

# JOINT E-CONFERENCE ON RENEWABLE ENERGY AND SUSTAINABILITY & GEO SCIENCE AND GREEN TECHNOLOGY MARCH 15-16, 2023 | WEBINAR



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## **The role of Geographical Information Systems (GIS) on assessing the Impact of Climate Change on Biodiversity (A Case Study of Northern Region Malawi)**

Globally, Climate change has been recognized as one of the biggest challenges that humanity is facing today. Climate change is happening due to natural factors and human activities. It has serious worldwide implications on biodiversity, economic development, food security, and poverty eradication for developing countries. Malawi is amongst developing countries in Southern Africa. Its socioeconomic development continues to be affected by the impacts of climate change. Due to climate change, distributions of species have shifted to higher elevations at a median rate of 11.0 m and 16.9 km per decade to higher latitudes. Accordingly, extinction rates of 1103 species under migration scenarios, provide 21-23% with unlimited migration and 38-52% with no migration. In response to Climate change as a global threat, international countries introduced several efforts such as European Green Deal, Paris Agreement, and Green Climate Fund. The government of Malawi also introduced various actions as a key priority at national level to increase resilience of its vulnerable population and ecosystems. The following measures have been put in place, National Climate Management Policy, The National Climate Change Investment Plan and National Climate Change Resilience Strategy. In Nkhata Bay one of the districts in the Northern region of Malawi several measures have been put in place to mitigate the impact of climate change such as adoption of environmentally sustainable farming, building resilience to climate change, promoting stewardship of forest conservation and management and increase household income through forest-friendly enterprises. This paper examines the role of GIS as a tool for Environmental Planning and Management. The capabilities of GIS are perceived in the following: perfective, environmental information data collection and management (Input, update and retrieval, display and visualization of digital environmental information, and spatial analysis of environmental information).

### **Biography:**

I recently graduated with a Bachelor's Degree in Education and Humanities in 2020 at the University of Livingstonia where I specialized in Geography and English. Before this, I worked as a certified teacher in Primary Education which I got from Karonga Teachers Training College. I worked for a few years as a primary school teacher before going back to University for my degree. I also worked as a Radio Reporter for about a year for a local community radio station where I interviewed people and reported on different events happening in our town. Along the way I picked up so many skills. Poetry has also been a huge part of my life; I use it as a form of self-expression. When I'm not doing any work-related activities I enjoy sports and I can play basketball and volleyball.