

# Europass Curriculum Vitae



## Personal information

First name / Surname

**Elmar Kriegler**

Institute

Potsdam Institute for Climate Impact Research

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Homepage

<http://www.pik-potsdam.de/members/kriegler>

Date of birth

01.01.1971

Gender

Male

Nationality

German

## Areas of expertise

Integrated Assessment of Climate Change, Economics of Climate Change, Decision and Scenario Analysis

## Work experience

Dates

Since 06 / 2010

Occupation or position held

**Deputy Chair Research Domain III "Sustainable Solutions"**

Name and address of employer

Potsdam Institute for Climate Impact Research, Telegrafenberg A31, 14473 Potsdam

Dates

06 / 2009 - 05 / 2010

Occupation or position held

**Senior Scientist**

Name and address of employer

Potsdam Institute for Climate Impact Research, Telegraphenberg A31, 14473 Potsdam

Dates

06 / 2006 - 05 / 2009

Occupation or position held

**Marie Curie Visiting Fellow**

Name and address of employer

Department of Engineering and Public Policy, Carnegie Mellon University, Pittsburgh and  
Potsdam Institute for Climate Impact Research, Telegraphenberg A31, 14473 Potsdam

Dates

08 / 2005 – 05 / 2006

Occupation or position held

**Postdoctoral researcher**

Name and address of employer

Potsdam Institute for Climate Impact Research, Telegraphenberg A31, 14473 Potsdam

## Project coordination (selected)

Dates

01 / 2013 – 12 / 2016

Occupation or position held

**Project Chair EU FP7 Project ADVANCE**

Project focus

Integrated Assessment Model Development and Validation for Improved Analysis of Costs and Impacts of Mitigation Policies

Dates 02 / 2011 – 01 / 2014  
Occupation or position held **Project Director EU FP7 Project AMPERE**  
Project focus Assessment of Mitigation Pathways and Evaluation of the Robustness of Mitigation Cost Estimates

Dates 07 / 2012 – 02 / 2014  
Occupation or position held **Coordinator Stanford Energy Modeling Forum Study 27**  
Project focus Technology Strategies for Achieving Climate Policy Objectives

Dates 01 / 2010 - 12 / 2012  
Occupation or position held **Coordinator Research Project RoSE**  
Project focus Roadmaps towards Sustainable Energy Futures

### IPCC authorship

Dates 2010-2014  
Occupation or position held **Lead author of the 5th Assessment Report of IPCC Working Group III**  
Chapter 6 "Assessing Transformation Pathways" and Annex II "Metrics and Methodology",  
Contributing Author to the Summary for Policy Makers and the Technical Summary

Dates Since 2017  
Occupation or position held **Lead author of the IPCC Special Report on 1.5°C Warming**  
Chapter 2 "Mitigation Pathways compatible with 1.5°C in the context of sustainable development"

### Education and training

Dates 02 / 2000 – 07 / 2005  
Title of qualification awarded Dr. rer. nat. (summa cum laude / with distinction)  
Principal subjects/occupational skills covered Doctoral Studies in Theoretical Physics  
Thesis title: Imprecise Probability Analysis for Integrated Assessment of Climate Change  
Principal Advisor H.J. Schellnhuber

Name and type of organisation providing education and training University of Potsdam

Level in national or international classification ISCED Level 6

Dates 09 / 1991 – 07 / 1998  
Title of qualification awarded "Diplom" (M.Sc. equivalent)  
Principal subjects/occupational skills covered Physics

Name and type of organisation providing education and training Albert—Ludwigs University Freiburg

Level in national or international classification ISCED Level 5A

### Personal skills and competences

Mother tongue(s) German

Other language(s) English

Self-assessment  
*European level (\*)*

**English**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user

## Additional information

### BOARD MEMBERSHIPS (selected)

Since 2010: Scientific Steering Committee of the Integrated Assessment Modeling Consortium  
Since 2015: Coordination Board of the EU H2020 Project CD-LINKS (Linking Climate and Development Policies – Leveraging International Networks and Knowledge Sharing)  
Since 2016: Scientific Steering Committee of the Project “The World in 2050”  
Since 2016: Executive Board of the DFG Scientific Priority Programme on Climate Engineering  
2011-2014: Coordination Board of the EU FP7 Project LIMITS (Low Climate Impact Scenarios and the Implications of Required Tight Emission Control Strategies)  
2012 - 2017: ICONICS International Committee on New Integrated Climate Change Assessment Scenarios, Co-chair of the Narratives Subgroup  
2014-2015: Scientific Steering Committee of the IPCC Expert Meeting on Scenarios (Laxenburg, May 2015)  
2010: Scientific Steering Committee of the IPCC Workshop on Socio-economic Scenarios (Berlin, Nov 2010)

### AWARDS

2014: EAERE Award for Outstanding Publication in Environmental and Resource Economics (ERE) for: M. G. W. Schmidt, H. Held, E. Kriegler, A. Lorenz (2013) Climate Policy Under Uncertain and Heterogeneous Climate Damages, Environmental and Resource Economics, Jan 2013, Vol 54, Issue 1, pp 79-99  
10 / 2013: IAMC Award 2012 for outstanding achievements in the field of integrated assessment (Integrated Assessment Modeling Consortium)  
06 / 2006 - 05 / 2009: Marie Curie Outgoing International Fellowship, European Union  
02 / 2000 - 01 / 2003: Ph. D. scholarship, Deutsche Bundesstiftung Umwelt (German Federal Foundation of the Environment)  
1995 / 96: Foreign exchange student travel grant, J. William Fulbright Foreign Scholarship Board

### GUEST EDITORSHIPS

AMPERE Special Issue 'The AMPERE intermodel comparison on the economics of climate stabilization', Technological Forecasting and Social Change, Vol. 90, Part A, Jan 2015  
EMF Special Issue 'The EMF27 Study on Global Technology and Climate Policy Strategies', Climatic Change, Vol. 123, Issue 3-4, Apr 2014  
LIMITS Special Issue on 'Implementing Climate Policies in the Major Economies: An Assessment of Durban Platform Architectures - Results from the LIMITS Project', Climate Change Economics, Vol. 04/Issue 04, Nov 2013  
RoSE Special Issue 'The Impact of Economic Growth and Fossil Fuel Availability on Climate Protection', Climatic Change, Vol. 136, Issue 1, May 2016

### REVIEWER

Climatic Change, Energy Economics, Energy Policy, Environmental Research Letters, Nature Climate Change, Nature Energy, Nature Communications, Proceedings of the National Academy of Sciences, Review of Environmental Economics and Policy, Science

## Publications

### Journal Articles (peer reviewed)

2017

- D.P. van Vuuren, K. Riahi, K. Calvin, R. Dellink, J. Emmerling, S. Fujimori, S. KC, **E. Kriegler**, B. O'Neill (2017) The Shared Socio-economic Pathways: Trajectories for human development and global environmental change. *Global Environmental Change* 42: 148-152, doi: 10.1016/j.gloenvcha.2016.10.009
- K. Riahi, D.P. van Vuuren, **E. Kriegler**, J. Edmonds, B. O'Neill, S. Fujimori, N. Bauer, K. Calvin, R. Dellink, O. Fricko, W. Lutz, A. Popp, J. Crespo Cuaresma, S. KC, M. Leimbach, L. Jiang, T. Kram, S. Rao, J. Emmerling, K. Ebi, T. Hasegawa, P. Havlik, F. Humpenöder, L. Aleluia Da Silva, S. Smith, E. Stehfest, V. Bosetti, J. Eom, D. Gernaat, T. Masui, J. Rogelj, J. Strefler, L. Drouet, V. Krey, G. Luderer, M. Harmsen, K. Takahashi, L. Baumstark, J. Doelman, M. Kainuma, Z. Klimont, G. Marangoni, H. Lotze-Campen, M. Obersteiner, A. Tabeau, M. Tavoni (2017) The Shared Socioeconomic Pathways and their Energy, Land Use, and Greenhouse Gas Emissions Implications: An Overview. *Global Environmental Change* 42: 153-168, doi: 10.1016/j.gloenvcha.2016.05.009
- E. Kriegler**, N. Bauer, A. Popp, F. Humpenöder, M. Leimbach, J. Strefler, L. Baumstark, B. Bodirsky, J. Hilaire, D. Klein, I. Mouratiadou, I. Weindl, C. Bertram, J.-P. Dietrich, G. Luderer, M. Pehl, R. Pietzcker, F. Piontek, H. Lotze-Campen, A. Biewald, M. Bonsch, A. Giannousakis, U. Kreidenweis, C. Müller, S. Rolinski, A. Schultes, J. Schwanitz, M. Stevanovic, K. Calvin, J. Emmerling, S. Fujimori, O. Edenhofer (2017) Fossil-fueled development (SSP5): an energy and resource intensive scenario for the 21st century. *Global Environmental Change* 42: 297-315, doi: 10.1016/j.gloenvcha.2016.05.015
- N. Bauer, K. Calvin, J. Emmerling, O. Fricko, S. Fujimori, J. Hilaire, J. Eom, V. Krey, **E. Kriegler**, I. Mouratiadou, H.S. de Boer, M. van den Berg, S. Carrara, V. Daigolou, L. Drouet, J. Edmonds, D. Gernaat, P. Havlik, N. Johnson, D. Klein, P. Kyle, G. Marangoni, T. Masui, R.C. Pietzcker, M. Strubegger, M. Wise, K. Riahi, D.P. van Vuuren (2017) Shared socio-economic pathways of the energy sector - quantifying the narratives. *Global Environmental Change* 42: 316-330, doi: 10.1016/j.gloenvcha.2016.07.006
- A. Popp, K. Calvin, S. Fujimori, P. Havlik, F. Humpenöder, E. Stehfest, B.L. Bodirsky, J.P. Dietrich, J.C. Doelmann, M. Gusti, T. Hasegawa, P. Kyle, M. Obersteiner, A. Tabeau, K. Takahashi, H. Valin, S. Waldhoff, I. Weindl, M. Wise, **E. Kriegler**, H. Lotze-Campen, O. Fricko, K. Riahi, D.P. van Vuuren (2017) Land-use futures in the shared socio-economic pathways. *Global Environmental Change* 42: 331-345, doi: 10.1016/j.gloenvcha.2016.10.002
- B.C. O'Neill, **E. Kriegler**, K.L. Ebi, E. Kemp-Benedict, K. Riahi, D.S. Rothman, B.J. van Ruijven, D.P. van Vuuren, J. Birkmann, K. Kok, M. Levy, W. Solecki (2017) The roads ahead: Narratives for shared socioeconomic pathways describing world futures in the 21st century. *Global Environmental Change* 42: 169-180, doi: 10.1016/j.gloenvcha.2015.01.004
- M. Leimbach, **E. Kriegler**, N. Roming, J. Schwanitz (2017) Future growth patterns of world regions – A GDP scenario approach. *Global Environmental Change* 42: 215-225, doi: 10.1016/j.gloenvcha.2015.02.005

2016

- E. Kriegler**, I. Mouratiadou, G. Luderer, J. Edmonds, O. Edenhofer (2016) Introduction to the RoSE special issue on the impact of economic growth and fossil fuel availability on climate protection. *Climatic Change* 136:1–6. doi: 10.1007/s10584-016-1667-4
- E. Kriegler**, I. Mouratiadou, G. Luderer, N. Bauer, R.J. Brecha, K. Calvin, E.D. Cian, J. Edmonds, K. Jiang, M. Tavoni, O. Edenhofer (2016) Will economic growth and fossil fuel scarcity help or hinder climate stabilization? *Climatic Change* 136:7–22. doi: 10.1007/s10584-016-1668-3
- I. Mouratiadou, G. Luderer, N. Bauer, **E. Kriegler** (2016) Emissions and their drivers: sensitivity to economic growth and fossil fuel availability across world regions. *Climatic Change* 136:23–37. doi: 10.1007/s10584-015-1368-4
- N. Bauer, I. Mouratiadou, G. Luderer, L. Baumstark, R.J. Brecha, O. Edenhofer, **E. Kriegler** (2016) Global fossil energy markets and climate change mitigation – an analysis with REMIND. *Climatic Change* 136:69–82. doi: 10.1007/s10584-013-0901-6
- G. Luderer, C. Bertram, K. Calvin, E.D. Cian, **E. Kriegler** (2016) Implications of weak near-term climate policies on long-term mitigation pathways. *Climatic Change* 136:127–140. doi: 10.1007/s10584-013-0899-9
- N. Bauer, J. Hilaire, R.J. Brecha, J. Edmonds, K. Jiang, **E. Kriegler**, H.-H. Rogner, F. Sferra (2016) Assessing global fossil

fuel availability in a scenario framework. *Energy* 111: 580-592.

- I. Mouratiadou, A. Biewald, M. Pehl, M. Bonsch, L. Baumstark, D. Klein, A. Popp, G. Luderer, **E. Kriegler** (2016) The impact of climate change mitigation on water demand for energy and food: An integrated analysis based on the Shared Socioeconomic Pathways. *Environmental Science and Policy* 64: 48-58. doi: 10.1016/j.envsci.2016.06.007
- U. Kreidenweis, F. Humpeöder, M. Stevanovic, B.L. Bodirsky, **E. Kriegler**, H. Lotze-Campen, A. Popp (2016) Afforestation to mitigate climate change: impacts on food prices under consideration of albedo effects. *Environmental Research Letters* 11: 085001. doi: 10.1088/1748-9326/11/8/085001
- C.D. Jones, P. Ciais, S.J. Davis, P. Friedlingstein, T. Gasser, G.P. Peters, J. Rogelj, D.P. van Vuuren, J.G. Canadell, A. Cowie, R.B. Jackson, M. Jonas, **E. Kriegler**, E. Littleton, J.A. Lowe, J. Milne, G. Shrestha, P. Smith, A. Torvanger, A. Wiltshire (2016) Simulating the Earth system response to negative emissions. *Environmental Research Letters* 11: 095012. doi: 10.1088/1748-9326/11/9/095012
- D.P. van Vuuren, H. van Soest, K. Riahi, L. Clarke, V. Krey, **E. Kriegler**, J. Rogelj, M. Schaeffer, M. Tavoni (2016) Carbon budgets and energy transition pathways. *Environmental Research Letters* 11: 075002. doi: 10.1088/1748-9326/11/7/075002
- B.C. O'Neill, C. Tebaldi, D.P. van Vuuren, V. Eyring, P. Friedlingstein, G. Hurtt, R. Knutti, **E. Kriegler**, J.-F. Lamarque, J. Lowe, G.A. Meehl, R. Moss, K. Riahi, B.M. Sanderson (2016) The Scenario Model Intercomparison Project (ScenarioMIP) for CMIP6. *Geoscientific Model Development* 9: 3461-3482. doi: 10.5194/gmd-9-3461-2016
- P. Smith, S.J. Davis, F. Creutzig, S. Fuss, J. Minx, B. Gabrielle, E. Kato, R.B. Jackson, A. Cowie, **E. Kriegler**, D.P. van Vuuren, J. Rogelj, P. Ciais, J. Milne, J.G. Canadell, D. McCollum, G. Peters, R. Andrew, V. Krey, G. Shrestha, P. Friedlingstein, T. Gasser, A. Gröbler, W.K. Heidug, M. Jonas, C.D. Jones, F. Kraxner, E. Littleton, J. Lowe, J.R. Moreira, N. Nakicenovic, M. Obersteiner, A. Patwardhan, M. Rogner, E. Rubin, A. Sharifi, A. Torvanger, Y. Yamagata, J. Edmonds, C. Yongsung (2016) Biophysical and economic limits to negative CO<sub>2</sub> emissions. *Nature Climate Change* 6(1): 42-50. doi: 10.1038/nclimate2870

## 2015

- J. Rogelj, G. Luderer, R.C. Pietzcker, **E. Kriegler**, M. Schaeffer, V. Krey, K. Riahi (2015) Energy system transformations for limiting end-of-century warming to below 1.5 °C. *Nature Climate Change* 5:519–527. doi: 10.1038/nclimate2572
- S.J. Smith, L.E. Clarke, J.A. Edmonds, J. Kejun, **E. Kriegler**, T. Masui, K. Riahi, P.R. Shukla, M. Tavoni, D.P. van Vuuren, J.P. Weyant (2015) Long history of IAM comparisons. *Nature Climate Change* 5:391–391. doi: 10.1038/nclimate2576
- C. Stechow von, D. McCollum, K. Riahi, J.C. Minx, **E. Kriegler**, D.P. Vuuren van, J. Jewell, C. Robledo-Abad, E. Hertwich, M. Tavoni, S. Mirasgedis, O. Lah, J. Roy, Y. Mulugetta, N.K. Dubash, J. Bollen, D. Ürge-Vorsatz, O. Edenhofer (2015) Integrating Global Climate Change Mitigation Goals with Other Sustainability Objectives: A Synthesis. *Annual Review of Environment and Resources* 40:363–394. doi: 10.1146/annurev-environ-021113-095626
- C. Bertram, G. Luderer, R.C. Pietzcker, E. Schmid, **E. Kriegler**, O. Edenhofer (2015) Complementing carbon prices with technology policies to keep climate targets within reach. *Nature Clim Change* 5(3): 235-239. doi: 10.1038/nclimate2514
- M. Tavoni, **E. Kriegler**, K. Riahi, et al. (2015) Post-2020 climate agreements in the major economies assessed in the light of global models. *Nature Climate Change* 5(2):119–126. doi: 10.1038/nclimate2475
- E. Kriegler**, K. Riahi, V. Bosetti, et al. (2015) Introduction to the AMPERE model intercomparison studies on the economics of climate stabilization. *Technological Forecasting and Social Change* 90, Part A:1–7. doi: 10.1016/j.techfore.2014.10.012
- E. Kriegler**, N. Petermann, V. Krey, et al. (2015) Diagnostic indicators for integrated assessment models of climate policy. *Technological Forecasting and Social Change* 90, Part A:45–61. doi: 10.1016/j.techfore.2013.09.020
- E. Kriegler**, K. Riahi, N. Bauer, et al. (2015) Making or breaking climate targets: The AMPERE study on staged accession scenarios for climate policy. *Technological Forecasting and Social Change* 90, Part A:24–44. doi: 10.1016/j.techfore.2013.09.021
- K. Riahi, **E. Kriegler**, N. Johnson, et al. (2015) Locked into Copenhagen pledges — Implications of short-term emission targets for the cost and feasibility of long-term climate goals. *Technological Forecasting and Social Change* 90, Part A:8–23. doi: 10.1016/j.techfore.2013.09.016
- M. Schaeffer, L. Gohar, **E. Kriegler**, J. Lowe, K. Riahi, D.P. van Vuuren (2015) Mid- and long-term climate projections for fragmented and delayed-action scenarios, *Technological Forecasting and Social Change* 90, Part A: 257-268. doi: 10.1016/j.techfore.2013.09.013
- T. Arroyo-Currás, N. Bauer, **E. Kriegler**, et al. (2015) Carbon leakage in a fragmented climate regime: The dynamic

response of global energy markets. *Technological Forecasting and Social Change* 90, Part A:192–203. doi: 10.1016/j.techfore.2013.10.002

**E. Kriegler**, K. Riahi, N. Bauer, V.J. Schwanitz, N. Petermann, V. Bosetti, A. Marcucci, S. Otto, L. Paroussos, S. Rao-Skirbekk, T.A. Currás, S. Ashina, J. Bollen, J. Eom, M. Hamdi-Cherif, T. Longden, A. Kitous, A. Méjean, F. Sano, M. Schaeffer, K. Wada, P. Capros, D.P. van Vuuren, O. Edenhofer, C. Bertram, R. Bibas, J. Edmonds, N. Johnson, V. Krey, G. Luderer, D. McCollum, K. Jiang (2015) A short note on integrated assessment modeling approaches: Rejoinder to the review of "Making or breaking climate targets — The AMPERE study on staged accession scenarios for climate policy." *Technological Forecasting and Social Change* 99:273–276. doi: 10.1016/j.techfore.2015.07.011

## 2014

J. Weyant, **E. Kriegler** (2014) Preface and introduction to EMF 27. *Climatic Change* 123: 345–352. doi: 10.1007/s10584-014-1102-7

**E. Kriegler**, J.P. Weyant, G.J. Blanford, et al. (2014) The role of technology for achieving climate policy objectives: overview of the EMF 27 study on global technology and climate policy strategies. *Climatic Change* 123: 353–367. doi: 10.1007/s10584-013-0953-7

V. Krey, G. Luderer, L. Clark, **E. Kriegler** (2014) Getting from here to there - energy technology transformation pathways in the EMF27 scenarios, *Climatic Change* 123: 369-382, doi: 10.1007/s10584-013-0947-5

G.J. Blanford, **E. Kriegler**, M. Tavoni (2014) Harmonization vs. fragmentation: overview of climate policy scenarios in EMF27. *Climatic Change* 123:383–396. doi: 10.1007/s10584-013-0951-9

S.K. Rose, **E. Kriegler**, R. Bibas, et al. (2013) Bioenergy in energy transformation and climate management. *Climatic Change* 123: 477–493. doi: 10.1007/s10584-013-0965-3

A. Popp, S.K. Rose, K. Calvin, D.P. van Vuuren, J.P. Dietrich, M. Wise, E. Stehfest, F. Humpenöder, P. Kyle, J. van Vliet, N. Bauer, H. Lotze-Campen, D. Klein, **E. Kriegler** (2013) Land-use transition for bioenergy and climate stabilization: model comparison of drivers, impacts and interactions with other land use based mitigation options, *Climatic Change* 123: 495-509, doi: 10.1007/s10584-013-0926-x

D. Klein, G. Luderer, **E. Kriegler**, J. Strefler, N. Bauer, M. Leimbach, A. Popp, J. P. Dietrich, F. Humpenöder, H. Lotze-Campen, O. Edenhofer (2013) The value of bioenergy in low stabilization scenarios: an assessment using REMIND-MAGPIE. *Climatic Change* 123: 705-718, doi: 10.1007/s10584-013-0940-z

K.L. Ebi, S. Hallegatte, T. Kram, N.W. Arnell, T.R. Carter, J. Edmonds, **E. Kriegler**, R. Mathur, B.C. O'Neill, K. Riahi, H. Winkler, D.P. van Vuuren, T. Zwickel (2014) A new scenario framework for climate change research: background, process, and future directions, *Climate Change*, 122(3): 373-386, DOI: 10.1007/s10584-013-0912-3

D.P. van Vuuren, **E. Kriegler**, B.C. O'Neill, K.L. Ebi, K. Riahi, T.R. Carter, J. Edmonds, S. Hallegatte, T. Kram, R. Mathur, H. Winkler (2014) A new scenario framework for Climate Change Research: scenario matrix architecture, *Climatic Change*, 122(3): 373-386, doi: 10.1007/s10584-013-0906-1

B.C. O'Neill, **E. Kriegler**, K. Riahi, K.L. Ebi, S. Hallegatte, T.R. Carter, R. Mathur, D.P. van Vuuren(2014) A new scenario framework for climate change research: the concept of shared socioeconomic pathways, *Climatic Change*, 122(3): 387-400, doi: 10.1007/s10584-013-0905-2

**E. Kriegler**, J. Edmonds, S. Hallegatte, K.L. Ebi, T. Kram, K. Riahi, H. Winkler, D.P. van Vuuren (2014) A new scenario framework for climate change research: the concept of shared climate policy assumptions, *Climatic Change*, 122(3): 401-414, doi: 10.1007/s10584-013-0971-5

K.L. Ebi, T. Kram, D.P. van Vuuren, B.C. O'Neill, **E. Kriegler** (2014) A new toolkit for developing scenarios for climate change research and policy analysis, *Environment*, 56(2): 6-16.

R.C. Pietzcker, T. Longden, W. Chen, S. Fu, **E. Kriegler**, P. Kyle, G. Luderer (2014) Long-term transport energy demand and climate policy: Alternative visions on transport decarbonization in energy-economy models, *Energy*, 64, doi: 10.1016/j.energy.2013.08.059

J. Strefler, G. Luderer, **E. Kriegler**, M. Meinshausen (2014) Can air pollutant controls change global warming? *Environmental Science & Policy* 41:33–43. doi: 10.1016/j.envsci.2014.04.009

J. Strefler, G. Luderer, T. Aboumahboub, **E. Kriegler** (2014) Economic impacts of alternative greenhouse gas emission metrics: a model-based assessment. *Climatic Change* 125:319–331. doi: 10.1007/s10584-014-1188-y

S. Zhang, N. Bauer, G. Luderer, **E. Kriegler** (2014) Role of technologies in energy-related CO<sub>2</sub> mitigation in China within a climate-protection world: A scenarios analysis using REMIND. *Applied Energy*, 115: 445-455, doi: 10.1016/j.apenergy.2013.10.039

T. Aboumahboub, G. Luderer, **E. Kriegler**, et al. (2014) On the regional distribution of climate mitigation costs: the impact of delayed cooperative action. *Clim Change Econ* 05: 1440002. doi: 10.1142/S2010007814400028

## 2013

**E. Kriegler**, M. Tavoni, K. Riahi, D.P. Van Vuuren (2013) Introducing the LIMITS special issue. *Clim Change Econ* 04:1302002. doi: 10.1142/S2010007813020028

**E. Kriegler**, M. Tavoni, T. Aboumahboub, et al. (2013) What does the 2°C target imply for a global climate agreement in 2020? the limits study on urban platform scenarios. *Clim Change Econ* 04:1340008. doi: 10.1142/S2010007813400083

M. Tavoni, **E. Kriegler**, T. Aboumahboub, et al. (2013) The distribution of the major economies' effort in the urban platform scenarios. *Clim Change Econ* 04: 1340009. doi: 10.1142/S2010007813400095

G. Luderer, R. C. Pietzcker, C. Bertram, **E. Kriegler**, M. Meinshausen, O. Edenhofer (2013) Economic mitigation challenges: how further delay closes the door for achieving climate targets. *Environmental Research Letters*, 8(3) 034033, doi: 10.1088/1748-9326/8/3/034033

**E. Kriegler**, O. Edenhofer, L. Reuster, G. Luderer, D. Klein (2013) Is atmospheric carbon dioxide removal a game changer for climate change mitigation? *Climatic Change*, 118(1): 45-57, doi: 10.1007/s10584-012-0681-4

M. G. W. Schmidt, H. Held, **E. Kriegler**, A. Lorenz (2013) Climate policy under uncertain and heterogeneous climate damages. *Environmental and Resource Economics*, 54(1): 79-99, doi: 10.1007/s10640-012-9582-2

## 2012 and earlier

K. Calvin, L. Clarke, V. Krey, G. Blanford, K. Jiang, M. Kainuma, **E. Kriegler**, G. Luderer, P. R. Shukla (2012) The role of Asia in mitigating climate change: Results from the Asia modeling exercise. *Energy Economics*, 34(3): S251-S260, doi: 10.1016/j.eneco.2012.09.003

G. Luderer, R. Pietzcker, **E. Kriegler**, M. Haller, N. Bauer (2012) Asia's role in mitigating climate change: A technology and sector specific analysis with ReMIND-R. *Energy Economics*, 34(3): S378-S390, doi: 10.1016/j.eneco.2012.07.022

**E. Kriegler**, B. C. O'Neill, S. Hallegatte, T. Kram, R. J. Lempert, R. H. Moss, T. Wilbanks (2012) The need for and use of socio-economic scenarios for climate change analysis: a new approach based on shared socio-economic pathways. *Global Environmental Change*, 22: 807-822, doi: 10.1016/j.gloenvcha.2012.05.005

A. Lorenz, **E. Kriegler**, H. Held, M. G. W. Schmidt (2012) How to measure the importance of climate risk for determining optimal global abatement policies? *Climate Change Economics*, 3(1): 1250004-2-1250004-28, doi: 10.1142/S2010007812500042

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### Chapters in Books (peer reviewed)

- O. Edenhofer, R. Pietzcker, M. Kalkuhl, **E. Kriegler** (2010) Price and quantity regulation for reducing greenhouse gas emissions. In: *Global Sustainability - A Nobel Cause*. Eds.: H. J. Schellnhuber, M. Molina, N. Stern, V. Huber, S. Kadner. Cambridge, UK and New York, USA: Cambridge University Press
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- E. Kriegler**, H. Held, T. Bruckner (2007) Climate protection strategies under ambiguity about catastrophic consequences. In: *Advanced methods for decision-making and risk management in sustainability science*. Eds.: J. Kropp, J. Scheffran, 3-42. New York: Nova Science Publishers

### Articles in Conference Proceedings (peer reviewed)

- E. Kriegler** (2007) Updating and Testing Beliefs: An Open Version of Bayes' Rule. *Proceedings of the 5th International Symposium on Imprecise Probabilities and Their Applications*, Prague, 16-19 July 2007, 271-280
- N. Bauer, O. Edenhofer, H. Held, **E. Kriegler** (2004) Uncertainty of the role of carbon capture and sequestration within climate change mitigation strategies. *Proceedings of the 7th International Conference on Greenhouse Gas Control Technologies. Volume 1: Peer-Reviewed Paper and Plenary Presentations*. Cheltenham, UK: IEA Greenhouse Gas Programme 2005
- E. Kriegler**, H. Held (2003) Climate Projections for the 21st Century Using Random Sets. *Proceedings of the 3rd International Symposium on Imprecise Probabilities and Their Applications*, 345-360
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- C. Wilson, **E. Kriegler**, D.P. van Vuuren, C. Guivarch, D. Frame, V. Krey, T.J. Osborn, V.J., Schwanitz, E.L. Thompson (2017) Evaluating Process-Based Integrated Assessment Models of Climate Change Mitigation. IASA Working Paper WP-17-007.
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- E. Kriegler**, B. C. O'Neill, S. Hallegatte, T. Kram, R. Lempert, R. H. Moss, T. J. Wilbanks (2010) Socio-economic scenario development for climate change analysis. CIRED Working Paper DT/WP No. 2010-23
- K. Tanaka, **E. Kriegler**, T. Bruckner, G. Hooss, W. Knorr, T. Raddatz (2007) Aggregated carbon cycle, atmospheric chemistry, and climate model (ACC2). Hamburg: Max Planck Institute for Meteorology, Reports on Earth System Science No. 40, 188 p.
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## Lectures

### Teaching and University Lectures

- 2008 Climate Science and Policy, Carnegie Mellon University, Pittsburgh (together with Prof. Peter Adams), one semester, 2x1 hours per week. Topics: Introduction to the climate system (15 lectures, P. Adams), Introduction to the economics of climate change (7 lectures, E. Kriegler), Integrated Assessment of climate policies (6 lectures, E. Kriegler)
- 2004-2008 Guest lectures at lecture and seminar series at University of Potsdam, Technical University Berlin, Summer Academy of Studienstiftung des deutschen Volkes, Carnegie Mellon University (Pittsburgh, USA), Pennsylvania State University (State College, USA), Drexel University (Philadelphia, USA), University of Dayton (USA)
- 2009-2016 Guest lectures at lecture and seminar series at Ludwigs-Maximilian University Munich, Deutsches Institut für Wirtschaftsforschung (DIW, Berlin), Helmholtz Research School on Energy Scenarios (Karlsruhe Institute of Technology), University College London (UK), University College Cork (Cork, Ireland), Tsinghua University (Beijing, China), Potsdam University of Applied Sciences (FHP), Berlin University of Art & Design (BTK)

### Invited workshop and conference lectures (since 2010)

- 2010-2011 National Academy of Sciences Workshop on Describing Socio-Economic and Environmental Futures for Climate Change Research and Assessment (Washington D.C., USA, 2010), IPCC Expert Workshop on Scenarios (Berlin, 2010), Stanford Energy Modeling Forum Summer Workshop (Snowmass, USA, 2010, 2011), German IPCC Conference (Raunheim, 2011), IRENA workshop on renewable energy prospects (Bonn, 2011), IPCC First Lead Author Meeting (Uncertainty Guidance Note) and meeting on new scenario approaches (Changwon City, Korea, 2011), Integrated Assessment Modeling Consortium Annual Meeting (Vienna, Austria, 2011), NCAR Workshop on New Socio-economic Pathways for Climate Change Research (Boulder, USA, 2011)
- 2012-2013 Integrated Assessment Model Diagnostics Workshop (Stanford University, Stanford, USA, 2012), Netherlands Meeting on New Socio-Economic Pathways for Climate Change Research (The Hague, Netherlands, 2012), Stanford Energy Modeling Forum Summer Workshop (Snowmass, USA, 2012, 2013), Integrated Assessment Modeling Consortium Annual Meeting (Utrecht, Netherlands, 2012; Tsukuba, Japan, 2013), Global Carbon Project – IIASA workshop on Negative Emissions and the Carbon Cycle (Laxenburg, Austria, 2013), Joint AMPERE-PIAMDDI workshop on integrated Assessment Model Validation (Seville, Spain, 2013),
- 2014-2016 International Energy Workshop (Beijing, 2014), World Climate Research Program Workshop (Bern, Switzerland, 2014), Climate Risk Project Meeting (Harvard University, USA, 2014), Integrated Assessment Modeling Consortium Annual Meeting (University of Maryland, USA, 2014; Potsdam, Germany, 2015; Beijing, China, 2016), IPCC Expert Workshop on Scenarios (Laxenburg, Austria, 2015), German IPCC Conference (Berlin, 2015), Our Common Future Under Climate Change Conference (Paris, 2015), Stanford Energy Modeling Forum Summer Workshop (Snowmass, USA, 2015, 2016), DG Research workshop on research and innovation on post-2030 decarbonisation pathways (Brussels, Belgium, 2015), German Future Earth Summit (Berlin, 2016), ALPS International Symposium (Tokyo, Japan, 2016), Shanghai Forum (Fudan University, Shanghai, China, 2016), DFG Scientific Priority Programme (SPP) Climate Engineering Annual Retreat (Kloster Haydau, 2016), 1.5 degrees conference (Oxford, 2016), DFG SPP Workshop on 1.5 degrees and Climate Engineering (Kiel, 2016)

### Presentations at policy and stakeholder dialogues (since 2012)

- 2012-2014 Climate Policy Outreach Public and Stakeholder Meeting (Beijing, China, 2012), Side event at UNFCCC SB38 on requirements of climate stabilization (Bonn, 2013), European Commission side event at UNFCCC 19<sup>th</sup> Conference of the Parties on implications of the 2°C target for a global climate agreement (Warsaw, Poland, 2013), AMPERE final conference and outreach to policy makers and stakeholders (Brussels, Belgium, 2014), Presentation of IPCC AR5 WGIII Report to Geneva Environmental Network and World Meteorological Organization EC-66 (Geneva, Switzerland, 2014), LIMITS final conference and outreach to policy makers and stakeholders (Brussels, Belgium, 2014)
- 2015-2016 INDC Forum (Rabat, Morocco, 2015), Press Conference at UNFCCC ADP 2-11 on energy and emissions implications of INDCs (Bonn, Germany, 2015), European Commission side event at UNFCCC 21<sup>st</sup> Conference of the Parties on the road from INDCs to 2 degrees (Paris, France, 2015), COP21 debriefing (French and US embassy, Berlin, 2015), Presentation at Siemens Forum Energiewende on Implications of the Paris Agreement (Erlangen, 2016), High-level panel of the European Decarbonisation Pathways Initiative (Brussels, 2016),

German Sustainable Development Solutions Network Annual Meeting (Potsdam, 2016), Side event at UNFCCC 22<sup>nd</sup> Conference of the Parties on global transformation pathways (Marrakesh, Morocco, 2016)