COLLEGE OF ATMOSPHERIC AND GEOGRAPHIC SCIENCES
DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL SUSTAINABILITY
The UNIVERSITY of OKLAHOMA

Postdoctoral Positions in Satellite Remote Sensing for Monitoring Global Change: 1) Drought, Fire, and Forest Carbon Dynamics in West Africa, and 2) Urban Microclimates and Disease Transmission in India.

We seek two dedicated and enthusiastic postdoctoral researchers to join our research group. These positions are in the Ecological and Geospatial Research and Applications in Planetary Health (EcoGRAPH) group in the Department of Geography & Environmental Sustainability at the University of Oklahoma. Our research explores the impacts of changing climate and landscapes on ecosystems and human health. We address these topics through landscape, regional, and global analyses using satellite remote sensing and environmental monitoring data. Major research foci include the effects of environmental change on vector-borne disease outbreaks and the influences of human land use and wildfires on forest landscape dynamics. We conduct our research in locations throughout the world including North America, West Africa, Ethiopia, and India.

1) Drought, Fire, and Forest Carbon Dynamics in West Africa: The postdoc will study the effects of climate variation and forest degradation on wildfire risk, the effects of fire on forest structure, and the implications of these dynamics for carbon storage in West African tropical forests under a changing climate. This research will require integrating multiple sources of remote sensing data including Landsat, GEDI, ECOSTRESS, and VIIRS. The position is funded for three years through a grant from the NASA Carbon Cycle Science Program.

2) Urban Microclimates and Disease Transmission in India: The postdoc will conduct high-resolution analyses of urban settlement patterns and their changes in the Gujarat region of India. The resulting data will be used to predict variation in mosquito habitats and microclimates in two major cities and will be linked to epidemiological models of malaria transmission risk. This research will use Landsat, Sentinel-1, and Sentinel-2 data along with very high-resolution datasets like PlanetScope. The position is funded for three years through a grant from the National Institutes of Health.

Applicants must have a Ph.D. with research experience using satellite Earth observations. The Ph.D. must be completed before starting the position. The desired candidate would have strong writing and communication skills combined with programming experience using relevant platforms such as R, Python, or the Google Earth Engine API. Strong interest in studying fire and forest dynamics, urban systems, or vector-borne disease ecology is also desired.

These positions are available as early as September 1, 2021, although a later start date is negotiable, and will remain open until filled. Candidates from diverse backgrounds and underrepresented demographics are encouraged to apply. To apply, please send a letter of interest and a CV to Dr. Mike Wimberly at mcwimberly@ou.edu. Please feel free to send an email first if you have questions about the position.

The University of Oklahoma is committed to achieving a diverse, equitable, and inclusive university community by embracing each person's unique contributions, background and perspectives. The

University of Oklahoma recognizes that fostering an inclusive environment for all, with particular attention to the needs of historically marginalized populations, is vital to the pursuit of excellence in all aspects of our institutional mission. This enhances the OU experience for all students, faculty and staff and for the communities we engage. The Department of Geography and Environmental Sustainability recently completed a cluster hire focused on sustainability and equity, and has made a commitment to pursue transdisciplinary scholarship in this area.