Another conference tradition that was upheld this year as well, was the tasting of the Swedish delicacy of fermented herring. As usual, the fish was well appreciated by some, while others are not

likely to ever try it again. The conference received financial support from the Handelsbanken Research Foundations. We look forward to the midsummer week of 2018 and the 25th Ulvön conference which will also include the Workshop on Non-Market Valuation (WoNW).

The Ammarnäs Winter Workshop

For the eight consecutive year, CERE held its internal winter meeting in the alpine scenery of the small village of Ammarnäs, situated in the Swedish mountains. The 2017 meeting provided our PhD students, newly hired researchers and Post Doc's the opportunity to present their research. This along with the guest speaker Victor Champonnois, from the Aix-Marseille School of Economics, AMSE, who gave a talk about censored quantile regressions in contingent valuation studies.

As usual, the meeting was held at Vindelfjällens Research Station. Apart from being located at a nice spot, the research station provides an opportunity for researchers from various disciplines to gather and thereby build a creative meeting place. The long term aim with our meeting here is to build a knowledge centre for people interested in the relationship among environmentally related issues and developments in society.

The weather was also this year suitable for outdoor activities such as snowmobile, horseback riding, and downhill and cross-country skiing. Snowmobiling has become a fast favorite among our staff, partly due to the opportunity to get closer to the summits.



photo: Mona Bonta Bergman



photo: Aemiro M. Daniel

A Journal Article

The Potential and Cost of Increasing Forest Carbon Sequestration in Sweden

Forest can contribute to mitigating climate change through carbon sequestration. Carbon sequestration is, up to a certain limit, a positive side-effect of forest management and can be further increased by e.g. increasing forestry investment and reducing timber harvest. In general, to increase forest carbon sequestration would incur a cost in the form of increased investment or reduction of some other benefits of forest management.

Many studies have shown that it is socially beneficial to increase carbon sequestration in managed forests by postponing or, in some cases, stopping forest harvest. By how much forest carbon sequestration in a region can be increased is determined by the policy measures used to enhance the contribution of the forest to mitigating climate change. This paper examines the potential and cost of increasing forest carbon sequestration in Sweden by providing an economic incentive to forest owners for increasing carbon storage in their forests.

The economic incentive is designed in such a way that forest owners are subsidized for carbon sequestration in their forests and are taxed for timber harvests. Thus, a forest owner will each year receive a net carbon sequestration payment (or pay a carbon tax) proportional to the annual increment (reduction) of the carbon stock in his/her forests. Such a carbon subsidy/tax will motivate forest owners to reduce timber harvest. A general reduction in harvest would cause timber price to increase, which in turn will affect forest owners' timber harvest decisions. In this study, we use a

partial equilibrium model based on intertemporal optimization to predict the changes in domestic timber supply, timber price, and forest carbon stock after the above mentioned carbon subsidy/tax is implemented. Based on these predictions the potential increase in carbon sequestration and the associated cost are assessed.

Our analysis covers about 20 million ha managed forests in Sweden. The results show that to increase forest carbon sequestration is a relatively low-cost option for reducing net emission of CO₂. With a subsidy/tax rate in the range of 170 - 1428 SEK/tonne of CO₂, carbon sequestration in the 20 million ha managed forests during 2015-2050 could be increased by 30.2 to 218.3 million tonnes of CO₂. The associated cost, in terms of reduced total benefits of timber and other non-timber goods, excluding the subsidy payment, ranges from 80 SEK to 106 SEK per tonne of CO₂. The effect of the economic incentive on carbon sequestration is declining with time. The change in carbon sequestration from the business-as-usual case beyond 2050 is small when carbon subsidy/tax rate is 680 SEK/tonne or lower. A carbon subsidy/tax rate of 1428 SEK/tonne could increase carbon sequestration by 70 million tonnes during 2050-2070, and by 64 million tonnes during 2070-2170.

Jinggang Guo and Peichen Gong
(2017) Journal of Forest Economics 29 (B), 78-86

A CERÉ Working Paper

Accounting for Elimination-by-Aspects Strategies & Demand Management in Electricity Contract Choice

Increasing demand for electricity coupled with integration of intermittent renewable energy sources casts doubt on the future of electricity supply security. Given the limited ability to effectively store electricity, supply may be disrupted when extreme weather conditions prevent constant balance between demand and supply. Effective demand management is therefore indispensable to reduce or avoid disruptions and black-outs.

The demand for household electricity follows a cyclical pattern with peaks in the morning and evening. It is possible that in the near future this can lead to a situation where the demand for electricity exceeds the capacity during those morning and evening hours. The critical question is then how to induce households to shift their use of electricity from peak to off-peak hours. The market based mechanism is to set higher electricity prices for peak demand hours so that households shift their consumption to off-peak hours. However, due to the low share of electricity in households' expenditures, this market based mechanism is ineffective.

When price-based demand management policies fail to succeed, one possibility is to design electricity contracts that induce demand flexibility through direct load control, i.e., a restriction on electricity use. The idea is that households might be willing to change their demand for electricity during certain hours of the day for a monetary compensation. However, designing such a contract, requires information on households' preferences for the main characteristics of the contract.

In this study, hypothetical contracts are designed experimentally to estimate Swedish households' average willingness to accept such contracts. The contracts in the choice experiment are characterized by; restrictions on use of heating and specific electric appliances during morning and evening peak hours (7-10 am and 5-8 pm), anonymous distribution of metering information, restriction on use during situations of low production or extreme demand, and compensation for accepting the contract.

A flexible model is developed. It allows the possibility that respondents may reject contracts with certain restrictions. Our results show that Swedish households, in order to accept restrictions in electricity use, particularly on electric appliances, ask for a substantial compensation. We also find that about half of the respondents choose according to an elimination-by-aspects type of strategy and that, on average, they are unwilling to accept any restrictions on heating in the evening or electricity use at any time of the day. This result reflects a typical weekday and sounds intuitive. Swedish households, on average, use electricity in the morning for breakfast, while it is not essential to consider their indoor temperature when at work. Consequently, when coming home in the afternoon they need electricity to cook, watch TV, do laundry, etc., and they might want to turn up the heat. Furthermore, we find that considering elimination-by-aspects behavior leads to a downward shift in elicited willingness-to-accept.

Aemiro Melkamu Daniel, Lars Persson
and Erlend Dancke Sandorf
CERE WP #2017-7

Selection of Ongoing Projects

Landscape Planning for Forest Biodiversity and Diverse Forestry (Swedish Environmental Protection Agency)

Swedish environmental quality objectives for forests are difficult to achieve with current instruments. One reason is the lack of landscape perspective in forest management and insufficient environmental considerations during harvesting. Sweden also does not meet its international commitments, such as protecting certain species and habitats under the EU Habitats Directive. At the same time, the timber production is important, not least to align the energy system with the EU Renewable Energy Directive. The project will investigate the ecological and legal conditions for the physical planning of forest landscapes. Initially, an ecological landscape model will be used for landscape strategy and simulated planning. Scenarios will be developed which then form the basis for the subsequent study on the legal implementation of the ecological landscape planning. We will use a model landscape where we experiment with different scenarios for nature conservation and production. CERE contact; Göran Bostedt.

POLYFORES: Decision-making Support for Forest Ecosystem Services in Europe - Value Assessment, Synergy Effects and Trade-offs (Sum Forest ERA NET)

Forest ecosystem services, are those benefits that people obtain from forest ecosystems, such as timber, food, alternative energy materials, climate mitigation, water quality, biodiversity, recreation, and cultural benefits. This project focus on the synergies of using forest residuals for example for bioenergy and climate mitigation, but also the trade-offs between different uses of the forest, for example timber production and recreation.

POLYFORES aims at mapping ecological impacts between different forest ecosystem services at both temporal and spatial scales. Also to provide a holistic approach to value assessment to consider different valuation taking into account multiple levels of decisions-making. Thirdly to support decision-making processes of forest ecosystem services at different levels. The project is organized into six work packages that in different combinations of ecologic, economic and political science models studies forest ecosystem services, hence combining natural and social sciences disciplines. The project also focus on contributing to the policy science and practice interface. Project leader Camilla Widmark.

Green Technology & Economics (Umeå University, the Umeå municipality companies; Umeå Energi, Dáva Dac and VAKIN)

An interdisciplinary research program launched in 2014. Research within the program is focusing applied research in the intersection of environmental system analysis, process optimization, and environmental economics, related to energy, waste and sewage issues. The aim is to apply a system analytic perspective on issues related to energy and waste treatment. Apart from regular research activities, workshops and other activities are organized within the program with the aim to disseminate results from research to stakeholders, but also to develop and strengthen collaboration between researchers and stakeholders. Main responsible from CERE in this program are Thomas Broberg and Runar Brännlund. From CERE we also have two phd-students (Golnaz Amjadi and Alejandro Eguez) that are part of the program.

Board Members

Board of Directors

The Board of Directors oversees the Centre's activities and review the Strategic Plan. It consists of researchers from across the environmental science and economic disciplines in Umeå. The Board meets every six months to discuss the overall strategic vision and CERE's on-going activities.

Chair: Sofia Lundberg (Rector at Umeå School of Business and Economics, Umeå University)

Ove Nilsson (Professor, Department of Forest Genetics and Plant Physiology, SLU Umeå and Director of Umeå Plant Science Centre)

Carina Keskitalo (Professor, Department of Social and Economic Geography, Umeå University)

Göran Ericsson (Professor, and Head of Department of Wildlife, Fish and Environmental Studies, SLU Umeå)

Johan Fransson (Associate Professor, and Head of Department of Forest Resource Management, SLU Umeå)

Research Director of CERE: Bengt Kriström (Professor, and Head of Department of Forest Economics, SLU Umeå) (Adjunct board member)

Deputy Research Director of CERE: Runar Brännlund (Professor, USBE, Umeå University) (Adjunct board member)

Scientific Secretary of CERE: Tommy Lundgren (Associate Professor, USBE, Umeå University and Department of Forest Economics, SLU Umeå) (Adjunct board member)

Our Advisory Board for Strategic Issues

The Advisory Board provides invaluable knowledge, experience and advice from their respective industries and areas of expertise. Industries and areas very much relevant to CERE's research. They visit biannually.

Professor Lars Bergman - Former President, Stockholm School of Economics

Professor Torbjörn Fagerström - Former CEO, Swedish Foundation for Strategic Research

Yvonne Fredriksson - Former Director General, Swedish Energy Markets Inspectorate, Founder of WHYWE consulting AB

Kjell Jansson - Former CEO, Swedenergy

Anders Kristoffersson - Former Senior Advisor, Ministry of Finance

Mårten Larsson - Head of Industrial Policy Department, Swedish Forest Industries Federation



photo: Mona Bonta Bergman

Personnel and Visitors

Professors

Runar Brännlund
Peichen Gong
Bengt Kriström
Magnus Lindmark
Karl-Gustaf Löfgren

Associate Professors

Ann-Kristin Bergquist
Göran Bostedt
Tommy Lundgren

Other Researchers

Maria Arvaniti
Oben Kurtulus Bayrak
Thomas Broberg
Ola Carlén
Jurate Jaraite
Amin Karimu
Andrius Kazukauskas
Chandra Kiran B Krishnamurthy
Lars Persson
Klarizze Puzon
Erlend Dancke Sandorf
Mattias Vesterberg
Camilla Widmark
Wenchao Zhou

Graduate Students

Golnaz Amjadi
Victoria S Ayubu
Brian Danley
Alejandro Egüez
Jinggang Guo
Aemiro Melkamu
Mattia Luigi Ratti
Sandra Schusser
Tharshini Thangavelu
Anders Vesterberg

Communication

Mona Bonta Bergman

CERE Associates

Doctor Kelly de Bruin
Professor Chris Böhringer
Professor Shawna Grosskopf
Professor Per-Olov Johansson
Assistant Professor Anton Paulrud

CERE Visitors

Doctor Astrid Zabel
School of Agricultural, Forest and Food Sciences, Bern
University of Applied Sciences, January
Professor Michael Hoel
Department of Economics, University of Oslo, January
Associate Professor Rob Hart
Swedish University of Agricultural Sciences, January
Associate Professor H el ene Ollivier
Paris School of Economics, February
Doctor Jens Abildtrup
Laboratory of Forest Economics, INRA, AgroParisTech, March
Professor Marc Willinger
University of Montpellier, April
Doctor Sonja Peterson
IFW, Institute for the World Economy, April
Professor Petros Sekeris
Montpellier Business School, May
Professor Olivier Deschenes
University of California, June (Ulv on)
Professor Ing-Marie Gren
Swedish University of Agricultural Sciences, June (Ulv on)
Professor Jason Shogren
University of Wyoming, June (Ulv on)
Associate Professor Patrik Thollander
Link oping University, August
Professor Francesco Ricci
ART-DEV Laboratory – University of Montpellier, September
Researcher and Analyst Sofia Ahlroth
Wealth Accounting and the Valuation of Ecosystem Services
(Waves), World Bank, December



photo: Niklas Hanes

Publications and Activities 2016-2017

Professors

Runar Brännlund

Journal articles

Acar, S., Söderholm, P. and Brännlund, R. (Published online April 24, 2017) Convergence of per capita Carbon Dioxide Emissions: Implications and Meta-analysis. *Climate Policy*

Brännlund, R. and Karimu, A. (Published online December 8, 2017) Convergence in Global Environmental Performance: Assessing Heterogeneity. *Environmental Economics and Policy Studies*

Brännlund, R., Karimu, A. and Söderholm, P. (2017) Convergence in Carbon Dioxide Emissions and the Role of Growth and Institutions: A Parametric and Nonparametric Analysis. *Environmental Economics and Policy Studies* 19 (2), 359-390

Brännlund, R., Nordström, J., Stage, J. and Svedin, D. (Published online April 26, 2016) Foreign Ownership and its Effects on Employment and Wages: The Case of Sweden. *IZA Journal of European Labor Studies* 5 (8), 1-17

Jansson, J., Pettersson, T., Mannberg, A., Brännlund, R. and Lindgren, U. (2017) Adoption of Alternative Fuel Vehicles: Influence from Neighbors, Family and Coworkers. *Transportation Research Part D* 54, 61-73.

Karimu, A., Brännlund, R., Lundgren, T., and Söderholm, P. (2017) Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis. *Energy Economics* 62, 347-356

Book

Riera, P., Garcia, D., Kriström, B., and Brännlund, R. (2016) *Manual de Economía Ambiental y de los Recursos Naturales*. Madrid: Paraninfo

Reports

Bostedt, G., Brännlund, R., Carlén, O., Gisselman, F. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En empirisk studie*. Working Paper 2016:17, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Brännlund, R., Carlén, O. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En konceptuell analys*. Working Paper 2016:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Broberg, T., Brännlund, R. and Persson, L. (2017) *Consumer Preferences and Soft Load Control on the Swedish Electricity Market*. Working Paper 2017:9, Centre for Environmental and Resource Economics, Umeå, Sweden

Carlén, O., Bostedt, G., Persson, L. and Brännlund, R. (2016) *Rekreationsfiske i Sverige 2013: Omfattning och värde*. Working Paper 2016:20, Centre for Environmental and Resource Economics, Umeå, Sweden

Eriksson, M., Brännlund, R. and Lundgren, T. (2016) *Pricing Forest Carbon: Implications of Asymmetry in Climate Policy*. Working Paper 2016:6, Centre for Environmental and Resource Economics, Umeå, Sweden

Karimu, A., Brännlund, R., Lundgren, T. and Söderholm, P. (2016) *Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis*. Working Paper 2016:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Invited speaker at Energiföretagen Sveriges seminar *Hur stabil är elsektorn som skattebas?* Almedalen, July 2016

Invited speaker at Energiföretagen Sveriges seminar *Lyser fortfarande lamporna 2025?* Almedalen, July 2016

External activities

Board member of the Marcus Wallenberg Foundation for International Scientific Collaboration

Board member of the Umeå School of Business and Economics

Board member of Trafikverket (Swedish Transport Administration), 2010-2016

Chairman for the Scientific Council in Environmental Economics at the National Institute for Economic Research, (Konjunkturinstitutets Vetenskapliga Råd i Miljöekonomi) 2012-

Chairman of IVA project "Vägval EI"

Deputy Research Director of CERE, 2009-

Editor in chief: *Journal of Forest Economics*, Elsevier. 2011-

Elected member of the Royal Swedish Academy of Engineering (IVA), 2009-

Elected member of the The Royal Skyttean Society (Kungliga Skytteanska Samfundet), 2011-

Faculty opponent on the doctoral thesis *Essays on Energy Demand and Renewable Natural Resource Management*, by Justice Tei Mensah, Swedish University of Agricultural Sciences, January 2016.

Peichen Gong

Journal articles

Bostedt, G., Mustonen, M. and Gong, P. (2016) Increasing Forest Biomass Supply in Northern Europe – Countrywide Estimates and Economic Perspectives. *Scandinavian Journal of Forest Research* 31 (3), 314-322

Felton, A. Nilsson, U., Sonesson, J., Felton, A.M., Roberge, J-M., Ranius, T., Ahlström, M., Bergh, J., Björkman, C., Boberg, J., Drössler, L., Fahlvik, N., Gong, P., Holmström, E., Keskitalo, C.H., Klapwijk, M.J., Laudon, H., Lundmark, T., Niklasson, M., Nordin, A., Pettersson, M., Stenlid, J., Sténs, A. & Wallertz, K. (2016) Replacing Monocultures with Mixed-species Stands: Ecosystem Service Implications of two Production Forest Alternatives in Sweden, *Ambio* 45 (2), 124-139

Gong, P. and Löfgren, K.G. (2016) Could the Faustmann Model have an Interior Minimum Solution? *Journal of Forest Economics* 24, 123-129

Guo, J. and Gong, P. (2017) The Potential and Cost of Increasing Forest Carbon Sequestration in Sweden. *Journal of Forest Economics* 29 (B), 78-86

Skonhøft, A. and Gong, P. (2016) Maximum Sustainable Yield Harvesting in an Age-structured Fishery Population Model. *Natural Resource Modeling* 29, 610–632

Conferences

Guo, J. and Gong, P. (2016) Economic Potential of Forestry Options for Carbon Sequestration in Sweden. *Scandinavian Society of Forest Economics 2016 Biennial meeting*. Oscarsborg, Norway, May 25-27, 2016

Guo, J. and Gong, P. (2016) Impacts of Increased Bioenergy Demand on Timber Markets: An Intertemporal Optimization Perspective. *The Fifth International Faustmann Symposium*, Beijing, China, October 18-21, 2016

External activity

Editor in chief: *Journal of Forest Economics*, Elsevier. 2010-

Bengt Kriström

Journal articles

Bayrak, O. and Kriström, B. (2016) Is There a Valuation Gap? The Case of Interval Valuations. *Economics Bulletin*, 36 (1), 218-236

Krishnamurthy, C. K. B. and Kriström, B. (2016) Determinants of the Price-premium for Green Energy: Evidence from an OECD Cross-section. *Environmental and Resource Economics* 64 (2), 173-204

Book

Riera, P., Garcia, D., Kriström, B., and Brännlund, R. (2016) *Manual de Economía Ambiental y de los Recursos Naturales*. Madrid: Paraninfo

Report

Kriström, B. (2016) *A General Equilibrium Cost-benefit Rule for Green Certificates*. Working Paper 2016:19, Centre for Environmental and Resource Economics, Umeå, Sweden

Johansson, P-O. and Kriström, B. (2017) *Principiella aspekter på samhällsekonomisk kalkyl av LKAB:s beslut att bryta nya gruvnivåer 2008*. Underlag till granskningsrapport DNR: 3.1.1 - 2017 - 0013, Riksrevisionen, Stockholm, Sweden

Newspaper article

Johansson, P-O. and Kriström, B. Flygskatten kontraproduktiv sÄrlösning. *VÄsterbottenskuriren*, April 20, 2017

Conference

Lucotte, E., Pascucci-Cahen, L., Mahieu P-A., Dachary-Bernard, J., Louviere, J. & Kriström B. (2016) A Pilot Choice Experiment Among French Nuclear Specialists to Measure the Intangible Value of Territories. *13th International Conference on Probabilistic Safety Assessment and Management (PSAM 13)*. Seoul, Korea, October 2-7, 2016

External activities

Board Member, Faculty Recruiting and Hiring Search Committee, SLU, 2013-2016

Board Member, Scientific Council Transport Analysis, Stockholm

Board Member, The Swedish National Road and Transport Research Institute

Board Member, Vindelfjällens forskningsällskap

Elected Working Member, The Royal Skyttean Society, 2013-

Elected Member, Swedish Society for Energy Economists 2013-

Head, Department of Forest Economics 2001-2009, 2010-

Director, CERE 2009-

Elected Member of The Royal Swedish Academy of Agriculture and Forestry, 2011 -

Expert, Scientific Council of Trafikanalys, 2011-

Magnus Lindmark

Journal articles

Acar, S. and Lindmark, M. (2017) Convergence of CO2 Emissions and Economic Growth in the OECD Countries: Did the Type of Fuel Matter? *Energy Sources, Part B: Economics, Planning, and Policy* 12 (7), 618-627

Acar, S. and Lindmark, M. (2016) Periods of Converging Carbon Dioxide Emissions from Oil Combustion in a pre-Kyoto Context. *Environmental Development* 19, 1-9

Bergquist, A-K. and Lindmark, M. (2016) Sustainability and Shared Value in the Interwar Swedish Copper Industry, *The Business History Review* 90 (2), 197-225

Lindmark, M. and Andersson, L.F. (2016) A Historical Wealth Assessment – Measuring the Swedish National Wealth for the Nineteenth and Twentieth Centuries. *Scandinavian Economic History Review* 64 (2), 122-137

Report

Lindmark, M. and Olsson Spjut, F. (2017) *Perspectives on the Transformation of the Organic Energy System in 19th Century Sweden*. Working Paper 2017:6, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

23rd *Ulvön Conference on Environmental Economics*, 2016

Magnus Lindmark (2016) Rethinking the environmental state: An Economic History of the Swedish Environmental Kuznets Curve for carbon. *Good Energy Policy seminar; Energy@Cambridge*. Centre for Science and Policy, Judge Business School, University of Cambridge, February 23, 2016

Swedish Association for Energy Economics (SAEE) conference, 2016

External activities

Consultant for Swedish Agency for Growth Policy Analysis, 2016

Faculty opponent: Johan Brolund, (Lic-thesis). Luleå Tekniska Universitet mars 2016

Karl-Gustaf Löfgren

Journal article

Gong, P. and Löfgren, K.G. (2016) Could the Faustmann Model have an Interior Minimum Solution? *Journal of Forest Economics* 24, 123-129

External activities

Chairman of the Institute of Labour Market - and Human Capital Evaluations (IFAU)

Member of Energiutskottet (The Energy Committee) Kungliga Vetenskaps Akademien (KVA)

Member of the Editorial Board of International Yearbook of Environmental and Resource Economics 1995 -

Member of the Editorial Board of The German Economic Review 1999-

Member of the Editorial Board of The Open Forest Science Journal 2008-

Member of the European Economic Association 1986 -

Member of the Royal Academy of Agriculture and Forestry 1996 -

Member of the Royal Academy of Science 1999-

Member of the Royal Skytteanum Foundation 1995 -

Member of the Scandinavian Society of Forest Economics 1979 -

Associate Professors

Ann-Kristin Bergquist

Journal articles

Andersson, L-F., Bergquist, A-K. and Eriksson, R. (2016) Profits, Dividends and Industry Restructuring: The Swedish Paper and Pulp Industry 1945s-1980s. *Scandinavian Economic History Review* 64 (3), 278–296

Bergquist, A-K. (Published online September 7, 2017) Profits and Sustainability. A History of Green Entrepreneurship by Geoffrey Jones. *Business History*, doi/full/10.1080/00076791.2017.1371433

Bergquist, A-K (2017) The Swedish Nonferrous Mining Industry and the Environmental Issue: The case of Boliden Business Archives. *Entreprises et Histoire* 1 (86), 157-159

Bergquist, A-K. and Eriksson, L. (Published online October 6, 2017) Sober Business. Shared Value Creation Between the Insurance Industry and the Temperance Movement. *Business History*, doi.org/10.1080/00076791.2017.1380627

Bergquist, A-K. and Keskitalo, C. (2016) Regulation versus Deregulation. Policy Divergence between Swedish Forestry and the Swedish Pulp and Paper Industry after the 1990s. *Forest Policy and Economics* 73, 10-17

Bergquist, A-K. and Lindmark, M. (2016) Sustainability and Shared Value in the Interwar Swedish Copper Industry. *Business History Review* 90 (2), 197-225

Bergquist, A-K. and Söderholm, K. (2016) Sustainable Energy Transition: the Case of the Swedish Pulp and Paper Industry 1973-1990. *Energy Efficiency* 9 (5), 1179-1192

Söderholm, K. Bergquist, A-K. and Söderholm, P. (2017) The Transition to Greener Pulp Revisited: Nordic Heterogeneity in Environmental Regulation and R&D Collaboration. *Journal of Cleaner Production* 195, 1328-1339

Book chapter

Bergquist, A-K. (2017) Dilemmas of Going Green. Environmental Strategies in the Swedish Mining Company Boliden 1960-2000. In: Bergoff, H and Rome, A. (Eds.) *Green Capitalism? Business and the Environment in the Twentieth Century* 149-171, Philadelphia: University of Pennsylvania Press

Reports

Bergquist, A-K. (2017) *Business and Sustainability: New Business History Perspectives*. Working Paper No 8-034, Harvard Business School

Bergquist, A-K and Söderholm, A-K (2017) *Business and Green Knowledge Production in Sweden 1960s-1980s*. Working Paper No 18-050, Harvard Business School.

Conferences

Bergquist, A-K. and Jones, G. (2017) Green Nordic Capitalism. An overview. *Association of Business History Conference*, Glasgow, 29 June-1 July, 2017.

Bergquist, A-K. and Näsman, M. (2016) Safe before Green? Environmental Strategies in Volvo Car Corporation and the Importance of the U.S. Market, 1970s-1990s. *Business History Conference*, Portland, the United States, March 31- April 2, 2016

Bergquist, A-K. and Söderholm, K. (2016) Transition to Cleaner Technologies: the Swedish Pulp and Paper Industry in Comparative Perspective. *1st World Congress in Business history/20th Congress of the European Business History Association*, Bergen, Norway August 25-27, 2016

Göran Bostedt

Journal articles

Bostedt, G., Hörmell, A. and Nyberg, G. (2016) Agroforestry Extension and Dietary Diversity – An Analysis of the Importance of Fruit and Vegetable Consumption in West Pokot, Kenya. *Food Security* 8, 271-284

Bostedt, G., Mustonen, M. and Gong, P. (2016) Increasing Forest Biomass Supply in Northern Europe – Countrywide Estimates and Economic Perspectives. *Scandinavian Journal of Forest Research* 31, 314-322

Håkansson, C., Östberg, K. and Bostedt, G. (2016) Estimating Distributional Effects of Environmental Policy in Swedish Coastal Environments – A Walk along Different Dimensions. *Journal of Environmental Economics and Policy* 5 (1), 49-78

Reports

Bostedt, G., Brännlund, R., Carlén, O., Gisselman, F. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En empirisk studie*. Working Paper 2016:17, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Brännlund, R., Carlén, O. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En konceptuell analys*. Working Paper 2016:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Carlén, O., Bostedt, G., Persson, L. and Brännlund, R. (2016) *Rekreationsfiske i Sverige 2013 Omfattning och värde*. Working Paper 2016:20, Centre for Environmental and Resource Economics, Umeå, Sweden

Zabel, A., Bostedt, G. and Ekvall, H. (2017) *Policies for Forest Landscape Management – A Conceptual Approach with an Empirical Application for Swedish Conditions*. Working Paper 2017:5 Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Bostedt, G. (2017) Landskapsplanering, äganderätten och ekonomisk kompensation – om rättsliga krav och ekonomiska styrmedel. *The 2017 CBM Diversity Conference*. Uppsala, Sweden, October 2017

Bostedt, G. (2017) Workshop panellist: Policy Instruments to Manage Human-Wildlife Conflicts. *The 23rd International Symposium on Society and Resource Management (ISSRM)*, Umeå, Sweden, June 2017

Håkansson, C., Östberg, K. and Bostedt, G. (2016) Estimating Distributional Effects of Environmental Policy in Swedish Coastal Environments – A Walk along Different Socio-economic Dimensions. *The 4th Workshop On Non-market Valuation (WONV)*, Bordeaux, France, June 2016

Saving for a Dry, not Rainy, Days - Saving and Borrowing Behavior among Agropastoralists in West Pokot County, Kenya. *The 4th Triple L (Land, Livestock and Livelihood) Workshop*, Kitale, Kenya, November 2016

External activities

Board member, Centre for Sami Research (CeSam), Umeå University, 2014 -

Grading Committee member, Max Ericsson's PhD thesis, Department of Political Science, Umeå University, January 10, 2017

Grading committee member, Ryan G Wagner's PhD thesis, Department of Global Health, Umeå University, June 2, 2016

Member of Editorial Board, *Journal of Forest Economics*, 2016-

Member of the Committee for Sustainable Development (responsible for ISO14001 certification), Umeå School of Business and Economics, Umeå University, 2013-2016

Member of the Equal Opportunities Committee, Faculty of Forest Sciences, SLU, 2014-2016

Member of the International Committee, Faculty of Forest Sciences, SLU, 2009-

Substitute member of the Associate Professorship Board, Faculty of Forest Sciences, SLU, 2016-

Research stay abroad

Visiting researcher, October 24-28, 2016, Bern University of Applied Sciences, on invitation by assistant professor Astrid Zabel von Felten

Tommy Lundgren

Journal articles

Bostian, M., Färe, R., Grosskopf, S. and Lundgren, T. (2016) Environmental Investment and Firm Performance: A Network Approach. *Energy Economics* 57, 243-255

Bostian, M., Färe, R., Grosskopf, S., Lundgren, T. and Weber, W. (Published online September 26, 2016) Time Substitution for Environmental Performance. *Empirical Economics*, DOI:10.1007/s00181-016-1180-7

Karimu, A., Brännlund, R., Lundgren, T., and Söderholm, P. (2017) Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis. *Energy Economics* 62, 347-356

Lundgren, T., Marklund, P-O., and Zhang, S. (2016) Industrial Energy Demand and Energy Efficiency - Evidence from Sweden. *Resource and Energy Economics* 43, 130-52

Lundgren, T. and Wenchao, Z. (2017) Firm Performance and the Role of Environmental Management. *Journal of Environmental Management* 203(1), 330-341

Lundgren, T., Zhang, S. and Wenchao, Z. (2016) Energy Efficiency in Swedish Industry - A Firm-level Data Envelopment Analysis. *Energy Economics* 55, 42-51

Books

Aldén et al. (2017) *Nationalekonomins frågor*. Lund: Studentlitteratur

Färe, R., Grosskopf, G., Lundgren, T., Marklund, P.-O. and Wenchao, Z. (2016) *The Impact of Climate Policy on Economic and Environmental Performance – Evidence from Sweden*. London: Routledge

Reports

Amjadi, G., Lundgren, T., and Persson, L. (2017) *The Rebound Effect in Swedish Heavy Industry*. Working Paper 2017:1, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostian, M., Färe, R., Grosskopf, S., Lundgren, T., and Weber, W.L. (2016) *Time Substitution for Environmental Performance*. Working Paper 2016:3, Centre for Environmental and Resource Economics, Umeå, Sweden

Dahlqvist, A., Lundgren, T. and Marklund, P.-O. (2017) *Assessing the Rebound Effect in Energy Intensive Industries: A Factor Demand Model Approach with Asymmetric Price Response*. Working Paper 2017:10, Centre for Environmental and Resource Economics, Umeå, Sweden

Eriksson, M., Brännlund, R. and Lundgren, T. (2016) *Pricing Forest Carbon: Implications of Asymmetry in Climate Policy*. Working Paper 2016:6, Centre for Environmental and Resource Economics, Umeå, Sweden

Karimu, A., Brännlund, R., Lundgren, T. and Söderholm, P. (2016) *Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis*. Working Paper 2016:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Lundgren, T. and Marklund, P.-O. (2016) *An Analysis of the Swedish CO2 Tax and its Impact on Firm Performance*. Working Paper 2016:1, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Amjadi, G., T. Lundgren, L. Persson, S. Zhang. (2017) The Rebound Effect in Swedish Heavy Industry. *The 23rd Ulvö Environmental Economics meeting*, June 2016

Amjadi, G., T. Lundgren, L. Persson, S. Zhang. (2017) The Rebound Effect in Swedish Heavy Industry. *The EWEPA Meeting in London*, June 2016

Karimu, A., Brännlund, R., Lundgren, T. and Söderholm, P. (2016) Energy Intensity and Convergence in Swedish industry: A Combined Econometric and Decomposition Analysis. *SAEE 2016*, August 2016, Luleå, Sweden

23rd *Ulvön Conference on Environmental Economics*, Organizer (together with T. Broberg and L. Persson), 2016

External activity

Researcher/consultant, National Institute of Economic Research, Environmental Economics Unit, October 2015 - January 2016

Assistant Professors

Maria Arvaniti

Reports

Arvaniti, M. (2016) Uncertainty, Extreme Outcomes and Climate Change: a Critique. Working Paper 2016:11, Centre for Environmental and Resource Economics, Umeå, Sweden

Arvaniti, M. and Carvajal, A. (2016) *When Financial Imperfections are not the Problem, but the Solution*. Working Paper 2016:15, Centre for Environmental and Resource Economics, Umeå, Sweden

Oben Bayrak

Journal articles

Bayrak, O. and Hey, J. D. (2017) Expected Utility Theory With Imprecise Probability Perception: Explaining Preference Reversals. *Applied Economics Letters* 24 (13), 906-910

Bayrak, O. and Kriström, B (2016) Is There a Valuation Gap? The Case of Interval Valuations. *Economics Bulletin*, 36 (1), 218-236

Book

Bayrak, O (2016) *Preference Cloud Theory: Modelling Imprecise Preferences and a New Theory for Decision under Risk*. Doctoral Thesis, Umeå: SLU, Department of Forest Economics

Report

Bayrak, O. K. (2016) *Another Solution for Allais Paradox: Preference Imprecision, Dispersion and Pessimism*. Working Paper 2016:12, Centre for Environmental and Resource Economics, Umeå, Sweden

Thomas Broberg

Journal article

Broberg, T. and Persson, L. (2016) Is Our Everyday Comfort for Sale? Preferences for Demand Management on the Electricity Market. *Energy Economics* 54, 24-32

Reports

Broberg, T., Brännlund, R. and Persson, L. (2017) *Consumer Preferences and Soft Load Control on the Swedish Electricity Market*. Working Paper 2017:9, Centre for Environmental and Resource Economics, Umeå, Sweden

Broberg, T. and Kazukauskas, A. (2016) *Perception and Inattention in Private Electricity Consumption*. Working Paper 2016:2, Centre for Environmental and Resource Economics, Umeå, Sweden

Broberg, T. and Egüez, A. (2017) *Blame it on the Owner – Ownership and Energy Performance of Multidwelling Buildings*. Working Paper 2017:4, Centre for Environmental and Resource Economics, Umeå, Sweden

Kazukauskas, A., Broberg, T. and Jaraitė, J. (2017) *Social Comparisons in Real Time: A Field Experiment of Residential Electricity and Water Use*. Working Paper 2017:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

23rd Ulvön Conference on Environmental Economics, Organizer (together with T. Lundgren and L. Persson), 2016

Energidagene, Oslo, Norway, 2016

Smarts grid conference, Trondheim, Norway, 2016

External activities

ESO: Grön tillväxt (Green growth), Expert

SOU 2017:83, Förbränningskattutredningen, Inquiry secretary

Ola Carlén

Reports

Bostedt, G., Brännlund, R., Carlén, O., Gisselman, F. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En empirisk studie*. Working Paper 2016:17, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Brännlund, R., Carlén, O. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En konceptuell analys*. Working Paper 2016:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Carlén, O., Bostedt, G., Persson, L. and Brännlund, R. (2016) *Rekreationsfiske i Sverige 2013: Omfattning och värde*. Working Paper 2016:20, Centre for Environmental and Resource Economics, Umeå, Sweden

Jūratė Jaraitė

Journal articles

Jaraitė, J. and Di Maria, C. (2016) Did the EU ETS make a Difference? An Empirical Assessment using Lithuanian Firm-level Data. *Energy Journal* 37 (1)

Jaraitė, J., Karimu, A. and Kažukauskas, A. (2017) Policy-Induced Expansion of Solar and Wind Power Capacity: Economic Growth and Employment in EU Countries. *Energy Journal* 38 (5), 197-222

Reports

Jaraitė, J., Kažukauskas, A. and Broberg, T. (2017) *Social Comparisons in Real Time: A Field Experiment of Residential Electricity and Water Use*. Working Paper 2017:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Jaraitė, J. and Schusser, S. (2016) *Explaining the Interplay of Three Markets: Green Certificates, Carbon Emissions and Electricity*. Working Paper 2016:10, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Jaraitė, J., Kažukauskas, A. and Broberg, T. (2017) Social Comparisons in Real Time: A Field Experiment of Residential Electricity and Water Use. *The 23rd Annual Conference of the European Association of Environmental and Resource Economics*, Athens, Greece, June, 2017

Jaraitė, J., Kažukauskas, A. and Broberg, T. (2017) Social Comparisons in Real Time: A Field Experiment of Residential Electricity and Water Use. *The sixth Mannheim Energy Conference*, Mannheim, Germany, May 11-12, 2017

External activities

Oben Bayrak's PhD defence committee member, 2016

EAERE 2016 Programme Committee member

Amin Karimu

Journal articles

Brännlund, R. and Karimu, A. (Published online December 8, 2017) Convergence in Global Environmental Performance: Assessing Heterogeneity. *Environmental Economics and Policy Studies*

Brännlund, R., Karimu, A. and Söderholm, P. (2017) Convergence in Carbon Dioxide Emissions and the Role of Growth and Institutions: A Parametric and Nonparametric Analysis. *Environmental Economics and Policy Studies* 19 (2), 359-390

Jaraitė, J., Karimu, A. and Kažukauskas, A. (2017) Policy-Induced Expansion of Solar and Wind Power Capacity: Economic Growth and Employment in EU Countries. *The Energy Journal* 38 (5), 197-222

Karimu, A., Brännlund, R., Lundgren, T., and Söderholm, P. (2017) Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis. *Energy Economics* 62, 347-356

Reports

Karimu, A., Brännlund, R., Lundgren, T. and Söderholm, P. (2016) *Energy Intensity and Convergence in Swedish Industry: A Combined Econometric and Decomposition Analysis*. Working Paper 2016:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Karimu, A., Mensah, J.T. and Adu, G. (2016) *Who Adopts LPG as the Main Cooking Fuel and Why? Empirical Evidence on Ghana Based on National Survey*. Working Paper 2016:9, Centre for Environmental and Resource Economics, Umeå, Sweden

Andrius Kazukauskas

Journal article

Jaraitė, J., Karimu, A. and Kažukauskas, A. (2017) Policy-Induced Expansion of Solar and Wind Power Capacity: Economic Growth and Employment in EU Countries. *The Energy Journal* 38 (5), 197-222

Reports

Broberg, T. and Kazukauskas, A. (2016) *Perception and Inattention in Private Electricity Consumption*. Working Paper 2016:2, Centre for Environmental and Resource Economics, Umeå, Sweden

Kažukauskas, A., Broberg, T. and Jaraitė, J. (2017) *Social Comparisons in Real Time: A Field Experiment of Residential Electricity and Water Use*. Working Paper 2017:8, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Kažukauskas, A., Broberg, T. and Jaraitė, J. (2017) Social Comparisons in Real Time: A Field Experiment of Residential Electricity and Water Use. *The 23rd Annual Conference of the European Association of Environmental and Resource Economists (EAERE)*. Athens, Greece, June 28-July 1, 2017

Kažukauskas, A., Broberg, T. and Jaraitė, J. (2017) Social Comparisons in Real Time: A Field Experiment of Residential Electricity and Water Use. *The Sixth Mannheim Energy Conference*. Mannheim, Germany, May 11–12, 2017

External activities

Receiving the USBE Scientific Award in Economics in 2017. Awarded by the USBE Research Institute for high-quality research in the field of economics. USBE, Umeå University, June, 2017

The seminar of the USBE Scientific Award winners. Presentation on "Behavioural Economics and Energy Consumption". USBE, Umeå University, December, 2017

Research stay abroad

Visiting Researcher TIDES institute, The University of Las Palmas, March, 2017

Chandra Kiran B Krishnamurthy

Journal articles

Krishnamurthy, C. K. B. and Kriström, B. (2016) Determinants of the Price-premium for Green Energy: Evidence from an OECD Cross-section. *Environmental and Resource Economics* 64 (2), 173-204

Vesterberg, M. and Krishnamurthy, C.K.B. (2016) Residential End-use Electricity Demand: Implications for Real Time Pricing in Sweden. *Energy Journal* 37, 141-164

Report

Zaeske, A.L. and Krishnamurthy, C.K. (2017) *Managing Water: Rights, Markets, and Welfare*. Working Paper 2017:2, Centre for Environmental and Resource Economics, Umeå, Sweden

Lars Persson

Journal article

Broberg, T. and Persson, L. (2016) Is Our Everyday Comfort for Sale? Preferences for Demand Management on the Electricity Market. *Energy Economics* 54, 24-32

Reports

Amjadi, G., Lundgren, T., and Persson, L. (2017) *The Rebound Effect in Swedish Heavy Industry*. Working Paper 2017:1, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Brännlund, R., Carlén, O., Gisselman, F. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En empirisk studie*. Working Paper 2016:17, Centre for Environmental and Resource Economics, Umeå, Sweden

Bostedt, G., Brännlund, R., Carlén, O. and Persson, L. (2016) *Fiskefria områden ur ett samhällsekonomiskt perspektiv: En konceptuell analys*. Working Paper 2016:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Broberg, T., Brännlund, R. and Persson, L. (2017) *Consumer Preferences and Soft Load Control on the Swedish Electricity Market*. Working Paper 2017:9, Centre for Environmental and Resource Economics, Umeå, Sweden

Carlén, O., Bostedt, G., Persson, L. and Brännlund, R. (2016) *Rekreationsfiske i Sverige 2013: Omfattning och värde*. Working Paper 2016:20, Centre for Environmental and Resource Economics, Umeå, Sweden

Daniel, A.M., Persson, L. and Sandorf, E.D. (2017) *Accounting for Elimination-by-aspects Strategies and Demand Management in Electricity Contract Choice*. Working Paper 2017:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Ek, K. and Persson, L. (2016) *Priorities and Preferences in the Implementation of the European Water Framework Directive – A Case Study of the River Alsterån*. Working Paper 2016:18, Centre for Environmental and Resource Economics, Umeå, Sweden

Ek, K. and Persson, L. (2016) *The Economics of the European Water Framework Directive – A Retrospective Remark Focusing on Sweden*. Working Paper 2016:16, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Broberg, T., Brännlund, R., and Persson, L. (2017) Peak Load Habits for Sale - Soft Load Control and Consumer Preferences on the Electricity Market. *3rd EFORIS international conference*, Stockholm, November, 2017

Ek, K. and Persson, L. (2016) The European Water Framework Directive – Cost effectiveness, burden and PPP. *Havs- och vattenforum Gothenburg*, May 24-25, 2016

Ek, K., and Persson, L. (2017) Priorities and Preferences in the Implementation of the European Water Framework Directive. *The 23rd Annual Conference of the European Association of Environmental and Resource Economists (EAERE)*. Athens, Greece, June 28-July 1, 2017

24th *Ulvön Conference on Environmental Economics*, Organizer (together with T. Broberg and T. Lundgren), 2016

External activity

Invited speaker. Workshop on Electricity Demand: New Modelling Perspectives. Paris, France, March, 2017

Klarizze Puzon

Journal articles

Boucekkine, R., Prieur, F., and Puzon, K. (2016) On the Timing of Political Regime Changes in Resource-dependent Economies. *European Economic Review* 85, 188-207

Puzon, K. and Willinger, M. (2016) Malevolent Governance, Intra-group Conflict and the Paradox of the Plenty: An Experiment. *Games* 7 (1)

Report

Muller, C. and Puzon, K. (2016) On the Number of Social Reforms in MENA Economies. AMSE Working Papers 1623, Aix-Marseille School of Economics, Marseille, France

Conferences

Puzon, K. and Willinger, M. (2016) Resource Abundance and Participatory Governance in the Commons: An Experiment. *7th Atlantic Workshop on Energy and Environmental Economics*, A Toxa, Spain, June 27-28, 2016

Puzon, K. and Willinger, M. (2016) Resource Abundance and Participatory Governance in the Commons: An Experiment. *Seminario: Faculdade de Ciências Empresariais e Turismo*, Ourense, Spain, June 10, 2016

Research stay abroad

Visiting Researcher Department of Applied Economics, University of Vigo, Spain, May to July, 2016

Erlend Dancke Sandorf

Journal article

Xuan, B. B., Sandorf, E. D. and Aanesen, M. (2017) Informing Management Strategies for a Reserve: Results from a Discrete Choice Experiment Survey. *Ocean & Coastal Management* 145, 35-43

Reports

Daniel, A.M., Persson, L. and Sandorf, E.D. (2017) *Accounting for Elimination-by-aspects Strategies and Demand Management in Electricity Contract Choice*. Working Paper 2017:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Sandorf, E.D. (2017) Trapped! Catching Inattentive Respondents in an Online Discrete Choice Experiment. *Invited Seminar*, University of Gothenburg, Sweden, March 27, 2017

Sandorf, E.D. and Campbell, D. (2017) That's good enough! Satisficing in Stated Choice Experiments. *International Choice Modeling Conference*. Cape Town, South Africa, April 3 -5, 2017

Sandorf, E. D., Crastes, R. and Mahieu, P.- A. (2017) The Effect of Attribute-alternative Matrix Displays on Preferences and Processing Strategies. *ENVECHO VI Workshop*. University of Bern, Switzerland, September 25-26, 2017

Sandorf, E. D., Crastes, R. and Mahieu, P.- A. (2017) The Effect of Attribute-alternative Matrix Displays on Preferences and Processing Strategies. *Workshop on Non-Market Valuation (WONV)*. University of Leeds, United Kingdom, June 26-27, 2017

Sandorf, E. D., Crastes, R. and Mahieu, P.- A. (2017) The Effect of Attribute-alternative Matrix Displays on Preferences and Processing Strategies. *24th Ulvön Conference on Environmental Economics*, Ulvön, Sweden, June 20-22, 2017

Mattias Vesterberg

Journal articles

Vesterberg, M. (2016) The Hourly Income Elasticity of Electricity. *Energy Economics* 59, 188-197

Vesterberg, M. and Krishnamurthy, C.K.B. (2016) Residential End-use Electricity Demand: Implications for Real Time Pricing in Sweden. *Energy Journal* 37, 141-164

Camilla Widmark

Journal article

Danley, B. and Widmark, C. (2016) Evaluating Conceptual Definitions of Ecosystem Services and their Implications. *Ecological Economics* 126, 132-138

Nummelin, T., Widmark, C., Riala, M., Sténs, A., Nordström, E-M. and Nordin, A. (2017) Forest Futures by Swedish Students - Developing a Mind Mapping Method for Data Collection. *Scandinavian Journal of Forest Research* 32 (8), 807-817

Report

HLPE. (2017) *Sustainable Forestry for Food Security and Nutrition*. HLPE Report 11, High level panel of experts on food security and nutrition on the committee on World Food Security, Rome, Italy

Conferences

Widmark, C. (2016) Swedish Non-industrial Forest Owners Attitudes toward Environmental Consideration. *The Biennial Meeting of the Scandinavian Society of Forest Economics*. Oslo, May 25-27, 2016

Widmark, C. (2016) Bargaining Situations in Common Pool Resource Situations and Transaction Costs - The case of Reindeer Husbandry and Forestry in Sweden. *Aktasne - Together 2016 New concepts and methodologies on Saami Studies*, Umeå, Sweden, 9-11 March, 2016

Widmark, C. (2017) The Economics of Land Use Management. *International Symposium on Society and Resource Management (ISSRM)*. Umeå, June 18-22, 2017

Widmark, C. (2017) Managing Ecosystem Services. *International Arctic Social Sciences Association (ICASS) IX*, Umeå, June 8-12, 2017

External activity

Grading Committee Member (deputy), Ulrika Widman's PhD thesis. Department of Political Sciences, Umeå University, November 25, 2016

Pre-evaluation, Antti-Huhani Pekkarinen PhD thesis. University of Helsinki, October, 2017

Graduate Students

Golnaz Amjadi

Reports

Amjadi, G., Lundgren, T., and Persson, L. (2017) *The Rebound Effect in Swedish Heavy Industry*. Working Paper 2017:1, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Amjadi, G., Lundgren, T., Persson, L. and Zhang, S. The Rebound Effect in Swedish Heavy Industry. *Association for Energy Economics Conference*, Luleå, Sweden, 23-34 August, 2016

Amjadi, G., Lundgren, T., Persson, L. and Zhang, S. The Rebound Effect in Swedish Heavy Industry. *23rd Ulvön Conference on Environmental Economics*, Sweden, 15-17 June, 2016

Amjadi, G., Lundgren, T. and Persson, L. (2018) The Rebound Effect in Swedish Heavy Industry. *European Association of Environmental and Resource Economics (EAERE)*, Athens, Greece, June 28- July 1, 2017

Aemiro Melkamu Daniel

Reports

Daniel, A.M., Persson, L. and Sandorf, E.D. (2017) *Accounting for Elimination-by-aspects Strategies and Demand Management in Electricity Contract Choice*. Working Paper 2017:7, Centre for Environmental and Resource Economics, Umeå, Sweden

Brian Danley

Journal article

Danley, B. and Widmark, C. (2016) Evaluating Conceptual Definitions of Ecosystem Services and their Implications. *Ecological Economics* 126, 132-138

Conferences

Private Contributions to Biodiversity in Swedish Commercial Forestry: Linking Tree Retention to Environmental Offsetting. 23rd *Ulvön Conference on Environmental Economics*, Sweden, 15-17 June, 2016

Shared Responsibility for Nature Conservation and Voluntary Set-Asides in Swedish Forest Policy. *International Symposium on Society and Resource Management*, Umeå, Sweden, 19-22 June, 2017

External activity

2017: Visiting PhD student, University of Stirling. Hosting professors: Nick Hanley & Danny Campbell, October-November, 2017

Alejandro Egüez

Report

Broberg, T. and Egüez, A. (2017) Blame it on the Owner – Ownership and Energy Performance of Multidwelling Buildings. Working Paper 2017:4, Centre for Environmental and Resource Economics, Umeå, Sweden

Conference

Broberg, T. and Egüez, A. Ownership and Energy Efficiency in Multi-dwelling Buildings – A Swedish Case Study. *The Swedish Association for Energy Economics Conference*, Luleå, Sweden, 23-34 August, 2016

Jinggang Guo

Journal article

Guo, J. and Gong, P. (2017) The Potential and Cost of Increasing Forest Carbon Sequestration in Sweden. *Journal of Forest Economics* 29 (B), 78-86

Conferences

Guo, J. and Gong, P. (2016) Economic Potential of Forestry Options for Carbon Sequestration in Sweden. *Scandinavian Society of Forest Economics 2016 Biennial meeting*. Oscarsborg, Norway, May 25-27, 2016

Guo, J. and Gong, P. (2016) Impacts of Increased Bioenergy Demand on Timber Markets: An Intertemporal Optimization Perspective. *The Fifth International Faustmann Symposium*, Beijing, China, October 18-21, 2016

Research stay abroad

Visiting Researcher, Purdue University, USA, August-November, 2017

External activity

Jinggang Guo, Peichen Gong, Runar Brännlund. The Consequences of Increasing Bioenergy Production. Seminar on Bio-based Feedstock, February 6, 2017, Umeå

Mattia Luigi Ratti

Ratti, M.L. (2017) *The Economics of Natural Disasters: an Overview of the Current Research Issues and Methods*. Working Paper 2017:3, Centre for Environmental and Resource Economics, Umeå, Sweden

Sandra Schusser

Report

Jaraité, J. and Schusser, S. (2016) *Explaining the Interplay of Three Markets: Green Certificates, Carbon Emissions and Electricity*. Working Paper 2016:10, Centre for Environmental and Resource Economics, Umeå, Sweden

Conferences

Schusser, S. and Jaraite, J. (2016) Explaining the Interactions of Three Markets: Green Certificates, Electricity and Carbon Emission Allowances In The Swedish-Norwegian Green Certificate System. *The EAERE Conference*, Zürich, Switzerland, June 24-26, 2016

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Tharshini Thangavelu

Journal article

Thangavelu, T., Paulrud, A. and Stage, J. (2017) Understanding Heterogeneous Preferences for Angling Site at Tributes: Application of a Choice Experiment. *Journal of Environmental Economics and Policy* 6 (3), 324-340

Anders Vesterberg

Report

Eriksson, M. and Vesterberg, A. (2016) *When Not in the Best of Worlds: Uncertainty and Forest Carbon Sequestration*. Working Paper 2016:4, Centre for Environmental and Resource Economics, Umeå, Sweden

Associates of CERÉ

PhD Kelly de Bruin

Reports

Baarsch, F., de Bruin, K., Schaeffer, M., Granadillos, J.R., Krapp, M., Amegble, K.D., Balaghi, R., and Hare, B. (2016) *Economic Growth, Development and Climate Change in Africa*. UNEP, Nairobi, Kenya

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Professor Chris Böhringer

Journal articles

- Böhringer C., Bortolamedi, M., Keller, A. and Rahmeier Seyffarth, A. (2016) Good Things do not Always come in threes: On the Excess Cost of Overlapping Regulation in EU Climate Policy. *Energy Policy* 94, 502-508
- Böhringer, C, Bye, B, Fæhn, T. and Rosendahl, K. E. (2017) Output-based Rebating of Carbon Taxes in the Neighbor's Backyard. *Canadian Journal of Economics* 50 (2), 426-455
- Böhringer, C., Carbone, J.C., and Rutherford, T.F. (2016) The Strategic Value of Carbon Tariffs. *American Economic Journal: Economic Policy* 8 (1), 1-25
- Böhringer, C., Cuntz, A., Harhoff, D. and Asane-Otoo, E. (2017) The Impact of the German Feed-in Tariff Scheme on Innovation: Evidence Based on Patent Filings in Renewable Energy Technologies. *Energy Economics* 67, 545-553
- Böhringer, C., Garcia-Muros, X., Cazcarro, I. and Arto, I. (2017) The Efficiency Cost of Protective Measures in Climate Policy. *Energy Policy* 104, 446-454
- Böhringer, C., Garcia-Muros, X., Gonzalez-Eguino, M. and Rey, L. (2017) US Climate Policy: A Critical Assessment of Intensity Standards. *Energy Economics* 68 (1), 125-135
- Böhringer, C., Rivers, N. and Yonezawa, H. (2016) Vertical Fiscal Externalities and the Environment. *Journal of Environmental Economics and Management* 77, 51-74
- Böhringer, C., Rivers, N., Rutherford, T.F. and Wigle, R. (2016) Sharing the Burden for Climate Change Mitigation in the Canadian Federation. *Canadian Journal of Economics* 48 (4), 1350-1380
- Böhringer, C., Rosendahl, K.E. and Storrøsten, H.B. (2017) Robust Policies to Mitigate Carbon Leakage. *Journal of Public Economics* 149, 35-46

Professor Shawna Grosskopf

Journal articles

- Barnhardt, B., Bostian, M., Whittaker, G., Färe, R. and Grosskopf, S. (2016) Prioritizing Conservation for the Reduction of Gulf Hypoxia using an Environmental Performance Index. *Ecological Indicators*, 235-241
- Bostian, M., Färe, R., Grosskopf, S. and Lundgren, T. (2016) Environmental Investment and Firm Performance: A Network Approach. *Energy Economics* 57, 243-255
- Bostian, M., Färe, R., Grosskopf, S., Lundgren, T. and Weber, W. (Published online September 26, 2016) Time Substitution for Environmental Performance. *Empirical Economics*, DOI:10.1007/s00181-016-1180-7
- Färe, R., Grosskopf, S., Fukuyama, H. and Zelenyuk, V. (2016) Cost Decompositions and the Efficient Subset. *Omega* 123-130
- Färe, R., Grosskopf, S. and Karagiannis, G. (Published online December 11, 2017) On Technical Inefficiency Indicators at the Industry Level. *International Journal of Production Economics*
- Färe, R., Grosskopf, S., Karagiannis, G. and Margaritis, D. (2017) Data Envelopment Analysis and its Related Linear Programming Models. *Annals of Operations Research* 250 (1), 37-43

- Färe, R., Grosskopf, S. and Pasurka, C. (2016) Technical Change and Pollution Abatement Costs. *European Journal of Operational Research* 248 (2), 715-724
- Färe, R., Grosskopf, S., Pasurka, C., and Shadbegian, R. (2017) Pollution Abatement and Employment. *Empirical Economics* 54 (1), 2152-2812
- Färe, R., Grosskopf, S. and Vincent, C. (2016) A Translation Invariant Pure DEA Model. *European Journal of Operational Research* 715-724
- Färe, R. Grosskopf, S. and Weber, W.L. (2016) Pricing Nonmarketed Outputs with an Application to Community Colleges. *Public Finance Review*, 197-219
- Färe, R., Grosskopf, S., Walden, J. (2017) Measuring Capital Value in a Commercial Fishery: A Distance Function Approach. *Marine Policy* 81, 109-115
- Grosskopf, S., Hayes, K., Taylor, L. and Weber, W. (2017) Would Weighted-Student Funding enhance Intra District Equity in Texas? A Simulation using DEA. *Journal of the Operational Research Society* 68 (4), 377-389
- Walden, J. Färe, R. Grosskopf, S. (2017) Measuring Change in Productivity of a Fishery with the Bennet-Bowley Indicator. *Fishery Bulletin*, 115 (3), 273-283
- Whittaker, G., Färe, R., Grosskopf, S., Barnhart, B. and Bostian, M. (2017) Spatial Targeting of Agri-Environmental Policy using Bilevel Evolutionary Optimization. *Omega* 66 (A), 15-27
- Book**
- Färe, R., Grosskopf, G., Lundgren, T., Marklund, P-O. and Wenchao, Z. (2016) *The Impact of Climate Policy on Economic and Environmental Performance – Evidence from Sweden*. London: Routledge
- Book chapter**
- Färe, R., Grosskopf, S. and Pasurka, C. (2017) Modelling Pollution Abatement Technologies as a Network In: Ancev, T., Azad, S. and Hernandez-Sancho, F. (Eds) *New Directions in Productivity Measurement and Efficiency Analysis* 59-79, Stockholm: Dialogos förlag
- Report**
- Bostian, M., Färe, R., Grosskopf, S., Lundgren, T., and Weber, W.L. (2016) *Time Substitution for Environmental Performance*. Working Paper 2016:3, Centre for Environmental and Resource Economics, Umeå, Sweden
- Conferences**
- Bostian, M., Färe, R., Grosskopf, S. and Lundgren, T. (2017) Unintended Outputs. *European Workshop on Productivity and Efficiency*, London, June 12-14, 2017
- Färe, R. and Grosskopf, S. (2017) Network DEA tutorial. *Data Envelopment Analysis Conference*, Prague, June 27-29
- Färe, R. and Grosskopf, S. Workshop on Topics in DEA Modeling and Application. *Asia Pacific Productivity Conference*, Tianjin, China, 2016
- Grosskopf, S. Performance Measurement and Modeling of Good and Bad Outputs with a Network Application. *Workshop on Environmentally Adjusted Productivity and Efficiency*, University of Sydney, Australia, February 22, 2016

Grosskopf, S. (and coauthors). Time Substitution and Some Applications. *Asia Pacific Productivity Conference*, Tianjin, China, July 7-10, 2016

Izzo, M.G., Leuzzi, L. and Ruocco, G. (2017) Inference for Nonparametric Production Networks: A Pseudo-likelihood Approach. *CMStat*, London, December, 2017

External activity

Invited seminar, Charter School Issues, Miami University, October 17

Research stays abroad

Visiting Scholar, University of Auckland, March 2016

Visiting Scholar (and Adjunct Professor), CERE, June, 2016

Visiting Researcher, University of Auckland, February/March, 2017

Visiting Researcher, CERE/Umea, June, 2017

Visiting Researcher, IHE, Lund, Sweden, June, 2017

Professor Per-Olov Johansson

Journal article

Jorge-Calderon, D. and Johansson, P-O. (2017) Emissions Trading and Taxes: An Application to Airport Investment Appraisals. *Journal of Transport Economics and Policy* 51 (4), 249-265

Reports

Johansson, P-O. (2016) *On the Treatment of Emissions Trading and Green and White Certificates in Cost–Benefit Analysis*. 2016:13, Centre for Environmental and Resource Economics, Umeå, Sweden

Johansson, P-O. (2016) *Tradable Permits in Cost–Benefit Analysis. A Numerical Illustration*. 2016:14, Centre for Environmental and Resource Economics, Umeå, Sweden

Johansson, P-O. and Kriström, B. (2017) *Principiella aspekter på samhällsekonomisk kalkyl av LKAB:s beslut att bryta nya gruvnivåer 2008*. Underlag till granskningsrapport DNR: 3.1.1 - 2017 - 0013, Riksrevisionen, Stockholm, Sweden

Newspaper article

Johansson, P-O. and Kriström, B. Flygskatten kontraproduktiv sår lösning. *Västerbottenskuriren*, April 20, 2017

External activities

Member of Scientific Committee for a project on R&D at Università degli Studi di Milano financed by the European Investment Bank, 2013-

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