

CONTACT INFORMATION	Address: LSE, Houghton Street London WC2A 2AE U.K.	E-mail: m.sato1@lse.ac.uk Website: personal.lse.ac.uk/SATOM
CURRENT POSITIONS	Associate Professorial Research Fellow , Grantham Research Institute, London School of Economics and Political Science (LSE) 08/25– Deputy Research Director , Grantham Research Institute (LSE) 09/25– Co-Director LSE Green Skills Lab 07/25– Senior Associate , Centre for Economic Performance, Green Transition Programme (LSE) 10/25– Co-Editor , Environmental and Resource Economics, Springer 06/22– Advisory Board , ESRC Environmental Social Science Strategic Advisory Group 03/21– DIW Research Fellow , DIW Berlin (the German Institute for Economic Research) 12/21–	
PREVIOUS POSITIONS	Assistant Professorial Research Fellow , Grantham Research Institute, LSE 09/16–07/25 Deputy Director , ESRC Centre for Climate Change Economics and Policy 08/18–09/24 Research Officer (Post doc), GRI, London School of Economics 09/13–08/16 Research Assistant , Faculty of Economics, Cambridge University 09/05–08/08	
VISITING POSITIONS	Visiting researcher, French Economic Observatory (OFCE), Sciences Po 02/20 Visiting fellow, Energy Studies Institute, National University of Singapore 05/19–06/19 Visitor, MINES ParisTech, PSL Research University, CERNA - Centre d'Economie Industrielle 08/14	
EDUCATION	Ph.D. in Environmental Economics , London School of Economics 2013 M.Sc. in Environmental and Resource Economics , University College London 2005 M.A. Joint Honours in Economics and Chinese , Edinburgh University 2003	
PUBLICATIONS - JOURNAL ARTICLES	Google Scholar stats (as of 03/26): total citations = 4384, h-index = 22, i-10 index = 35 “Carbon pricing, compensation and competitiveness: lessons from UK manufacturing” (w. P. Basaglia and E. Isaksen). Journal of Environmental Economics and Management , vol 133, 103208, 2025. 133:103208. Featured in <i>Business Green</i> . “Impacts of climate litigation on firm value” (w. G. Gostlow, C. Higham, J. Setzer, and F. Venmans). Nature Sustainability , 7, 1461–1468, 2024. Winner of Best Paper Award at Global Research Alliance for Sustainable Finance and Investment conference at the Yale School of Management , Aug 2023. Featured in <i>The Guardian</i> , <i>Reuters</i> , <i>The Guardian</i> and others. “The impacts of energy prices on industrial foreign investment location: evidence from global firm level data” (with A. Saussay), Journal of Environmental Economics and Management , vol 127, 2024. Winner of Young Economist Best Paper from the French Association of Environmental and Resource Economists (FAERE) . “Are financial markets aligned with climate action? New evidence from the Paris Agreement” (with T. Kruse and M. Mohnen), Journal of the Association of Environmental and Resource Economics , 11(3), 549–576, 2024. “Quasi-Experimental Evidence on Carbon Pricing” (with K. Vrolijk) World Bank Research Observer , 38(2), 213–248, 2023. “Allocation, allocation, allocation! The political economy of the development of the European Union Emissions Trading System”. (with R. Rafaty, R. Caelé and M. Grubb) Wiley Interdisciplinary Reviews: Climate Change , 13(5) 2022. “Carbon Leakage, Consumption, and Trade”. (with M. Grubb, N. Jordan, K. Neuhoff et.al.) Annual Review of Resource Economics , 47(1) 2022. “International and sectoral variation in industrial energy prices 1995 – 2015” (with G. Singer, D. Dussaux and S. Lovo), Energy Economics , 78, 235–258, 2019. Data download “The competitiveness impacts of environmental regulation” (with A. Dechezleprêtre), Review of Environmental Economics and Policy , 11(2), 183–206, 2017. Reprinted in <i>Robert Stavins (ed.) “Economics of the Environment Selected Readings, Seventh Edition”, Edward Elgar, 2019.</i>	

- “Solving the clinker dilemma with hybrid output based allocation” (with F. Branger), **Climatic Change** 140:483, 2017.
- “Asymmetric industrial energy prices and international trade” (with A. Dechezleprêtre), **Energy Economics**, 52 S130-141, 2015. Featured in *Business Green*, *The Daily Telegraph*, *Business Spectator* and *Blue and Green Tomorrow*.
- “EU ETS, free allocations and activity level thresholds - the devil lies in the details” (with F. Branger, J. Ponsard and O. Sartor), **Journal of the Association of Environmental and Resource Economics**, 2(3), 401-437, 2015.
- “Sectors under scrutiny - Evaluation of indicators to assess the risk of carbon leakage in the UK and Germany” (with K. Neuhoff, V. Graichen, K. Schumacher and F. Matthes), **Environmental and Resource Economics**, 60(1), 99-124, 2015.
- “Product level embodied carbon flows in bilateral trade”, **Ecological Economics**, 105,106-117, 2014.
- “Embodied carbon in trade: a survey of the empirical literature”, **Journal of Economic Surveys**, 28(5), 831-861, 2014.
- “The effects and side-effects of the EU emissions trading scheme” (with T. Laing, M. Grubb and C. Comberti), **Wiley Interdisciplinary Reviews: Climate Change**, 5(4), 509-519, 2014.
- “Who will win the green race? In search of environmental competitiveness and innovation” (with S. Fankhauser, A. Bowen, R. Calel, A. Dechezleprêtre, D. Grover and J. Rydge), **Global Environmental Change**, 23(5), 902-913, 2013.
- “Emissions trading: Lessons learnt from the 1st phase of EU ETS and prospects for the 2nd Phase, an Editorial” (with Regina Betz), **Climate Policy**, 6(4) 351-360, 2006.
- “Implications of announced Phase 2 National Allocation Plans for the EU ETS” (with K. Neuhoff, M. Ahman, et.al. **Climate Policy**, 6(5) 411-422, 2006.
- “Allocation, incentives and distortions: The impact of EU ETS emissions allowance allocations to the electricity sector” (with K. Neuhoff and K. Martinez), **Climate Policy**. 6(1), 73-91. 2006.

WORKING PAPERS

- “Adoption, incidence and welfare impacts of interest-free loans: evidence from solar PV” (with L. Cass and A. Saussay), GRI Working Paper Series, No. 438, 2026. R&R at AEJ: Economic Policy. Featured in *The Herald* and *EIBI*
- “Emerging skills and wage gaps in the low-carbon transition: evidence from online job vacancy data”, (with A. Saussay, F. Vona and L. O’Kane). Previously published as “Who’s fit for the low-carbon transition? Emerging skills and wage gaps in job ad data”, GRI Working Paper Series, No. 381, 2022. R&R at JAERE
- “Climate Litigation as a Financial Risk: Evidence from a Global Survey of Equity Investors” (with G. Gostlow, T. Chan, C. Higham, M. Sato, J. Setzer and F. Venmans)
- “Returns to Green Tasks in Europe: Evidence from Online Job Vacancies” (with L. Cass, F. Frattini, A. Saussay, M. Sato and F. Vona)
- “Green revenues, clean innovation and their spillovers: Evidence from global firm level data” (with M. Mohnen and Y. Zheng)
- “Will green innovation augment or automate labor?” (with A. Saussay and M. Sato and F. Vona)
- “Reskilling-burden and outside options for workers in the green transition” (with L. Cass, J. Kershenbaum, M. Sato and A. Saussay)
- “The social and environmental consequences of the twin energy-digital transition” (with A. Saussay and F. Vona)
- “Sectoral Alliance for a Just Global Decarbonisation” (with A. Pirlot, K. Neuhoff, R. Ismer, H. van Asselt and K. Biedenkopf)
- “Green revenues, profitability and market valuation: Evidence from a global firm level dataset” (with T. Kruse, M. Mohnen and P. Pope), *GRI Working Paper Series*, No. 331, 2020.
- “Benchmarks for emissions trading –general principles for emissions scope” (with V. Zipperer and K. Neuhoff), *GRI Working Paper Series*, No. 287, 2017.

BOOK CHAPTERS	<p>“Are carbon markets the best way to address climate change?” (with T. Laing) in Mike Hulme (ed.), <i>Contemporary Climate Change debates: A Student Primer</i>, Routledge, 2020.</p>
SELECT POLICY PAPERS	<p>“Pathways to a productive and inclusive net zero”(with P. Andres, C. Cavaglia, S. Fankhauser, F. Lafond, R. Martin, S. McNally, V. Nguyen-Tien, A. Owen and others), LSE CEP, February 2026.</p> <p>“CBAM based on standardized values Q&A”(with F. Ballesteros, T. Deletombe, R. Ismer, and T. Köveker, P. Linares, S. Matikainen and K. Neuhoff), DIW Berlin.</p> <p>“Industrial decarbonisation in a fragmented world: an effective carbon price with a ‘climate contribution’”(with K. Neuhoff, F. Ballesteros, C. Böhringer, S. Borghesi, A. Cosbey and others). <i>Policy Insights</i>, LSE Grantham Research Institute, January 2025. Op. Ed. in <i>FT Sustainable Views and Business Green</i>.</p> <p>“Skills and wage gaps in the low-carbon transition: comparing job vacancy data from the US and UK”(with L. Cass, A. Saussay, F. Vona, L. Mercer, and L. O’Kane), <i>Policy Report</i>, LSE Grantham Research Institute, January 2023. Featured in <i>The Guardian</i>, <i>The FT</i> and <i>The FT</i>.</p> <p>“What does an eu carbon border adjustment mechanism mean for the UK?”(with J. Burke, C.Taylor and F. Li), <i>Policy Report</i>, LSE Grantham Research Institute, April 2021.</p> <p>“Does it pay for firms to go green?”(with T. Kruse, J. Burke, M. Mohnen, P. Pope), <i>Policy Report</i>, LSE Grantham Research Institute, June 2020.</p> <p>“Sustainable growth in the UK: Seizing opportunities from technological change and the transition to a low-carbon economy” (with J. Rydge, R. Martin, et.al.), <i>Special Report</i>, LSE Growth Commission, December 2018.</p> <p>“Green policies and firms’ competitiveness” (with A. Dechezleprêtre), <i>Issue Paper</i>, OECD Green Growth and Sustainable Development Forum, November 2018.</p> <p>“Inclusion of Consumption of carbon intensive materials in emissions trading: An option for carbon pricing post-2020” (with K. Neuhoff, R. Ismer, et.al.), <i>Climate Strategies Report</i>, June 2016.</p> <p>“Methods for Evaluating the Performance of Emission Trading Schemes” (with T. Laing, S. Cooper and L. Wang), <i>Climate Strategies Discussion Paper</i>, November 2015.</p> <p>“Modernization and innovation in the materials sector lessons from steel and cement” (with K. Neuhoff, A. Ancygier et.al.), <i>Climate Strategies Report</i>, July 2015.</p> <p>“The competitiveness impacts of environmental regulation” (with A. Dechezleprêtre). <i>Grantham Research Institute Policy Report</i>. November 2014. Featured in <i>The Economist</i>, <i>The Sunday Times</i> and <i>Business Green</i>. Blogged in <i>Climate & Development Knowledge Network</i> and <i>LSE Politics and Policy blog</i>.</p> <p>“Carbon control Post-2020 in Energy Intensive Industries: The Steel Report” (with K. Neuhoff, W. Acworth et.al.), <i>Climate Strategies Report</i>, October 2014.</p> <p>“Carbon control and competitiveness post-2020: The Cement Report” (with K. Neuhoff, B. Vanderborght et.al.), <i>Climate Strategies Report</i>, February 2014.</p> <p>“Staying with the leaders: Europe’s path to a successful low-carbon economy” (with K. Neuhoff, W. Acworth et.al.), <i>Climate Strategies Report</i>, February 2014, Featured in <i>Financial Times</i>.</p> <p>“Assessing the effectiveness of the EU Emissions Trading Scheme” (with T. Laing, M. Grubb and C. Comberti). <i>Climate Strategies Report</i>, February 2012.</p>
GRANTS, HONOURS & AWARDS	<p>European Commission (HORIZON-MSCA), 2026-2030, “Socio-economic energy-climate Modelling for European Green transition” (M4G) (with 5 other Institutions), €175,350, Co-I</p> <p>Grantham Research Institute and the Global School of Sustainability (GSoS) Global Sustainability Funds, 2025-2026, LSE Green Skills Lab, £267,981, Co-PI.</p> <p>Grantham Research Institute and the Global School of Sustainability (GSoS) Global Sustainability Funds, 2025-2026, Forward-looking climate litigation: scientific evidence, financial risk, and corporate governance, £210,888, Co-I.</p> <p>Economic and Social Research Council, 2023-2027, Centre for Climate Change Economics and Policy Legacy, £100,000, Co-I</p>

Best Paper Prize at the Global Research Alliance on Sustainable Finance and Investment conference, August 2023. joint with G. Gostlow, C. Higham, J. Setzer, and F. Venmans (2023)

ESRC Research to improve UK economic productivity, Productive and Inclusive Net Zero (PRINZ) - Opportunities and barriers in the transition to sustainable and equitable growth, 2022-25, with 4 other Institutions, Total £1,967,054.15, LSE-GRI PI

European Commission (H2020-MSCA-RISE), 2022-2026, Global Excellence in Modelling Climate and Energy Policies (GEOCEP) (with 5 other Institutions), Total €3,036,000, Co-I

JPI Climate, Socially Just and Politically Robust Decarbonisation: A Knowledge Base and Toolkit for Policymakers (Justdecarb), 2021-23, (with 3 other Institutions), Total £1,040,000, LSE PI

LSE-Sciences Po Faculty Mobility grant, 2020

European Commission Horizon2020, EU Global Excellent in Modelling of Climate and Energy (GEM-CLIME), 2016-2022, with multiple partners, Total €3,330,000, LSE PI

Research Council of Norway, PLATform for Open and Nationally accessible climate policy knowledge (PLATON), 2019-2022, LSE share NOK 441,000 LSE PI

Young Economist Best Paper Prize from the French Association of Environmental and Resource Economists (FAERE), joint with A. Sauusay (2018)

Economic and Social Research Council, 2018-2022, Centre for Climate Change Economics and Policy - Transition Phase, LSE budget £1,092,822, Co-I

Economic and Social Research Council, 2016, Future Research Leaders (2016-2018) £131,095, PI

Graduate and undergraduate: Santander Travel Research Fund (2015); Research Student Conference Fund, Geography and Environment Department, LSE (2012); London School of Economics Graduate Scholarship (2011-2012); Economic and Social Research Council, Centre-linked Quota PhD Studentship (2008- 2011); Gaitskell MSc Scholarship, Faculty of Economics, UCL (2004- 2005); Carnegie Travel Scholarship, University of Edinburgh (2002)

STUDENT SUPERVISION AND EXAMINATION	Main PhD Advisor on PhD Environmental Economics programme, LSE: Pia Andres, Yang Zheng, Andy Jiang.	2018–
	Visiting PhD students' Advisor, Grantham Research Institute, LSE: Frederic Branger (CIRED), Aurélien Saussay (CIRED), Vera Zipperer (DIW), Marie Theres VonSchickfus (ifo institute), Gabriella De Sario (U. Roma), Maren Holthe Hedne (U. Oslo), Guillaume Wald (CIRED), Till Koveker (DIW), Leonard Stimpfle (U. Gent)	2015–
	PhD Examiner, Alienor Cameron (Université Paris Nanterre) LSE	2014–
	MSc dissertation supervisor, 'Environmental Economics and Climate Change' and 'Environmental Policy and Regulation (MSc), LSE	2014–
TEACHING	Guest lecturer, Green Technology and Innovation (MSc), University of Bologna	2019
	Guest lecturer, Climate Change: Science, Economics and Policy (MSc), LSE	2019
	Guest lecturer, LIFE SIDE Online course on the EU Emissions Trading System, European University Institute, Florence School of Regulation	2018
	Guest lecturer, Law and the Environment (LLM), LSE	2016–2018
	Guest lecturer, Executive Masters program on "Energy, Environment and Regulation" Learning Expedition London, Sciences Po (Paris)	2016
REFEREEING	<i>Journals:</i> Climate Policy, Ecological Economics, Energy Economics, Energy Journal, Energy Policy, Environment and Development Economics, Environmental and Resource Economics, Journal of Environmental Economics and Management, Journal of Economic Studies, Journal of Environmental Planning and Management, Nature Climate Change	
	<i>Grants:</i> Economic and Social Research Council, Swiss National Science Foundation, UK Research and Innovation	
	<i>Conference Programme Committee:</i> European Association of Environmental and Resource Economists Annual conference 2019, 2021-2025. LSE/Imperial Environmental Economics Workshop 2025	
PROFESSIONAL ACTIVITIES	European Association of Environmental and Resource Economists (EAERE) (since 2009–)	

Association of Environmental and Resource Economists (2013)

LANGUAGES Japanese, native; English, fluent; Chinese Mandarin, proficient

INVITED

SEMINARS/
TALKS

Transport, Energy and Climate Economics (TrEnCE) Seminar, Paris, March 2026
Hertie School Sustainability Colloquium, Berlin, October 2025
CER-ETH & CEPE lunch seminar, Zurich, May 2025
Grantham Workshop, London School of Economics, February 2024
Oxford Environmental Economics Seminar, Oxford University, February 2024
Department of Economics Seminar Series, TED University-Ankara, July 2023
Center for Environmental and Resource Economics, Umea University, May 2023
National Bank of Belgium, Seminar on Firm Analysis, March 2023
UK Department for Business, Energy & Industrial Strategy, Carbon Pricing Seminar, February 2023
EAERE, The Economics of a Just and Equitable Climate Transition Pre-Conference Workshop (Keynote), June 2022
National University of Singapore, Energy Studies Institute Workshop on International Experience of Carbon Pricing – Adoption and Implementation, January 2023
Florence School of Regulation/ EUI 8th Annual Conference on the Economic Assessment of European Climate Policies, December 2022
Grantham Workshop, London School of Economics, November 2022
19th International Fiscal Association - WIN Japan online Seminar, November 2022
EAERE, The Economics of a Just and Equitable Climate Transition Pre-Conference Workshop (Keynote), June 2022
WTO, Trade and Climate Change Webinar, April 2022
Oxford University, Multilateral cooperation and carbon taxation: challenges and opportunities Workshop, March 2022
Cambridge University, Cambridge Centre for Environment, Energy, and Natural Resource Governance Seminar, November 2021
US International Trade Commission workshop on Trade and Environment, October 2021
ifo Institute Munich and TUM School of Management, Seminar on Energy and Environmental Economics Munich, January 2020
University of Bayreuth, Economics Research Seminar, Bayreuth, July 2019
Energy Studies Institute, National University of Singapore, May 2019
CIRED Environmental Economics Seminar, Paris, March 2019
LSE Grantham Research Institute workshop, London, January 2018
VATT Institute for Economics Research / HECER Environmental, Resource and Energy Economics Seminar, Helsinki, May 2017
UK Department of Energy & Climate Change Analytical Seminar Series, London, May 2016
Paris Environmental and Energy Economics Seminar, Université Paris 1, March 2015

CONFERENCE/

WORKSHOP
PRESENTATIONS

Climate Policy- Research in Action workshop, DIW Berlin, Sep 2025
1st International Alpine Workshop on Energy Economics and Policy, Airolo, September 2025
DG EMPL and JRC Expert Workshop, Brussels, June 2025
CRED-HEC Conference Law, Economics and Regulation, Paris, May 2025
Climate Policy - Research in Action workshop, DIW Berlin, Sep 2024
ESRC Thematic Investment Research Event on Productivity, LSE, London, June 2024
10th Atlantic Workshop on Energy and Environmental Economics, A Toxa, June 2024
14th Toulouse Conference on the Economics of Energy and Climate, Toulouse, June 2024
EcoTransit Workshop, University of Siena, April 2024
Climate change research with impact: what works? Centre for Climate Change Economics and Policy final event, London, November 2023
International Green Skills Conference, London, September 2023
6th Annual LSE/Imperial Workshop on Environmental Economics, London, June 2023
UK BEIS carbon pricing seminar series, London, February 2023
Knowledge, skills, behaviours: An international workshop on the systematic analysis of job vacancy

data, Brighton, Oct 2022
26th EAERE Annual Conference, Rimini, June 2020
25th EAERE Annual Conference, Berlin, June 2020
24th EAERE Annual Conference, Manchester, June 2019
6th World Congress of Environmental and Resource Economists, Gothenburg, June 2018
23rd EAERE Annual Conference, Greece, June 2019
International Symposium on Environment Energy & Finance Issues, Paris, May 2017
Expert Workshop on Environmental Policy Data and Competitiveness, United Nations Environment Programme, Geneva, January 2017
Climate Annual Conference, Florence School of Regulation, December 2016
Applied Environmental Economics Conference, The Royal Society, London, March 2016
Climate Annual Conference, Florence School of Regulation, October 2015
Association of Environmental and Resource Economists conference, Banff, June 2013
19th European Association for Environmental and Resource Economics Annual Conference, Prague, June 2012
5th Atlantic Workshop on Energy and Environmental Economics, A Toxa, June 2012
International Society for Industrial Ecology Annual Conference, Berkeley, June 2011
18th EAERE Annual Conference, Rome, June 2011
ENVECON Applied Environmental Economics Conference, The Royal Society, London, February 2011