

## Perception of climate change by farmers in Cameroon highlands

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**Keywords:** Climate change, land use change, perception, highlands, Cameroon

**Abstract:** Africa is affected by global changes, demographical and economical but also by climate change. This situation is specifically affecting rural areas. This research is focused on Cameroon highland, a low documented area in comparison to other African regions like Sahel or East Africa. It aims to draw a comprehensive typology of farm households with regard to their climate change perceptions and strategies of adaptation.

West part of Cameroon is a mountainous area between 700 m and 1500 m high, where climate is characterized by lower temperatures and a transient rainfall regime, between a humid tropical monsoon climate in the south and a tropical humid mountain climate in the north. It is also affected by land use evolution and diversification since the 1980s due to demographic change and the integration of agriculture into the market economy, resulting in the colonization of available land, from summits to low-land along rivers. Most of households are involved in an agricultural activity, like gardening, coffee or cocoa production. Demographic and climate changes reshape the various natural hazards observed for decades: floods, landslides, weather hazards, land-use conflicts. The changes and risks that affect rural dynamics are very complex: changes in rainfall, natural hazards and social risks are closely linked together.

In order to understand the influence of climate or socio-economic changes in the adaptation process of rural populations, this research is based on the study of perceptions to environmental changes from farm households. We used a mixed-method approach including quantitative surveys (with 170 interviews) and qualitative interviews in three different villages, which present a social, economic and agricultural diversity (different ethnic groups, mountainous agroforestry, lowland gardening, livestock farming).

Key findings suggest that even if most households perceive a change in climate, especially an evolution of the rainy season pattern, this perception is not homogeneous, suggesting that perception and therefore adaptation strongly depend on socio-economic factors, as the main activity or the location of their fields between lowlands and slopes.