

Land Use, Co-Operatives and Climate Change Nexus

By

Somo, M.L. Seimu

Department of Community and Rural Development, MUCCoBS

Yusufu Kulindwa

Department of Cooperative Development and Management, MUCCoBS

(2011)

Over the last decade there has been increasing in the impact of global use. Much of the land use in Sub-Saharan Africa is a result of human activities that are largely driven by the demand for more land to meet and improve food security, alleviate poverty, and also enhance the human and social welfare at household and community levels mostly in Sub-Saharan Africa where most of the population is largely rural, poor and dependent on traditional agricultural systems for survival. In Tanzania rapid forest depletion has been associated with increase in population, extensification of agriculture activities and increase in demand for forest products (Misana and Nyaki, 1983), Mather and Needle, 2022). Various studies have established that extensification is a key driver for removal of forested land, which is the major carbon stock on one hand and intensification of agriculture can result in higher rates of carbon sequestration (Wootner et al., 1997; IPCC. 2000). African countries south of Sahara have developed programmes to modernize agriculture in an effort to reduce poverty, improve food security, and increase the capacity to generate foreign exchange earnings through the sale of agricultural products. Also, states that expansion of agriculture through conversion of forests and grassland during the past 140 years has led to a net release of about 121 gigatons of carbon, of which about 60% has been emitted in the tropics. Moreover, climate change impacts and associated vulnerability are of particular to developing countries, where large parts of the population depend on climate sensitive sectors like and forestry for livelihood. The relationship between climate change and agriculture is however a one: climate change in general adversely affects agriculture and agriculture contributes to climate change in several major ways whereby it directly releases into the atmosphere a significant amount of carbon (CO₂), methane (CH₄) and nitrous oxide (N₂O), amounting to around 10-12 percent of global greenhouse gas emissions annually (Smith et al., 2007).

In this context, this paper reveals that land use, cooperative and climate change nexus are closely linked and interdependent; humans exploit land for agriculture for their livelihoods and nations. Programmes meant improve food security and alleviate poverty all of which results into immense contribution on climate change, primary through the production and release of greenhouse gases. It is the opinion of the presenters that a comprehensive strategy for addressing climate change must include both mitigation and adaptation. For the most rural farmers, the vulnerable group, whose livelihoods are being impacted by climate change, adaptation is urgent. For this to succeed concerted and sustained mitigation efforts worldwide, starting with the largest contributors to greenhouse gas (GHGs) emissions are urgent.