# Dr. Jennifer E. Baka

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October 2019

# **EDUCATION**

- Ph.D. Environmental Studies, Yale School of Forestry & Environmental Studies, 2012
- M.P.P. Goldman School of Public Policy, University of California Berkeley, 2007
- B.S. Economics, The George Washington University, 2000 *Summa cum laude*, Phi Beta Kappa

# **ACADEMIC APPOINTMENTS**

Assistant Professor, Geography, The Pennsylvania State University, July 2016 – Present

Assistant Professor, Geography and Environment, London School of Economics & Political Science, July 2013 – June 2016

Postdoctoral Associate, Yale Center of Industrial Ecology, Yale School of Forestry & Environmental Studies, 2012-2013

### **GRANTS & FELLOWSHIPS**

- Penn State John T. Ryan Faculty Fellowship, 2017-2020
- Penn State Institutes of Energy and Environment Seed Grant, 2017-2018
- Penn State Institute of CyberScience Seed Grant, 2017-2018
- Penn State General Education Seed Grant, 2017-2018
- Canadian Social Science and Humanities Research Council, Insight Grant, 2016-2020
- Social Science Research Council Critical Agrarian Studies Alumni Workshop Award, 2014
- Fulbright IIE Student Award, India, 2009-2010
- Social Science Research Council Dissertation Proposal Development Fellowship (DPDF), 2009
- Yale Graduate School Doctoral Award, 2007-2012
- Javits Foundation Fellowship, University of California Berkeley, summer 2006
- Richard & Rhoda Goldman Fellowship, University of California Berkeley, 2005-2007
- The George Washington University Presidential Achievement Scholarship, 1996-2000

#### HONORS & AWARDS

- Best Poster Award, 3<sup>rd</sup> Place, Rural Sociological Society Annual Meeting, Portland, OR, July 2018
- LSE Student Led Teaching Award Nominee, 2013-14, 2014-15, 2015-16
- Best Student Poster Award, 6th International Society for Industrial Ecology Semi-Annual Meeting, Berkeley, CA, May 2011

### **PUBLICATIONS**

### **Articles in Refereed Journals**

- Wallgruen, J. O., Chang, J.-K., Sajjadi, P., Zhao, J., Oprean, D., Murphy, T., **Baka, J.**, & Klippel, A. K. For the Many, Not the One: Designing Low-Cost Joint VR Experiences for Place-Based Learning. *EuroVR19*. [Accepted July 2019].
  - **Baka, J.**, Hesse, A., Weinthal, E., Bakker, K. "Environmental Knowledge Cartographies: Evaluating Competing Discourses in US Hydraulic Fracturing Rule-making", *Annals of the Association of American Geographers*, 109(6), 1941-1960.
  - Neville, K.J., Cook, J., **Baka, J.**, Bakker, K., Weinthal, E. "Can Shareholder Advocacy Shape Energy Governance? The Case of the US Antifracking Movement", *Review of International Political Economy*, 26(1) 104-133.
- 2018 **Baka, J.**, Neville, K.J., Weinthal, E., Bakker, K., "Agenda Setting at the Energy-Water Nexus: Constructing and Maintaining a Policy Monopoly in US Hydraulic Fracturing Regulation", *Review of Policy Research*, 35(3), 439-465.
- 2017 Newell, J., Cousins, J., **Baka, J.** "Political-Industrial Ecology: An Introduction", *Geoforum*, 85, 319-323.
  - Neville, K.J., **Baka, J.,** Gamper-Rabindran, S., Bakker, K., Andreasson, S., Vengosh, A., Nem Singh, J., Lin, A., Weinthal, E. "Debating Unconventional Energy", *Annual Review of Environment and Resources*, 42, 241-266.
  - **Baka, J.** "Making Space for Energy: Wasteland Development, Enclosures and Energy Dispossessions", *Antipode*, 49(4) 977-996.
  - Calvert, K., Kedron, P., **Baka, J.**, Birch, K. "Geographical Perspectives on Sociotechnical Transitions and Emerging Bio-Economies: Introduction to a Special Issue", *Technology Analysis and Strategic Management*, 29(5), 477-485.
- 2015 **Baka, J.**, Bailis, R., "Wasteland Energy-Scapes: A Comparative Energy Flow Analysis of India's Biofuel and Biomass Economies", *Ecological Economics*, 108, 8-17.
- 2014 **Baka, J.**, "What Wastelands? A Critique of Biofuel Policy Discourse in South India", *Geoforum*, 54, 315-323.
- 2013 **Baka, J.**, "The Political Construction of 'Wasteland': Governmentality, Land Acquisition and Social Inequality in South India", *Development and Change*, 44(2), 409-428.
- 2011 Bailis, R., **Baka, J.**, "Constructing Sustainable Biofuels: Governance of the Emerging Biofuel Economy", *Annals of the Association of American Geographers*, 11(4), 827-838.
- 2010 Bailis, R., **Baka, J.**, "Greenhouse Gas Emissions and Land Use Change from Jatropha Curcas Based Jet Fuel in Brazil", *Environmental Science & Technology*, 44(22), 8684–8691.
- 2009 **Baka, J.**, Roland-Holst, D., "Food or Fuel? What European Farmers can do to Contribute to Europe's Transportation Energy Requirements and the Doha Round", *Energy Policy*, 37(7), 2505-2513.

### **Articles Under Review**

Baka, J., Vaishnava, S. "The Evolving Borderland of Energy Geography", Geography Compass.

# In Preparation

- **Baka, J.**, Hesse, A., Neville, K.J., Weinthal, E., Bakker, K., "The Influence of Model Bills and State-to-State Information Sharing on Hydraulic Fracturing Fluid Disclosure Regulations" for *Energy Research and Social Science*
- **Baka**, **J.** "Stealth Unknown Knowns in Air Permitting: Volatile Organic Compound Regulation and Public Health in Southwestern Pennsylvania", for *Geoforum*
- **Baka, J.** "Cracking Appalachia: A Political-Industrial Ecology Perspective", for *Environment and Planning: E*
- Goldberg, Z., **Baka, J.**, & Zimmerer, K. S. "Unconventional Energy and Agriculture: A Literature Review" for *Global Environmental Change*

# Non-Peer Reviewed Articles/Book Chapters

- **Baka, J.** "Do Wastelands Exist? Conflicting Perspectives on "Productive" Land Use in India's Rural Energy-Scapes" *Rachel Carson Centre Perspectives*, 2, 57-64.
- **Baka, J.** "Political-Industrial Ecologies of Energy" *Handbook on the Geographies of Energy*, Edward Elgar, Calvert, K. & Solomon, B. (eds).
- Hesse, A., **Baka**, J., Calvert, K. "Energy, Extractive Industries, Enclosure and Exclusion," in *Handbook of the International Political Economy of Energy*, Van de Graaf, T., Sovacool, B.K., Ghosh, A., Kern, F., Klare, M.T., (eds) Palgrave Press.

### **Policy Papers**

- Roland-Holst, D., Karl, F., Khanna, M., **Baka, J.**, "Clean Energy and Climate Policy for U.S. Growth and Job Creation An Economic Assessment of the American Clean Energy and Security Act and the Clean Energy Jobs and American Power Act", University of California.
- 2007 **Baka, J.**, Roland-Holst, D. "Greener Pastures for Globalization: How European Farmers can Help Save the Planet as well as the Doha Round", Giannini Foundation of Agricultural Economics: Agricultural and Resource Economics Update, ARE Update Volume 11.
- 2006 **Baka, J.**, Ling, F, Kammen, D. "Towards Energy Independence in 2025", Renewable and Appropriate Energy Laboratory, UC Berkeley.

#### JOURNAL ISSUE ORGANIZATION

- *Geoforum*, "Political Industrial Ecology", co-organized with Joshua Newell (Michigan SNRE), Joshua Cousins (Suny ESF) 2017 85.
- *Antipode*, "Agrarianisms: Past and Present", co-organized with Aaron Jakes (New School), Greta Marchesi (Berkeley), Sara Safransky (Vanderbilt). 2017 49(4).

• *Technology Analysis and Strategic Management* "Socio-technical Transitions in the Emerging Bio-economy: Geographical Perspectives", co-organized with Kean Birch (York), Kirby Calvert (Guelph), and Peter Kedron (Ryerson) 2017 29(5).

# INVITED LECTURES & COLLOQUIA

- 2020 "Cracking Appalachia: A Political-Industrial Ecology Perspective", Cornell University Development Sociology Seminar, February 7 (invited).
- 2019 "Cracking Appalachia: A Political-Industrial Ecology Perspective", Clark University Department of Geography Colloquium, November 21 (invited).
  - "Cracking Appalachia: A Political-Industrial Ecology Perspective", Penn State University Department of Geography Coffee Hour, September 6.
  - "Advancing Sustainability Science: A Political-Industrial Ecology Perspective", International Symposium for Sustainable Systems and Technology, Portland, OR, June 26 (with Josh Cousins).
- 2018 "Contract Farming and Dispossession: Jatropha Biofuels Control Grabbing in Tamil Nadu, India" Singapore Metropolitan University, Singapore, July 27-29.
  - "Knowledge Cartographies: Evaluating the Mobilization of Competing Knowledge Discourses in US Hydraulic Fracturing Rulemaking", Penn State University, Department of Geosciences, February 6, 2018.
  - "Knowledge Cartographies: Evaluating the Mobilization of Competing Knowledge Discourses in US Hydraulic Fracturing Rulemaking", Texas State University, Department of Geography, January 26, 2018.
- 2017 "E-Governance as a Data Source for Evaluating Stakeholder Positions in Hydraulic Fracturing Regulation", Shale Network Workshop, Penn State University, May 19, 2017.
  - "Knowledge Cartographies: Evaluating the Mobilization of Competing Knowledge Discourses in US Hydraulic Fracturing Rulemaking", Penn State Beaver Campus, April 15, 2017.
  - "Knowledge Cartographies: Evaluating the Mobilization of Competing Knowledge Discourses in US Hydraulic Fracturing Rulemaking", University of North Carolina, Department of Geography, March 2, 2017.
- 2016 "Towards Political-Industrial Ecology: Landscapes, Livelihoods and Metabolisms" Spatial Adventures on Energy Studies, Windsor, UK, 30 May-1 June 2016.
- 2015 "Energy Policy Landscape Governance", London School of Economics, Cities, Spaces and Development Seminar, 17 November 2015.
  - "Fracturing Regulation: How Industry Plays a Two-Level Game to Amend, Avoid, and Attenuate Hydraulic Fracturing Rules in the US", King's College London, 28 October 2015.

- "Wasteland Energy-Scapes: Biofuels, Land Politics and Social Inequality in South India" at the "Biofuels and (Ir)responsible Innovation", (invited keynote), Eindhoven University of Technology, Eindhoven, The Netherlands, April 13.
- "Miracle Crop or Miraculous Flop? Analyzing the Socio-environmental Impacts of Jatropha Promotion in South India" CABI Seminar, February 4.
- 2014 "Wasteland Energy-Scapes: Biofuels, Land Politics and Social Inequality in South India", Royal Holloway Geography Seminar, October 27.
  - "A Political Ecology of Wastelands", Political Ecology and Development: Resources, Power and Justice, Lancaster University, September 10.
  - "Energy Security for Whom? A Biopolitics of Wasteland Development in India", SSRC DPDF Critical Agrarian Studies Workshop, Berkeley, CA, March 15-18.
  - "Biofuels and Marginal Lands: Examining the Land Use Change Impacts of Jatropha Promotion in South India", Political Ecology Seminar Series, Cambridge University, January 28.
- 2013 "Biofuels and Marginal Lands: Interrogating the Land Use Change Impacts of Jatropha Promotion in South India, The London School of Economics and Political Science, February 20.
  - "Biofuels and Marginal Lands: Interrogating the Land Use Change Impacts of Jatropha Promotion in South India, The Pennsylvania State University, February 15.
  - "Wastelands, Biofuels and Land Grabs in South India", Human Dimensions of Global Environmental Change Seminar, University of Maryland, February 7.
- 2012 "Biofuels and Marginal Lands: Interrogating the Land Use Change Impacts of Jatropha Promotion in South India, Nicholas School of the Environment, Duke University, November 13.

# **CONFERENCE PANELS/ROUNDTABLES**

- 2019 "Conceptual and Methodological Opportunities for Data Production for Transdisciplinary SUS", Sustainable Urban Systems Workshop, Temple University, Philadelphia, PA, September 12.
  - "The Academic Career Path: 2. Research Universities," Survival Skills for Finishing Doctoral Students, Yale School of Forestry & Environmental Studies, New Haven, CT, February 13.
- 2018 "Environmental Legacies Related to Oil and Gas Production", National Academies of Sciences, Engineering and Medicine, Pittsburgh PA, November 15.
  - "Political Ecologies, Authoritarian Populism and Emancipatory Politics", POLLEN Bi-Annual Conference, Oslo, Norway, June 19-22.
  - "The Academic Career Path: 2. Research Universities," Survival Skills for Finishing Doctoral Students, Yale School of Forestry & Environmental Studies, New Haven, CT, February 15.

2015 "Political-Industrial Ecology", Association of American Geographers Annual Meeting, Chicago, IL, April 23.

# **CONFERENCE PRESENTATIONS (Last 5 Years)**

- 2019 "The Influence of Model Bills and State-to-State Information Sharing on Hydraulic Fracturing Fluid Disclosure Regulations," Energy and Society in Transition, Energy Research and Social Science, Tempe, AZ, May 28.
  - "Involving Communities in Environmental Decision Making: A Case Study of the Shell Ethane Cracker Facility", Shale Network Workshop, Earth and Environmental Systems Institute, University Park, PA, May 17.
  - "Analyzing the Social and Environmental Impacts of Biofuels: A Political-Industrial Ecology Perspective", Symposium on Biotechnology for Fuels and Chemicals, Society for Industrial Microbiology and Biotechnology, Seattle, WA, May 1.
  - "Cracking Appalachia: A Political-Industrial Ecology Perspective", American Association of Geographers Annual Meeting, Washington, DC, April 5.
- 2018 "Re-Industrializing Appalachia: A Political-Industrial Ecology Perspective", Rural Sociological Society Annual Meeting, Portland, OR, July 29.
- 2017 "Tribal Land and Water Discourses in US Hydraulic Fracturing Rulemaking", American Association of Geographers Annual Meeting, Boston, MA, April 7.
  - "Knowledge Cartographies: Evaluating the Mobilization of Competing Knowledge Discourses in US Hydraulic Fracturing Rulemaking", American Association of Geographers Annual Meeting, Boston, MA, April 6.
- 2016 "Landscapes, Livelihoods and Metabolisms: A Political-Industrial Ecology of Jatropha", Political Ecologies of Capitalism, Conflict and Contestation Conference, Wageningen University, The Netherlands, July 8 2016.
  - "Political-Industrial Ecology: Landscapes, Metabolisms and Livelihoods", American Association of Geographers Annual Meeting, San Francisco, CA April 1.
- 2015 "Energy Policy Landscape Governance", Energy Landscapes Conference, Dresden, Germany, September 17.
  - "States, Congress and the Influence of Industry: Who Regulates Hydraulic Fracturing in the US?" American Association of Geographers Annual Meeting, Chicago, IL, April 23.
- 2014 "Wasteland Energy-Scapes: A Comparative Energy Flow Analysis of India's Biofuel and Biomass Economies", Royal Geographic Society-Institute of British Geographers Annual Meeting, London, UK, August 28.

"Wasteland Energy-Scapes: A Comparative Energy Flow Analysis of India's Biofuel and Biomass Economies", Association of American Geographers Annual Meeting, Tampa, FL, April 12.

# **POSTER PRESENTATIONS (Last 5 Years; Presenter in bold)**

- 2018 Wildermuth, G., Engle, E., **Baka, J.**, Brasier, K. "Media Representations Across Space, Place, and Time: Impact Framing of Ethane Plant Development in Southwest Pennsylvania", League of Women Voters of Pennsylvania Shale and Public Health Conference, Pittsburgh, PA, November 14.
  - **Wildermuth, G.**, Engle, E., Baka, J., Brasier, K. "Media Representations Across Space, Place, and Time: Impact Framing of Ethane Plant Development in Southwest Pennsylvania", Rural Sociological Society Annual Meeting, Portland, OR, July 27-29.
  - **Wildermuth, G.**, Engle, E., Baka, J., Brasier, K. "Media Representations Across Space, Place, and Time: Impact Framing of Ethane Plant Development in Southwest Pennsylvania", Energy Days Conference, State College, PA, May 30-31.
  - **Wildermuth, G.**, Engle, E., Baka, J., Brasier, K. "Media Representations Across Space, Place, and Time: Impact Framing of Ethane Plant Development in Southwest Pennsylvania", Shale Network Meeting, May 17-18.
- 2017 Baka, J., **Hesse, A.**, Bakker, K., Weinthal, E. "Knowledge Cartographies: Evaluating the Mobilization of Competing Knowledge Discourses in US Hydraulic Fracturing Rulemaking", Energy Impacts Conference, Columbus, OH, July 26-27.
  - **Baka, J.**, Hesse, A., Bakker, K., Weinthal, E. "Knowledge Cartographies: Evaluating the Mobilization of Competing Knowledge Discourses in US Hydraulic Fracturing Rulemaking", Penn State Energy Days, State College, PA, May 22-23.
  - Baka, J., Hesse, A., Bakker, K., **Weinthal, E.** "Knowledge Cartographies: Evaluating the Mobilization of Competing Knowledge Discourses in US Hydraulic Fracturing Rulemaking", First Annual Conference on Energy Research and Social Science Conference, Sitges, Spain, April 2-5.

# SESSIONS ORGANIZED AT PROFESSIONAL MEETINGS

- 2017 Co-organizer (with Elvin Delgado, Matthew Fry and Arielle Hesse) "Making a Resource: Science, Legal Frameworks, and Political Economies of Shale Fuels" paper sessions for American Association of Geographers Annual Meeting, Boston, MA.
  - Co-organizer (with Karen Bakker) "Indigenous Water Governance: Global Geographies of Water Governance in Indigenous Communities" paper sessions for American Association of Geographers Annual Meeting, Boston, MA.
- 2016 Co-organizer (with Joshua Newell and Joshua Cousins) "Political-Industrial Ecology" paper sessions for American Association of Geographers Annual Meeting, San Francisco, CA.
- 2015 Co-organizer (with Kean Birch, Kirby Calvert and Peter Kedron) and discussant, "Bioenergy,

Biofuels and the Emerging Bio-economy" paper sessions for American Association of Geographers Annual Meeting, Chicago, IL.

# **CONFERENCE ORGANIZATION**

2020 Shale Network Workshop, Penn State University, University Park, PA (anticipated).

2019 Shale Network Workshop, Penn State University, University Park, PA.

TEACHING	
GEOG30 web	PSU Introduction to Nature-Society Geography, first year online undergraduate course
GEO GAAA	e
GEOG330	PSU Political Ecology, introductory undergraduate course
GEOG332N	PSU Science & Policy of Greenhouse Gas Emissions, introductory
	undergraduate course
GEOG432	PSU Energy Geographies and Policy, upper division undergraduate
	course
GEOG530	PSU graduate seminar in human-environment geography
GY121	LSE Sustainable Development, first year undergraduate course
GY325	LSE Environment and Development, third year undergraduate course
GY420/465	LSE Environmental Policy and Regulation master's course
FES689	Yale Advanced Industrial Ecology Seminar: Energy Industries and
	Technologies, with Bill Ellis, master's course

#### UNDERGRADUATE ADVISING

- M. Liu, reader for honor's thesis, 2019-20
- H. Willig, independent study, 2018
- A. Becker, independent study, 2016

### **GRADUATE ADVISING**

# **MSc Advisor**

- H. Caudill, Penn State Geography, in progress
- S. Vaishnava, Penn State Geography, in progress

### **MSc Committee Member**

• E. Kinkaid, Penn State Geography, 2016-2018

# **MSc Thesis Advisor**

- G. Arenas, London School of Economics, Department of Geography and Environment, 2013-14
- D. Durand-Delacre, London School of Economics, Department of Geography and Environment, 2013-14
- D. Harris, London School of Economics, Department of Geography and Environment, 2013-14
- Y. Li, London School of Economics, Department of Geography and Environment, 2013-14
- K. Moberg, London School of Economics, Department of Geography and Environment, 2013-14
- A. Moro, London School of Economics, Department of Geography and Environment, 2013-14
- P. Pey, London School of Economics, Department of Geography and Environment, 2013-14
- H. Reeve, London School of Economics, Department of Geography and Environment, 2013-14
- N. Audi-Dor, London School of Economics, Department of Geography and Environment, 2014-15

- Y. Braaten, London School of Economics, Department of Geography and Environment, 2014-15
- I. Cuperstein, London School of Economics, Department of Geography and Environment, 2014-15
- A. Lunden, London School of Economics, Department of Geography and Environment, 2014-15
- A. Mohamad Hedar, London School of Economics, Department of Geography and Environment, 2014-15
- S. Neoh, London School of Economics, Department of Geography and Environment, 2014-15
- E. Weyer, London School of Economics, Department of Geography and Environment, 2014-15
- J. Yates, London School of Economics, Department of Geography and Environment, 2014-15
- R. Dabas, London School of Economics, Department of Geography and Environment, 2015-16
- J. Fell, London School of Economics, Department of Geography and Environment, 2015-16
- M. Habasque, London School of Economics, Department of Geography and Environment, 2015-16
- A. Holderby, London School of Economics, Department of Geography and Environment, 2015-16
- R. Parfett, London School of Economics, Department of Geography and Environment, 2015-16
- S. Pickstone, London School of Economics, Department of Geography and Environment, 2015-16
- L. Sette, London School of Economics, Department of Geography and Environment, 2015-16

# **PhD Committee Member**

- Z. Goldberg, Penn State Geography, 2019-Present
- B. Hinger, Penn State Geography, 2019-Present
- C. Jackson, Penn State Geography, 2018-Present
- T. Young, Penn State Geography, 2017-Present
- K. Yoo, Penn State Energy and Mineral Engineering, graduated May 2019
- M. Dejani, London School of Economics, Department of Geography and Environment, graduated May 2019

### **PhD Qualifying Exam Member**

- C. Flanagan, Penn State Geography, 2020
- B. Tian, Penn State Geography, 2019
- B. Hinger, Penn State Geography, 2019
- W. Hu, Penn State Geography, 2018

### **PhD Independent Studies**

- Z. Goldberg, Penn State Geography, 2019
- T. Young, Penn State Geography, 2017

# **PUBLIC SERVICE**

• Pennsylvania Department of Environmental Protection, Environmental Justice Advisory Board, 2020-Present

### PROFESSIONAL SERVICE

- Editorial Board Member, *The Professional Geographer*, 2019-Present
- Chair, Energy and Environment Specialty Group, American Association of Geographers, 2015-17

### UNIVERSITY SERVICE

• Member, Faculty Search Committees, Penn State University, (n=4), 2018-Present

- Member, Academic Integrity Committee, Penn State College of Earth & Mineral Sciences, 2019-Present.
- Chair, Department Policy Committee, Penn State Department of Geography, 2019-Present.
- Director, PLACE Lab, Penn State Department of Geography, 2017-2019.
- Graduate Admissions Committee, Penn State Department of Geography, 2017-2019.
- Undergraduate Awards Committee, Penn State Department of Geography, 2017-2018.
- Public Presence Committee, Penn State Department of Geography, 2016-2017.
- Seminar Co-organizer, LSE Environment, 2015-2016
- Director of Undergraduate Environment Programs, LSE, 2013-2016

### **JOURNAL REVIEWER**

Annals of the American Association of Geographers, Area, Biomass and Bioenergy, Energy Policy, Energy Research and Social Science, Environment & Planning A, Environment & Planning C, Environment & Planning E, Environmental Policy and Governance, Environmental Science & Technology, Geoforum, Global Environmental Politics, Journal of Industrial Ecology, Journal of Agrarian Change, Journal of Peasant Studies, Journal of Responsible Innovation, Regional Environmental Change, Review of Policy Research, Sustainability Science, World Development.

#### GRANT REVIEWER

National Science Foundation

#### ACADEMIC AFFILIATIONS

- American Association of Geographers (AAG)
- International Society for Industrial Ecology (ISIE)
- Royal Geographic Society, Institute of British Geographers (RGB-IGS)

### **CERTIFICATIONS**

UK Postgraduate Certificate in Higher Education, Associate Level, 2013-14