

MARYIA BAKHTSIYARAVA

Department of Geography, Environment and Society
University of Minnesota – Twin Cities
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EDUCATION

2014–date Ph.D. in Geography, University of Minnesota (expected Spring 2020)

Co-advisors: Dr. Kathryn Grace and Dr. Steven Manson

Minor: Population Studies

Dissertation: A multisectoral investigation of child nutrition and food security in Ethiopia

Interdisciplinary Doctoral Fellow at the Center for Global Health and Social Responsibility, University of Minnesota (2018-2019)

2014–2017 Graduate Trainee in Population Studies, Minnesota Population Center, University of Minnesota (formal training in quantitative demographic methods and theory)

2014 B.S. in Geography and GIS, Belarusian State University

AREAS OF RESEARCH INTERESTS AND METHODOLOGICAL EXPERTISE

Population studies, spatial analysis and statistics, climate change, food security, GIS

AWARDS

Minnesota Population Center Outstanding Service Award	2019
Interdisciplinary Doctoral Fellowship, University of Minnesota	2018
Council of Graduate Students Conference Travel Grant	2017
Best Student Publication Award, Department of Geography	2017
Council of Graduate Students Career Development Grant	2016
Minnesota Population Center Research Collaboration Award	2016
PAA Travel Grant, Minnesota Population Center	2015–2018
Vernadsky Fellowship, Non-governmental Vernadsky Ecological Foundation	2013–2014
Excellent Service Award, Belarusian State University	2013
Travel grant for the International Student Festival in Trondheim, Norway, Belarusian State University	2013
1st place, National Geography Competition. Minsk, Belarus.	2006–2009

PUBLICATIONS

- Bakhtsiyarava, M.,** Grace, K., & Nawrotzki, R. (2017). Climate and Birthweight: Investigating Agricultural livelihoods in Kenya and Mali. *American Journal of Public Health* 108(Suppl 2), S144–S150. DOI: 10.2105/AJPH.2017.304128.
- Bakhtsiyarava, M.,** & Nawrotzki, R. (2017). Environmental Inequality and Pollution Advantage among Immigrants in the United States. *Applied Geography* 81, 60-69. DOI: 10.1016/j.apgeog.2017.02.013. [This paper was also [featured](#) in the *London School of Economics' USA Politics and Policy Blog*]
- Nawrotzki, R. J., DeWaard, J., **Bakhtsiyarava, M.,** & Ha, J. T. (2016). Climate shocks and rural-urban migration in Mexico: Exploring nonlinearities and thresholds. *Climatic Change* 140(2), 243-258. DOI: 10.1007/s10584-016-1849-0.
- Nawrotzki, R. J., & **Bakhtsiyarava, M.** (2016). International Climate Migration: Evidence for the Climate Inhibitor Mechanism and the Agricultural Pathway. *Population Space & Place* 23(4), e2033. DOI: 10.1002/psp.2033.
- Bakhtsiyarava, Maryia.** (2010). Population changes in Europe. *Wide World (GCSE geography)* 21(3), 15-18.

RESEARCH EXPERIENCE

- Research Assistant, NSF-INFEWS Project** (Innovations at the Nexus of Food, Energy and Water Systems), University of Minnesota. Quantitative data analysis, manuscript development, data preparation, and knowledge dissemination. 2017–date
- Research Assistant, IPUMS-International,** Minnesota Population Center, University of Minnesota (NSF- and NIH-funded). Produced and integrated administrative boundary data and census microdata for 80+ countries, created contextual environmental variables. Developed R scripts to automate data processing. Developed a method for linking environmental data from various sources and formats to IPUMS-DHS with the help of R and Python. 2017–2018
- Research Consultant, HealthPartners,** Minneapolis. Spatial and statistical analysis for a study investigating food deserts in Saint Paul. Spatial and statistical analysis for a study investigating preventable emergency department visits. 2016
- Research Assistant, Terra Populus,** Minnesota Population Center, University of Minnesota (NSF- and NIH-funded). Processed, integrated, and linked environmental data and aggregate census data with countries' administrative boundaries. Other activities included manuscript development and quantitative data analysis, development of workshop and outreach materials, knowledge dissemination. 2014–2017
- GIS intern, National Park Service, Acadia National Park,** Maine, USA. Created and maintained a database of Acadia National Parks' vistas, or scenic 2013

viewpoints. The created database was successfully integrated into the Facility Management Software System and has been used by the park's maintenance crew for evaluating and streamlining work orders and funding proposals.

GIS intern, Land Inventory & Monitoring Data Center, Minsk, Belarus. 2012–2013
Created a database of horticulture associations' land plots. The database and maps were implemented in the Land Information System of Minsk District.

ADDITIONAL TRAINING

Rostock Retreat on Simulation in Population Studies. Max Planck Institute for Demographic Research. Rostock, Germany	2019
INFEWS Field Course, Ethiopia	2017
GEOSTAT 2016 Summer School on Spatial Statistics, University of Castilla – La Mancha, Spain	2016
Esri Student Assistantship, Esri User Conference, San Diego, California.	2016
Humanitarian crisis simulation, University of Minnesota (Processed and analyzed spatial and demographic data in a refugee crisis scenario)	2015
International Student Festival in Trondheim, Norway (Workshop attended: Natural Resources)	2013
Certificate in C++ programming, School of Information Technologies, Belarusian State University	2012

PRESENTATIONS

Bakhtsiyarava, M. 2019. Agriculture, rainfall and child nutrition in Ethiopia: Evidence from cross-sectional and longitudinal analyses. Retreat on Simulation at the Max Planck Institute for Demographic Research. Rostock, Germany.

Bakhtsiyarava, M. 2019. Are Improvements in Agricultural Production Equally Beneficial for Household Food Security and Children's Nutrition? Evidence from Ethiopia. Annual Meeting of the Population Association of America, Austin, USA.

Bakhtsiyarava, M. 2018. Investigation of the Determinants of Food Security: The Role of Agricultural Inputs for Household Food Security and Child Nutrition in Ethiopia. Annual Meeting of the Population Association of America, Denver, USA.

Bakhtsiyarava, M. 2018. The role of agricultural inputs for household food security and child nutrition in Ethiopia. Annual Meeting of the Association of American Geographers, New Orleans, USA.

Bakhtsiyarava, M. 2018. The dimensions of household electricity use and their impact on child nutrition: Evidence from the Ethiopia Socioeconomic Survey. NSF-INFEWS, University of California Santa Barbara, USA.

Bakhtsiyarava, M. 2017. Does Agricultural Specialization Matter? An Analysis of the Relationship between Climate Change, Agricultural Specialization and Children's Health in

Kenya and Mali. 28th International Population Conference of the International Union for the Scientific Study of Population (IUSSP), Cape Town, South Africa.

Bakhtsiyarava, M. 2017. Climate change and health: Evidence from the Kenya and Mali DHS. Annual Meeting of the Population Association of America, Chicago, USA.

Bakhtsiyarava, M. 2017. A Comparative Analysis of the Relationship between Climate Change, Agricultural Specialization and Children's Health: Evidence from Kenya and Mali, preliminary results. Annual Meeting of the Association of American Geographers, Boston, USA.

Bakhtsiyarava, M., Nawrotzki, R. 2016. Environmental inequality and pollution advantage among international immigrants in the United States, Inequality and Methods Workshop Series, Minnesota Population Center, University of Minnesota, Minneapolis, Minnesota.

Nawrotzki, R., Bakhtsiyarava, M. 2016. Seasonality in the climate-migration relationship in Africa. Annual Meeting of the Population Association of America, Washington, DC.

Nawrotzki, R., Bakhtsiyarava, M. 2015. Seasonality in the climate-migration relationship in Africa. Inequality and Methods Workshop Series, Minnesota Population Center, University of Minnesota, Minneapolis, Minnesota.

Bakhtsiyarava, M. 2015. Integration of Administrative Boundary and Census Data. Association of American Geographers Annual Meeting, Chicago, USA

Bakhtsiyarava, M. 2013. Digital elevation modeling during the process of creating orthophotographs. Annual GIS conference, Belarusian State University, Minsk, Belarus.

Bakhtsiyarava, M. 2011. Assessing the quality of cell reception in the central region of Belarus with the help of GIS. Annual GIS conference, Belarusian State University, Minsk, Belarus.

TEACHING EXPERIENCE

Teaching assistant, Geography of Health & Health Care, UMN Department of Geography, Environment and Society Fall 2018

Guest Lecturer on Climate Change and Health, Global Nutrition Class, UMN School of Public Health Spring 2019, 2018

Guest Lecturer on Climate and Population, World Population Problems Class, UMN Department of Sociology Spring 2018

Guest Lecturer on Linking Remotely Sensed Satellite Data to DHS in R, GIS & Spatial Analysis Class, UMN Department of Geography, Environment and Society Fall 2017

UNDERGRADUATE RESEARCH EXPERIENCE

Bakhtsiyarava, M. (2013). Digital elevation modeling during the process of creating orthophotographs. *Collection of research papers of undergraduate and graduate students of Belarusian State University*, 5.

Bakhtsiyarava, M. (2012). Assessing cell coverage quality provided by MTS, Velcom and Life mobile operators in Minsk Region, Belarus. *Proceedings of the Annual GIS Conference. Minsk, Belarusian State University*, 49-53.

Bakhtsiyarava, M. (2012). Belarusian agritowns. *Collection of research papers of undergraduate and graduate students of Belarusian State University*, 8.

Bakhtsiyarava, M. (2011). Agriecotourism: Its peculiarities in Belarus and in the world. *Collection of research papers of undergraduate and graduate students of Belarusian State University*, 6.

Bakhtsiyarava, Maryia. (2010). Population changes in Europe. *Wide World (GCSE geography)* 21(3), 15-18.

SERVICE

Reviewer for American Journal of Public Health, Applied Geography, Journal of Environmental Science and Management, Population and Environment	2016–date
Esri Campus Ambassador Program	2016–2017
Advisory Board, Minnesota Population Center	2016–2017
Training Committee of the Graduate Faculty in Population Studies, Minnesota Population Center	2016–2018
Department of Geography Coffee Hour Committee	2015–2016
Secretary of the GIS Students Research Lab at Belarusian State University	2013–2014
Volunteer at the Belarusian Association of UNESCO Clubs	2010–2011

PROFESSIONAL AFFILIATIONS

- Member, International Union for the Scientific Study of Population (2017 – present)
- Member, Association of American Geographers (2016 – present)
- Member, Population Association of America (2015 – present)
- Student Member, Minnesota Population Center (2015 – present)

ACADEMIC REFERENCES

Dr. Steven Manson	Dr. Kathryn Grace	Dr. Eric Shook
Department of Geography, Environment and Society University of Minnesota 414 Social Sciences 267 - 19th Avenue South Minneapolis, MN 55455 Phone: +1 612 625 4577 Email: manson@umn.edu	Department of Geography, Environment and Society University of Minnesota 414 Social Sciences 267 - 19th Avenue South Minneapolis, MN 55455 Phone: +1 612 625 4026 Email: klgrace@umn.edu	Department of Geography, Environment and Society University of Minnesota 414 Social Sciences 267 - 19th Avenue South Minneapolis, MN 55455 Phone: +1 612 625 5970 Email: eshook@umn.edu

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