

Integrating Population and Environment Data: The Terra Populus Project

Workshop co-sponsored by the PSTC and S4
March 16-17, 2017
PSTC Seminar Room

This two-day workshop provides members of the Brown community with an introduction to the intricacies of integrating demographic and environmental data—a necessary step in any research that investigates human-environment interactions (e.g. land use and migration or climate and demographic change). Using the University of Minnesota's Terra Populus project as a framework, the workshop will cover typical characteristics of both types of data, issues related to their combination, and examples.

The workshop will be organized around formal presentations, hands-on activities, and one-on-one meetings with our visitor. Details will be forthcoming; save the date!

Project Overview: Our understanding of interactions between population and environment has been hampered by differences in the data structures and analysis methods and tools used within different disciplines, as well as a dearth of internationally comparable data. Closely integrating global population data with data on the environment allows us to describe the unfolding transformation of human and ecological systems. Data on the human population are crucial for understanding changes in the Earth's biological and climate processes; equally important, data on climate and land provide essential tools for understanding the impact of environmental change on human behavior. By creating a framework for locating, analyzing, and visualizing the world's population and environment in time and space, TerraPop provides unprecedented opportunities for investigating the agents of change, assessing their implications for human society and the environment, and developing policies to meet future challenges.

Terra Populus provides global-scale data on human population characteristics, land use, land cover, climate, and other environmental characteristics. It makes these data interoperable across time and space, disseminates them to the public and to multiple research communities, and preserves these precious resources for future generations. The TerraPop framework provides tools for integrating, analyzing, and visualizing a wide range of data that have spatial and temporal dimensions.

Visitor: Steven Manson is a professor in the Department of Geography, Environment, and Society at the University of Minnesota in the Twin Cities. He directs the Human-Environment Geographic Information Science lab and U-Spatial. Dr. Manson combines environmental research, social science, and geographic information science to understand complex human-environment systems. His primary research interests are in land change in North America (examination of the patterns, processes, and impacts of urbanization and agriculture in the United States and deforestation in Mexico); Big Data and integrating local to global datasets; and GIScience, Complexity, and Scale.



Manson is a Resident Fellow at the U of Minnesota's Institute on the Environment. He is a past NASA New Investigator in Earth-Sun System Science and NASA Earth System Science Fellow. He received the Young Scholar Award from the University Consortium for Geographic Information Science, the Sustainability Science Award from the Ecological Society of America, and a University of Minnesota McKnight Land Grant Professorship. Manson teaches in the areas of geographic information science and spatial analysis of human-environment system.