

Institutional development: from legal pluralism to institutional bricolage in West African pastoralism

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Summary

Pastoralists in Africa are increasingly vulnerable to the effects of globalisation, climate change and changes in land use. They are confronted with problems related to access to scarce natural resources and their regulation, the management of mobility, and too little investment in health systems, livestock production and social service delivery.

However, this paper focuses on positive trends and vital innovations in pastoral societies. These rely on robust institutions and policy frameworks that contribute to economically secure, politically stable, and environmentally sustainable livelihoods for African pastoral societies. The authors analyse ways in which internal and external efforts can improve the economic viability and social aspects of pastoralism. The institutions that manage natural resources and their effects on livelihoods and access to social services must be critically reviewed. The authors suggest that a new model for the economic and social development of African pastoralism should be positioned between donor- or government-driven development (in other words, 'seeing like a state') and the autonomous development goals of pastoralists ('seeing like a pastoralist').

Pastoralists are resourceful, entrepreneurial and innovative people, fully able to support new institutional systems and services which recognise their way of life and production systems. It seems evident that African pastoralism will maintain its vitality and creativity through a process of 'bricolage', with institutional and policy innovations based on a constant renegotiation of norms, the reinvention or transformation of tradition, the importance of legitimate authority and the role of the people themselves in shaping such arrangements.

Keywords

Africa – Institutional bricolage – Legal pluralism – Mobile pastoralism – Pastoralism – Power relationship.

Introduction

Pastoralism is a way of life for millions of people in Africa, making the best use of dry grasslands, while providing many economic and social benefits. While varying from one region to another, pastoralism makes a major contribution to the economy in many African countries (1). In different regions, African pastoralism is characterised by differing degrees of mobility, enabling pastoralists to seek the best grazing land and maximise the productivity of their herds (2, 3, 4). Pastoralist communities in Africa generally live in isolated, remote and underdeveloped areas. These

areas are often prone to conflict and food insecurity and poorly covered by basic social services, such as health and education. Pastoralists are among the most politically and economically marginalised communities, pushed to the periphery by diverse development initiatives (5). Access to pastoral resources (water and pastures) is regulated by institutions which determine the rules, power relationships, cooperation/coordination, and/or competition (6, 7). The main challenge for pastoralism, especially in eastern Africa, is the threat from investors, especially via land alienation, in which communal pastoral grazing land is continually being taken by local and foreign investors and turned into agricultural land or other land investments.

Theoretical thinking has, in the past, depicted pastoral production as economically irrational and extensive livestock management systems as environmentally destructive (8), which has influenced the development strategies of many post-independence policy-makers in Africa. Since then, pastoral resource governance has been administered in an environment of legal pluralism, including statutory regulations, customary laws and combinations of both. These result, in any given zone, in overlapping rights, contradictory rules and competing authorities in regard to pastoralists (9, 10, 11). In Africa, pastoral resources have been managed for centuries by customary land tenure systems, defined as collective rules governing land occupation and distribution. These rules, often embedded in the local culture, usually apply to a vast range of resources well beyond the land itself, including water (surface water, shallow wells, hand-dug wells), crops, minerals, wild-gathered products, fauna, and herbaceous or ligneous vegetation (12). Customary systems are not static, but continuously evolving as a result of diverse factors, such as cultural interactions, population pressures, socio-economic change and political processes (11, 13, 14).

Colonial and post-independence government interventions have affected local relations and agreements on access to natural resources. These interventions include the nationalisation of land and centralisation of resource management, land registration programmes, and the devolution of resource management responsibilities to local government bodies (15, 16, 17, 18, 19). In many parts of Africa, the integration of chiefs into the state administrative apparatus resulted in a reinterpretation of customary rules. New institutions drew their power from reinvented traditions and from state legislation. In other countries, government interventions aimed to abolish customary systems through privatisation or state ownership (16, 17, 18). In some cases, new regulations have weakened the effectiveness and legitimacy of customary systems but have not totally replaced them (10, 20). In recent years, decentralisation processes conferred more power on local government bodies. This actually strengthened customary institutions (19) and aided their co-existence with other management bodies.

Problems related to access to and regulation of scarce natural resources, mobility, and transhumance – as well as insufficient investment made into production infrastructure and social service delivery – have all contributed to make pastoral communities in Africa and elsewhere more vulnerable to the effects of globalisation and climate change, which severely affect arid and semi-arid environments. This increases competition for land and water. Large-scale land acquisitions and general population growth add to the competition. Another important issue is ongoing insecurity, due to civil wars, banditry, and intra- and intertribal conflicts. The security situation has deteriorated through the

emergence and settlement of insurgency terrorist groups, such as Boko Haram, al-Qaeda in Islamic Maghreb (AQIM) and Al-Shabaab, whose actions in pastoral areas endanger the livelihoods of populations.

In spite of all this, African pastoralism as a way of life and livelihood will not disappear because there are also positive developments: such as the economic growth narrative, in which pastoralism has great potential, and livestock trade, which grows and becomes more robust through higher production as pastoralism becomes more resilient. Pastoralists are highly adaptive and support new systems and services which recognise their way of life and production systems (21). Conversely, pastoralists reject institutional and legislative reforms which fail to take their views and aspirations into account. Pastoralists do not live in a static society but rather are constantly adapting to changes around them, so they become resilient to different shocks and actively shape the conditions for a better life. One of the coping strategies for prolonged droughts that killed large livestock has been keeping more small ruminants (sheep and goats), especially in eastern Africa. Pastoralists appear to be resourceful, entrepreneurial and innovative. They successfully contribute to informal development efforts that are not always in line with standard development formulae (5). Still, development processes that make use of the vitality and innovation of pastoral societies rely on robust institutions and policy frameworks that safeguard pastoralists economically, contribute to political stability, and promote environmentally sustainable livelihoods. Pastoral development today should rely more heavily on pastoralist adaptability and innovation rather than on arbitrarily imposed regulation. The authors postulate that a new model for the economic and social development of pastoralism in Africa should fall between the donor-driven development that some authors have referred to as 'seeing like a state' and the autonomously driven development by pastoralists that could be viewed as 'seeing like a pastoralist' (22, 23).

In this paper, the authors analyse how internal and external forces contribute towards improving the economic viability and social aspects of African pastoralism. They critically review the institutions that manage natural resources and their effects on people's livelihoods and access to basic social services. This paper builds on the assumption that African pastoralism will maintain its vitality and creativity when institutional and policy innovations are based on constant renegotiation between the formal rules and regulations of the state or development agencies and pastoralists' own traditions, values, desires, objections and objectives. Exchanges and consultation should occur over norms, the flexibility of traditions, legitimate authorities and the role of communities in defining new arrangements. This leads to an 'institutional bricolage': people consciously and unconsciously draw on existing social and cultural

arrangements to shape institutions in response to changing situations. The resulting institutions are a blend of 'modern' and 'traditional', and of 'formal' and 'informal' rules (24).

Institutional development from the pastoralists' perspective

For many centuries in Africa, the management of natural resources was governed by traditional mechanisms. Different types of resources were subject to different forms of management. When resources became scarce, management was intensified. Rules were based on arrangements between various groups of users to determine how and by whom decisions on natural resources were made and the ways in which power relationships influenced those decisions. These mechanisms led to the definition of rights of access to resources. Agreements on the use of pastoral resources mainly concerned access to pastures and, most importantly, to water, which was simultaneously used by other communities, such as farmers and fishers. Pastoralist use of common-pool resources in certain regions was described as 'open access' when regulatory institutions were more diffuse (25). However, micro-analyses of local resource governance in pastoral areas showed that inclusion and exclusion rules did exist (26, 27, 28, 29). Those rules were reinforced during the dry season or periods of drought, particularly for deep wells and boreholes, which were the most laborious to operate and maintain (12, 30). Such rules were embedded in local culture and, because they were respected and related to the local belief system, there were low-cost mechanisms for monitoring and sanctioning.

State interventions have weakened traditional institutions, creating duplicate regulations, new restrictions, and taxes. Still, local arrangements predominate. Traditional pastoral institutions were quick to adapt and continue to govern access to natural resources in many places. Two examples from West Africa serve to illustrate this: access to fishing channels in the Logone floodplains of northern Cameroon and access to pastoral resources in the post-crisis context of northern Côte d'Ivoire.

From the weakening of traditional institutions to local institutional bricolage

In the Logone floodplains in the far north of Cameroon, mobile pastoralists had long-term social relationships and arrangements with the traditional local authorities. These arrangements comprised the protection of pastoralist

access to rangelands and security by local authorities in exchange for the payment of tribute and taxes by nomadic pastoralists. The local administration coordinated the activities of the various users of the floodplains to make the best use of the fisheries and pastures that were available to varying extents over the seasons and years. The traditional local authority was considered to be the holder of the land, and transhumant and nomadic pastoralists had to request permission to access rangelands (26). A 'nomadic contract' would then be made with the sedentary population (31). However, over recent decades, this nomadic contract came under pressure and mechanisms for monitoring common-pool resources and sanctioning fraudulent use were no longer enforced, as local leaders had been incorporated as auxiliaries of the state administration. Despite weakened traditional institutional arrangements, farmers, pastoralists and fishers using the floodplains have demonstrated a strong capacity to adapt and restructure rules for better resource governance. Farmers and fishers have diversified their activities to own cattle which they entrust to pastoralists. The advantage is that land owners retain their leading position in the management of resources on the floodplain, while conflicts are reduced. Because settled populations have also become livestock owners, they are less inclined to report crop damage (32). In return, mobile pastoralists have more rights to use pasture resources, fishing ponds and water points for their animals. They were also given the right to dig new waterholes during the dry season. This gave them more power over access to this scarce resource, enabling them to exclude other pastoralist groups from villages with which they have agreements. Thus, new inclusive management rules have been put in place by these actors in their efforts to reformulate conditions for better access to key resources and to prevent conflict (26, 27, 28, 29).

Changes in power relationships and the design of new pastoral regulations

Côte d'Ivoire was one of the coastal West African countries which regularly faced meat shortages due to the rapid growth of its urban population. In the mid-1970s, the Ivorian state launched a number of agro-pastoral projects with the intention of promoting national livestock production and reducing the country's dependence on external markets and imports (33, 34). Mobile pastoralists were encouraged to become sedentary. However, in northern Côte d'Ivoire, a set of institutional arrangements already existed between mobile pastoralists and farmers regarding the rights of herders to access pastoral resources by offering gifts to the *fanfolo* (village chief) and *tarfolo* (land chief) (35).

Even though changes in power relationships have subsequently weakened those arrangements, the traditional hunters' group (*dozo*) has increasingly taken a leading role in pastoral issues (33, 34, 36, 37). Hunters' associations have existed in West Africa since pre-colonial times, playing an almost military-like role in protecting villages against invaders and wildlife. They were more recently recruited by local farmers to organise a system for the protection of agricultural fields from damage caused by cattle. Traditional hunters were used by politicians during the socio-political crisis of 2002–2011 as auxiliaries of the rebellion. With the help of the *dozo*, some local farmers (of the Senufo ethnic group) were able to keep pastoralists away from village pastures, to catch Fulani whose cattle purportedly caused damage to crops, and to bring such pastoralists before the village authorities (36, 37).

However, interactions with pastoralists started to convince the *dozo* hunters that they should not restrict their role simply to patrolling in the interests of farmers. Thus, they positioned themselves as key actors in pastoral resource management, instituting fines in cases of crop damage, regulating access to dams for pastoralists and farmers, and settling conflicts. The new regulations continued to benefit farmers, while pastoralists were granted access to zones from which they had previously been excluded. Pastoralists started to use their social and financial capital to gain respect and access. Considered as 'secret societies' with esoteric power, the *dozo* were feared by farmers and herders alike, and succeeded in imposing their authority in a region where traditional institutions had been deeply eroded (34). In crafting new rules, the hunters could establish themselves as key actors in natural resource management and cement their symbolic power, solving the governmental problem of regulating the access of pastoralists from Mali and Burkina Faso to the rich, dry-season pastures of northern Côte d'Ivoire.

Pastoral institutional development: 'seeing like a state'

National pastoral policies

In West Africa, in contrast to other regions on the continent, legal arrangements and policies have been developed to support mobile pastoralism (1). In a region where pastoralism plays a strong social, cultural and economic role, many countries have passed regulations specifically to support pastoralism, such as the Pastoral Charter in Mali, the Pastoral Code in Mauritania and the Rural Code in Niger. These laws were developed out of a desire to address

the growing problem of conflict between pastoralists and farmers (38). They are characterised by the recognition and protection of mobility and the acknowledgement of priority-use rights over resources and 'productive' pastoral land use. Other West African countries do not yet have clear legislation but are also promoting pastoralism while protecting natural resources and preventing conflicts. Countries such as Côte d'Ivoire and Togo have adopted new national regulations to contribute towards increased agro-pastoral productivity (33, 34), while securing resources for other users in a context of international transhumance (38, 39).

Ongoing decentralisation processes in most countries are likely to bring development issues closer to the people, and they will benefit rural communities, including pastoralists, if they are matched with corresponding powers and address issues of capacity. Decentralisation can be useful in regulating the access of pastoral communities to resources. Pastoral communities would benefit still further with increased capacity and institutional support to influence local government decision-making processes, particularly over access rights to land and other natural resources (40).

International treaties and agreements

Given the transboundary nature of African pastoralism, institutional issues are trans-national. Mobile pastoralists are increasingly being integrated into regional and international markets, establishing their economic importance, as foreseen by the regional economic communities of Africa, such as the Economic Community of West African States (ECOWAS), the Economic and Monetary Community of Central Africa (CEMAC) and the East African Community (EAC).

However, the consequences of civil war in one country reverberate throughout the whole region. Regionalisation also carries health risks, as uncontrolled cross-border movements of goods, people and livestock can contribute to the spread of animal and human diseases (1, 41, 42, 43). Regional and international regulations exist in the form of treaties and agreements between states for cooperation and economic integration. Regional organisations provide a policy framework for sustainable pastoralism and cross-border mobility of pastoralists. In West Africa, the 15 Member Countries of ECOWAS agreed in 1998 to provide a regional framework for cross-border transhumance. Veterinary Services provide an international transhumance certificate after an examination of departing livestock herds. This ensures the protection of the health of local herds in the host country and informs the host population in a timely manner about the arrival of herds from neighbouring countries. The rights of non-resident mobile herders are protected by host country legislation, while, in return, the herders must respect the rules of the

host country concerning forests, wildlife, water points and pastures. Conflict resolution is carried out by a conciliation commission, made up of herders, farmers, local government representatives and other concerned parties (44). In 2010, the African Union developed a continent-wide policy initiative to secure, protect and improve the livelihoods and rights of African pastoralists. The 'Policy Framework for Pastoralism in Africa' is a platform for mobilising and coordinating political commitment to pastoral development in Africa. The framework explicitly recognises the rights of pastoralists and the need to provide security, services, infrastructure and economic opportunities comparable to those available in non-pastoral areas. It also recognises the need to incorporate and support existing or emerging policies at the national and regional level that aim to enhance the political representation of pastoralists, integrate pastoral development policy into national and regional policy frameworks, promote sustained conflict resolution, legitimise alternative models of service delivery in pastoral areas, enable pastoral mobility and secure access to rangelands and, finally, to support the marketing of livestock and livestock products (1, 43).

From legal pluralism to institutional bricolage in African pastoral resource management

The complexity of challenges for African pastoralism shows that it would be difficult to rely on a single institutional framework for a better future for sustainable pastoralism. However, overlapping local, national, and international regulations and frameworks are often contradictory. Therefore, efforts need to be made to align and harmonise regulations. Legal pluralism has not yet been able to respond to increasingly escalating conflict situations in pastoral areas, nor to satisfy the demand of populations for basic social services, particularly in health, education, and development infrastructures and markets.

This could become possible through a system of institutional bricolage (25), as the actions and interactions between various actors at different levels create synergies that contribute to the well-being of communities. The absence of social services and services that promote security and consolidate peace in pastoral areas can affect the availability of pastoral resources, as a result of reduced mobility or changes in migration patterns (45, 46). This shows that security, education, health and economic issues are closely interlinked and require joint solutions. For this, the state, private sector, civil society and communities must be closely and fully engaged.

Examples from intersectoral programmes in Chad and Mali from 2000–2010 show how social demands from pastoral communities can be translated into an integrative policy framework that contributes towards the provision of basic social services and the protection of mobility through consolidated pastoral contracts, while at the same time reducing the number and intensity of conflicts (47). In Chad, the population's social demands were incorporated – through the involvement of state agencies – into the design of an integrated national programme. In Mali, the approach was more local and rooted in the decentralisation process. A stimulating and dynamic dialogue, which includes all stakeholders, is crucial in organising the improved delivery of social services to remote, marginalised populations and in ensuring the well-being of pastoralists. Existing patterns of resource governance, alliances between communities, mobility constraints, cultural practices, infrastructures, and human resources should all be clearly evaluated (48). The previously mentioned programmes in Chad and Mali were less successful in setting up sustainable frameworks for multiple reasons. Factors such as political instability, poverty, conflict and terrorist threats can impede the process, but the beneficial practices of 'bricolage' should be taken into consideration. This involves the deep and meaningful participation of pastoralists at all stages of the process in order to adopt an innovative and adaptive approach and ensure a culturally sensitive environment (46).

Conclusion

Existing sets of rules and processes, complex social identities and unequal power arrangements shape resource management arrangements and outcomes. African pastoralism is increasingly confronted with environmental, political, social and economic challenges. These challenges require institutional innovations to deal with new dimensions of old problems. Moreover, pastoralists find themselves in a world which demands new skills. They have to be able to communicate with the government in the country's official language, understand new laws governing natural resources, deal with political organisations, and negotiate better marketing facilities and more reasonable terms of trade.

Pastoralists have demonstrated their adaptiveness, a capacity which allows a critical re-imagining of institutions for natural resource management and their effects on people's livelihoods and access to basic social services. Pastoralists are resourceful, entrepreneurial and innovative. They support new systems and services which recognise their way of life and production systems. African pastoralism is economically and socially viable if pastoral development is simultaneously seen from both the state's and the pastoralists' perspective. Institutional bricolage makes the

interplay between the traditional and the modern possible, by drawing on formal and informal arrangements.

The future of pastoralism in Africa will depend on various local, national, regional and international factors and will involve: finding rigorous ways to safeguard pastoral rangelands; ensuring the continued movement of pastoral livestock as an adaptation strategy; establishing land-use

plans for pastoral lands that can cope with ongoing changes; reducing land alienation by investors; improving the productivity of pastoral cattle and other services; ensuring the engagement of all stakeholders; and facilitating the co-existence of pastoralists and farmers. All these can be better achieved through institutional bricolage. ■

Évolutions institutionnelles : du pluralisme juridique au bricolage institutionnel dans le traitement du pastoralisme en Afrique de l'Ouest

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Résumé

Les pasteurs africains sont en situation de vulnérabilité accrue face aux effets de la mondialisation, du changement climatique et de la transformation de l'utilisation des terres. Ils sont confrontés à des problèmes liés à l'accès et à la réglementation des ressources naturelles qui se raréfient sans cesse, à la gestion de la mobilité et au manque d'investissements dédiés aux systèmes de santé, à la production animale et à la fourniture de services sociaux.

Néanmoins, dans cet article l'accent est mis sur les tendances positives et sur les innovations vitales actuellement à l'œuvre dans les sociétés pastorales. Celles-ci reposent sur des institutions robustes et des cadres d'élaboration de politiques qui contribuent à garantir aux sociétés pastorales africaines une source de revenus économiquement intéressants, politiquement stables, et durables au plan écologique. Les auteurs analysent les possibilités d'améliorer au moyen d'initiatives internes et extérieures la viabilité économique et les aspects sociaux du pastoralisme. Il est indispensable de procéder à une évaluation critique des institutions chargées de la gestion des ressources naturelles et d'analyser leurs effets sur les moyens d'existence des pasteurs et sur leur accès aux services sociaux. Les auteurs considèrent qu'un nouveau modèle de développement économique et social du pastoralisme africain devrait trouver sa place entre le développement impulsé par les donateurs ou par les gouvernements (autrement dit, le point de vue étatique) et les objectifs autonomes de développement des pasteurs eux-mêmes (le point de vue du pasteur).

Les pasteurs sont des individus pleins de ressources et animés par l'esprit d'entreprise et d'innovation, ce qui les rend parfaitement capables de soutenir de nouveaux systèmes et services institutionnels dès lors que ceux-ci prennent en compte leur mode de vie et leurs systèmes de production. Il semble clair que le pastoralisme africain préservera sa vitalité et sa créativité tout au long d'un processus de bricolage, ce qui se traduira par des innovations institutionnelles et politiques fondées sur une renégociation permanente des normes, sur la réinvention ou la transformation des traditions, sur l'impératif de légitimer l'autorité et sur la participation des populations à la conception des dispositifs mis en place.

Mots-clés

Afrique – Bricolage institutionnel – Pastoralisme – Pastoralisme transhumant – Pluralisme juridique – Relations de pouvoir. ■

Desarrollo institucional: del pluralismo jurídico al bricolaje institucional en el pastoreo oesteaficano

G. Fokou & B. Bonfoh

Resumen

Las sociedades pastorales africanas son cada vez más vulnerables a los efectos de la mundialización, el cambio climático y la transformación de los usos del suelo. Afrontan problemas relacionados con el acceso a recursos naturales escasos y su regulación, con la gestión de la movilidad y con la insuficiencia de las inversiones en sistemas de salud, producción ganadera y prestación de servicios sociales.

Los autores, sin embargo, se centran en las tendencias positivas y las innovaciones esenciales que tienen lugar en las sociedades pastorales, fruto de instituciones robustas y de conjuntos de políticas que favorecen medios de sustento económicamente seguros, políticamente estables y ambientalmente sostenibles en las sociedades pastorales africanas. Los autores se detienen a analizar el modo en que las iniciativas internas y externas pueden mejorar tanto la viabilidad económica como una serie de aspectos sociales del pastoreo. Es preciso someter a un examen crítico las instituciones que gestionan los recursos naturales, así como los efectos de esa gestión en los medios de sustento y el acceso a los servicios sociales. Los autores abogan por un nuevo modelo de desarrollo económico y social del pastoreo africano que convendría posicionar a medio camino entre el desarrollo impulsado por donantes o administraciones públicas (o dicho de otro modo, visto «desde la óptica del estado») y los objetivos de desarrollo fijados por las propias sociedades de pastores (esto es, «desde la óptica del pastoreo»).

Las sociedades pastorales están formadas por gente ingeniosa, emprendedora e innovadora, perfectamente capaz de secundar nuevos servicios y sistemas institucionales que tengan en cuenta sus modos de vida y sistemas de producción. Parece evidente que el mantenimiento de la vitalidad y creatividad del pastoreo africano habrá de pasar por un proceso de «bricolaje» que traiga consigo innovaciones institucionales y políticas basadas en la renegociación constante de las normas, la reinención o transformación de la tradición, la importancia de la autoridad legítima y la intervención de la propia población en el proceso de configurar toda esta nueva organización.

Palabras clave

África – Bricolaje institucional – Pastoreo – Pastoreo trashumante – Pluralismo jurídico – Relación de poder.



References

1. African Union (AU) (2010). – Policy framework for pastoralism in Africa: securing, protecting and improving the lives, livelihoods and rights of pastoralist communities. AU, Addis Ababa. Available at: www.achpr.org/files/instruments/policy-framework-pastoralism/policy_framework_for_pastoralism.pdf (accessed on 6 June 2016).
2. Niamir-Fuller M. (ed.) (1999). – Managing mobility in African rangelands: the legitimization of transhumance. Intermediate Technology Publications, London, 314 pp. doi:10.3362/9781780442761.
3. Niamir-Fuller M. (2005). – Managing mobility. In African rangelands: collective action and property rights for sustainable rangeland management (CAPRI). CAPRI Research Brief, Washington DC. Available at: http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/3683/brief_dryl.pdf (accessed on 24 July 2016).
4. Niamir-Fuller M. & Turner M. (1999). – A review of recent literature on pastoralism and transhumance in Africa. In Managing mobility in African rangelands: the legitimization of transhumance (M. Niamir-Fuller, ed.). Intermediate Technology Publications, London, 18–47. doi:10.3362/9781780442761.002.

5. Catley A., Lind J. & Scoones I. (eds) (2013). – Pastoralism and development in Africa: dynamic change at the margins. Routledge, Abingdon, UK.
6. Ostrom E. (1990). – Governing the commons. The evolution of institutions for collective action. Cambridge University Press, Cambridge. doi:10.1017/cbo9780511807763.
7. Ensminger J. (1992). – Making a market. The institutional transformation of an African society. Cambridge University Press, Cambridge.
8. Hardin G. (1968). – The tragedy of the commons. *Science*, **162** (3859), 1243–1248. doi:10.1126/science.162.3859.1243.
9. De Bruijn M. & van Dijk H. (1999). – Insecurity and pastoral development in the Sahel. *Dev. Change*, **30** (1), 115–139. doi:10.1111/1467-7660.00109.
10. Cotula L. (2005). – Can research bridge the gap between local rules and national legal frameworks? The case of local conventions for natural resource management in the Sahel. In *Bridging research and policy* (A. Reenberg & H.S. Marcussen, eds). University of Copenhagen, Copenhagen, 125–132.
11. Haller T. (2009). – Common-pool resources, legal pluralism and governance from a new institutionalist perspective: lessons from the African Floodplain Wetlands Research Project (AFWeP). In *Negotiating local governance natural resources management at the interface of communities and the state* (I. Eguavoen & W. Laube, eds). LIT Verlag, Munich, London, New York.
12. Thébaud B. (1995). – Le foncier dans le Sahel pastoral. Situations et perspectives. In *Dynamique des systèmes agraires: terre, terroir, territoire : les tensions foncières* (C. Blanc-Pamard & L. Cambrézy, eds). Office de la recherche scientifique et technique outre-mer (ORSTOM), Paris, 37–56.
13. Lesorogol C. (2003). – Transforming institutions among pastoralists: inequality and land privatization. *Am. Anthropol.*, **105** (3), 531–542. doi:10.1525/aa.2003.105.3.531.
14. Haller T. (2013). – The contested floodplain. Institutional change of the commons in the Kafue Flats, Zambia. Rowman & Littlefield, Lanham, Maryland.
15. Lund C. (2002). – Negotiating property institutions: on the symbiosis of property and authority in Africa. In *Negotiating property in Africa* (K. Juul & C. Lund, eds). Heinemann, Portsmouth, UK.
16. Berry S. (1993). – No condition is permanent: the social dynamics of agrarian change in sub-Saharan Africa. University of Wisconsin Press, Madison, Wisconsin.
17. Benjamin C.E. (2008). – Legal pluralism and decentralization: natural resource management in Mali. *World Dev.*, **36** (11), 2255–2276. doi:10.1016/j.worlddev.2008.03.005.
18. Toulmin C. & Quan J. (2000). – Evolving land rights, tenure and policy in sub-Saharan Africa. In *Evolving land rights, policy and tenure in Africa* (C. Toulmin & J. Quan, eds). Department for International Development/International Institute for Environment and Development/Natural Resources Institute, London, 1–30.
19. Schareika N. (2004). – Bush for beasts: Lake Chad from the nomadic Wodaabe point of view. In *Living with the lake: perspectives on history, culture and economy of Lake Chad* (M. Krings & E. Platte, eds). Rüdiger Köppe Verlag, Cologne, 171–190.
20. Chauveau J.-P. (2003). – Rural land plans: establishing relevant systems for identifying and recording customary rights. International Institute for Environment and Development, London.
21. Chauveau J.-P. (2006). – How does an institution evolve? Land, politics, intergenerational relations and the institution of the *tutorat* between autochthons and migrant farmers in the Gban region (Côte d'Ivoire). In *Land rights and the politics of belonging in West Africa* (R. Kuba & C. Lentz, eds). Brill, Leiden, the Netherlands, 213–240.
22. Scott J.C. (1998). – Seeing like a state: how certain schemes to improve the human condition have failed. Yale University Press, New Haven, Connecticut.
23. Moritz M. (2013). – Review of 'Pastoralism and development in Africa: dynamic change at the margins' (A. Catley, J. Lind & I. Scoones, eds). *Pastoralism: Res., Pol., Pract.*, **3**, 19. doi:10.1186/2041-7136-3-19.
24. Moritz M., Scholte P., Hamilton I. & Kari S. (2013). – Open access, open systems: pastoral management of common-pool resources in the Chad Basin. *Hum. Ecol.*, **41** (3), 351–365. doi:10.1007/s10745-012-9550-z.
25. Cleaver F. (2012). – Development through bricolage: rethinking institutions for natural resources management. Routledge, New York.
26. Fokou G. (2008). – Gestion communautaire des ressources naturelles et relations de pouvoir. Étude anthropologique des changements institutionnels dans les plaines du Logone et du lac Tchad. University of Yaoundé 1, Yaoundé, Cameroon.
27. Fokou G., Yéré H.M., Gasparini M., Chenal J. & Bonfoh B. (2010). – Autochthony, natural resource management and conflicting rights in West Africa. In *Global change and sustainable development: a synthesis of regional experiences from research partnerships* (H. Hurni & U. Wiesmann, eds). Geographica Bernensia, Bern, 61–76.
28. Fokou G. (2010). – Tax payments, democracy and rent-seeking administrators: common-pool resource management, power relations and conflicts among the Kotoko, Musgum, Fulbe and Arab Choa in the Waza Logone Floodplain (Cameroon). In *Disputing the floodplains: institutional change and the politics of resource management in African floodplains* (T. Haller, ed.). Brill, Leiden, the Netherlands. doi:10.1163/ej.9789004185326.i-454.33.
29. Haller T., Fokou G., Mbeyale G. & Meroka P. (2013). – How fit turns into misfit and back: institutional transformations of pastoral commons in African floodplains. *Ecol. Soc.*, **18** (1), 34. doi:10.5751/ES-05510-180134.

30. McCabe T. (1990). – Turkana pastoralism. A case against the tragedy of the commons. *Hum. Ecol.*, **18** (1), 81–103. doi:10.1007/BF00889073.
31. Moritz M., Scholte P. & Kari S. (2002). – The demise of the nomadic contract: arrangement and rangelands under pressure in the far north of Cameroon. *Nomad. Peoples*, **6** (1), 127–146. doi:10.3167/082279402782311013.
32. Turner M. (1999). – The role of social networks, indefinite boundaries, and political bargaining in maintaining the ecological and economic resilience of the transhumance systems of Sudano-Sahelian West Africa. In *Managing mobility in African rangelands: the legitimization of transhumance* (M. Niamir-Fuller, ed.). Intermediate Technology Publications, London, 97–123. doi:10.3362/9781780442761.005.
33. Kohlhagen D. (2002). – Gestion foncière et conflits entre agriculteurs et éleveurs, autochtones et étrangers dans la région de Korhogo (Côte d'Ivoire). Association pour la Promotion de l'Enseignement et de la Formation Agricoles Publics (APREFA)/Laboratoire d'Anthropologie Juridique de Paris (LJJP)/Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD).
34. Diallo Y. (2001). – Process and types of pastoral migration in northern Côte d'Ivoire. In *Mobile Africa: changing patterns of movement in Africa and beyond* (M. de Bruijn, H. van Dijk & D. Foeken, eds). Brill, Leiden, the Netherlands, 153–168.
35. Diallo Y. (2008). – Nomades des espaces interstitiels ; pastoralisme, identité, migrations (Burkina Faso – Côte d'Ivoire). Rüdiger Köppe Verlag, Cologne.
36. Bassett T.J. (2009). – Mobile pastoralism on the brink of land privatization in northern Côte d'Ivoire. *Geoforum*, **40**, 756–766. doi:10.1016/j.geoforum.2009.04.005.
37. Bassett T.J. & Koné M. (2008). – Shifting ground: land competition and agricultural change in northern Côte d'Ivoire. In *Land change science in the tropics: the changing countryside* (A. Millington & W. Jepson, eds). Springer, Boston, Massachusetts, 143–164.
38. Bonfoh B., Zinsstag J., Fokou G., Weibel D., Ould Taleb M., Ur-Rahim I., Maselli D., Kasymbekov J. & Tanner M. (2011). – Pastoralism at the crossroads: new avenues for sustainable livelihoods in semi-arid regions. In *Research for sustainable development: foundations, experiences, and perspectives* (U. Wiesmann & H. Hurni, eds). Geographica Bernensia, Bern, 549–570.
39. Grolimund A. (2009). – Transhumance between the Sahel and Togo: effects of the new inter-Ministerial order on the vulnerability of the different actors. National Centre of Competence in Research (NCCR) North-South, Bern & Swiss Tropical and Public Health Institute, Basel.
40. Hesse C. & Thébaud B. (2006). – Will pastoral legislation disempower pastoralists in the Sahel? In *Africa and the millennium development goals*. *Indigenous Affairs*, **1**, 14–23. Available at: www.eldis.org/go/home&id=24174&type=Document#.V5SB7zWorY0 (accessed on 24 July 2016).
41. Grolimund A. (2010). – The pastoralist women in the Sahel: sexual and reproductive vulnerabilities and mobility. University of Basel, Basel, Switzerland.
42. Dean A.S., Bonfoh B., Kulo A.E., Boukaya G.A., Amidou M., Hattendorf J., Pilo P. & Schelling E. (2013). – Epidemiology of brucellosis and Q fever in linked human and animal populations in northern Togo. *PLoS ONE*, **8**, e71501. doi:10.1371/journal.pone.0071501.
43. Bonfoh B., Fokou G., Crump L., Zinsstag J. & Schelling E. (2016). – Institutional development and policy frameworks for pastoralism: from local to regional perspectives. In *The future of pastoralism* (J. Zinsstag, E. Schelling & B. Bonfoh, eds). *Rev. Sci. Tech. Off. Int. Epiz.*, **35** (2), 499–509. doi:10.20506/rst.35.2.2537.
44. Economic Community of West African States (ECOWAS) (1998). – Decision A/DEC.5/10/98: Regulating Transhumance Between the Member States of ECOWAS. ECOWAS, Abuja, Nigeria.
45. Bonfoh B., Zinsstag J., Münch A., Fokou G., Weibel D., Ould Taleb M., Béchir M. & Tanner M. (2007). – New approaches in health and social services provision for nomadic people in the Sahel. In *Proc. 5th European Congress on Tropical Medicine and International Health* (M.J. Boeree, ed.), 24–28 May, Amsterdam. Medimond, Bologna, 223–229.
46. Schelling E., Weibel D. & Bonfoh B. (2008). – Learning from the delivery of social services to pastoralists: elements of good practice. United Nations Development Plan (UNDP)/International Union for Conservation (IUCN), Nairobi.
47. Schelling E. & Hattendorf J. (2015). – One Health study designs. In *One Health: the theory and practice of integrated health approaches* (J. Zinsstag, E. Schelling, D. Waltner-Toews, M. Whittaker & M. Tanner, eds). Centre for Agriculture and Biosciences International (CABI), Oxfordshire, Boston, 107–121.
48. Fokou G., Haller T. & Zinsstag J. (2004). – A la recherche des déterminants institutionnels du bien-être des populations sédentaires et nomades dans la plaine du Waza-Logone de la frontière Camerounaise et Tchadienne. *Méd. Trop.*, **64** (5), 464–468.

