

NEWS

Climate cropland changes 'raising temperatures' in East Africa

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[NAIROBI] Research predicts that vast amounts of land in East Africa will be converted from grasslands to ploughed fields over the next 40 years, as wetter conditions caused by climate change attract crop farmers to grazing grounds.

"The transformation of natural ecosystems into croplands will be the biggest contributor to global warming in East Africa," says Pius Yanda, director of the Institute of Resource Assessment at Dar es Salaam University in Tanzania.

Yanda took part in the Climate Land Interaction Project (CLIP), a collaboration between Kenyan and US scientists, which combined meteorology modelling with studies of land-use changes and high-resolution satellite imagery to make the forecasts.

According to the UN Intergovernmental Panel on Climate Change, most climate models predict East Africa to be the only tropical region in the world that will have a wetter climate by the end of the century. Wetter and warmer conditions are likely to cause a drop in existing agricultural productivity.

The CLIP study, released last month (22 July), warns that some agricultural land will get drier while arid land in the remote northeast gets wetter, causing dramatic changes in land use.

By 2050, nomadic cattle and goat grazers in the Wajir region of northeast Kenya will be affected by increased rainfall, which encourages scrub growth instead of existing grassy ground cover.

Differences in soil moisture can alter the type of grass grown, which will adversely affect livestock feed. Furthermore, increased bush growth can encourage mosquitoes and other vectors that spread diseases such as highland malaria, sleeping sickness and Rift Valley fever.

This could lead to displaced livestock and their keepers, concentrating them in areas with less rainfall and plant growth. The resulting increased land pressure could lead to soil degradation.

The process may trigger land disputes over limited usable land as drought strikes other semi-arid regions and pastoralists abandon some regions, says Joseph Mworio Maitima, a CLIP researcher from the International Livestock Research Institute in Nairobi.

"Unmitigated climate change will undermine Kenya's economy, with significant negative impacts on human livelihoods, health, water resources, agricultural production and food security as well as nature-based tourism," Emily Massawa of the Kenyan Ministry of Environment and Mineral Resources, told SciDev.Net

CLIP presented their findings to policymakers in workshops in Kenya and Tanzania in June, to try to influence



Vast amounts of land in East Africa will be converted from grasslands to ploughed fields over the next 40 years, predict researchers
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decision-making in the region.

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