

## Assessing perception and adaptation to socio-ecological changes in rural Africa : first results from a case study in Cameroon

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SUMMARY. — West-Africa is affected by global changes, particularly by demographical and economical transformations and climate change modifying rainfall spatio-temporal structures. This situation is specifically affecting rural areas. In western Cameroon, land use has evolved and diversified since the 1980s: coffee cultivation, followed by eucalyptus, and recently an increase in gardening (Uwizeyimana, 2009). This is observed throughout West and Central Africa in response 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 (Tchatchouang, 2015). Western Cameroon is located in a transient rainfall regime, between a humid tropical monsoon climate in the south and a tropical humid mountain climate in the north (Tsalefac et al., 2003). This effect is due to the topography of the region which extends from sea level to the highlands above 1500m. Climate changes come here in addition to the various natural hazards observed for decades: floods, landslides, weather hazards, land-use conflicts. The changes and risks that affect rural dynamics and migration are very complex: changes in rainfall, natural hazards and social risks are closely linked together. The work focus here on West Cameroon, because it is still a low documented area in comparison to other Africans regions like Sahel or East Africa.

To understand interactions between environment and society, this research in geography is based on a transdisciplinary approach. The objective is to define and evaluate how rural societies in western Cameroon perceive and, in particular, adapt to socio-environmental changes and risks. The presentation will show the preliminary results of the study focalized on a rural community (Kekem), which present a social, economic and agricultural diversity (mountainous agroforestry, lowland gardening, livestock farming). The research uses a mixed-method approach. Quantitative surveys (n=94) are used to evaluate the perception of changes and risks from people, and factors influencing this perception. We also used qualitative interviews to highlight adaptations strategies used to cope risks and changes.

Key findings from the village of Kekem suggest that most households perceive a change of the beginning of the rainy season, which occurred earlier in recent years. Compared to the rainfall data collected in Bafang (20 km), this perception is correct. The percentage of people perceiving this rainfall trend is close to other results observed in Africa, as in Ethiopia (Habtemariam et al., 2016). There is also an increase in some natural hazards, whether landslides or floods, and land-use conflict. Surveys show that exposure and perception of risk depend mainly on social factors, as shown by farmers' better perception of rainfall evolution and the exposure of migrants to floods due to the location of their fields in lowlands. In the surveyed community, we observed that coping strategies are closely linked to migration. Migration to cities is a solution often chosen by households that face multiple environmental problems. Conversely, return migration is at the origin of grouping farmers into cooperatives aimed at reducing economic risks, especially for cocoa and coffee production.

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