

Donald Owele Akanga

673 Auditorium Road, Room 116, East Lansing, MI 48824
E-Mail: akangado@msu.edu Phone: +1 256 694-4795

Education

Michigan State University

East Lansing, Michigan, USA

PhD - Geography, Environment & Spatial Sciences

August 2018-May 2023

Graduate Certificate in Spatial Ecology

August 2018-December 2021

University of North Alabama

Florence, Alabama, USA

M.S - Geospatial Science

August 2016-May 2018

Kenyatta University

Nairobi, Kenya

B.S - Environmental Studies & Community Development

September 2009-April 2013

Technical Skills & Key Competencies

ArcGIS Desktop – Proficient

| ArcGIS Pro – Proficient

QGIS – Proficient

| Google Earth Engine – Intermediate

ENVI – Proficient

| R statistical software – Intermediate

ERDAS – Proficient

| Microsoft Office suite – proficient

Research Interests

- Climate Change and livelihoods sustainability
- Human environment interactions
- Community engagement and partnerships for development
- Remote sensing and geospatial applications to natural resources management

Dissertation Project (advised by Dr. Kyla M. Dahlin)

- Spatiotemporal analysis of land cover change within the Greater Mau Forest Complex, Kenya
- Assessment of socio-ecological status of the Greater Mau Forest Complex, Kenya
- Interconnections between land use land cover change and livelihoods in the Greater Mau Forest Complex, Kenya

Peer-reviewed Manuscripts and Publications

- **Akanga DO**, Moore N., & Dahlin KM. Advancing socioecological sustainability among vulnerable populations in a changing climate, a water, energy, and food (WEF) nexus approach (in prep).
- **Akanga DO**, Dahlin KM, & Moore N (2022). Accelerating agricultural expansion in the Greater Mau Forest Complex Ecosystem, Kenya. *Remote Sensing Applications: Society and Environment*, 100860.
- **Akanga DO**, Mighty M, Fleming P, Sim S & Koti F (submitted to Applied Geography). Spatiotemporal analysis of drought occurrence in Kenya using MODIS satellite data.
- Zhong S, Wang T, Siusco P, Shen M, Pei L, Nikolic J, McKeehan K, Kashongwe H, Hatami-Bahman-Beiglou P, Camacho K, **Akanga DO**, Charney J & Bian X (2021). Will land use land

cover change drive atmospheric conditions to become more conducive to wildfires in the United States? *International Journal of Climatology*. <https://doi.org/10.1002/joc.7036>

- Dahlin KM, **Akanga DO**, Lombardozi DL, Reed DE, Shirkey G, Lei C, Abraha M & J Chen (2020). Challenging a global land surface model in a local socio-environmental system. *Land*, 9(10), 398.

Conference Presentations & Participation

American Geophysical Union (AGU) | 2022 Fall Meeting | Chicago, IL

- Advancing socioecological sustainability among vulnerable populations in a changing climate, a water, energy, and food (WEF) nexus approach (Paper)

American Geophysical Union (AGU) | 2021 Fall Meeting | Online

- Shrinking grasslands in topographically heterogeneous landscapes: the Role of elevation and slope gradients in determining where land cover change (Poster)

National Center for Atmospheric Research (NCAR) | 2019 Workshop | Boulder, CO

- Carbon Cycle Change in Kalamazoo River Watershed (Poster)

American Association of Geographers (AAG) | 2018 Annual Meeting | New Orleans, LA

- Analysis of spatiotemporal occurrence of agricultural drought in Kenya using Modis satellite data (Paper)

Southeastern Division of the American Association of Geographers (SEDAAG) | 2018 Annual Meeting | Starkville, MS

- Examining spatiotemporal occurrence of agricultural drought in Kenya using remotely sensed data (Paper)

International Cartographic Conference (ICC) | 2017 | Washington, DC

- Geospatial science graduate opportunities at the University of North Alabama (Exhibition)

Work Experience

Michigan State University

East Lansing, Michigan, USA

Instructor of Record

2020, 2021, and 2022 Summer

- Taught ISS 310 (People and the Environment, Online), GEO 221 (Introduction to Geographic Information System - Online), and GEO 221L (Introduction to Geographic Information System Lab - Online)
- Guiding students to complete course labs and quizzes
- Guiding students through the course material
- Communicating to students about essential information in the class
- Grading labs, quizzes, and exams, and providing feedback to students
- Improving existing lab materials, activities, and lesson modules

Michigan State University

East Lansing, Michigan, USA

Graduate Teaching Assistant

August 2020- December 2020

- Instructor of record for ISS 330 (People and Environment), GEO 330 (Geography of the United States, Online), GEO 204 (World Regional Geography, Online), and teaching assistant for GEO 324 (Remote Sensing of the Environment)
- Guided students to complete course labs and quizzes.
- Guided students through the course material

- Communicated to students about essential information in the class.
- Graded labs, quizzes, and exams, and provided feedback to students
- Improved existing lab materials, activities, and lesson modules.

Michigan State University

East Lansing, Michigan, USA

Graduate Research Assistant

August 2020- December 2020

- Collaborated with US NASA Carbon Cycle Science MSU team to predict future changes in biodiversity and ecosystem functioning
- Researched on the Earth system models – the Community Land Model
- Downloaded, processed, and analyzed remote sensing data for understanding socio-ecological systems
- Participated and disseminated project results in conferences/workshops

Lawrenceburg Utility Systems

Lawrenceburg, Tennessee, USA

GIS Intern

May 2018 – August 2018

- Gathered, analyzing, and integrating non-geospatial information to acceptable GIS formats
- Collected electric, water, gas and sewer meter locations and other attributes
- Collected data on newly installed utility infrastructure
- Performed mapping and data analysis tasks e.g., producing graphic and tabular data
- Created, organized, and updated GIS databases and digitized geographic data

University of North Alabama

Florence, Alabama, USA

Graduate Teaching Assistant & GIS Lab Instructor

August 2020- December 2020

- Assisted in teaching physical geography (level 100), GIS (level 300), and remote sensing (level 400) courses
- Guided students to complete course labs and quizzes
- Guided students through the course material
- Graded labs, quizzes, and exams, and provided feedback to students
- Improved existing lab materials, activities, and lesson modules

Komaza

Kilifi, Kenya

Interim Nursery Manager

September 2015 – May 2016

- Supervised 20 Nursery Daily program operations management of the department
- Prepared and managed departmental budget and procurement requirements
- Mentored and conducted performance reviews and appraisals for the nursery staff (20)
- Prepared reports and disseminated findings to top-level management and investors
- Developed Standard Operating Procedures (SOPs) for company scaling

Komaza

Kilifi, Kenya

Project Management Associate & KIVA Coordinator

October 2013 – May 2016

- Led Short Term Crops (Sorghum) Project cycle for local farmers in Kilifi County
- Trained field extension officers on project management
- Recruited, trained, and supervised Project Management Interns
- Planned and executed Wood Market Survey Project for Kenyan coastal counties
- Conducted Komaza Environmental Impact Assessment and Audit

Komaza

Project Management Intern

- Planned and executed Agroforestry Savage Harvest project
- Collected, analyzed, and presented data and report on community partnerships
- Led community engagement exercise to educate farmers

Kilifi, Kenya

June 2013 – October 2013

Ecotourism Kenya

Eco-rating Intern

- Analyzed Eco-Rating Questionnaires and generation of management reports
- Conducted field audits for accommodation facilities at Masai Mara National Reserve
- Researched information to develop training curriculum on Ecotourism best practices
- Collected data on newly installed utility infrastructure
- Maintained eco-rating database
- Performed customer care and Front office services

Nairobi, Kenya

May 2012 – August 2012

Field Experience

PhD Dissertation Research

May 2022 – July 2022

- *Interviews and household surveys on interconnections between land cover change, climate variability, and livelihoods in Bomet, Kericho, Nakuru, and Narok counties*

Komaza Coast Wood Market Survey

August 2014 – November 2014

- *Conducted field market survey in Kilifi, Mombasa, Kwale, and Taita Taveta counties*

Ecotourism Kenya

August 2014 – November 2014

- *Conducted Eco-rating evaluations in Maasai Mara tourist facilities under supervision of the Eco-rating Manager*

Kenya Agricultural & Livestock Research Organization

May 2011 – August 2011

- *Field assistant, CIMMYT – International Maize and Wheat Improvement Center*
- *Collected and analyzed field data on the following projects:*
 - ✓ *Insect Resistant Maize for Africa (IRMA)*
 - ✓ *Water Efficient Maize for Africa (WEMA)*
 - ✓ *Drought Tolerant Maize for Africa (DTMA)*

Research & Travel Funding

○ Michael A. Graff Dissertation Completion Award	\$2,000	Spring 2022
○ Department of Geography, Research/Travel Fellowship	\$1,420	Spring 2022
○ Graduate Office Fellowship (GOF) Research Grant	\$1,450	Spring 2022
○ African Study Centre conference Travel Fellowship	\$425	Fall 2021
○ College of Social Science (CSS) Fellowship	\$3,500	Spring 2021
○ Sommers Graduate Fellowship/International Research	\$1,500	Spring 2021
○ Graduate Office Fellowship (GOF) Research Grant	\$2,132	Spring 2021
○ National Center for Atmospheric Research (NCAR)	\$3,500	Spring 2019
○ College of Arts and Sciences, UNA	\$1,016	2017/2018
○ Office of International Affairs, UNA	\$800	2017/2018
○ Department of Geography, UNA	\$600	2017/2018
○ Center for Sustainability, UNA	\$500	Spring 2017
○ Freddie Wood Travel Grant, UNA	\$300	Fall 2017

Total \$19,143

Awards & Recognition

- Michigan State University Cloud Computing Fellowship 2019
- Phi Kappa Phi Spring 2018 Graduation Photo Contest winner 2018
- SEDAAG Graduate Student Paper Competition, Finalist 2017
- Certificate of Excellence – Komaza Kenya 2014
- Kenyatta University Students Association, Congress Representative 2011-2012
- Bayer-United Nations Young Environmental Envoy Program, Runner-up 2011
- Bayer-United Nations Young Environmental Envoy Program, Finalist 2010

Professional Memberships & Certifications

- American Geophysical Union - Member
- American Association of Geographers (AAG) - Member
- Phi Kappa Phi Chapter 132 – Academic Honor Society
- Kenya Scholars and Studies Association – Member
- Certified Associate in Project Management (CAPM) – Project Management Institute
- Certified Environmental Impact Assessment & Audit Expert – National Environment Management Authority (NEMA)– Kenya

Outreach, Non-Profit & Volunteerism

- Higher Education Loans Board (HELB) Kenya Diaspora Ambassador December 2018-present
 - *Mobilizing loan repayments among Kenyans in USA*
 - *Recognized for outstanding performance*
- Young Leader, Transforming Young Stars of Africa (TYSA), Kenya June 2013-present
 - *Provide academic mentorship to youth in the organization*
- Vice President, Association of Kenyans in Lansing (AKL), Michigan USA 2019-2021
- International Liaison, Michigan State University Geography Graduate Group 2019-2020
- Founder Opportunities Across Continents (OAC) International 2018
 - *Non-profit organization connecting youth from developing countries to opportunities around the globe including further studies, cultural exchanges, and entrepreneurship through local and global partnerships.*
- Swahili language instructor at University of North Alabama Spring 2018
 - *Taught conversational Swahili to UNA students enrolled in a summer study abroad program to Tanzania*
- Panelist for the 2019 Earth Day Film “Thank You for the Rain” Lansing, MI April 2019
 - *Discussed effects of climate change on community livelihoods in Africa 4/23/19*
- American Association of Geographers (AAG) 2018 New Orleans LA April 2018
 - *Conference Assistant*
- Student Leader, Kenyatta University Kenya Congress 2011-2012
 - *Secretary, Kenyatta University Environment & Health Committee*
 - *Represented students in the Students in the Student Governing Council*
 - *Students’ academic advising and peer counseling to students*
- International Conference on Biodiversity, Land Use & Climate Change Nairobi, Kenya 2010
 - *Conference Assistant*