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EDUCATION

- 2020 – 2024 PhD candidate, Imperial College London, Environmental Science, Grantham Institute and Centre for Environmental Policy, London, United Kingdom.
- 2018 – 2019 MSc, University College London, Climate Change, London, United Kingdom, *Distinction*.
- 2015 – 2018 BSc (Hons), University of Twente, Technology, Liberal Arts and Sciences, Enschede, Netherlands, *Magna cum Laude*.

PROFESSIONAL APPOINTMENTS

- 2019 – present Researcher, IIASA, Energy, Climate, and Environment Program, Laxenburg, Austria
- 2020 – 2022 IPCC Contributing Author, Working Group III Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (2020-2022).
Summary for Policymakers; Chapter 3 (Mitigation pathways compatible with long-term goals); Annex III (Scenarios and Modelling Methods)

PRIZES

- 2022 Award for Early Career Researcher.
Integrated Assessment Modelling Consortium, during the Fifteenth Annual Meeting in College Park, Maryland, USA.
- 2022 Prize for best student abstract at the 2022 ESEE conference in Pisa.

AREAS OF INTEREST

Integrated Assessment Modelling, Inequality, Climate Change Mitigation, Energy, Multidimensional Poverty, Emissions, Climate Emulators, Climate impacts, Environmental Economics, Post-growth modelling.

PUBLICATIONS

Manuscripts under review

- In review* R. D. Lamboll, Z. R. J. Nicholls, Chris J. Smith, **J. S. Kikstra**, E. Byers, J. Rogelj. Assessing the size and uncertainty of remaining carbon budgets.
- In review* C. Zimm, K. Mintz-Woo, E. Brutschin, S. Hanger-Kopp, R. Hoffmann, **J. S. Kikstra**, M. Kuhn, J. Min, R. Muttarak, S. Pachauri, O. Patange, K. Riahi, T. Schinko. Climate Justices Beyond Burden Sharing.

Journal Articles, peer-reviewed (7), including first-author (4) and co-author (3)

- 2022 **Kikstra, J. S.**, Zebedee R. J. Nicholls, Christopher J. Smith, Jared Lewis, Robin D. Lamboll, Edward Byers, Marit Sandstad, Malte Meinshausen, Matthew J. Gidden, Joeri Rogelj, Elmar Kriegler, Glen P. Peters, Jan S. Fuglestedt, Ragnhild B. Skeie, Bjørn H. Samset, Laura Wienpahl, Detlef P. van Vuuren, Kaj-Ivar van der Wijst, Alaa Al Khourdajie, Piers M. Forster, Andy Reisinger, Roberto Schaeffer, and Keywan Riahi. The IPCC Sixth Assessment Report WGIII climate assessment of mitigation pathways: from emissions to global temperatures. *Geosci. Model Dev.*, 15, 9075–9109, <https://doi.org/10.5194/gmd-15-9075-2022>
- 2022 Nicholls, Z., Meinshausen, M., Lewis, J., Smith, C.J., Forster, P.M., Fuglestedt, J., Rogelj, J., **Kikstra, J.S.**, Riahi, K. and Byers, E., 2022. Changes in IPCC scenario assessment emulators between SR1.5 and AR6 unravelled. *Geophysical Research Letters*. <https://doi.org/10.1029/2022GL099788>
- 2021 **Kikstra, J.S.**, Vinca, A., Lovat, F., Boza-Kiss, B., Van Ruijven, B., Wilson, C., Rogelj, J., Zakeri, B. Fricko, O. and Riahi, K., 2021. Climate mitigation scenarios with persistent COVID-19 related energy demand changes. *Nature Energy*. <https://doi.org/10.1038/s41560-021-00904-8>.
- 2021 **Kikstra, J.S.**, Mastrucci, A., Min, J., Riahi, K., Rao, N.D., 2021. Decent living gaps and energy needs around the world. *Environ. Res. Lett.* <https://doi.org/10.1088/1748-9326/ac1c27>
- 2021 **Kikstra, J.S.**, Waidelich, P., Rising, J., Yumashev, D., Hope, C., Brierley, C.M., 2021. The social cost of carbon dioxide under climate-economy feedbacks and temperature variability. *Environ. Res. Lett.* 16, 094037. <https://doi.org/10.1088/1748-9326/ac1d0b>
- 2021 Huppmann, D., Gidden, M.J., Nicholls, Z., Hörsch, J., Lamboll, R., Kishimoto, P.N., Burandt, T., Fricko, O., Byers, E., **Kikstra, J.** and Brinkerink, M., 2021. pyam: Analysis and visualisation of integrated assessment and macro-energy scenarios [version 2; peer review: 3 approved]. *Open Research Europe*, 1. <https://doi.org/10.12688/openreseurope.13633.2>
- 2020 Lamboll, R.D., Nicholls, Z.R.J., **Kikstra, J.S.**, Meinshausen, M., Rogelj, J., 2020. Silicone v1.0.0: an open-source Python package for inferring missing emissions data for climate change research. *Geosci. Model Dev.* 13, 5259–5275. <https://doi.org/10.5194/gmd-13-5259-2020>

Reports

- 2022 UNEP Emissions Gap Report 2022 [contributing author]
- 2022 IPCC SPM [contributing author]
- 2022 IPCC WG3 Chapter 3, Riahi et al. [contributing author]
- 2022 IPCC WG3 Annex III [contributing author]
- 2022 Richters O, Bertram C, Kriegler E, Anz J, Beck T, Bresch D, Charles M, Clarke L, Cui R, Edmonds J, Hackstock P, Hilaire J, Holland D, Hurst I, Khourdajie A, **Kikstra J**, Kropf C, Lejeune Q, Liadze I, Min J, Pfliederer P, Piontek F, Rogelj J, Sauer I, Schwind N, Schleussner CF, Schleypen JR, Sferra, F, van Ruijven B, Weigmann P, Yu S, Zhao A, Zimmer A, Zwerling M.
NGFS Climate Scenario Database: Technical Documentation V3.1.
- 2022 Rising J, Dietz S, Dumas M, Khurana R, **Kikstra J**, Lenton T, Linsenmeier M, Smith C, Taylor C, Ward B.
What will climate change cost the UK? Risks, impacts and mitigation for the net-zero transition. London: Grantham Research Institute on Climate Change and the Environment, London. School of Economics and Political Science.
- 2022 **Kikstra, J.S.**, Pelz, S. and Pachauri, S.
Eliminating multidimensional poverty by providing decent living standards for all. Science-Policy Brief for the Multistakeholder Forum on Science, Technology and Innovation for the SDGs.
- 2021 Van Ruijven, B., Bertram, C., Pianta, S., **Kikstra, J.**, & Cherp, A.
ENGAGE: From COVID-19 shock to green recovery. In: Climate Action in the post-COVID-19 world-Insights from EU-funded projects on how to build forward better. pp. 27-32 Brussels: European Commission. ISBN 978-92-76-40952-6 10.2777/02755.
- 2021 Krey, V., P. Havlik, P. Kishimoto, O. Fricko, J. Zilliacus, M. Gidden, M. Strubegger, **et al.**.
“MESSAGEix-GLOBIOM Documentation - 2020 Release.” Other. Laxenburg, Austria: IIASA. March 18, 2021. <https://doi.org/10.22022/IACC/03-2021.17115>.

Outreach and media

- 2022 Selected interviews, podcasts, and outreach:
- Workshop at Austrian Youth Climate Conference (LCOY) on “What and who is behind the IPCC?”, 16 October, Vienna, Austria.
 - Video interview with France24, 28 September, online.
 - Long-form podcast: Hör mal wer die Welt verändert, episode “Who or what is IPCC? [English]”, May 2022, Vienna, Austria.
- 2021 Media coverage for lead author papers:
- “The social cost of carbon dioxide under climate-economy feedbacks and temperature variability”
 - o large coverage in newspapers with estimated reach of 20+ million, including coverage in The Guardian, The Independent, Zeit, Spiegel, and Süddeutsche Zeitung. Live TV interview, Money Talks, TRT World.

- “Decent living gaps and energy needs around the world”
 - o Media coverage: covered in news articles on Carbon Brief, World Economic Forum, Anthropocene Magazine, and Grist.
 - o Outreach: full feature podcast interview with Planet Philadelphia.
 - o Policy impact: Informed United Nations Policy Brief
- “Climate mitigation scenarios with persistent COVID-19 related energy demand changes”
 - o Policy impact: presentation during Structured Expert Dialogue to the UNFCCC climate negotiations
 - o Keynotes (invited): 60-year Heidelberg University Institute of Global Health Jubilee Symposium (forthcoming), Austrian Academy of Sciences (ÖAW).

CONFERENCE ACTIVITY [SELECTED]

2023 **Kikstra J.S.** EGU23 annual GIFT (Geosciences Information for Teachers) lecture, on “The role of energy in sustainable development”, 24-26 April, Vienna, Austria

2022 **Kikstra. J.S.** Fifteenth IAMC Annual Meeting, College Park, Maryland, USA.

- Received Award for Early Career Researcher

Presented:

- “IPCC AR6 climate scenarios and the open-source “climate-assessment” tool for IAM emissions scenarios”

- “Energy needs for a decent life: what do climate mitigation scenarios imply for energy inequality?”

2022 **Kikstra. J.S.** IIASA Water Programme Seminar, 10 October, Laxenburg, Austria.

Presented “A framework for Bringing together multidimensional poverty and climate mitigation through energy research and the implications for water research”

2022 **Kikstra. J.S.** Joint DTP Conference 2022, 1-2 September, UK.

Presented “Poverty and Climate: Bringing together multidimensional poverty and climate mitigation through energy research”

2022 **Kikstra. J.S.** Heidelberg Symposium global Health Institute, Heidelberg, Germany.

Presented “COVID and climate mitigation”, 25 June.

2022 **Kikstra. J.S.,** Hickel J., Soergel B., Organizer Scenarios Forum 2022 session “Plural economics and post-growth futures”, 20-22 June, Laxenburg, Austria.

2022 **Kikstra. J.S.,** “Conference of European Society for Ecological Economics”, 14-17 June, Pisa, Italy..

- Received Best Student Presentation Prize

- Presented “Quantifying energy needs for modelling multidimensional poverty”

2022 **Kikstra. J.S.,** Streeck J., Vogel J., and Krey V. Convening European Geosciences Union General Assembly 2022 (EGU22) session “Energy and materials demand in the context of climate change and other environmental burdens”, 23-27 May, Vienna, Austria.

- 2022 **Kikstra, J.S.**, Sustainable Energy for All Forum, Panel discussion organized by UNIDO and IIASA on “Decarbonizing Industries via Innovative Clean Energy Technologies”, 17-19 May, Kigali, Rwanda.
- 2021 **Kikstra, J.S.**, “Fourteenth Integrated Assessment Modeling Consortium (IAMC) Annual Meeting”. Presented “Quantifying energy needs for modelling multidimensional poverty”, 29 November to 3 December, (virtual).
- 2021 **Kikstra, J.S.**, Joint DTP Conference 2021 - Natural Networks: Connectivity and Inclusivity. Presented: “Decent Living Gaps and Energy Needs around the world: Quantifying energy needs for modelling multidimensional poverty”, 8-10 September 2021, (virtual/London).
Award: highly commended talk.
- 2020 **Kikstra, J.S.**, Thirteenth Annual Meeting of the Integrated Assessment Modelling Consortium. Presented "Regional sustainable development implications of ambitious climate mitigation" and "SCCO2, climate-economy feedbacks, and variability", 1-4 December 2020, (virtual).
- 2020 **Kikstra, J.S.**, European Geosciences Union General Assembly. Presented “Climate-economy feedbacks, temperature variability, and the social cost of carbon”, 7 May 2020, (virtual). <https://doi.org/10.5194/egusphere-egu2020-13230>
- 2019 **Kikstra, J.S.**, UCL Education Conference. Convened a workshop on self-directed learning and self-reflection using the PDP-SER cycle, London, United Kingdom.

OTHER SELECTED PRESENTATIONS

- 2022 Riahi, K., Byers, E., **Kikstra, J.S.**, Nicholls, Z., Closing Plenary Scenarios Forum
- 2022 **Kikstra J.S.**, University College London, Physical Geography Seminar: “Decent Living Gaps and Energy Needs around the world - Quantifying energy needs for modelling multidimensional poverty”, 10 March 2022, London, UK (on-site).
- 2022 **Kikstra J.S.**, University of Reading, presentation to Energy-Meteorology Group: “Decent Living Gaps and Energy Needs around the world - Quantifying energy needs for modelling multidimensional poverty”, 10 March 2022, Reading, UK.
- 2022 **Kikstra J.S.** and Min, J., presentation to IIASA Energy, Climate, and Environment group for the Just Transition for All project: “Towards just transition scenarios with MESSAGEix-GLOBIOM”, 21 February 2022, Vienna, Austria (virtual).
- 2021 **Kikstra J.S.**, “Imperial College London Faculty of Natural Science Research Showcase 2021”. Poster on “Decent Living Gaps and energy needs”, 30 September 2021, (virtual).
- 2021 **Kikstra, J.S.** “NAVIGATE/ENGAGE virtual expert meeting on Modelling and assessment of impacts, adaptive capacity, and interactions with Sustainable Development Goals in IAMs”.
Presented “The need for mitigation and adaptation: evidence from the social cost of carbon under partial growth effects”, 21 September 2021, (virtual).

2021 **Kikstra. J.S.** and Krey, V. “NAVIGATE/ENGAGE virtual expert meeting on Modelling and assessment of impacts, adaptive capacity, and interactions with Sustainable Development Goals in IAMs”. Presented “Overview of tradeoffs and synergies between climate policy and SDGs in global Integrated Assessment Models”, 22 September 2021, (virtual).

2021 **Kikstra. J.S.** and Vinca, A. 90th IIASA committee meeting at the Austrian Academy of Science.
Presented “COVID-19, energy demand, and climate mitigation”, 10 June 2021.

AWARDS AND SCHOLARSHIPS

2021-2024	Just Transition for All (JustTrans4All) grant, €400,000, IIASA. Co-lead of work package 3.
2020 – 2024	Science and Solutions for a Changing Planet (SSCP) Doctoral Training Partnership Scholarship, Imperial College London, Centre for Environmental Policy, London, United Kingdom. Individual scholarship.
2018	VSBFonds Scholarship, Netherlands. Individual scholarship.
2018	Hendrik Muller Fonds Scholarship. Individual scholarship.
2015 – 2018	Scholarship Kruis- of Doumaleen. Individual scholarship.
2015 – 2018	Scholarship Meindert Doumaleen. Individual scholarship.

SCIENTIFIC SOFTWARE DEVELOPMENT

- 2022-present *decent*. R package that includes an extended version of *DLE-scaleup*.
- 2020-2022 *climate-assessment*. Python package in development for the IPCC Sixth Assessment Report, which allows for assessing the climate implications of integrated assessment model emissions pathways, using different climate emulators and advanced emissions processing methods.
- 2020-2021 *DLE-scaleup*. R package that contains bottom-up global gap and energy need analysis for Decent Living Standards.
- 2020 *silicone*. Python package for inferring emissions pathways. Lamboll, Robin D., Zebedee R. J Nicholls, and **Jarmo S. Kikstra**. 2020. "Silicone," Software package. <https://doi.org/10.5281/zenodo.3822259>.

SCIENTIFIC DATABASES [SELECTED]

- 2022 *NGFS Climate Scenarios Data Set*.
<https://doi.org/10.5281/zenodo.5782903>
- 2022 *AR6 Infiller database for silicone: IPCC AR6 WGIII version*.
<https://doi.org/10.5281/zenodo.6390767>
- 2022 *AR6 Scenarios Database hosted by ILASA*.
<https://doi.org/10.5281/zenodo.5886911>

SELECTED PROFESSIONAL AND REVIEW ACTIVITIES

- Journal reviews for
Environmental Research Letters (3),
Energy Research and Social Science (1),
Economic Systems Research (1),
Journal of Integrative Environmental Sciences (1),
Nature Climate Change (1),
Nature Energy (1),
Renewable and Sustainable Energy Transition (1).