#### **LEONIE WENZ**

#### CONTACT

Office address: Telegraph Hill A56, 0.26, D-14473 Potsdam, Germany

E-mail: leonie.wenz[at]pik-potsdam.de URL: www.pik-potsdam.de/~wenz

#### **CURRENT POSITIONS**

Since 01/20	Deputy head of research department Complexity Science at Potsdam Institute for Climate Impact Research (PIK)
Since 09/19	Head of working group Data-based Analysis of Climate Decisions at PIK
Since 2012	Fellow at Mercator Research Institute on Global Commons and Climate Change (MCC), Berlin

#### **PAST POSITIONS**

09/18-08/19	Postdoc at Department of Agricultural and Resource Economics (ARE) at University of California (UC), Berkeley
09/12-08/18	Doctoral and postdoctoral researcher in Global Adaptation Strategies at PIK
2012 - 2016	Fellow in DFG Sonderforschungsbereich 1026 Sustainable Manufacturing at Technical University Berlin (Macroeconomic Sustainability Assessment)
02-05/2015	Visiting researcher at ARE Department at UC Berkeley

# **EDUCATION**

2016	Ph.D. / Dr.rer.nat. (summa cum laude) at University of Potsdam & PIK Thesis title: Climate change impacts in an increasingly connected world First supervisor: Prof. A. Levermann (Physics, University of Potsdam) Second supervisor: Prof. M. Auffhammer (Economics, UC Berkeley)
2012	M.Sc.+ B.Sc. in Mathematics (minors Psychology) at Philipps University of Marburg, Germany (final grade: 1.3/A) M.Sc. thesis in number theory (grade: 1.0/A+; supervisor: Prof. J. Hinz)
2007	Abitur at Gymnasium Edertalschule, German (grade: 1.0/A+, best of class)

## **GRANTS**

2023-2024 Australia-Germany Joint Research Cooperation Scheme Project title: Climate & social preferences

Project partner: Dr. Andrea La Nauze, University of Queensland

Funding amount: 15,841€ (out of ~30,000€ in total)

Role: Principal investigator

2023-2024 Fluxx Grant (ClimateWorks Foundation)

Project title: Network for Greening the Financial System (NGFS) scenarios Funding received for project part: 38,470€ (out of USD 783,755 in total)

Role: Project partner

2018-2023 Europe & Global Challenges (Volkswagen foundation)

Project title: Impacts of intensified weather extremes on Europe's economy Project partners: Columbia University, UC Berkeley and University of Sydney

Funding amount: 784,900€

Role: Principal investigator and coordinator

2020-2021 Corona Crisis and Beyond (Volkswagen foundation)

Project title: What can we learn from the Corona crisis to enhance our

societies' resilience to intensified weather extremes?

Funding amount: 119,800€

Role: Principal investigator and coordinator

## **AWARDS & PRIZES**

2022 - 2027	Elected Member of German Young Academy at the Berlin-Brandenburg Academy of Science and National Academy of Sciences Leopoldina
2023	Elected "Top 40 under 40" in Science category by Capital Magazine
2023	Sir Richard Stone Prize for the best publication in Economic Systems Research in the past years (joint with Timothé Beaufils)
2018-2019	S.V. Ciriacy-Wantrup Postdoctoral Fellowship in Natural Resource Economics and Political Economy (UC Berkeley) Funding: USD 58,040 (~52,500€) Offer to renew for another year (declined)
2017	Leibniz Dissertation Award Prize for best Ph.D. thesis in category Technical and Natural Sciences among all 96 German Leibniz institutes
2017	6th Lindau Nobel Laureate Meeting in Economic Sciences Selected for participation as young economist Sponsored by Leibniz Gemeinschaft and Mars Inc.
2017	PIK Dissertation Award Prize for best Ph.D. thesis awarded by Friends and Supporters of PIK
2013-2016	Graduate Scholarship of Deutsche Bundesstiftung Umwelt (DBU) Funding: 41,400€
2015	DAAD scholarship for research stay at UC Berkeley Funding: ~5,500€

# **APPOINTMENT PROCEDURES**

2022	Offer ("Ruf") W2 (tenure track W3) Professorship in Environmental Economics at University of Augsburg
2022	Offer ("Ruf") W2 (tenure track W3) Professorship in Sustainability and Economic Policy at Philipps University Marburg
2018/19	Short list for W1 Professorship for Human-Climate-Environment-Relations at Justus Liebig University Giessen (ranked 2nd)

# SUPERVISION - Ph.D. LEVEL

Since 2024 Since 2023 Since 2022	Katharina Ziegler (Ph.D. at Technical University Berlin, MPA) Anna Reckwitz (Ph.D. at University of Potsdam/PIK, M.Sc. Physics) Jakob Lochner (Ph.D. at University of Potsdam/PIK, M.Sc. in Physics)
Since 2020	Timothé Beaufils (Ph.D. at University of Potsdam/PIK, M.Sc. in Engineering
565 _5_6	and Economics)
Since 2020	Kelsey Barton-Henry (Ph.D. at TU Berlin/PIK, M.Sc. in Economics)
2019 - 2024	Annika Stechemesser (Ph.D. at University of Potsdam/PIK with summa
	cum laude, M.Sc. in Mathematics)
2019 - 2023	Maximilian Kotz (Ph.D. at University of Potsdam/PIK with summa cum
	laude, M.Sc. in Physics, Cambridge)

# **SUPERVISION – MASTER & BACHELOR LEVEL**

Since 2024	Clemens Giesen (M.Sc. Physics, U Köln)
Since 2023	Max Böhringer (M.Sc. Economics, U Bonn)
Since 2023	Claus Sarnighausen (M.Sc. Physics, U Heidelberg)
Since 2023	Tanja Schirmag (B.Sc. Computational Science, U Potsdam)
2022-2023	Robert D. Carr (M. Sc. Integrated Natural Resource Management, HU
	Berlin, thesis graded 1.0)
2022	Noah Kögel (M.Sc. Economics, FU Berlin; thesis graded 1.0)
2018-2019	Timothé Beaufils (M.Sc. Environmental, Energy and Transport Economics and M.Sc. Engineering, Université Paris-Saclay; graded 18/20)
2015-2016	Sebastian Klipp (M.Sc. Physics, University of Potsdam; graded 1.0)

# **EXAMINATION COMMITTEES - Ph.D. LEVEL**

2024	Kelsey Barton-Henry (PIK; Technical University Berlin, Faculty of Landscape Architecture and Environmental Planning), dissertation defense scheduled for spring 24
2024	Annika Stechemesser (PIK; University of Potsdam, Department of Physics),
2024	Demetrio Guzzardi (Scuola Superiore Sant'Anna, Pisa, Department of Economics)
2024	Camille Belmin (PIK, Humboldt University Berlin, Department of Sociology)
2023	Guglielmo Zappalà (Paris School of Economics)
2023	Christopher W. Callahan (University of Dartmouth, Department of Geography)
2023	Maximilian Kotz (PIK & University of Potsdam, Department of Physics)
2023	Franceso Pietro Colelli (Ca' Foscari University of Venice, Science and
	Management of Climate Change)
2023	Andrea Staccione (Ca' Foscari University of Venice, Science and Management of Climate Change)

# **TEACHING**

Since 2019	PIK Potsdam, day-to-day supervision and teaching of Postdocs, Ph.D., Master and Bachelor students within my research group					
Since 2015	PIK Potsdam, day-to-day supervision and teaching of Master and Bachelor students					
2024	WeAct Con workshop, input on cost of climate change					
2024	European School of Management and Technology, C-Level Potential Programme, session on Adapting to climate change					

2023	European School of Management and Technology, Hanken Programme, session on cost of climate change
2023	HU Berlin, lecturer Ringvorlesung Studium Oecologicum
2022	European Academy Otzenhausen, lecturer Climate change & science communication seminar for media representatives
2022	European Academy Otzenhausen, lecturer at 12. Kolloquium für den wisssenschaftlichen Nachwuchs (Forum für Verantwortung) on economic cost of climate change
2022	CEST student seminar series, panelist on responsible modelling
2015	Potsdam Summer School, lecture on supply chains in a warming world
2013	University of Potsdam, tutor in Climate Physics
2009/2012	Philipps University Marburg, tutor in Analysis and in Mathematical Statistics

#### INVITED TALKS, PANELS, WORKSHOPS

2024 **University Leipzig**, invited speaker Institute of Economics seminar (scheduled for June 24)

**Paris-Dauphine University**, invited speaker Laboratoire d'Économie de Dauphine (LEDa) seminar (scheduled for May 24)

**University Hamburg**, invited speaker Mapping the Effects of Environmental Policies workshop (scheduled for April 24)

PIK Potsdam, invited speaker Quidic workshop on Quantifying the Impacts of Climate Change on Socioeconomic Development (scheduled for April 24) CESifo Area Conference on Energy and Climate Economics, invited talk German Environmental Agency, Workshop on the Social Cost of Carbon PIK Potsdam, speaker at annual research days

**Scuola Superiore Sant'Anna, Pisa,** invited speaker Institute of Economics and EMbeDS seminar

2023 Kindernothilfe, talk at joint seminar with PIK

MCC Berlin, invited speaker research seminar

**National Bank of Belgium, Brussels**, invited speaker firm analysis seminar **Paris School of Economics**, invited speaker for Regulations & Environment seminar

**Technical University of Braunschweig,** invited speaker Braunschweig Seminar for Economics, Politics & Practice

**Technical University of Braunschweig**, invited speaker Institute of Economics seminar series

**German Young Academy**, Money & Society: Valuing Nature workshop **Royal Society**, **UK**, participation in meeting on New horizons for increasing the understanding of the economic consequences of climate change

**London School of Economics**, invited speaker Climate Change and Environment Research Seminar

German Federal Foreign Office, invited speaker Brownbag Lunch Seminar German Federal Ministry for Economic Affairs and Climate Action, colead of discussion group as part of conference on climate change costs for Germany

PIK Potsdam,	podium	discussion	on	climate	litigation,	loss	&	damage	at
research days									

**HGDF Holding Flensburg**, invited speaker

University of Hamburg, invited speaker KlimaCampus Colloquium

2022 **European Scientific Advisory Board on Climate Change**, overview of my research during their visit at PIK

IMF's Caribbean Regional Technical Assistance Centre, invited speaker webinar series

PIK, talk at pre-COP27 Journalist briefing

**Association of Renewable Energies Saxony**, invited speaker annual meeting

**German Bishops' Conference**, working group on ecological questions, overview of my research during their visit at PIK

How can MRIOs foster climate impact research and inform sustainable policies, organization of and presentation at workshop (joint with PIK, Universities of Leiden, Sydney, New South Wales, Potsdam, and others)

**Sustainability Standards conference** organized by Leibniz Institute for Financial Research, SAFE Frankfurt), invited panellist

**European Geophysical Union**, solicited talk Climate extremes, biosphere and society session

**Network for Greening the Financial System**, overview of our work on damage function during informal meeting

PIK, invited speaker for Science & Pretzels seminar series

PIK, speaker at annual research days

# 2021 SWEEP webinar series in Environmental and Energy Economics and Policy, invited speaker

International Monetary Fund & World Bank, invited speaker climate seminar (online)

**Energy Efficiency Convention for Building and Modernizing** (Hanover/online), invited speaker

PIK, talk at Pre-COP26 journalist briefing,

Navigate/Engage workshop on Modelling Impacts of Climate Change, invited speaker and expert input

**Siemens Foundation**, overview of my research during their visit at PIK **PIK**, speaker at annual research days

2020 London School of Economics and Oxford University, participation at Workshop on Strengthening Understanding of the Economic Impacts of Climate Change (online)

**Deutsche Bundesbank**, participation at joint workshop with PIK on Climate Risks for Finance

2019 Annual Summer Conference of the Association of Environmental and Resource Economists (AERE, Tahoe), talk

**UC Berkeley**, invited speaker at Colloquium of the Energy and Resources Group

- 2018 UC Berkeley, invited speaker at Climate Change Economics Seminar
- 2017 **Impacts World Conference** (Potsdam), organization or workshop on Climate Change & International Trade

Association of Renewable Energies Saxony (Dresden), invited speaker

German Federal Environment Agency, invited speaker stakeholder 2016 dialogue on climate change adaptation

MCC Berlin, invited speaker Research Seminar

German Green Party, podiums discussion on the occasion of the 2015 UN 2015 climate summit with Dr. Anton Hofreiter, parliamentary leader of the party Our Common Future under Climate Change Conference (Paris), poster

2014 International Input-Output Conference (Lisbon), flashlight talk and talk Re:publica Conference on Digital Culture (Berlin), talk

# PEER-REVIEWED PUBLICATIONS (\*corresponding author role, \* equal contributions)

2024 M. Kotz, A. Levermann, L. Wenz\*

The economic commitment of climate change

Nature (accepted)

W. Guo. L. Wenz. M. Auffhammer

The visual effect of wind turbines on property values is small and diminishing in space and time

**PNAS** (2024)

2023 M. Kotz, S. Lange, L. Wenz, A. Levermann

> Constraining the pattern and magnitude of projected extreme precipitation change in a multi-model ensemble

Journal of Climate (2023)

A. Stechemesser & L. Wenz

Inequality in behavioural heat adaptation: an empirical study using mobility data from the New York City transport system

The Lancet Planetary Health (2023)

>> Selected media coverage: Deutschlandfunk | Ärzteblatt | Tagesspiegel | Hessischer Rundfunk

A. Stechemesser, M. Kotz, M. Auffhammer, L. Wenz\*

Prolonged exposure weakens risk perception and behavioral response: Empirical evidence from Covid-19

**Transportation Research Interdisciplinary Perspectives** (2023)

L. Wenz\*, R.D. Carr+, N. Koegel+, M. Kotz+, M. Kalkuhl (+contributed equally) DOSE – Global data set of reported sub-national economic output **Nature Scientific Data** (2023)

T. Beaufils, H. Ward, M. Jakob, L. Wenz\*

Assessing different European Carbon Border Adjustment Mechanism implementations and their impact on trade partners

**Nature Communications Earth & Environment** (2023)

T. Beaufils, E.C. Berthet, H. Ward, L. Wenz

Beyond production and consumption: using throughflows to untangle the virtual trade of externalities

**Economic Systems Research** (2023)

K. Barton-Henry & L. Wenz\*

Nighttime light data reveal lack of full recovery after hurricanes in Southern US.

## **Environmental Research Letters** (2022)

2022 A. Stechemesser, A. Levermann, L. Wenz\*

Temperature impacts on hate speech online: evidence from four billion

# The Lancet Planetary Health (2022)

>> The Lancet Planetary Health cover story

>> Selected media coverage: Washington Post | Le Monde | The Guardian | Bloomberg | EuroNews | ZDF Heute | Spiegel Online | Ärzteblatt | Tagesspiegel | RBB24 | Deutschlandfunk | Radio 1 | WDR | SWR | HR Info

M. Jakob, S. Afionis, [...], L. Wenz, S.N. Willner How trade policy can support the climate agenda **Science** (2022)

M. Kotz, A. Levermann, L. Wenz\*

The effect of rainfall changes on economic production

**Nature** (2022)

- >> Nature cover story
- >> Highlighted in Nature News & Views
- >> Selected media coverage: Süddeutsche Zeitung | Spiegel Online | Die ZEIT | Tagesspiegel | MDR | Tagesanzeiger | N-TV | ABC News | Politico | NPR | Australian Financial Review | The Indian Express
- T. Beaufils & L. Wenz\*

A scenario-based method for projecting multi-regional input-output tables **Economic Systems Research** (2022)

>> Sir Richard Stone Prize 2023

A. Stechemesser, L. Wenz\*, M. Kotz, A. Levermann Strong increase of racist tweets outside of climate comfort zone in Europe **Environmental Research Letters (2021)** 

2021 M. Kotz, L. Wenz, A. Levermann

> Footprint of greenhouse forcing in day-to-day temperature variability **PNAS** (2021)

K. Kuhla, S.N. Willner, C. Otto, L. Wenz, A. Levermann Future heat stress to reduce people's purchasing power **PLoS ONE** (2021)

K. Barton-Henry, L. Wenz\*, A. Levermann

Decay radius of climate decision for solar panels in the city of Fresno, USA Nature Scientific Reports (2021)

>> Selected media coverage: Deutschlandfunk | TAZ | Süddeutsche Zeitung

M. Kotz, L. Wenz\*, A. Stechemesser, M. Kalkuhl, A. Levermann Day-to-day temperature variability reduces economic growth **Nature Climate Change** (2021)

- >> Highlighted in Nature
- >> Selected media coverage: The New Scientist, Anthropocene Magazine

2020 M. Kalkuhl & L. Wenz The impact of climate conditions on economic production. Evidence from a global panel of regions

## **Journal of Environmental Economics and Management** (2020)

- >> Informed climate scenarios used by Network for Greening the Financial Systems (European Central Bank and other central banks)
- >> Informed US White House Council of Economic Advisors
- >> Informed 2023 Economic Report of the US President
- >> Selected media coverage: Frankfurter Rundschau | Heise Online | Business Insider | Tagesschau

L. Wenz\*, A. Levermann, S.N. Willner, C. Otto, K. Kuhla Brexit no-trade-deal scenario: short-term consumer benefit at the expense of long-term economic development **PLoS ONE** (2020)

L. Wenz\*, U. Weddige, M. Jakob, J.C. Steckel

Road to glory or highway to hell? Global road access and climate change mitigation

**Environmental Research Letters** (2020)

- F. Ueckerdt, K. Frieler, S. Lange, L. Wenz, G. Luderer, A. Levermann The economically optimal warming of the planet Earth System Dynamics (2019)
- 2018 H. Ward, L. Wenz, J.C. Steckel, J.C. Minx
  Truncation error estimates in process lifecycle assessment using inputoutput analysis

  Journal of Industrial Ecology (2018)
- 2017 C. Otto, S.Willner, L. Wenz, K. Frieler, A. Levermann
  Modeling loss-propagation in the global supply network: The dynamic
  agent-based model acclimate
  Journal of Economic Dynamics & Control (2017)
  - L. Wenz\*, A. Levermann, M. Auffhammer

North-South polarization of European electricity consumption under future warming

**PNAS** (2017)

>> Selected media coverage: Carbon Brief | The Guardian | Spiegel Online | Frankfurter Allgemeine Zeitung | El País | NRC Handesblad

2016 L. Wenz\* & A. Levermann

Enhanced economic connectivity to foster heat stress-related losses **Science Advances** (2016)

- >> Motivated **parliamentary enquiry** on the resilience of the German economy and response by German government
- >> Informed stakeholder dialogue on the indirect effects of climate change on German economy organized by the Federal Environmental Agency (UBA) >> Selected media coverage: Washington Post | Bloomberg | The Times of India | Spiegel Online | Deutschlandfunk
- C. Bren d'Amour, L. Wenz, M. Kalkuhl, J.C. Steckel, F. Creutzig Teleconnected food supply shocks

**Environmental Research Letters** (2016)

2015 L. Wenz\*, S. Willner, A. Radebach, R.Bierkandt, J.C. Steckel, A. Levermann

Regional and sectoral disaggregation of multi-regional input-output tables - a flexible algorithm

**Economic Systems Research** (2015)

2014 L. Wenz, S. Willner, R. Bierkandt, A. Levermann.

Acclimate - a model for economic damage propagation. Part II: A dynamic formulation of the backward effects of disaster-induced production failures in the global supply network

**Environment Systems and Decisions** (2014)

R. Bierkandt, L. Wenz, S. Willner, A. Levermann Acclimate - a model for economic damage propagation. Part I: Basic formulation of damage transfer within a global supply network and damage conservation dynamics

**Environment Systems and Decisions (2014)** 

#### **BOOK CHAPTERS**

L. Wenz\* & F. Kuik

Ökonomische Risiken – Über die Folgen der Klimakrise für die Wirtschaft In: Drei Grad mehr – Ein Blick in die drohende Heißzeit und wie die Natur helfen kann, sie zu verhindern (2022; Hrsg. Klaus Wiegandt) >> TopTen SPIEGEL bestseller list paperback non-fiction

L. Wenz\* & S.N. Willner

Climate Impacts and Global Supply Chains – An Overview In: Handbook on Trade Policy & Climate Change (2022; edited by M. Jakob)

#### **COMMENTARIES & POPULAR WRITING**

L. Wenz. Von wegen "Klimaschutz ist teuer". Nichtstun kostet viel mehr. Gastbeitrag Focus Online (2023)

F. Funke, L. Mattauch, T. Merl, H. Mitter, V. Priesemann, L. Wenz, A. Wiese

Die Zukunft der Ernährung in Europa: Interdisziplinäre Perspektiven - The future of food in Europe: Multidisciplinary perspectives Austrian Journal of Agricultural Economics and Rural Studies (2023)

A. Stechemesser, L. Wenz\*, A. Levermann Corona crisis fuels racially profiled hate in social media networks The Lancet - EClinicalMedicine (2020)

L. Wenz

Globalization has made our economies more vulnerable to climate change World Economic Forum (2016)

#### **UNDER REVIEW / WORKING PAPER**

M.Tavoni, P. Andreoni, M. Calcaterra, E. Calliari, T. Deubelli-Hwang, R. Mechler, S. Hochrainer-Stigler, L. Wenz Economic quantification of loss and damage funding needs K. Barton-Henry & L. Wenz\*
Global economic response to fires has changed over time

N. Koegel, M. Kalkuhl, M. Kotz, L. Wenz\* Unequal impacts of climate change on inventive activity: a novel perspective on future productivity

J. H. Lochner, A. Stechemesser, L. Wenz\*
Drivers of climate change media coverage – Evidence from 92 000
German newspaper articles

R. Carr<sup>+</sup>, M. Kotz<sup>+</sup>, P.P. Pichler, H. Weisz, L. Wenz<sup>+</sup> Climate change to exacerbate the burden of water collection on women's welfare globally

J.H. Lochner, M. Kotz\*, A. Stechemesser, L. Wenz\* Climate action could avoid two billion climate migrants

# WORK IN PROGRESS (selection)

D. Huffman, A. La Nauze, L. Wenz Temperature and Preferences: Global Evidence

H. Gruhl, N. Koch, M. Themann, L. Wenz At boiling point: Amplification of heat shocks in global business groups

M. Kotz, C. Callahan, A. Stechemesser, L. Wenz Economic impacts of climate variability and extremes raise SCC

#### REFEREE SERVICE

American Economic Review Insights, Cell iScience, Climatic Change, Economic Systems Research, Environmental and Resource Economics, Environmental Research Letters, Environmental Research: Infrastructure and Sustainability, Global Environmental Change, Journal of Environmental Economics and Management, Nature, Nature Climate Change, Scientific Data, Scientific Reports, Science

#### **EXTRACURRICULAR**

Since 2022	Member of Sustainability working group and founding member of Money & Society working group of German Young Academy
2023	WISSKOMM Academy Interviewtraining
2021-2023	Member of search committee for W2 professorship Sustainable Landuse and climate protection at University Kassel & PIK
2021-2023	Expert reviewer of project "Klimafolgekosten" of German Federal Ministry for the Environment/ German Federal Ministry of Economics and Technology
2019	Expert input for symposium on Air and Climate organized by students at Berlin School of Economics and Law
2019	Nawik media training (Medienkompetenz – Fit für Fernsehen und Hörfunk)

2019	Berkeley/Sloan Summer School in Environmental and Energy Economics
2019	AERE Pre-Conference Workshop on Integrated Assessment Modeling
2018-2019	UC Berkeley D-Lab workshops for geospatial data analysis and machine learning programming skills in R and Python
2015-2016	Mentoring program for female academics at University of Potsdam (mentor: Prof. Eva Nora Paton, TU Berlin)
2012-2016	Potsdam Graduate School workshops on e.g. presentation, management and leadership skills

## **LANGUAGES**

German: native

English: C-Level; Cambridge Certificate Vantage for Business English French: Prix Apollinaire for outstanding results in graduation examination

# **PROGRAMMING & SOFTWARE**

Programming languages: Python, R, Stata Word & image processing: LaTeX, MS Office

## PERSONAL INFORMATION

Year of Birth: 1988

Family status: Married, two children (born 2017 and 2020)