

BENJAMIN P. WARNER
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Geography & Environmental Studies
University of New Mexico
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RESEARCH & PRACTICE INTERESTS

Disciplines: Water governance, human dimensions of global change, critical development studies, political ecology, environmental justice

Research topics: Rural development, climate change adaptation; institutional context of vulnerability; agrarian development; water justice; water governance; fluvial geomorphology; education assessment & policy; mixed methodologies

Geographic areas: Southwest, USA; Mexico; Central America; New England, USA

EDUCATION

- 2014 Ph.D., School of Sustainability, Arizona State University
Dissertation: *Political Economic Barriers to Global Change Adaptations: A Study of Agrarian Rural Development in Northwest Costa Rica*. Director: Dr. Daniel Childers.
- 2006 B.S. Civil Engineering, School of Civil Engineering, Purdue University

EMPLOYMENT HISTORY

- 2017 – Assistant Professor, Department of Geography & Environmental Studies, University of New Mexico
- 2014 – 2017 Postdoctoral Research Scholar, Department of Geosciences / Department of Environmental Conservation, University of Massachusetts at Amherst
- 2014 Adjunct Faculty, Department of Earth and Environment, Boston University
- 2006 – 2009 Water resources engineer, HNTB, Inc.

REFEREED ARTICLES & CHAPTERS

- 2020 Kuzdas, C., & Warner, B. P. Conflict and Cooperation in Costa Rica's Water Sector: Lessons for Water Management. In Fletcher, R., Dowd-Uribe, B., & Aistara, G. A. (Eds.), *The Ecolaboratory: Environmental Governance and Economic Development in Costa Rica* (pp. 276-289). University of Arizona Press.
- 2020 Warner, B. P., & Kuzdas, C. Understanding the Impact of Costa Rica's Protectionist Rice Economy on Smallholder Farmers in Semi-arid Northwest Costa Rica. In Fletcher, R., Dowd-Uribe, B., & Aistara, G. A. (Eds.), *The*

Ecolaboratory: Environmental Governance and Economic Development in Costa Rica (pp. 103-116). University of Arizona Press.

- 2020 Warner, B. P., Walsh-Dilley, M., Nelson-Nuñez, J., & Duvall, C. S. Rural Transformation in Latin America's Changing Climate. *Journal of Latin American Geography*, 19(3), 10-25.
- 2019 Warner, B. P. Explaining political polarization in environmental governance using narrative analysis. *Ecology & Society*, 24(3). <https://doi.org/10.5751/ES-10999-240304>
- 2019 Thomas, K. A., & Warner, B. P. Weaponizing vulnerability to climate change. *Global Environmental Change*, 57(May), 101928. <https://doi.org/10.1016/j.gloenvcha.2019.101928>
- 2019 Thomas, K., Hardy, R. D., Lazrus, H., Mendez, M., Orlove, B., Rivera-Collazo, I., Warner, B. P., Winthrop, R.. Explaining differential vulnerability to climate change: A social science review. *Wiley Interdisciplinary Reviews: Climate Change*. DOI: <https://doi.org/10.1002/wcc.565>
- 2018 Warner, B. P., Childers, D., Kuzdas, C., & Stocks, G. Smallholder adaptation to drought in Costa Rica's crony capitalist rice economy. *Development and Change* 49 (6), 1392-1421. DOI: <http://dx.doi.org/10.1111/dech.12420>
- 2018 Warner, B.P., J.D. Gartner, and C.E. Hatch. Fluvial Geomorphic Assessment and River Corridor Mapping as Flood Risk Management Tools in Massachusetts, USA. *Journal of Flood Risk Management*. 11, S1100-S1104. DOI: <http://dx.doi.org/10.1111/jfr3.12328>
- 2018 Milman, A., Warner, B. P., Chapman, D. & Short, A. Quantifying landowner perspectives on integrated flood risk management in Massachusetts, USA *Journal of Flood Risk Management* 11 (1), 34-47. DOI: <http://dx.doi.org/10.1111/jfr3.12291>
- 2018 Short Gianotti, Anne G., Benjamin Warner, and Anita Milman. Flood Concerns and Impacts on Rural Landowners: An Empirical Study of the Deerfield Watershed, MA (USA). *Environmental Science & Policy*, 79, 94–102. DOI: <http://dx.doi.org/10.1016/j.envsci.2017.10.007>
- 2017 Warner, B. P., & Kuzdas, C. The role of political economy in framing and producing transformative adaptation. *Current Opinions in Environmental Sustainability*. 29(C), 69-74. DOI: <https://doi.org/10.1016/j.cosust.2017.12.012>
- 2017 Warner, B. P. Schattman, R., & Hatch, C. E. Farming the floodplain: Ecological and agricultural tradeoffs and opportunities in river and stream governance in New England's changing climate. *Case Studies in the Environment*, Oct. 2017, 1 – 9. DOI: <https://doi.org/10.1525/cse.2017.sc.512407>
- 2016 Kuzdas, C., Warner, B. P., Wiek, A., Vignola, R., & Morataya, R. Identifying the potential of governance regimes to aggravate or mitigate water conflicts in regions threatened by climate change. *Local Environment*, 21(11), 1387-1408. DOI: <http://dx.doi.org/10.1080/13549839.2015.1129604>
- 2016 Milman, A., & Warner, B. P. The interfaces of public and private adaptation:

- Lessons from flooding in the Deerfield River Watershed. *Global Environmental Change*, 36, 46–55. DOI: <http://dx.doi.org/10.1016/j.gloenvcha.2015.11.007>
- 2016 Warner, B. P., & Kuzdas, C. Manufactured global change risk pathways in industrial-based agrarian development. *Climate and Development*, 8(5), 385–396. DOI: <http://dx.doi.org/10.1080/17565529.2015.1085359>
- 2016 Kuzdas, C., Warner, B. P., Wiek, A., Vignola, R., Yglesias, M., & Childers, D. L. Sustainability assessment of water governance alternatives: the case of Guanacaste Costa Rica. *Sustainability Science*, 11(2), 231–247. DOI: <http://dx.doi.org/10.1007/s11625-015-0324-6>
- 2016 Warner, B. P. Understanding actor-centered adaptation limits in smallholder agriculture in the Central American dry tropics. *Journal of Agriculture and Human Values*, 33(4), 785-797. DOI: <http://dx.doi.org/10.1007/s10460-015-9661-4>
- 2015 Warner, B. P., Kuzdas, C., Yglesias, M. G., & Childers, D. L. Limits to adaptation to interacting global change risks among smallholder rice farmers in Northwest Costa Rica. *Global Environmental Change*, 30, 101–112. DOI: <http://dx.doi.org/10.1016/j.gloenvcha.2014.11.002>
- 2015 Warner, B. P., & Elser, M. How Do Sustainable Schools Integrate Sustainability Education? An Assessment of Certified Sustainable K–12 Schools in the United States. *The Journal of Environmental Education*, 46(1), 1–22. DOI: <http://dx.doi.org/10.1080/00958964.2014.953020>
- 2015 Kuzdas, C., Wiek, A., Warner, B. P., Vignola, R., & Morataya, R. Integrated and participatory analysis of regional water governance regimes – The case of Guanacaste, Costa Rica. *World Development*, 66, 254–266. DOI: <http://dx.doi.org/10.1016/j.worlddev.2014.08.018>
- 2014 Kuzdas, C., Wiek, A., Warner, B. P., Vignola, R., & Morataya, R. Sustainability appraisal of water governance regimes – The case of Guanacaste Province, Costa Rica. *Environmental Management*, 54(2), 205-222. DOI: <http://dx.doi.org/10.1007/s00267-014-0292-0>

POLICY DOCUMENTS & POPULAR SCIENCE ARTICLES

- 2018 D. Hardy, H. Lazrus, M. Mendez, B. Orlove, I. Rivera-Collazo, J. T. Roberts, M. Rockman, K. Thomas, B. P. Warner, R. Winthrop. Social vulnerability: Social science perspectives on climate change, part 1. Washington, DC: USGCRP Social Science Coordinating Committee. <https://www.globalchange.gov/content/social-science-perspectives-climate-change-workshop>.
- 2017 Warner, B. P. Mixed-methods approaches to understanding climate change risks to agrarian-based livelihoods. *SAGE Research Methods Cases*. <http://dx.doi.org/10.4135/9781473994775>

- 2017 Warner, B. P. and Schattman, R. E. Farming in the floodplain: Overcoming tradeoffs to achieve good river governance in New England. Case study published by the National Socio-Environmental Synthesis Center (SESYNC), Bethesda, MD. <https://www.sesync.org/farming-the-floodplain-overcoming-tradeoffs-to-achieve-good-river-governance-in-new-england-2016-3>.
- 2016 Vogel, E., Gillett, N., Warner, B. P., Schoen, J., Payne, L., Chang, D., ... Slovin, N. Supporting New England Communities to Become River-Smart: Federal and state policies and programs that can help New England towns thrive despite river floods. *Army Corp of Engineers Institute for Water Resources*. Alexandria, VA. <https://extension.umass.edu/riversmart/policy-report>.
- 2015 Arguedas Ortiz, Diego. November 5. Riesgos manufacturados afectan desarrollo agrícola rural. SciDevNet. p. 2. San José, CR. Retrieved from <http://www.scidev.net/americas-latina/agropecuaria/noticias/riesgos-manufacturados-afectan-desarrollo-agricola-rural.html>
- 2015 Warner, B. P. September 21. Sustainability science is a new academic discipline. But is it sustainable? *The Conversation*, p. 2. Boston, MA. Retrieved from <https://theconversation.com/sustainability-science-is-a-new-academic-discipline-but-is-it-sustainable-46719>
- 2015 Warner, B. P. & Kuzdas, C. Origins of water scarcity in rural development in the Costa Rican dry tropics: Neoliberalism, international trade, and climate change. *GWF Discussion Paper*. Global Water Forum. Canberra, Australia. Retrieved from <http://www.globalwaterforum.org/2015/08/03/origins-of-water-scarcity-in-rural-development-in-the-costa-rican-dry-tropics-neoliberalism-international-trade-and-climate-change/> AWARDED "EDITORS' PICK" OF THE YEAR 2015.
- 2014 George, Michele St. May 6. Sustainability grad focuses on water management. *ASU Now*. Tempe, AZ. Retrieved from <https://asunow.asu.edu/content/sustainability-grad-focuses-water-management>
- 2013 Kuzdas, C., Yglesias, M., & Warner, B. P. Advancing Sustainable Governance of Water Resources in Costa Rica. *The Solutions Journal*. 4(4), Aug 2013. <http://thesolutionsjournal.com/node/23918>
- 2012 Kuzdas, C., Yglesias, M., Wiek, A., Warner, B. P., Vignola, R., & Morataya, R. Sustainability assessment of water systems and water governance in the Portrero, Caimital, and Upper Nosara Watersheds. *Comisión para el Manejo de las Cuencas Potrero-Caimital. Nicoya, GTE, Costa Rica* (Spanish)
- 2010 Warner, B. P. The Kerala Model of Development: A Path to Sustainability. *The Sustainability Review*. 1(1), March 2010. <https://thesustainabilityreview.org/the-kerala-model-of-development-a-path-to-sustainability/>

GRANTS & AWARDS

- 2020 **Co-PI** - Collaborative Research: IRES Track III: Partnerships Along the Headwaters of the Americas for Young Scientists Program, National Science Foundation, Award # 1954188 – Amount: \$598,498
- 2019 **PI** – Latin American and Iberian Institute interdisciplinary project development award – Filling the institutional gap in rural water contestation of expanding urban water spaces in decentralized Latin America – Amount: \$5,000
- 2017 – 2018 **PI** – Latin American and Iberian Institute course development support – Environments and People of Latin America – Amount: \$2,500
- 2014 – 2017 **SP** – U.S. Department of Agriculture (USDA, #2013-51130-21488) National Institute of Food and Agriculture (NIFA) Integrated Water Quality Grant Program – *Farms, floods and fluvial geomorphology: making the most of our natural resources* – PI: Christine Hatch – Amount: \$640,000
- 2014 **Award** – Arizona State University Doctoral Graduate Education Spring 2014 Completion Grant – Amount: \$9,500
- 2013 – 2014 **PI** – C.W. & Modene Neely Charitable Foundation Grant – *Managing water allocation equitably: Risks to smallholder farmers in Costa Rica's Arenal-Tempisque Irrigation District* – Amount: \$2,900
- 2012 – 2013 **Award** – Senior Fellowship, NSF (#0841374) Graduate STEM Fellowship (GK-12) – Amount: \$30,000
- 2012 – 2013 **Award** – Arizona State University, School of Sustainability Travel Grant – Amount: \$1,400
- 2012 – 2013 **CoPI** – GISER funded Integrative Society and Environment Research Grants Program – *Mitigating Water Conflicts in the Río Tempisque Basin, Costa Rica* – Amount: \$1,245
- 2012 **Award** – Visiting IPoS Scholar at University of Tokyo and Asian Institute of Technology – *Livelihood Strategies for Adaptation to Climate Change* – Amount: \$9,000
- 2011 – 2012 **CoPI** – USGS funded Water Resources Research Center 104(b) Grants Program (#2011AZ436B) – *Hydrology Versus Ecology: The Effectiveness of Constructed Wetlands for Wastewater Treatment in a Semi-arid Climate* – Amount: \$40,000
- 2011 – 2012 **Award** – Junior Fellowship, NSF (#0841374) Graduate STEM Fellowship (GK-12) – Amount: \$30,000
- 2010 **PI** – NSF (#0553925) International Graduate Research Experience Grant, Palo Verde Biological Station, Costa Rica – *Climate resilience in agriculture in Guanacaste Province, Costa Rica* – Amount: \$13,000

CLASSES TAUGHT

Graduate level:

GEOG562, *Water Governance*, Department Geography & Environmental Studies, University of New Mexico

GEOG516, *Globalization and Development*, Department Geography & Environmental Studies, University of New Mexico

GE600, *Environment and Development: A Political Ecology Approach*, Department of Earth & Environment, Boston University

Undergraduate level:

GEOG462, *Water Governance*, Department Geography & Environmental Studies, University of New Mexico

GEOG195, *Introduction to Environmental Studies: A Political Ecology Approach*, Department Geography & Environmental Studies, University of New Mexico

GE400, *Environment and Development: A Political Ecology Approach*, Department of Earth & Environment, Boston University

SOS 110, *Sustainable World Lab*, School of Sustainability, Arizona State University

PRESENTATIONS

- 2019 Warner, B. P., “Rural transformation in Latin America’s changing climate.” Association of American Geographers 2019 Annual Meeting in Washington, D.C., April, 2018.
- 2018 Warner, B. P., “Rural Transformation in Latin America.” UNM LAII Greenleaf Symposium, Greenleaf Symposium on Rural Transformation in Latin America's Changing Climate, Albuquerque, NM, November 14, 2018.
<https://laih.unm.edu/events/2018/11/2018-11-14-greenleaf.html>
- 2018 Warner, B. P., – Panel moderator, US Forest Service Symposium, “50 Years of New Mexico’s Rivers and Trails,” October 5, 2018, UNM’s Keller Hall.
<https://www.fs.usda.gov/news/r3/news-events>
- 2018 Warner, B. P., “Explaining river forms and functions through flood management narrative analyses in Western Massachusetts, USA.” Association of American Geographers 2018 Annual Meeting in New Orleans, Louisiana, April 14, 2018.
- 2015 Warner, B. P. Climate Change, Sustainability and Social Science Research. UMass Institute for Social Science Research - Fall Seminar Series. November 6. Amherst, MA. <https://www.umass.edu/issr/events/climate-change-sustainability-and-social-science-research>
- 2015 Warner, B. P. Limits to adaptation to interacting global change risks among smallholder rice farmers in Northwest Costa Rica. UMass Department of Geosciences Professional Seminar. March 27. Amherst, MA.
- 2015 Warner, B. P., Hatch, C. Farms, Floods and Fluvial Geomorphology: Making the Most of Our Natural Resources. Presented at Soil and Water Conservation Society International Annual Conference. July 28, 2015. Greensboro, NC.
www.swcs.org/15ac

- 2012 Warner, B. P. Agricultural Adaptation to Water Scarcity in Northern Costa Rica. Intensive Program on Sustainability (IPoS) Workshop at the Asian Institute of Technology, 8/2012.
- 2012 Warner, B. P. Do sustainability projects make sustainable schools? Integrating K-12 campuses in communities to create sustainable schools. Presented at the 41st Annual North American Association for Environmental Educators (NAAEE) Conference, Oakland CA (10/12). Poster presented. <http://www.naaee.net/sites/default/files/conference/program/NAAEE.Prog.Final.9.28.12A.pdf>.
- 2012 Sanchez, C., Childers, D. L., Turnbull, L. J., Warner, B. P., & Weller, N. The contribution of evapotranspiration to the water budget of an aridland urban treatment wetland. Presentation at the 7 June 2012 INTECOL International Wetlands Conference, Orlando, FL.
- 2012 Foley, R. W., Kuzdas, C., Warner, B. P., Withycombe-Keeler, L., Iwaniec, D. & Wiek, A. Designing sustainable governance: Cross-domain comparison and evaluation. Poster presented at the 19-22 February 2012 3rd Annual International Conference on Sustainability Science, Tempe, AZ.
- 2012 Sanchez, C. A., Childers, D., Turnbull, L., Warner, B. P., & Weller, N. The contribution of evapotranspiration and evaporation to the water budget of a treatment wetland in Phoenix, AZ, USA. Poster presented at 13 January 2012 CAP LTER 14th Annual Poster Symposium and All Scientist Meeting, Global Institute of Sustainability, Arizona State University, Tempe, AZ.
- 2011 Warner, B. P., & Kuzdas, C. Approach for Coordination, Collaboration and Effectiveness in Sustainability Science (ACCESS). Presented at Annual Organization for Tropical Studies Directorate Meeting (3/11). Poster. <http://www.ots.ac.cr/images/downloads/information-resources/otspublications/annual-report-fy/fy2010.pdf>.
- 2011 Warner, B. P., Turnbull, L., & Childers, D. Hydrology versus Ecology: The Effectiveness of Constructed Wetlands for Wastewater Treatment in a Semi-Arid Climate. Poster presented at Central Arizona-Phoenix Long Term Ecological Research (LTER) Annual Symposium (1/11).
- 2010 Warner, B. P. & Kuzdas, C. Measuring urban vulnerability using a model of ecological resilience: An assessment methodology. Poster presented at the January 14, 2010 12th Annual Central Arizona-Phoenix Long-Term Ecological Research Poster Symposium, Global Institute of Sustainability.
- 2008 Warner, B. P. The Application of Leadership in Energy and Environmental Design (LEED) to Water and Wastewater Treatment Plants. Presentation at Indiana Water Environment Association (IWEA) Annual 2008 Conference (11/2008).

APPOINTMENTS

- 2016 – 2018 Partner – United States Global Change Research Program, Social Science Coordinating Committee, Washington, D.C.,

<https://www.globalchange.gov/about/iwgs/sscc>

2015 – 2018 Steering Committee Member – RiverSmart Communities Fluvial Geomorphic Task Force, Amherst, MA, <https://extension.umass.edu/riversmart/>

MENTORSHIP/ADVISORSHIP

2017 – 2019 Graduate student – Anthony Meluso – Thesis: La gota que colma la caguama: Cumulative Tensions Transformed into the Defense of Water.
https://digitalrepository.unm.edu/geog_etds/44/

2018 – Graduate student – Tucker Colvin

2019 – Research assistant – Amy Jones

2019 – Undergraduate intern – Rachel Sanchez

2019 – Undergraduate intern – Indu Roychowdhury

PROFESSIONAL MEMBERSHIPS & SERVICE

2019 Chair – Faculty hire search committee – Department of Geography and Environmental Studies, University of New Mexico

2019 – Chair – UNM Geography and Environmental Studies colloquium series

2018 Co-chair – UNM LAII Greenleaf Symposium, Greenleaf Symposium on Rural Transformation in Latin America's Changing Climate, Albuquerque, NM, November 14 – 16, 2018. <https://laih.unm.edu/events/2018/11/2018-11-14-greenleaf.html>

2018 – Member – American Association of Geographers

2018 Co-chair – US Forest Service Symposium, “50 Years of New Mexico’s Rivers and Trails,” October 5 – 6, 2018, UNM’s Keller Hall and the National Hispanic Cultural Center. <https://www.fs.usda.gov/news/r3/news-events>

2018 – Director – Development Geography Specialty Group of the American Association of Geographers

2018 – Member – Conference of Latin Americanist Geographers