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HOUSEHOLD WELL-BEING, DIVERSIFICATION AND CLIMATE CHANGE IN BURKINA FASO

The West African Sahel region has had its share of adverse climate impacts. Several studies have shown that variability in rainfall has increased in the last decades and that climate change most probably has a considerable impact on this variability (Boko, M. et al., 2007). Sahelian societies and their agricultural systems will be increasingly subjected to this variability.

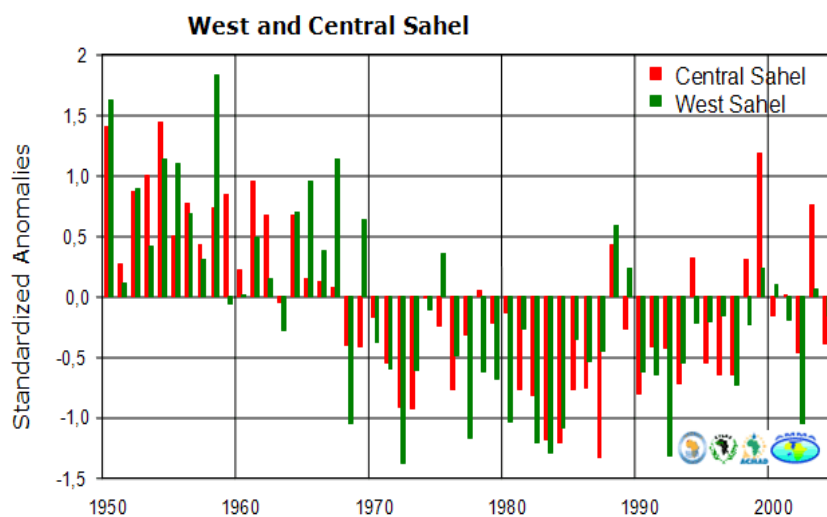


Figure: June to September standardized rainfall anomalies for two rainfall regions in West Africa from 1950 to 2004. Rainfall stations within the West Sahel (7 stations), the Central Sahel (14 stations), and the Guinea Coast (10 stations) regions have been found to exhibit similar rainfall variability on interannual to decadal time scales (Nicholson, S.E. and Palao, I.M., 1993) ; (Moron, V., 1994). The time series reveal that Sub-Saharan West Africa has a very variable climate (Le Barbé, L. et al.,

2002).

Source: ([http://www.impetus.uni-koeln.de/content/rainfall var.html](http://www.impetus.uni-koeln.de/content/rainfall_var.html), 2008).

However, that doesn't necessarily mean they will be increasingly vulnerable to it. Farmers and pastoralists have long since developed a range of strategies to cope with this variability (Mortimore, M.J. and Adams, W.M., 1999; Jouve, P., 1991; Ellis, J. and Galvin, K.A., 1994; Swinton, S., 1988). In addition to this, rapid changes in land use and socio-economic conditions have been observed in the West African Sahel region in the last three decades. Emerging markets, investments from well-off urban dwellers and remittances from emigrated members of rural households are but a few of the examples that point towards an open and dynamic system (Geist, H.J. and Lambin, E.F., 2004).

This PhD research starts from the idea that Sahelian households with strongly diversified incomes and activities reduce their vulnerability to potential adverse effects of climate variability. One of the hypotheses is moreover that climate variability does not have a significant influence anymore on household labour allocation decisions.

A custom-developed wealth indicator based partly on household assets shows that poverty headcount (of households) has declined in Burkina Faso during the last decade. We found no significant correlation between the degree of variability of rainfall and poverty headcounts between 1998 and 2007 for different geographical areas of Burkina Faso. The same indicator predicts that Burkina Faso is heading towards the achievement of the first Millennium Development Goal faster than previously estimated. Analysis of survey data between 1998 and 2007 suggests that rainfall variability does not significantly influence household labour decisions. Further in-depth analysis of data prior to 1998 will determine whether rainfall variability did play an important role during the severe draughts of the early 1970's and 1980's. My ongoing research investigates the relationship between household economic decisions and household poverty.

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Picture: Household income diversification. Boy herding donkeys at the southern border of the Sahel, Dapaong, Togo.

Keywords: Sahel, Household economic well-being, Climate change, Burkina Faso, Senegal, Mali, Niger

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