# Clark L Gray

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### **EDUCATION**

### Ph.D. Geography, University of North Carolina at Chapel Hill, May 2008

Dissertation Title: Out-Migration and Rural Livelihoods in the Southern Ecuadorian Andes Dissertation Committee: Drs. Thomas Whitmore (advisor), Richard Bilsborrow, Chirayath Suchindran, Stephen Walsh and Wendy Wolford

## B.S. Biology, University of North Carolina at Chapel Hill, May 1999

Awarded with Highest Distinction and Highest Honors

Honors Thesis: The Roles of Disturbance Frequency and Substrate Heterogeneity in Lotic Macroinvertebrate Communities (Advisor: Dr. Seth Reice)

### **ACADEMIC POSITIONS**

# University of North Carolina at Chapel Hill

Associate Professor, Department of Geography, January 2017-present Faculty Fellow, Carolina Population Center (CPC), June 2011-present Adjunct Faculty, Environment, Ecology and Energy Program (E3P), January 2011-present Assistant Professor, Department of Geography, January 2011-December 2016

## Postdoctoral

Postdoctoral Associate, Department of Economics, Duke University, August 2009-December 2010, Mentors: Elizabeth Frankenberg and Duncan Thomas

Postdoctoral Scholar, Carolina Population Center, University of North Carolina at Chapel Hill, April 2008-July 2009, Mentor: Richard Bilsborrow

### **HONORS**

2017 Research Excellence Award, Population Specialty Group of the Association of American Geographers

2010 Nystrom Dissertation Award, Association of American Geographers

## REFEREED JOURNAL ARTICLES

- \* Student or postdoctoral mentee
- 1. Khristopher Nicholas\*, Leah Campbell\*, Emily Paul\*, Gioia Skeltis\*, Wenbo Wang\*, and Clark Gray. (Accepted). Climate anomalies and childhood growth in Peru. *Population and Environment*.
- 2. Maia Call\* and Clark Gray. (2020). Climate anomalies, land degradation and rural out-migration in Uganda. *Population and Environment*, 41: 507–528.
- 3. Clark Gray, Douglas Hopping\*, and Valerie Mueller. (2020). The changing climate-migration relationship in China, 1989-2011. *Climatic Change*, 160: 103-122.

- 4. Clark Gray and Richard Bilsborrow. (2020). Stability and change within indigenous land use in the Ecuadorian Amazon. *Global Environmental Change*, 63: 102116.
- 5. Valerie Mueller, Clark Gray, Sudhanshu Handa and David Seidenfeld. (2020). Do social protection programs foster short-term and long-term migration adaptation strategies? *Environment and Development Economics*, 25: 135-158.
- 6. Valerie Mueller, Clark Gray, and Douglas Hopping\*. (2020). Climate-induced migration and unemployment in middle-income Africa. *Global Environmental Change* 65: 102183.
- 7. Valerie Mueller, Glenn Sheriff, Xiaoya Dou and Clark Gray. (2020). Temporary migration and climate variation in Eastern Africa. *World Development*, 104704.
- 8. Heather Randell, Clark Gray, and Kathryn Grace. (2020). Stunted from the start: Early life weather conditions and child undernutrition in Ethiopia. *Social Science and Medicine*, 113234.
- 9. Victoria Salinas Castro\*, Richard Bilsborrow and Clark Gray. (2020). Cambios socioeconómicos en el siglo XXI en poblaciones indígenas Amazónicas: Retos actuales. *Estudios Demográficos y Urbanos* 35(1): 83-116.
- 10. Brian Thiede and Clark Gray. (2020). Characterizing the indigenous forest peoples of Latin America: Results from census data. *World Development*, 104685.
- 11. Brian Thiede and Clark Gray. (2020). Climate exposures and child undernutrition: Evidence from Indonesia. *Social Science and Medicine*, 265: 113298.
- 12. Nathalie Williams and Clark Gray. (2020). Spatial and temporal dimensions of weather shocks and migration in Nepal. *Population and Environment* 41: 286–305.
- 13. Maia Call\*, Clark Gray, and Pamela Jagger. (2019). Smallholder responses to climate anomalies in rural Uganda. *World Development* 115: 132–144.
- 14. Heather Randell\* and Clark Gray. (2019). Climate change and educational attainment in the global tropics. *Proceedings of the National Academy of Sciences* 116 (18): 8840-8845.
- 15. Samuel Sellers\* and Clark Gray. (2019). Climate shocks constrain human fertility in Indonesia. *World Development* 117: 357-369.
- 16. Valerie Mueller and Clark Gray. (2018). Heat and adult health in China. *Population and Environment* 40(1): 21–46.
- 17. Leah Bevis\*, Jon Conrad, Christopher Barrett, and Clark Gray. (2017). State-conditioned soil investment in rural Uganda. *Research in Economics* 71(2): 254–281.
- 18. Maia Call\*, Clark Gray, Michael Emch and Mohammad Yunus. (2017). Disruption, not displacement: Environmental variability and temporary migration in Bangladesh. *Global Environmental Change* 46: 157–165.
- 19. Maia Call\*<sup>1</sup>, Tony Mayer\*<sup>1</sup>, Samuel Sellers\*<sup>1</sup>, Diamond Ebanks\*<sup>1</sup>, Margit Bertalan\*<sup>1</sup>, Elisabeth Nebie\*<sup>1</sup>, and Clark Gray. (2017). Socio-environmental drivers of forest change in rural Uganda. *Land Use Policy* 62: 49–58. <sup>1</sup>Authors contributed equally to this research
- 20. Jason Davis\*, Samuel Sellers\*, Clark Gray, and Richard Bilsborrow. (2017). Indigenous migration dynamics in the Ecuadorian Amazon: A longitudinal and hierarchical analysis. *Journal of Development Studies* 53(11): 1849-1864.
- 21. Julia Jennings and Clark Gray. (2017). Climate, marriage and fertility in the Netherlands, 1871-1937. *Population and Environment* 38:242–260.
- 22. Brian Thiede and Clark Gray. (2017). Heterogeneous climate effects on human migration in Indonesia. *Population and Environment* 39(2): 147-172.

- 23. Matthew Bozigar\*, Clark Gray, and Richard Bilsborrow. (2016). Oil extraction and indigenous livelihoods in the Northern Ecuadorian Amazon. *World Development* 78: 125–135.
- 24. Clark Gray and Erika Wise. (2016). Country-specific effects of climate variability on human migration. *Climatic Change* 135(3): 555-568.
- 25. Heather Randell\* and Clark Gray. (2016). Climate variability and educational attainment: Evidence from rural Ethiopia. *Global Environmental Change* 41: 111–123.
- 26. Brian Thiede, Clark Gray, and Valerie Mueller. (2016). Climate variability and inter-provincial migration in South America, 1970-2011. *Global Environmental Change* 41: 228–240.
- 27. Jason Davis\*, Richard Bilsborrow, and Clark Gray. (2015). Delayed fertility transition among indigenous women: A case study in the Ecuadorian Amazon. *International Perspectives on Sexual and Reproductive Health* 41(1):1–10.
- 28. Clark Gray, Matthew Bozigar\*, and Richard Bilsborrow. (2015). Declining use of wild resources by indigenous peoples of the Ecuadorian Amazon. *Biological Conservation* 182: 270–277.
- 29. Julia Jennings and Clark Gray. (2015). Climate variability and human migration in the Netherlands, 1865-1937. *Population and Environment* 36(3): 255-278.
- 30. Timothy Baird\* and Clark Gray. (2014). Livelihood diversification and shifting social networks of exchange: A social network transition? *World Development* 60: 14–30.
- 31. Elizabeth Fussell, Lori Hunter and Clark Gray. (2014). Measuring the environmental dimensions of human migration: The demographer's toolkit. *Global Environmental Change* 28: 182–191.
- 32. Clark Gray and Richard Bilsborrow. (2014). Consequences of out-migration for land use in rural Ecuador. *Land Use Policy* 36: 182–191.
- 33. Clark Gray, Elizabeth Frankenberg, Thomas Gillespie, Cecep Sumantri and Duncan Thomas. (2014). Studying displacement after a disaster using large scale survey methods: Sumatra after the 2004 tsunami. *Annals of the Association of American Geographers* 104(3): 594-612.
- 34. Valerie Mueller, Clark Gray and Katrina Kosec. (2014). Heat stress increases long-term human migration in rural Pakistan. *Nature Climate Change* 4(3): 182-185.
- 35. Clark Gray and Richard Bilsborrow. (2013). Environmental influences on human migration in rural Ecuador. *Demography* 50(4): 1217-1241.
- 36. Clark Gray and Valerie Mueller. (2012). Natural disasters and population mobility in rural Bangladesh. *Proceedings of the National Academy of Sciences* 109(16): 6000-6005.
- 37. Clark Gray and Valerie Mueller. (2012). Drought and population mobility in rural Ethiopia. *World Development* 40(1): 134–145.
- 38. Clark Gray. (2011). Soil quality and human migration in Kenya and Uganda. *Global Environmental Change* 21(2): 421–430.
- 39. Clark Gray. (2010). Gender, natural capital and migration in the southern Ecuadorian Andes. *Environment and Planning A* 42(3): 678–696.
- 40. Flora Lu, Clark Gray, Richard Bilsborrow, Carlos Mena, Jason Bremner, Alisson Barbieri, Christine Erlien, and Stephen Walsh. (2010). Contrasting colonist and indigenous impacts on Amazonian Forests. *Conservation Biology* 24(3): 881-885.
- 41. Clark Gray. (2009). Environment, land and rural out-migration in the southern Ecuadorian Andes. *World Development* 37(2): 457–468.
- 42. Clark Gray. (2009). Rural out-migration and smallholder agriculture in the southern Ecuadorian Andes. *Population and Environment* 30(4-5): 193-217.

- 43. L. Earl Gray, Norman Barlow, Kembra Howdeshell, Joseph Otsby, Jonathan Furr and Clark Gray. (2009). Transgenerational effects of di(2-ethylhexyl) pthalate in the male CRL:CD(SD) rat: Added value of assessing multiple offspring per litter. *Toxicological Sciences* 110(2): 411–425.
- 44. Clark Gray, Richard Bilsborrow, Jason Bremner, and Flora Lu. (2008). Indigenous land use in the Ecuadorian Amazon: a cross-cultural and multilevel analysis. *Human Ecology* 36(1): 97–109.
- 45. Andrew Hotckiss, Cynthia Rider, Chad Blystone, Vickie Wilson, Phillip Hartig, Gerald Ankley, Paul Foster, Clark Gray and L. Earl Gray. (2008). Fifteen years after 'Wingspread': Environmental endocrine disrupters and human and wildlife health: Where we are today and where we need to go. *Toxicological Sciences* 102(2): 371-382.
- 46. Ronald Rindfuss, Barbara Entwisle, Stephen Walsh, Carlos Mena, Chris Erlien, and Clark Gray. (2007). Frontier land use: Synthesis, challenges, and next steps. *The Annals of the Association of American Geographers* 97(4): 739–754.

# **EDITED VOLUMES**

1. Lori Hunter, Clark Gray and Jacques Véron (eds.). (In preparation). *The International Handbook of Population and Environment*. Springer.

## OTHER PUBLICATIONS

- 1. Clark Gray, Matthew Bozigar, and Richard Bilsborrow. (2015). Both extensive and intensive study designs are needed to understand wild resource harvesting: A reply to Sirén. *Biological Conservation* 190:189.
- 2. Clark Gray. (2013). Human migration in a changing climate. Book review essay. *Global Environmental Politics* 13(1): 128-132.
- 3. Clark Gray. (2011). Book review of *Ordinary Families, Extraordinary Lives: Assets and Poverty Reduction in Guayaquil, 1978-2004. Population, Space and Place* 17(3): 292–293.

### Invited Presentations

- 2019 Using Big Demographic Data to Measure Global Vulnerability to Climate Change. Seminar presentation for the Ohio University Institute for Population Research. Columbus, OH, October 1.
- 2019 Climate Change and Internal Migration in Africa. Seminar presentation for the Cornell University Institute for African Development. Ithaca, NY, September 5.
- 2017 Climate Change and Human Migration in South Asia. Seminar presentation for the Arizona State School of Politics and Global Studies. Phoenix, AZ, September 15.
- 2017 Vulnerability to Climate-Induced Migration in the Developing World. Plenary presentation for the Rural Sociological Society. Columbus, OH, July 27-30.
- 2013 Climate Variability and Internal Migration in Pakistan and Bangladesh. Seminar presentation for the Brown University Population Studies and Training Center. Providence, RI, December 5.
- 2012 Climate Change and Human Migration in the Developing World. Plenary presentation to the World View Community College Symposium on Population and Migration: A World on the Move. Chapel Hill, NC, November 14.
- 2012 Climate Change and Human Migration in the Developing World. Seminar presentation for the Duke University Program in Ecology. Durham, NC, November 2.

- 2012 Natural Disasters and Population Mobility in Rural Bangladesh. Invited contribution to the CUPC/NCAR Workshop on Migration, Urbanization and Climate Change. Boulder, CO, May 7-8.
- 2011 Climate Change and Human Migration in the Developing World. Invited contribution to the Brown University International Advanced Research Institute on Climate Change and Its Impacts. Providence, RI, June 22.
- 2011 Soil Quality and Human Migration in Kenya and Uganda. Seminar presentation for the International Food Policy Research Institute. Washington DC, March 30.
- 2010 Economic Migrants or Environmental Refugees?: Evidence from Ecuador, Indonesia and Ethiopia. Seminar presentation for the Rutgers Department of Human Ecology. New Brunswick, NJ, May 5.
- 2010 Economic Migrants or Environmental Refugees?: Evidence from Ecuador, Indonesia and Ethiopia. Seminar presentation for the University of Maryland Department of Geography. College Park, MD, May 11.
- 2009 Human Migration and the Rural Environment in the Ecuadorian Andes. Seminar presentation for the NCSU PopMed Forum. Raleigh, February 18.
- 2008 Environmentally-Induced Migrants: A Beginning and a Way Forward. Invited contribution to the Population-Environment Research Network's Cyberseminar on Environmentally Induced Population Displacements. August 18-29.

# **CONFERENCE PARTICIPATION**

AAG: American Association of Geographers, IUSSP: International Union for the Scientific Study of Population, PAA: Population Association of America

- 2021 Co-author, Climate-Induced Migration and Unemployment in Middle-Income Africa, PAA
- 2019 Co-author, Climate Change and Lifetime Migration in the Global Tropics, PAA
- 2019 Co-author, Is Climate Stress Driving Tropical Depopulation?, PAA
- 2019 Co-author, Smallholder Responses to Climate Anomalies in Rural Uganda, AAG
- 2019 Co-author, The Social Consequences of Environmental Migration in Africa, PAA
- 2019 First author, Climatic Influences on Women's Health and Mobility in Sub-Saharan Africa, PAA
- 2019 Presenter, Climate Change and Food Security in Uganda, PAA
- 2018 Co-author, Climate Change and Multidimensional Vulnerability to Child Undernutrition: Evidence from Ethiopia, PAA
- 2018 Co-author, Does Women's Empowerment Reduce the Negative Effect of Climate Change on Child Health? Empirical Evidence from Households in India, PAA
- 2018 Co-author, Impact of Climate Variability on Agriculture and Food Security in Ugandan Households, AAG
- 2018 Reviewer, Population Specialty Group Student Paper Competition, AAG
- 2018 Session organizer, Food Security and Development I-II, PAA
- 2017 Co-author, Characterizing the Forest-Dwelling Indigenous Peoples of Latin America: Results from Census and Satellite Data, IUSSP
- 2017 Co-author, Climate Change, Environmental Degradation, and Migration in Uganda, AAG
- 2017 Co-author, Climatic Variability and Early Childhood Malnutrition in Indonesia, IUSSP
- 2017 Co-author, Climate Variability and Rural Livelihood Diversification in Uganda, PAA
- 2017 Co-author, Contextual Influences on the Climate-Migration Relationship: Evidence from India, AAG

- 2017 Co-author, Indigenous Health in the Ecuadorian Amazon: A Multilevel and Longitudinal Analysis, IUSSP
- 2017 Co-author, Livelihood Adaptation to Climate Change in Rural Ethiopia, AAG
- 2017 Co-author, What Drives Environmental Migrants? Longitudinal Evidence from Uganda, PAA
- 2017 Panelist, Population Geography and the Environment: Special Session in Honor of Clark Gray and David Lopez-Carr, AAG
- 2017 Presenter, Climate and Unemployment in East Africa, AAG
- 2017 Session introducer, Disruption or Displacement? Exploring the Complex Interactions between the Environment and Migration, AAG
- 2017 Session organizer, Changing Livelihoods and Landscapes in East Africa I-II, AAG
- 2016 Co-author, Climate Events and Temporary Migration in Matlab, Bangladesh, PAA
- 2016 Co-author, Socio-Environmental Drivers of Forest Change in Rural Uganda, PAA
- 2016 Presenter, Drivers of Changing Indigenous Land Use in the Ecuadorian Amazon, PAA
- 2016 Presenter, Indigenous Health in the Ecuadorian Amazon: A Multilevel and Longitudinal Analysis, PAA
- 2015 Co-author, Country-specific Effects of Climate Variability on Human Migration, PAA.
- 2015 Presenter, Oil Extraction and Indigenous Livelihoods in the Northern Ecuadorian Amazon. PAA.
- 2014 Presenter, Wild Resource Use in the Ecuadorian Amazon: A Multi-Ethnic and Longitudinal Approach, AAG.
- 2014 Presenter, Wild Resource Use in the Ecuadorian Amazon: A Multi-Ethnic and Longitudinal Approach, PAA.
- 2014 Discussant, Demography of Disasters II, PAA.
- 2014 Session organizer, Changing Landscapes and Livelihoods in the Amazon Basin I-III. AAG.
- 2013 Co-author, Climate Variability and Human Migration in the 19th Century Netherlands, PAA
- 2013 Co-author, Population Mobility and Monsoon Anomalies in Pakistan, PAA
- 2012 Presenter, Consequences of Out-Migration for Land Use in Rural Ecuador, AAG
- 2012 Presenter, Natural Disasters and Population Mobility in Rural Bangladesh, PAA
- 2012 Presenter, Soil Quality and Human Migration in Kenya and Uganda, PAA
- 2012 Session organizer, Changing Landscapes from the Andes to the Amazon I-V, AAG
- 2011 Presenter, Drought and Human Migration in Rural Ethiopia, PAA
- 2011 Presenter, Return Migration after the Tsunami in Indonesia, PAA
- 2010 Presenter, Environment, Land and Rural Out-Migration in the Southern Ecuadorian Andes, AAG
- 2009 Panelist, Our Cohort's Response: Graduate Students and the (Re) Theorization Project in Population Geography, AAG
- 2009 Presenter, Contrasting Colonist and Indigenous Impacts on Amazonian Forests, IUSSP
- 2009 Presenter, Tsunami-Induced Displacement in Sumatra, Indonesia, AAG, IUSSP & PAA
- 2009 Presenter, Rural Out-Migration and Smallholder Agriculture in the Southern Ecuadorian Andes, PAA
- 2008 Presenter, Contradictory Effects of Out-migration on Smallholder Agriculture in the Southern Ecuadorian Andes, AAG
- 2008 Session organizer, Consequences of Out-Migration for Rural Origin Areas, AAG
- 2007 Presenter, Rural Out-Migration to Alternative Destinations in the Southern Ecuadorian Highlands, AAG & PAA

- 2007 Session organizer, Conservation and Development from the Andes to the Amazon I-IV, AAG
- 2005 Session organizer, Human-Environment Studies from the Andes to the Amazon, AAG.
- 2005 Presenter, Indigenous Land Use in the Northern Ecuadorian Amazon: A Cross-Cultural and Multilevel Analysis, AAG, IUSSP & PAA

## TEACHING AND MENTORING

## **Courses Taught** (number of students)

ENEC 490 Special Topics: Fall 2017 (14)

ENEC 567 Ecological Analyses and Applications: Fall 2020 (7)

ENEC 569 Current Issues in Ecology: Spring 2019 (6), Spring 2017 (10), Spring 2015 (6)

GEOG 120 World Regional Geography: Spring 2018 (153), Fall 2012 (150), Fall 2007 (40)

GEOG 230 The World at Eight Billion: Fall 2018 (14)

GEOG 437 Social Vulnerability to Climate Change: Fall 2019 (22), Fall 2018 (17)

GEOG 451 Population, Development and the Environment: Fall 2019 (15), Fall 2017 (12), Spring 2016 (18), Fall 2014 (21), Fall 2013 (35), Fall 2011 (18)

GEOG 803 Human-Environment Research Seminar: Spring 2020 (9), Spring 2019 (11)

#### **Advisees**

Masters: Douglas Hopping (Gender Differences and Social Capital among Temporary and Permanent Migrants in China, 2016), Matthew Bozigar (Oil Extraction and Indigenous Livelihoods in the Northern Ecuadorian Amazon, 2014)

Doctoral: Sandeep Kandikuppa (E3P, current), Maia Call (Rural Livelihoods and Environmental Change in Rural Uganda, 2017)

Postdoctoral: Heather Randell (SESYNC, 2016-2018), Jason Davis (CPC, 2012-15)

Honors thesis: Erika Munshi (E3P, 2018), Katie McMahon (2021)

## **Committees**

Dissertation: Rajesh Bista (current), Varun Goel (current), Madeline Giefer (2020), Victoria Salinas (University of Minas Gerais, 2020), Samuel Sellers (E3P, 2017), Leah Bevis (Cornell University, 2016), Heather Randell (Brown University, 2015), Jason Bremner (Planning, 2013), Timothy Baird (2012)

Honors thesis: Morgan Pratt (Global, 2018), Jack Cordes (2017), Emma Seagle (2014)

## **GRANTS**

#### **External**

Clark Gray (PI, 8%), Brian Thiede (Co-I). Environmental Change and Undernutrition among Women and Children. NIH R03-HD101859 (\$129,931 direct), 2020-2022.

Clark Gray (PI, 8%), Valerie Mueller (Co-I). Population Dynamics in Africa: Selected Outcomes and Causes. NIH R03-HD098357 (\$128,500 direct), 2019-2022.

Clark Gray (PI, 16%), Valerie Mueller (Co-I). Climate, Population Health, and Well-being over Time. NIH R03-HD083528 (\$108,630 direct), 2015-2018.

Clark Gray (PI, 8%), Ephraim Nkonya (Co-I), Darrell Schulze (Co-I), Kaizzi Kayuki (Co-I). The Relationship between Soil Degradation, Rural Livelihoods, and Household Well-Being. NSF Geography and Spatial Sciences BCS-122681 (\$341,626 direct), 2012-2016.

- Clark Gray (PI, 75%), Richard Bilsborrow (Co-I). Economic Well-being in the Aftermath of the Indian Ocean Tsunami. NIH Pathway to Independence R00-HD061752 (\$510,380 direct), 2011-2015.
- Clark Gray (PI, 100%), Duncan Thomas (Mentor), Elizabeth Frankenberg (Co-mentor). Economic Well-being in the Aftermath of the Indian Ocean Tsunami. NIH Pathway to Independence K99-HD061752 (\$116,070 direct), 2009-2010.
- Richard Bilsborrow (PI), Clark Gray (Co-I, 0%). Frontier Migration and the Rural Environment in Ecuador. NIH R21-HD052092 (\$275,000 direct), 2007-2010.
- Richard Bilsborrow (PI), Clark Gray (Co-I, 0%). Doctoral Dissertation Research: Out-Migration, Environmental Change, and Rural Livelihoods in the Southern Ecuadorian Andes. NSF Geography and Spatial Sciences BCS-0525469 (\$12,000 direct), 2005-2008.

## **Internal** (past 5 years)

- 2021 Senior Faculty Research and Scholarly Leave, Committee on Faculty Research and Scholarly Leaves
- 2020 Summer Award for Research-Intensive Courses, Office of Undergraduate Research
- 2017 Course-Based Undergraduate Research Experience Development Grant, College of Arts & Sciences

## PROFESSIONAL SERVICE

**Professional memberships:** American Association of Geographers, Population Association of America

Editorial boards: Population and Environment (2020-present)

Advisory boards: IPUMS-International at the University of Minnesota (2021-present)

Manuscripts reviewed: Annals of the Association of American Geographers (3), Applied Geography (1), Biological Conservation (1), Climate Change Economics (1), Climatic Change (5), Current Anthropology (1), Demography (3), Environmental Development (1), Environmental Research Letters (2), Forest Policy & Economics (1), Geographical Review (2), Global Environmental Change (11), Handbook of Environmental Displacement & Migration (1), Health & Place (2), Human Ecology (1), International Migration Review (2), Journal of Development Economics (2), Journal of Development Studies (2), Landscape & Urban Planning (1), Migration Studies (1), Nature Climate Change (3), Photogrammetric Engineering & Remote Sensing (1), Population & Environment (23), Population Research & Policy Review (1), Population, Space & Place (3), Proceedings of the National Academy of Sciences (2), Progress in Human Geography (1), Rural Sociology (1), Science (1), Social Science & Medicine (1), Social Science Research (1), Society & Natural Resources (1), Transactions of the Institute of British Geographers (1), UK Government Office of Science (2), Vienna Yearbook of Population Research (1), Weather, Climate & Society (1), World Development (10)

**Proposal reviews:** NICHD Population Sciences Subcommittee (standing member 2019-2021, 1 ad hoc review), NSF Geography and Spatial Sciences (6 ad hoc reviews)

### **UNC** committees

Diversity Committee, Department of Geography (Spring 2016, Fall 2020, Chair: Fall 2018-Spring 2020)

Graduate Awards Committee, Department of Geography (Spring 2018-Fall 2020; Fall 2014-Spring 2016)

Training Committee, Carolina Population Center (Fall 2017-Spring 2020)

Faculty Hiring Committee, Department of Geography (Fall 2019)

Merit Committee, Department of Geography (Summer 2018, Chair: Summer 2019)

Faculty Search Committee, Curriculum for Environment and Ecology (Fall 2018)

Course-Based Research Award Selection Committee, College of Arts and Sciences (Spring 2018)

Graduate Committee, Department of Geography (Fall 2013-Spring 2018)

Strategic Planning Committee, Curriculum for Environment and Ecology (Spring 2017)

Curriculum Committee, Curriculum for Environment and Ecology (Fall 2012) Colloquium Committee, Department of Geography (Chair: Fall 2012)