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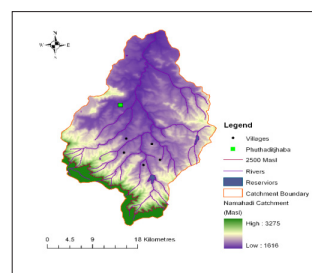
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Is there any relationship between the spatiotemporal variability of ozone concentration in the Pacific Ocean and ecosystem phenology in the Drakensberg mountains?**Geoffrey Mukwada**

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Climate change is posing a threat to ecosystem health in mountain regions. Mountain environments are not only fragile because they are easily being affected by extreme climate conditions, but they also provide signals of climatic change and its impact on ecosystem phenology. Based on both vegetation and climate indices, this study assesses how ecosystem phenology within the Namahadi catchment area of the Drakensberg Mountains in South Africa has been affected by climate change. In recently published research, it had been shown that the variability of ozone concentration in the Pacific Region was responsible for drought occurrence across southern Africa, while it was also revealed that there are sentinel pristine sites within the catchment from which the impact of climate change can be effectively assessed.

Using climate data from CRU-TS and Landsat images, climate and vegetation indices for the pristine sites were computed and correlation analyses undertaken to determine, if there were any teleconnections between the variability concentration of ozone in the Pacific Ocean and climate indices and vegetation phenology at the pristine sites. Based on the results, the study concludes that it may be possible to predict drought once extreme signals of ozone concentration have attained specific thresholds in the upper troposphere and lower stratosphere. This knowledge is important for drought monitoring and disaster preparedness in mountain areas.

**Biography**

Geoffrey Mukwada is an Associate Professor in Environmental Geography and is based at the University of the Free State in South Africa. His research primarily revolves around natural resource management, climate change and rural livelihoods. He has published more than 30 papers in accredited journals. He is the Founding Coordinator of the Afromontane Research Unit at the University of the Free State and is the current Coordinator of the living and doing business in Afromontane Environments theme of the ARU.

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