

Discussion of Population and Environment Interactions in West Africa

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Résumé français : Discussion sur les interactions Population-Environnement en Afrique de l'Ouest

Les catastrophes prévues en Afrique de l'Ouest, du fait de la sécheresse et de la croissance démographique rapide, n'ont pas eu et les paysans ont su remédier à leurs difficultés en optant pour diverses stratégies adaptatives telles que l'intensification culturelle, la migration ou encore la diversification de leurs revenus. A la lumière des études présentées dans le cyber-séminaire et d'autres sources tirées de la littérature récente (voir bibliographie), ce papier vise toutefois à examiner la soutenabilité de ces pratiques en examinant trois de leurs aspects : intensification, migration et tensions foncières.

Les formes d'intensification sont diverses et souvent effectives, même si elles se font au prix d'une dégradation des ressources comme le sol ou les forêts. A partir de différents cas, on constate également que l'intensification profite souvent plus aux paysans riches et renforcent les inégalités foncières. Dans le cas du coton –alors que les cours mondiaux ont baissé–, certaines études montrent néanmoins que l'ensemble de la paysannerie en a tiré profit.

La migration demeure un moyen d'assurer la sécurité alimentaire et de maintenir l'agriculture, suscitant souvent de nouvelles synergies. Mais le bilan reste contrasté, notamment en raison de l'exemple malheureux des migrants burkinabés de retour de Côte d'Ivoire. Un élément qui semble manquer est la dimension de genre et la place des femmes dans les diverses formes de mobilité rencontrées, en termes de pratiques, de mécanismes, d'effets et plus généralement à propos de l'évolution des rapports entre hommes et femmes impulsée par la migration.

Dans le domaine foncier, les effets de l'intensification et de la densification se traduisent par une individualisation accrue des droits et par une raréfaction des terres disponibles. Dans ce domaine, les femmes se trouvent encore une fois en situation plus fragile. Une grande confusion règne également en de nombreuses zones d'Afrique de l'Ouest en raison de la coexistence des droits coutumiers locaux et des systèmes fonciers plus formels souvent encouragés par les autorités publiques. Il semble qu'un effort de contractualisation des transactions foncières aiderait l'ensemble des agriculteurs dont les droits sur la terre sont précaires et tendrait à limiter la fréquence des conflits aujourd'hui fréquemment observés.

Several decades after the great droughts that affected Sahelian and Sudanian West Africa, neo-Malthusian predictions of societal collapse have not occurred, despite the doubling of population in many areas. Farmers in semi-arid West Africa, like other regions of sub-Saharan Africa, are using different adaptive strategies to manage increasing populations and decreasing land availability. They are intensifying their production systems, migrating in search of seasonal work or better land and diversifying their incomes beyond the farm (Mortimore and Adams 1999). In some cases, there has been synergy between agricultural and socio-economic development, with agriculture spurring off-farm commerce, infrastructural development and access to schooling and health care. Despite this, there are some questions as to whether these areas can sustain continued economic growth if population continues to increase at past rates. Several of the case studies illustrate that with increased population pressure, there have been changes in land cover, with agricultural areas replacing forests. Farmers are concerned their resource bases are being degraded. With migration and population growth, land has become scarce and conflicts have increased. I will address three themes that emerge in the different case studies: agricultural intensification and landscape change, migration and changing land rights and conflict.

Agricultural Intensification and Landscape Change

The ability to intensify production systems in contexts of rapid population growth and declining land availability determines whether farmers succeed or fail at agricultural production in semi-arid Africa. There is growing evidence that farmers in sub-Saharan Africa are changing their landscapes and improving welfare through intensification (Tiffen, et al. 1994; Turner et al. 1993) using practices such as manure application, agro-forestry and soil conservation techniques (Gray 1999; Mazzucato and Niemeijer 2000). Several of the case studies demonstrate that under population pressure, farmers are intensifying their agricultural systems. For example, the case study of cotton cultivation in Tao (Mali), where cotton cultivation is well established, shows that yields of most crops are higher now than they were in the past, despite the perception that land is more degraded. Farmers are using more manure and other soil building techniques.

Intensification, though, has led to changing landscapes, with fields replacing fallows and forests. Benjaminsen (2001) also finds this in Mali, where intensive farming strategies have led to an anthropogenic landscape where some types of natural resources, particularly types enhanced by human activity such as soils and trees on farms, are maintained, while others such as forests and biodiversity are lost.

In much of rural Africa, while intensification has benefited many farmers it has not been an even process, but one that has resulted in social costs, particularly in the form of uneven distribution of assets and differential environmental trade-offs. Murton's (1999) examination of population-environment interactions in the Machakos region of Kenya contends that intensification has been accompanied by differential access to non-farm income and unequal land tenure. Hulme et al (2001) argue that in several wetland locations in Africa intensified production systems are leading to uneven individualization of land rights and socioeconomic differentiation. There is evidence of some unequal access to resources in some of the study areas. Farmers in the older cotton cultivation area of Mali (Tao) show differential practices. Wealthier farmers are intensifying at a faster rate, although poorer farmers also use soil amending inputs but at a lower rate. By examining the differential practices of wealthier and poorer farmers in Mali, the case study allows us to see the effects of intensification on socio-economic change.

Several of the case studies examine cotton growing regions. While the cotton sector has recently faced difficulties in West Africa because of declining world prices, both the Mali and Burkina Faso case studies show how cotton and new agricultural technologies have led to certain synergies between agricultural development and socio-economic development. Farmers from all income groups in the area of older cotton cultivation of Mali perceive that they are much better off. This is because of the presence of cotton and the development strategies of CMDT, the Malian cotton parastatal. In Garalo, a relatively recent cotton zone, many farmers, particularly poorer farmers, do not perceive that they are better off.

Migration

One theme of the case studies is that since the great droughts of the 1970s and 1980s, farmers have undertaken migration as an adaptive strategy. Farmers have migrated to new agricultural frontiers in search of better agricultural land, made possible, in many cases, by disease eradication. The Niger case study illustrates how farmers use seasonal migration as a tool for sustaining agricultural livelihoods and household food security.

Several of the cases illustrate that migration has led to new economic opportunities and economic growth. Migrants bring with them new skill sets and new experiences. The Burkina Faso case study illustrates how migrants have brought with them new strategies for agricultural innovation and entrepreneurship. Migrants have cultivated cash crops such as cotton which has permitted them to acquire new agricultural implements and use fertilizer. Other synergies have been observed as well. Permanent markets have been introduced. New activities employ people in the off-farm sector. The livelihoods of migrants have improved in the eastern region of Burkina Faso, where poverty levels have decreased, and infrastructure has been enhanced. This is partially due to in-migration and also because of a hydroelectric dam which has increased economic opportunities. The case study in southwestern Burkina Faso shows a different scenario. Poverty has increased over time. This is a region which has experienced out-migration in the 1990s and was heavily affected by returned migrants from Cote d'Ivoire in the past several years.

One element that is missing in the case studies of migration is the gendered dimension of access to resources and of coping strategies. Do female migrants have rights to land or rights to cultivate crops? Evidence from Burkina Faso suggest that female migrants often have reduced access to land (McMillan, 1995). In Niger, one of the main strategies has been seasonal out-migration by young men. What happens to female headed households that are left behind? Are they independent or are they subsumed into larger extended households? What does this mean for the well-being of women and children? Short-term migration is one of the major coping strategies for families during times of drought and famine. When men migrate in search of work or other income, there is some evidence that it may lead to an increase in female-headed households which can lead to a feminization of poverty and increased famine vulnerability. Women are often entirely responsible for feeding families during the period when their men-folk are not there. It would be interesting to see how seasonal wages earned are divided among different household members and whether women have a say in how off-farm income is utilized.

Changing Land Rights and Conflict

Debates about land tenure as a key institution that mediates between population changes and environmental outcomes have shaped policy and research priorities. One large debate is the effect of land tenure systems on investments in land and soil quality. Many government policy makers continue to believe that communal tenure systems impede agricultural investment, despite the fact that research has consistently failed to demonstrate impacts of titling and formal individualization on investment behavior (Migot-Adholla et al 1991; Platteau 2000, Sjaastad and Bromley 1997). This is particularly true for Burkina Faso, where studies have found no link between tenure status and agricultural practice (De Zeeuw 1997). In contrast, there is a growing literature that farmers use investments in land quality to strengthen rights to land. Research in Burkina Faso illustrates how farmers seem to be quite conscious of how intensification gradually strengthens rights to land. The longer one can stay on a field, whether one is a local or migrant farmer, the more difficult it is to take the land away and the less authority lineages and communities have over the field (Gray and Kevane 2001).

With increased population growth and agricultural intensification, there is a trend towards land scarcity and an evolving individualization of land rights. One concern about land rights with intensification is that as individual rights are expanded, other types of rights holders are excluded, particularly those with secondary or weak rights, often women, migrants and pastoral nomads. For example, women and migrants in sub-Saharan Africa frequently have tenuous land tenure status. Women generally gain access to land through their status as wives, mothers, and sisters. Rights frequently change with a change in status: divorce, marriage, or widowhood often changes a woman's rights to land (Hilhorst, 2000). Likewise, migrants are vulnerable to having land taken away from them.

In much of West Africa, both customary and formal systems claim control over land tenure systems. While many states assert national control over land, effective control is often held at the local scale. This creates complex systems of formal and customary land rights, neither of which is totally dominant. Uncertainties arise from this confusion about who controls land and has resulted in increased conflict (Toulmin and Quan 2000). This partially emerges from confusion about the rules of control. Problems emerge because of the multiplicity of arbitration authorities. One way farmers often get around this is by presenting authorities with a *fait accompli*, which often results in success. This also, unfortunately, escalates conflict. One of the interesting consequences is that while formal titling programs have generally failed, with escalating conflict and competition over land, there is some need for formal control over land. Several authors propose interesting solutions. Lavigne-Delville (2000) suggests that a starting point to formalizing tenure relations would be to document land transactions. A contractual approach particularly in situations where people feel that their rights are insecure, borrowed land, for example. This would set the basis for a paper trail that could create flexible but legitimate arrangements. In fact, this is already happening in some of the cotton zones in southwestern Burkina Faso where farmers have formal leasing relationships using written contracts and have also started to buy and sell agricultural land.

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