

Urbanization, environmental change and community impacts on the landscape surrounding Mwanza Gulf, Tanzania

Ryan Z. Good - PhD Candidate (Geography)



TUE, APR 16

12:45 - 1:45

Grinter 376

Tropilunch is a weekly seminar run by graduate students from the Tropical Conservation and Development (TCD) Program. It provides a forum for a range of discussions and presentations related to TCD work and research. Special guests, visiting scholars and practitioners also participate. It happens every Tuesday @ 12:45 – 1:45 p.m. in Grinter Hall, Room 376.

Tropilunch presentations are recorded and posted weekly on TCD's YouTube Channel.

BIO

Ryan Z. Good is a Ph.D. candidate in the Department of Geography at the University of Florida in Gainesville, Florida. He is also affiliated with the Tropical Conservation and Development program and the Center for African Studies. His research concerns the relationships between resource management and environmental change in the Global South, particularly sub-Saharan Africa. Ryan currently teaches in the University Writing Program, and he has also taught multiple courses in geography. His career goals are to work in international development in either an academic or a non-profit setting. Prior to moving to Florida, Ryan was a student at Michigan State University and the University of Kansas.

PRESENTATION SUMMARY

The area around Mwanza Gulf, off of Lake Victoria in northern Tanzania, has experienced rapid and sustained urbanization during the past several decades. Anecdotal evidence from the ground indicates this urban growth on the landscape has significantly changed the nature of the lake, which is supported by a handful of localized ecological studies. Less attention has been given to a landscape-level study of change across the entire gulf. This study explores the nature of change on the landscape, exploring urban growth and lake change since 1984, using remote sensing techniques. The roughly 2300 square kilometer area of the gulf and its surrounding shores were examined utilizing Landsat imagery from 1984-2017. Change detection analysis, including NDVI and NDBI, was utilized across this landscape, producing both cartographic and statistical outputs of the locations and degree of changes occurring across this region. These outputs are cross-referenced with climatic data to draw final conclusions about the nature of change occurring since 1984, and results highlight the significant and rapid increase in urban cover across the time period and the changes in lake level and lake blooms as a direct result of these modifications. Impacts of landscape changes and lake fluctuations on local communities is also discussed.