



Sahel pastoralists: opportunism, struggle, conflict and negotiation. A case study from eastern Niger

Brigitte Thébaud^{a,b,*}, Simon Batterbury^c

^a*Independent Consultant and Associate Researcher, Ecole des Hautes Etudes en Sciences Sociales, Paris, France*

^b*Skovbovaengets Sidealle 5, 4000 Roskilde, Denmark*

^c*Development Studies Institute, London School of Economics, Houghton Street, London WC2A 2AE, UK*

Received 16 August 2000

Abstract

The livelihoods and life chances of pastoral communities in the West African Sahel are linked to: the complexity of the activities they must engage in to insure access to resources; to the nature of conflicts and co-operation between ethnic groups; to the inconsistent role of the state in assisting or constraining pastoral livelihoods; and to the negative discourse surrounding pastoralism that still circulates in some government and development policy circles. The paper reviews pastoral livelihoods systems in eastern Niger to illustrate changing modes of access to water and pasture, culminating in present-day tensions and conflict between pastoral groups. State development efforts to provide secure watering points for pastoral herds have initiated social conflicts and violence, rather than creating security. No viable solution has yet been found to control the use of public wells and boreholes. Enabling frameworks for negotiation and conflict resolution must be developed locally, and centrally enforced in this, and many other regions of uncertain climatic change and overlapping systems of resource exploitation. © 2001 Elsevier Science Ltd. All rights reserved.

Keywords: Sahel; Pastoralism; Common property; Eastern Niger

1. Introduction

Pastoralists, though far fewer in number than farmers, use most of the Sahel. Moreover, they have borne a large proportion of the blame for environmental degradation, in the literature and in policy statements. No perspective on environmental research and policy is therefore complete without considering their circumstances. In this paper, we demonstrate the range of negotiations and conflicts that pastoral communities in the West African Sahel deploy to manage temporal and spatial variability in biophysical resources. We show that adaptations to environmental conditions have changed since the Sahelian droughts of the 1970s, and particularly since the additional dry years of 1983–85. The conditions experienced by pastoral communities are strongly linked: (a) to the complexity of the activities they must use to insure access to resources; (b) to conflicts and co-operation

between ethnic groups; (c) to the inconsistent role of the state in assisting or constraining pastoral livelihoods; and (d) the negative discourse surrounding pastoralism that still circulates in some government and development policy circles. Daunted by the complexities of the pastoral question and the difficulties of finding appropriate ways of intervening to improve the livelihoods of pastoral peoples, many of the larger aid organisations are becoming less and less involved in pastoral regions in the West African Sahel.¹

First, we will summarise the main features of pastoral livelihoods; in order to identify the main constraints and opportunities afforded by the Sahelian environment and political economy. Second, pastoral livelihoods systems in eastern Niger are presented as an example of a rich and complex land-use system that has changed markedly over time, culminating in present-day tensions and

* Corresponding author.

E-mail addresses: bthebaud@mail.tele.dk (B. Thébaud), s.batterbury@lse.ac.uk (S. Batterbury).

¹ Most pastoral development projects financed through bilateral or multilateral channels have been terminated at the end of the 1980s. During the past decade, State programmes for service provision (human and animal health, for instance) have been drastically reduced.

conflict between pastoral groups. In this region, state development efforts to provide secure watering points for pastoral herds have initiated social conflicts, rather than created security. We question the modernising influence of such pastoral infrastructure improvement projects in this light. Third, we use the case of eastern Niger to comment on new visions of pastoral systems that have emerged in the 1990s, and discuss the need to rethink common property management strategies in the Sahel.

2. Transformation in Sahelian pastoralism

In the West African Sahel, several particular features of the biophysical environment, and the rural political economy, help to explain how pastoral and agropastoral communities and individuals control or negotiate access to the rangelands and watering points.

The rainfall pattern is unimodal, with one short rainy season from June to September–October, a cold dry season from November to February, and a hot dry season from March to May. In the northern regions, mean annual rainfall is frequently below 300 mm, and is insufficient or too uncertain to permit rain-fed agriculture. Recurring droughts are inherent to pastoral systems, and therefore require a complex set of specific strategies in order to save animals and to recover rapidly from the crisis: temporary migrations to southern and more humid areas, loans of animals, seasonal emigration to coastal countries for the purpose of wage-labour and, in some cases, agriculture. During the 20th century, the droughts of 1913–1914, 1931–1933 and 1942 were severe, although the 1950s and 1960s proved exceptionally humid, providing pastoralists with abundant pasture resources, allowing herders to reach high stocking rates, and farmers to spread northward into pastoral areas. More recently, the droughts of 1973–1974 and 1983–1985 have had serious and long lasting effects on Sahelian rural communities and, particularly, on pastoralists.

The western Sahel has little relief. Topography has only a localised influence on soils and vegetation, and strategic resources such as perennial grasses and trees tend to concentrate in depressions (valleys, bas-fonds, cuvettes). Because of the natural aridity of the environment, the erratic rainfall and the “risk” of droughts, pastoral systems operate in a “disequilibrium” context (Behnke et al., 1993). Therefore, pastoral mobility remains a vital strategy that promotes optimal utilisation of highly scattered resources, frequently out of synchronisation with existing stocking rates (Behnke, 1994).

“Opportunistic” grazing movements enable pastoralists to have access to heterogeneous and unpredictable pasture resources, rather than relying on the hypothetical stability or uniformity of those resources (Lane and Moorehead, 1994; Mace, 1991; Mortimore, 1998). During

the rainy season, annual grasses have a high nutritional value, and surface water resources (ponds, lakes, rivers) allow herds to roam freely throughout the rangelands. During the dry season, however, pastures have a low nutritional value, and access to trees, shrubs and perennial grasses (when available) is strategic. Since natural ponds and temporary rivers have usually dried up, access to pasture resources is conditioned by the availability of subsurface water, which is typically reached by traditional wells, cement-lined wells or boreholes (Taylor, 1996). The biomass available for the dry season must cover the basic nutritional requirements of the herds until the next rainy season. Herds need to stay in the vicinity of wells to be regularly watered, within a radius of 15–25 km. Therefore, access to pastures is determined by rules of access to wells.

It was from the 1940s that widespread modern infrastructure (cement wells, and, deep tube wells with pumps) allowed herds to remain longer on inaccessible pasturelands. The provision of new water points has justified the creation of rules of use, to prevent livestock numbers exceeding capacity, particularly around boreholes which soon attracted large stocks. These rules have proven problematic, as the case below demonstrates, and access to modern water infrastructures became public (Thébaud, 1990).

With the exception of the rainy season, herds provide low milk yields, thus forcing pastoralists to sell animals at local markets in order to purchase cereals. Reciprocal arrangements between herders living in the north and farmers in the southern regions were common practice until the end of the 1960s. But for the past quarter century, the bipolar spatial arrangement has been giving way to new merged agropastoral systems. On the one hand, farming communities have tried to diversify into livestock ownership, to minimise their exposure to agronomic risks. Agricultural expansion occurred rapidly during the 1950s and 1960s due to favourable rainfall, which permitted progressive northward settlement onto rangelands, into lowlands (bas-fonds), and onto sites on the banks of rivers or lakes. On the other hand, pastoral societies, responding to drought and to the historic spread of the agricultural frontier, also began to engage in farming, in many different forms. A conversion to mixed agropastoral economies where agriculture played an increasing role has meant some convergence of agropastoral systems, causing increasing competition for agricultural land and for pastures (Bassett and Zueli, 2000; Mortimore, 1998). It is far from evident that these changes have been of benefit to those who remain as transhumant herders, since the spatial reach of their grazing orbits has been constrained. Pastoralist herds are no longer as welcome in some southern Sahelian regions for their contributions to soil fertility (by stabling their animals on harvested fields), because farmers tend to keep their harvest residues and fallows for themselves, if

they own animals. Yet pastoralists need to roam across the southern (wetter) Sahelian regions and have long established livestock corridors there. Local and international markets for animals remain an essential component of pastoral viability, linking pastoralists to coastal countries such as Ghana, Ivory Coast, Togo, Benin, and Nigeria, where demand for Sahelian meat is usually high.

In terms of political and institutional controls on pastoralist activity, the governance of pastoral space has constituted a true headache for various government authorities. Sixty years of French colonial administration resulted in a certain homogeneity throughout the subregion. Shared systems of government and local administration (préfectures, cercles, chefferies de canton); and a legal system strongly influenced by the Code Civil Napoléonien, did not always deal well with itinerant herders, mobility, and common property rangeland management systems (Lavigne Delville, 2000; IIED, 1999). Although land laws in the western Sahel offer various interpretations of the tenure and use of pastoral rangelands, herders often could not (and still cannot) secure formal rights to pastures and water resources. For example, in Djerma regions of SW Niger (Warren et al., this issue), Fulani agropastoralists have no land rights, even after 40 years of continuous cultivation in proximity to Djerma villages. Herding is often not recognised by modern law as a legitimate form of productive land use (“mise en valeur”), compared with farming, exploitation of forest resources, and the creation of wildlife reserves. Thus, pastoralists often operate in a precarious context in which pastoral resources (rangelands, etc.) can be cleared for agricultural production or their small agricultural holdings reclaimed by the state for other purposes.

Recent legislation has proved to be not only inadequate, but actually detrimental to pastoralists. In spite of various land reforms such as the Code Rural of 1993, in Niger (still not fully implemented — see Lund, 1998) and the Réorganisation Agraire et Foncière in Burkina Faso (1984, with subsequent revisions in 1991 and 1996), Sahelian states, in general, do not fully acknowledge the specific nature of pastoral land-use. In pastoralist common property regimes, water and pasture resources can be used by different users at different times of the year and according to complex rights of access negotiated between those users. Exclusive rights for individuals or communities are rare, access to resources generally being flexible in order to enable herd mobility and to facilitate reciprocal arrangements between groups. Although national land tenure laws are often honoured in the breach in remote rural areas (Lund, 1998; 1999) pastoral land is usually vested in the state, which can allocate resources to pastoral communities, define rights of use, and penalise transgressions. The Réorganisation Agraire et Foncière in Burkina Faso subjects pastoral rights to formal delimitation of “zones pastorales” (pastoral areas) and “plans d’aménagement” (management plans). In

Niger, although the Code Rural acknowledges the principle of common access to pastoral resources, pastoralists’ rights are conditioned by their sustainable use of pastures and water points, which must be regularly verified by local officials.

Pastoralists insure access to grazing lands in dry areas by digging their own wells and watering points (Taylor, 1996). Traditional, shallow hand-dug wells allowed access to water (and therefore to pastures) to be locally negotiated (see below). The recent implementation of boreholes and cement-lined wells has modified property regimes, since regulation of these public, open-access resources is far harder to achieve at sustainable levels. The introduction of modern hydraulic systems (boreholes particularly since the 1950s, and cement-lined wells since the 1970s) has brought about the weakening, even disappearance, of essential access regimes, for example in eastern Niger and northern Senegal. In the pastoral Sahel, Peul, Tuareg Tubu and Arab communities are in serious conflict over access to water points.

The lesson here is that economic, social and institutional factors are as much to blame for destabilising pastoral communities as climatic ones (Batterbury and Forsyth, 1999). Conflicts in the northern Sahel have been simmering for decades, but in certain areas — notably in Mali and Niger, armed rebel movements have disrupted relations with the state and aid donors. Some factors, like erratic rainfall and periodic drought, have always been part of Sahelian life, but the dynamic relationship between herd size and the needs of a household unit can easily be disturbed by restrictions imposed on movement, access to water, services, land, and adverse legislation. Institutional and political changes codified since the 1950s have contributed to diminished flexibility in the ability to respond to climatic change, or to other crises. They should not be attributed to uncertain rainfall patterns or climatic changes alone; pastoralists have been severely affected by economic and institutional changes, which are largely taking place outside the realm of pastoral influence (Blaikie et al., 1994; Thébaud, 1988). We can illustrate how these interrelationship play out with reference to a case study in eastern Niger.

3. Controlled access to wells and the management of pastures: lessons from a pastoral conflict in eastern Niger

3.1. The context

Located in the extreme east of Niger, on the borders with Chad, Cameroon and Nigeria, the Diffa region is an arid and sparsely populated region in the ‘Sahel proper’ where pastoral production is largely dominant. The “Département de Diffa” covers a vast area of 140,000 km² and includes the northeastern part of Lake

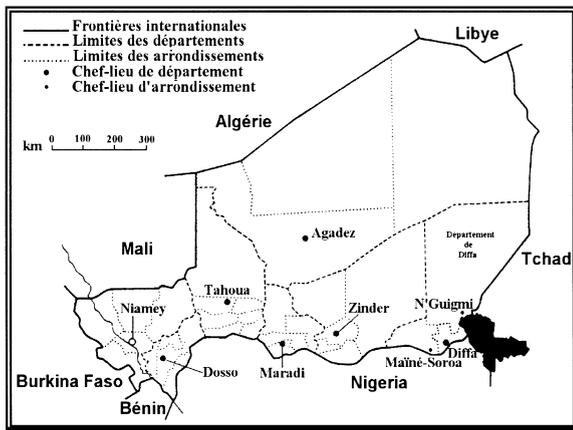


Fig. 1. Location of the Diffa region, eastern Niger.

Chad. The Komadugu River forms the official border between Niger and Nigeria (Fig. 1). Niger is one of the world's poorest countries, and Diffa is remote from its major population centres and markets in the south-west and south of the country (Charlick, 1991). The Diffa region consists mostly of a sandy plain (the Manga), which extends on both sides of the Dillia, a depression corridor stretching from the Termit Mountains to Lake Chad. The Manga plain is dotted with numerous "cuvettes" (pans), where the water table is accessible. Traditional wells, reinforced with timber, provide water for people and animals. These wells have a short life span (between 1 and 4 years only). With a few exceptions, agricultural activity during the rainy season is highly opportunistic, and is intended only to supplement the more substantial production derived from herding.

The region's aridity and its inhabitants' slow demographic growth rate are probably key factors in its comparatively modest population — just over 200,000. Three main ethnic groups live in Diffa: the Kanuri (Manga and Mobeur), who form almost 60% of the population, the Fulani (20%) and the Tubu Teda, Daza and Azza (10%), with small Arab groups (Awlâd Suleyman and Shuwa). The Tubu Daza reside for the most part on the Manga Plateau north of the Dillia Valley, along with small Arab communities (see Fig. 2). Until the end of the 19th century Daza populations could be found as far south as the Kadzell region and the present-day border between Niger and Nigeria; their northward movement is commonly attributed to protectionist colonial policy favouring the influx and settlement of the Fulani (see below).

Until the French conquest, at the beginning of the 20th century, eastern Niger was part of the outer territories of the Kanem–Bornu empire, first established east of Lake Chad, in the Kanem, and moved to Bornu (south-west of the Lake) in the 14th century.

The regions extending north of the Komadugu were always marked by insecurity, raiding and slavery, which resulted in a patchwork of ethnic groups gravitating

around Lake Chad (Barth, 1858; Nachtigal, 1879). Small farming communities (Kanuri) remained safely clustered along the river, while the rest of the region was controlled by Tubu and Arabs, extending their domination over the northern oases of Bilma and Agadem. Soon after the French conquest, at the turn of the 20th century, the colonial administration faced strong opposition from Tubu clans, particularly from Daza cattle-herders living south of the Dillia. Tubu were perceived as an anarchic society, which operated as wandering groups of warriors, without any formal chiefs. Therefore, when migratory Fulani (FulBe and WoDaaBe groups) arrived in eastern Niger after the 1914 drought, the French administration supported their settlement within a vast corridor of rangelands extending from the Komadugu to the Dillia, forcing the Daza gradually to retreat north of the Dillia (Chapelle, 1987; Thébaud, 1999; Zakari, 1985). In contrast to the Tubu and Arabs, Fulani were considered as peaceful herders, who could be easily organised in order to collect taxes.

Such territorial arrangement remained relatively stable until the end of the 1960s (Thébaud, 1999). As a result of favourable climatic conditions, the Daza groups living north of the Dillia were able to maintain cattle herding and even to cultivate millet. South of the Dillia, FulBe and WoDaaBe herders shared the rangelands peacefully, with the Dillia serving as a tacitly agreed boundary between them and Tubu herders. The Daza sporadically crossed into the Fulani rangelands for short periods to graze or sell animals, and to buy cereals in Nigeria.

After the event of the drought in the mid-1970s, however, subsequent environmental change has compelled most Daza to convert to camel-herding, a process which entails a number of considerable constraints (reorganisation of family labour resources, loss of cow's milk-based butter which was crucial to both diet and as a commodity in cross-desert caravan trade with markets in the Saharan Kawar region). Still, at the end of the 1970s, Tubu Daza settlements did not extend beyond the series of dunes along the southern side of the Dillia Valley, the Termit Mountains on the west side and eastward into Chad.

Originating from Nigeria and from central Niger, Fulani groups called FulBe began immigrating to eastern Niger after the drought of 1914 and quickly settled around the pastoral "cuvettes", south of the Dillia, where they dug a dense network of traditional wells. The FulBe are agropastoralists, cultivating millet during the brief rainy season and practising husbandry in mixed herds of cattle, small ruminants, and sometimes camels. FulBe settlement is generally not characterised by a high degree of mobility (i.e. involving distant or frequent transhumance), such pastoral groups preferring to remain in a limited home-area surrounding one or more favoured cuvettes.

The WoDaaBe also originated from central Niger, and constitute a distinctly different ethnic group of Fulani in eastern Niger. They practice no agriculture and depend entirely on animal husbandry, their herds consisting primarily of cattle frequently associated with small ruminants. Despite the fact that WoDaaBe resource-management patterns are founded on a very high degree of mobility, such communities in eastern Niger tend to gravitate toward a particular home-territory based on pasture conditions, season water courses and marshes, and preferred dry-season wells. The WoDaaBe maintain close ties with local FulBe in order to negotiate access to their traditional wells for dry season watering.

More recently, the Arab Mohamid began immigrating to eastern Niger in the 1980s, seeking refuge from drought conditions and insecurity prevailing in Chad and Sudan. They now occupy vast areas of rangelands north and south of the Dillia, and herd camels.

4. Traditional management of access to water in eastern Niger

Pastoral communities living in the Diffa region must cope with variations in pasture conditions and climatic uncertainties which create perpetual disequilibrium between stocking rates and annual rangeland productivity. Therefore, a varying degree of human/herd mobility constitutes the keystone of pastoral land-use systems. FulBe residents always anticipate, as a matter of course, the dry season arrival of outsiders in search of water and grazing grounds.

The technical aspects of the water point (depth, daily water yield, diameter which conditions the number of herds being watered simultaneously, type of animal traction used for extracting the water) are key determinants of the animal-load (number of animals) in a particular area. Traditional wells in Diffa area are generally relatively shallow in depth, ranging from 10 to 25 m. Their yields rarely exceed 1 cm³ per hour over a 12-h period, after which the well should stand idle to allow sufficient time for water recharge. By comparison, cement-lined wells are capable of yielding 5 cm³ per hour over a longer period of intensive use (15–18 h). Artesian boreholes provide 10–20 cm³ per hour continuously and require no human or animal-labour for extraction. By its inherent limits on the quantity of water it can furnish (sufficient for only 200–300 cows per day), the traditional well imposes a ceiling on the number of animals grazing at any given moment in the vicinity.

Limiting the extent of user-rights accorded to outsiders on a given traditional well serves as the management tool with which FulBe residents synchronise animal charge with the available biomass during the dry season. Instead of establishing exclusive rights to their traditional wells, FulBe reserve for outsiders (mostly FulBe

and WoDaaBe) a right to negotiate access to water; residents retain priority user-rights while honouring the principle of reciprocity (which will be invoked when needed).

The protocol adheres to a complex set of social rules culminating with a final agreement on the length of the visitor's stay, and by association, on the approximate quantity of fodder resources to be granted. The rules of reciprocity apply to any and all outsiders including those who normally inhabit distant regions. Local FulBe may expect uncontested access to a neighbouring well (i.e. not their own). No formal negotiation is required. Non-local herders must negotiate watering rights, which includes enumeration of length of stay and placement in the daily watering schedule. Only under exceptional circumstances, such as when the visiting herd is suspected of harbouring disease, is access subject to strict limitations; sick animals must be served far from the wells for example.

In turn, resident FulBe expect all visitors to grant them reciprocal access to their wells. For those visitors whose arrival is a regular occurrence, tea, sugar, or a small ruminant may be offered as compensation for user-rights.

Watering rights are also secured by WoDaaBe. Because they do not possess wells of their own to offer in return, remuneration is immediate and its cost higher. It may consist of an animal loan, or payment of a lump sum in cash, this latter destined to cover maintenance and repair costs on the well. Therefore, WoDaaBe maintain close ties with FulBe, and the wells function as a focal point for the dialogue and exchange of information that builds 'social capital'. Repeated contact with and negotiation between different herder groups fosters the creation of informal alliances, the product of which is an intricate support and reciprocal-aid network.

The essential function of negotiation is to secure shared access to resources: this is crucial to maximising mobility, while controlling access to the rangelands and ensuring a degree of herd dispersion commensurate to available fodder resources.

5. Conflict between Tubu and Fulani herders over public wells and boreholes

We have shown that wells of various types play a key role in the management of pastoral resources during the dry season. To a degree, eastern Niger illustrates the remarkable resilience of traditional pastoral land use systems and their constant adaptation to erratic rainfall and unpredictable resources. But the region also illustrates our argument that such systems have proven sensitive to external influence, particularly from the State. It is to these broader 'human dimensions' of resource access that we now turn.

Fulani herders attribute many of their conflicts with Tubu herders to the lack or differing perceptions of rules governing access to modern watering points — cement-lined wells and boreholes. Confronted with user-rights systems which are open to dispute and potentially disadvantageous, Tubu reactions often consists of simple confiscation of the wells and boreholes. Thus, where a body of shared conceptions concerns user-rights pertaining to traditional wells, the dynamic governing modern watering points is subject to continual re-interpretation. Elsewhere in the Sahel, borehole and well-digging programmes — one objective of substantial international donor support — have been welcomed by agricultural communities; in central Burkina Faso, now well covered by modern water points, these have eased women's daily burdens considerably. By contrast, in Diffa region — a pastoral zone — cement-lined wells and boreholes have often constituted the focal point for inter-ethnic communal strife. In the absence of clearly defined regulatory mechanisms, modern watering points have become an open-access resource according immediate priority to the most forceful herders.

A particular conflict between the Fulani, Tubu and Arabs began in the early 1980s and is the result of a complex set of closely related problems which include drought, poverty, and insecurity. These issues are inextricably tied to regional climatic change as described by Hulme (2001), and to the livestock and water policies begun by the colonial administration and pursued by post-Independence governments. In sum, conflict 'paid off' after years of peace, due to a conjunction of political and economic events.

Beginning in the 1940s, colonial policy favoured livestock development programmes based on improving animal health (vaccination campaigns against rinderpest) and creation of modern water-supply infrastructure as a means to boost cattle production and to open rangelands previously inaccessible due to unavailability of water during the dry season. Primarily financed by external donors, this approach remained in effect after Independence and through the 1970s, with the aim of developing water resources and promoting the optimal use of rangelands.² The strategy for placement of modern wells and boreholes was determined by purely technical criteria, the objective being to maximise the density of coverage in rangelands. This was carried out in the absence of any thorough analysis of pastoralists' needs or perceptions.

Since boreholes water large numbers of animals, the government passed a complex set of laws and regulations in 1960, by which local administrators were to control

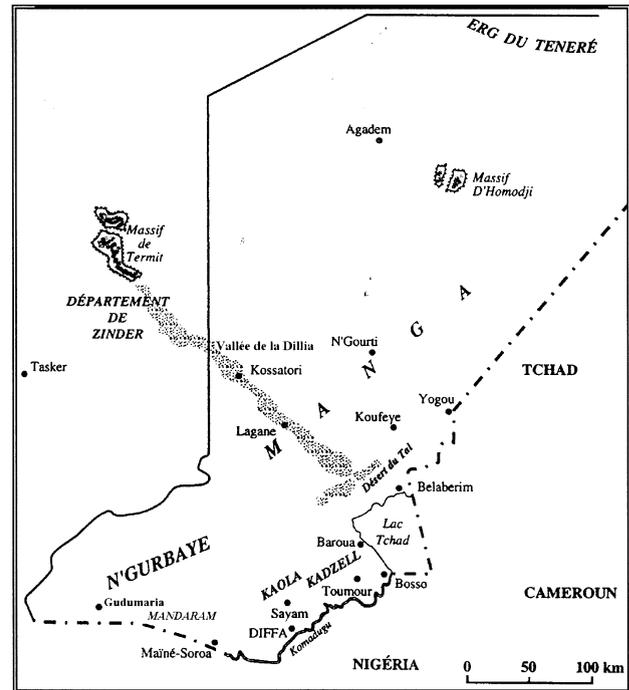


Fig. 2. Département de Diffa, Niger.

access to water by issuing special grazing permits when stocking rates exceeded the carrying capacity of the rangelands. In reality, these regulations proved difficult, if not impossible, to enforce. Rapidly, open access to boreholes or cement-lined wells became the rule. Such practice was later institutionalised by the State. Free access to water was then perceived as a fundamental right.

In the Diffa region, two parallel systems developed. Around traditional wells, controlled access to water and pastures would continue to prevail, while modern watering points became a focus for tensions between pastoral communities. Until the end of the 1970s, the Niger army was always called upon to arbitrate conflicts erupting sporadically around cement-lined wells or boreholes, opposing Tubu or Arabs (with automatic weapons), who crossed occasionally the Dillia, against FulBe and WoDaaBe (usually unarmed).

In the early 1980s, a series of rainfall deficits culminating in the drought of 1984 compelled some FulBe and WoDaaBe herders to move southward (as far as Nigeria) with their cattle, leaving behind residual groups with the small ruminants. In April of 1984, the FulBe community of Alichugul (35 Katsinanko'en families) was attacked by Tubu who wrested control of the cement-lined well. Neither civil nor military authorities exhibited concern; the Tubu remained in control of the well, and the FulBe were obligated to flee. Soon after, large numbers of Tubu and Arab families moved southward across the Dillia to colonise the disputed region. By the end of 1987, 10

² By the end of the 1980s, eastern Niger had 350 cement-lined wells, and about 40 boreholes that reached the deep water table under pressure, enabling them to operate without pumping stations.

cement-lined wells and three boreholes were under their control, FulBe and WoDaaBe having been forced to retreat southward or eastward into Lake Chad. The situation was exacerbated as another pastoral group (the Mohamid Arabs from Chad) infiltrated the area and became involved in disputes with not only the Tubu, but also the Arabs and Fulani. Because of insecurity in the rangelands, FulBe and WoDaaBe had to adapt by gathering around boreholes for long periods, thus reducing their mobility.

The fall of the Chadien government of Hissène Habré, in 1990, was followed by the retreat of his army into the Diffa/N'Guigmi region. The arrival of this massively armed force marked the beginning of a flourishing trade in arms and munitions in eastern Niger. Soon after, FulBe and WoDaaBe joined forces in an armed militia. For most of the 1990s, the Diffa region was arena to violent and mutually destructive conflicts between pastoral communities. Tubu and Arabs also established official rebellion fronts against the Niger Government.³

After several years of violent confrontations and strategic manoeuvring (including barring entry to markets to the Tubu), Fulani communities have now reclaimed most of the territory from which they had been dispossessed by the Tubu and Arabs. Since 1998, rebel and militia groups have signed peace agreements with the government. Various ethnic and interest-groups have gradually opened dialogue. The re-opening of many markets — previously shut down or inaccessible to large portions of the community — in the pastoral region has contributed to re-establish the normalcy of daily existence in Diffa. A good rainy season in 1999 and abundant pasture resources has stimulated economic recovery. Commercial activities in the region are evolving toward the kind of free exchange and movement (livestock toward the south, cereals toward the north) that existed a decade ago.

Still, these new developments should inspire a guarded optimism. Both Tubu and Fulani communities have to resolve conflicts related to animal theft perpetrated by rogue elements in the region. In addition, no solution has yet been found to control the use of public wells and boreholes, where sporadic attacks are still occurring, initiated mostly by Mohamid Arabs. Following new guidelines promoted by the State for implementing pastoral wells, attempts to allocate wells and adjacent pastures to groups of users, or with local management committees, are still proving risky, costly and inconclusive.

6. The role of the State in negotiating property and access rules

The 'disequilibrium' ecology of eastern Niger is best suited to locally negotiated rules of access to natural resources. This demands a commitment by groups of land users to share water and pastures. While traditional systems based on customary rules were rarely subject to conflicts, recent management systems have been unsettled by new water points, and by political events.

As Raynaut argues (2001), "Conflict management, arbitration between divergent interests and territorial development all require the action of a state that is exercising its prerogatives to the full". In practice, the State (a complex hierarchy of elected and unelected officials, with varying powers) has played a background role in opening access to boreholes and wells; and it has not been able to muster the financial and legislative resources needed to implement the Code Rural in regions dominated by pastoral land uses. There remains a need for some form of central arbitration of the most serious conflicting claims. Government should be responsible for allocating resources to pastoral communities, and for strengthening user-rights. The Code Rural in Niger, as well as the RAF in Burkina, provides some mechanisms by which this could be done, but they remain complex legal exercises without sufficient 'teeth'.

Although such a redefinition of the State's mandate and a devolution of powers is expected to be part of the tide of decentralisation policies sweeping Sahelian countries, this should not be taken for granted (Toulmin, 2000). History reveals that until the 1990s, pastoral development policies in West Africa were primarily based on a negative perception of pastoral societies and the ways they by the local administration and by development actors, and this has been slow to change (Warren, 1995). According to many government officials and development agencies, it appeared self-evident that herders were unable to manage common range resources in a rational way, thus providing strong justification for privatising common rangelands and controlling pastoralists' movements and stocking rates. These attempts and parallel efforts to sedentarise herders have proven problematic, and created many tensions — indeed rebellion — among pastoralists themselves. For example dividing rangeland in northern Senegal into "private ranches" to be allocated to individual families, led to severe ecological, economic and social problems (Thébaud et al., 1995). Since the beginning of the 1980s, development projects and programmes involving the local management of natural resources by rural communities in the Sahel (for instance, "gestion de terroirs" programmes for farmers — see Batterbury, 1998) have achieved modest success, but in many instances reinforced the alienation of pastoralists rather than promoted their integration (Marty, 1993).

³ The Front Démocratique Révolutionnaire (FDR), a movement that included Tubu, Kanuri and Arab elements, demanded regional autonomy for the Manga region. The Libyan-backed Tubu Forces Armées Révolutionnaires du Sahara (FARS) was also operating in the Diffa region.

New legislation could and should play an essential role in providing pastoralists with secure land tenure and guaranteed access to key resources. The legislative embodiment of ownership by 'productive use' (*mise en valeur*) needs to apply to grazing lands as well as agriculture or forestry. If the 'rules of the game' for access were agreed and understood, then there would be room for customary practices and collective arrangements to coexist with these (Lavigne Delville, 2000; Cousins, 2000).

The fact that the pastoral land question is far from resolved is partly because pastoralists are often insufficiently organised and poorly represented in the political structure. Devolved governance, therefore, needs to take into account the distinctive situation of pastoralists and their marginalised position in civil society. In many Sahelian regions, the capacity of pastoralists (and, for that matter, agropastoralists) to negotiate access to key resources has to be guaranteed both with local representatives of the administration and with other economic and ethnic groups (Lund, 1999). Access to information (through literacy, education, and training) has also to be improved and the growing role of the newly emergent pastoral associations should be supported.

7. Rules and negotiation in the management of pastoral resources

Pastoral systems in the Sahel may be considered to be somehow 'outside' both private ownership and State management. They are merely an efficient way "to take profit in common" from scattered and highly variable resources. Such resources can be used simultaneously or sequentially by members of a community, or by different communities (Cousins, 2000; McCay and Jentoft, 1998). It is difficult to divide rangelands and to enforce exclusive rights, but it is also hard to exclude anyone from using them. Common use of resources makes it possible for each user to deprive other users of these resources, potentially creating rivalry among them (Williams, 1998).

As we saw in the case of eastern Niger, pastoralists rely on a wide variety of resources on which different right of access and use can prevail, depending on the location of those resources, their strategic importance and the extent to which pastoralists can control their access with other groups or individuals. Use of pastoral resources is therefore based on a complex set of temporary or more permanent claims on pastures, wells and other resources (salt licks, for example), and on underlying principles of flexibility and reciprocity. Therefore, pastoralists will not favour exclusive rights, the *quid pro quo* exchange of use rights remaining the basis of non exclusive land use systems. Territorial boundaries should remain fuzzy,

allowing margins of manoeuvre and providing buffer zones to pastoral groups living in the vicinity through overlapping rights (Behnke, 1994). Conflicts are part of the system. "Customary systems also suffer a number of drawbacks, such as their vulnerability to abuse by more powerful groups within society who may try and ensure their preferential access to key resources, or who profit from sale of property considered to be owned by the society as a whole" (IIED, 1999).

However, negotiation over access is a permanent process in which individuals or user groups re-evaluate their share of pastoral resources and their particular level of control over strategic resources. In many cases, violent conflicts are contained because of the 'social capital' developed by pastoral communities among themselves and with other communities who share common interests and common resources. There is, in other words a sort of social, cultural and economic 'symbiosis'.

Over time, as our case study reveals, outsiders came to enjoy unrestricted access to rangelands and water points and this all but relieved them of any need to negotiate. Local herding communities therefore lost control over these resources. Herders no longer had anything to offer when bargaining for access to resources controlled by newcomers, particularly in the southern regions that had been their sanctuary in times of drought. Each new drought had insidious effects on the pastoralists, and a new class of destitute herders emerged, especially among the pastoral groups that had never fully recovered from the 1983–1985 drought. This complex set of closely related processes of droughts, poverty and currents of pastoral rebellion in the West African Sahel since the 1980s are inextricably tied to livestock and water policies adopted by the colonial administration and pursued by post-Independence governments. Ironically, such policies have created the very conditions of open access to pastoral resources which they intended to prevent.

In some respects, the pastoral conflict that erupted between the Tubu and Fulani in eastern Niger is also rooted in the growing isolation of these communities during a long period of drought and erratic rainfall, their limited access to basic services and their difficulties of herding cattle north of the Dillia. Seen from the Tubu side, the conflict benefited from a series of events: declining legitimacy of the Niger's military regime after 1987, reluctance from the local administration and the army to mitigate conflicts between the Tubu and the Fulani communities around public wells and boreholes and open access to arms and munitions. After several decades of status quo, Tubu could eventually challenge history and reclaim their former territories south of the Dillia; open conflict with Fulani communities could very well "pay off" (Ostrom, 1986; Hendrickson et al., 1999) and provide Tubu with new opportunities.

8. Conclusion

Over the last 25 years, the Sahelian ‘pastoral question’ has had impacts far beyond the limits of pastoral territories.

The history of misunderstanding of pastoral ways of life is not unique to eastern Niger, and nor is it a new development. The malign nexus of colonial governance, scientific homogenisation, and simplistic economic theories about the use of the commons had similar negative impacts on pastoralists throughout Africa and well beyond, as far away as the Navajo homelands of Arizona in the USA, and the settler pastoralists of New South Wales (Warren, 1995). In particular, pastoralists are a common target for ‘crisis’ narratives in the Sahel, and have been implicated in ‘desertification’ since the 1930s. Yet a more sympathetic understanding of Sahelian pastoralism has also been around for a long time. Derrick Stenning (1959) and Marguerite Dupire (1962) established as early as the 1950s that the domestic economy of the Peul of northern Nigeria and of Niger constituted sound use of limited resources. By the 1980s, the rigorous understanding of pastoral lifeworlds in the Sahel had been significantly enriched, also casting serious doubts on rangelands degradation by pastoralists. But these lessons went, for the most part, unheeded by mainstream research and policy networks.

Looking to the future, it is unfortunate that a new humid climatic period in the Sahel, which is a possibility suggested by the high rainfall of the last few years, might actually worsen the lot of many pastoral groups. Although relatively productive pastures and new opportunities for restocking would be a blessing, the increasing value and opportunities offered by better pastures would be very likely to attract the attention of new outside interests and opportunistic agricultural expansion, thus sparking more potential for conflict.

If situations like these are not to develop, pastoral rights must be approached within the broader context of economic and political changes affecting Sahelian states. Political and macroeconomic factors exert an influence over the ways in which people gain access to pastoral resources in agropastoral regions. These include the effects of structural adjustment programmes on market opportunities and pricing systems, the gradual withdrawal of government involvement in public services (e.g. veterinary services, wells and boreholes), and the promotion of private entrepreneurship in different sectors (Cour, 2001).

In the context of 25 years of evolution and transformation of land use and resource access in the rural Sahel, the role of the State has to receive a thorough re-evaluation, especially in settling land tenure disputes and in arbitrating severe conflicts between communities over resources. The State must, on one hand, promote and guarantee the use and access rules deemed acceptable to stakeholders

(Rojat, 1991); on the other, it must distance itself from the definition of these rules, which must be left to communities themselves. The rules governing the occupation of space and the exploitation of resources should form a framework to facilitate negotiations between the users of these resources (Requier-Desjardins, 1988).

One thing is certain. The cliché of the contemplative pastoral nomad, irrational, enlarging herds to boost prestige, a ‘cowdolatrist’, consuming forage and water at an alarming rate (all stock characters in much of the desertification discourse), does not stand up to critical scrutiny.

Acknowledgements

Sections of this paper were presented by Thébaud at the RGS Sahel conference in London in May 1998 and at the research seminar, *Negotiating Property — Processes of Vindication of Land Claims in Developing Countries*, Roskilde University, Denmark October 11–14, 1999. Her fuller account of Sahelian resource conflicts appears in Juul, K. and Lund, C., eds. (2001) *Negotiating Property: Processes of Vindication of Land Claims in Africa*. Heinemann, London (forthcoming). Andrew Warren’s deft editing is gratefully acknowledged.

References

- Barth, H., 1858. *Travels and Discoveries in North and Central Africa: being a journal of an Expedition undertaken under the auspices of H.B.M.’s Government in the years 1849–1855 by Henry Barth, Fellow of the Royal Geographic and Asiatic Societies*, 5 Vols. Longman, Brown, Green, Longmans and Roberts, London, 3225pp.
- Bassett, T., Zueli, K.B., 2000. Environmental discourses and the Ivorian Savanna. *Annals of the Association of American Geographers* 90 (1), 67–95.
- Batterbury, S., 1998. Local environmental management, land degradation and the Gestion de Terroirs approach in West Africa, policies and pitfalls. *Journal of International Development* 10, 871–898.
- Batterbury, S.P.J., Forsyth, T., 1999. Fighting back: human adaptations in marginal environments. *Environment* 41(6), 6–11, 25–30.
- Behnke, R.H., Scoones, I., Kerven, C. (Ed.), 1993. *Range Ecology at Disequilibrium, New Models of Natural Viability and Pastoral Adaptation in African Savannas*. ODI/IIED/Commonwealth Secretariat, London.
- Behnke, R., 1994. *Natural resource management in pastoral Africa*. Commonwealth Secretariat, Overseas Development Institute. International Institute for Environment and Development, London.
- Blaikie, P., Cannon, T., Davis, I., Wisner, B., 1994. *At Risk: Natural Hazards, People’s Vulnerability, and Disasters*. Routledge, London, 284pp.
- Chapelle, J., 1987. *Souvenirs du Sahel*, collection Mémoires Africaines. L’Harmattan, Paris, 288pp.
- Charlick, R.B., 1991. *Niger: personal rule and survival in the Sahel*. Dartmouth/Westview, Boulder, 160pp.
- Cour, J.M. 2001. The Sahel in West Africa: countries in transition to a full market economy. *Global Environmental Change* 11, 31–47.

- Cousins, B., 2000. Tenure and common property resources in Africa. In: Toulmin, C., Quan, J.F. (Eds.), *Evolving Land Rights, Policy and Tenure in Africa*. DFID/IIED/NRI, London, pp. 151–179.
- Dupire, M., 1962. Peuls nomades: étude descriptive des WoDaaBe du Sahel nigérien. *Travaux et Mémoires*, Vol. 64. Institut d'Ethnologie, Université de Paris, 327pp.
- Hulme, M., 2001. Climate perspectives in Sahelian desiccation. *Global Environmental Change* 11, 19–29.
- IIED, 1999. Land tenure and resource access in West Africa: issues and opportunities for the next twenty five years. International Institute for Environment and Development, London, 44pp.
- Hendrickson, D., Armon, J., Mearns, R., 1999. Conflict and vulnerability to famine: livestock raiding in Turkana, Kenya. *Drylands Issues Paper*, 80, International Institute for Environment and Development (IIED), London.
- Lane, C., Moorehead, R., 1994. New directions in rangeland and resource tenure and policy. In: Ian Scoones (Ed.), *Living with Uncertainty: New Directions in Pastoral Development in Africa*. Intermediate Technology Publications, London.
- Lavigne Delville, P., 2000. Harmonising Formal Law and Customary Land Rights in French-Speaking West Africa. In: Toulmin, C., Quan, J.F. (Eds.), *Evolving Land Rights, Policy and Tenure in Africa*. DFID/IIED/NRI, London, pp. 97–122.
- Lund, C., 1998. *Law, Power and Politics in Niger*. LIT Verlag, Hamburg / Transaction Publishers, New Brunswick, 252pp.
- Lund, C., 1999. A question of honour — property disputes and brokerage in Burkina Faso. *Africa* 69 (4), 575–594.
- Mace, R., 1991. Overgrazing overstated. *Nature* 349, 280–281.
- Marty, A., 1993. La gestion des terroirs et les éleveurs: un outil d'exclusion ou de négociation? *Revue Tiers Monde*, XXXIV(134), 327.
- McCay, B., Jentoft, S., 1998. Market or Community Failure? Critical Perspectives on Common Property Research. *Human Organization* 57 (1), 21–29.
- Mortimore, M.J., 1998. *Roots in the African Dust: Sustaining the Sub-Saharan Drylands*. Cambridge University Press, Cambridge, 219pp.
- Nachtigal, G., 1879. *Saharâ und Sûdân, Ergebnisse Sechsjähriger Reisen in Afrika*, 2 Vols. Wiegandt, Hempel und Parey, Berlin, 789pp.
- Ostrom, E., 1986. Issues of Definition and Theory: Some conclusions and hypotheses. *Proceedings of the Conference on Common Property Resource Management*, 1985, National Academy Press and the National Research Council, Washington DC, pp. 597–614.
- Raynout, C., 2001. Societies and nature in the Sahel: ecological diversity and social dynamics. *Global Environmental Change* 11, 9–18.
- Requier-Desjardins, M., 1988. Common Property, Pastoral Mobility and Access Rules: the Case of Common Pastures in Northern Cameroon. Presented at "Crossing Boundaries" The Seventh Common Property Conference of the International Association for the Study of Common Property, 10–14 June 1998, Vancouver, Canada.
- Rojat, D., 1991. Pâturages communs: modélisation bio-économique et gestion des systèmes pastoraux. *Etudes et Synthèses de l'Institut d'Élevage et de Médecine Vétérinaire des Pays Tropicaux (IEMVT)*, Vol. 37, 58pp.
- Stenning, D.J., 1959. *Savannah Nomads: a Study of the Wodaabe Pastoral Fulani of western Bornu Province, Northern Region, Nigeria*. Oxford University Press for the International African Institute, 266pp.
- Taylor, V.N.H., 1996. Pastoral water resources in the Sahel: Soum Province, Burkina Faso West London Papers in Environmental Studies 3, 55–72.
- Thébaud, B., 1988. *Élevage et développement au Niger: quel avenir pour les éleveurs sahéliens?* International Labor Office, Geneva.
- Thébaud, B., 1990. L'évolution récente des politiques d'hydraulique pastorale et la gestion de l'espace au Sahel, in *Sociétés Pastorales et Développement*. *Cahiers des Sciences Humaines* 26 (1–2), 97–117.
- Thébaud, B., 1999. Gestion de l'espace et crise pastorale au Sahel: étude comparative du Niger oriental et du Yagha Burkinabé. Thèse de doctorat, Ecole des Hautes Etudes en Sciences Sociales, Paris, 479pp.
- Thébaud, B., Grell, H., Miede, S., 1995. Recognising the effectiveness of traditional pastoral practices: lessons from a controlled grazing experiment in Northern Senegal. *Drylands Issues Paper*, 55, International Institute for Environment and Development (IIED), London.
- Toulmin, C., 2000. Decentralisation and land tenure. In: Toulmin, C., Quan, J.F. (Eds.), *Evolving Land Rights, Policy and Tenure in Africa*. DFID/IIED/NRI, London, pp. 229–245.
- Warren, A., 1995. Changing understandings of African pastoralism and environmental paradigms. *Transactions of the Institute of British Geographers* NS20 (2), 193–203.
- Warren, A., Batterbury, S., Osbahr, H., 2001. Soil erosion in the West African Sahel: a review and an application of "local political ecology" approach in South West Niger. *Global Environmental Change* 11(1), 79–95.
- Williams, T., 1998. Multiple uses of common pool resources in semi-arid West Africa: a survey of existing practices and options for sustainable resource management. *Natural Resource Perspectives*, 38, Overseas Development Institute, London.
- Zakari, M., 1985. Contribution à l'histoire des populations du sud-est nigérien, le cas du Mangari (XVI^e-XIX^e siècles). *Etudes Nigériennes* 53.