ASPECTS OF RESOURCE CONFLICT IN SEMI-ARID AFRICA

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The present century has seen a significant real increase in resource conflict in semi-arid Africa. The most important causes of this are human population increase and the globalisation of the economy. Such conflicts reflect both point resources (mines, farms, reserves) and ecozonal conflicts (water, grazing and hunting rights). Although attempts to involve the community have been partially successful in relation to reserved land, conflict over extensive and patchy common property resources such as wetlands and grazing has made them more difficult to conserve and manage.

Policy conclusions

- Resource conflict in semi-arid Africa is set to increase and a failure to take it into account is likely to affect development initiatives.
- Attempts to police highly mobile groups such as pastoralists or hunter-gatherers only ever record short-term successes. Only constructive interaction with such groups can succeed in the longer term.
- Participatory schemes that involve communities in the management of wildland resources only succeed where a significant faunal resource remains and where the community is village-based and thus relatively fixed.
- Governments can expect to see a significant rise in community activism often supported by externally-funded NGOs.
- Land rights of displaced hunting-gathering populations is likely to become a major issue.

Introduction

Development projects that concentrate on particular natural resource sectors (forestry, livestock, water etc.) have rarely taken into account interactions with other sectors. Equally important is that they have not taken account of conflict. Highlighting conflict can be problematic politically, yet an awareness of the nature, causes and potential results of conflicts must be a part of effective development planning. In semi-arid sub-Saharan Africa, development projects have a poor record of success, often through ignoring resource competition. When resources are short and populations live on the edge, minor deficits in rainfall or pasture may generate major conflict.

This paper describes the main categories of conflict and suggests a classification (see also Blench, in press). It summarises the various mechanisms proposed for their resolution and makes some policy recommendations as to how an understanding of resource conflict can be better incorporated into development planning.

Box 1. Categories of conflict

Point

Categories of conflict

Two major arenas of conflict are shown in Box 1: those over **point resources**, such as mines, large farms and reserves, and those which are **ecozonal**, i.e. which reflect the patchy resources of the semi-arid zone and its historic exploitation systems.

Conflict between livestock producers and cultivators occurs throughout the semi-arid zone. Other sources of conflict may be locally important but they are essentially tied to point enterprises, such as mines, large-scale farming, game parks or infrastructure projects (Richards, 1988).

An historic conflict that has been replayed numerous times in the region of eastern and southern Africa is that between the indigenous hunting-gathering populations and the incoming pastoral/agricultural populations, both African and later European. The few remaining Khoisan peoples are either settled or move in areas so remote that there is little competition for their isolated terrain. Recent moves by some groups to reclaim hunting rights in southern African game may become an issue in the next century, as is already the case in North America and in parts of Siberia.

Ecozonal

1. Pastoralists/livestock producers and cultivators
+
2. Fishing peoples with both pastoralists and cultivators
+
3. Urban resource users extracting rural resources such as water and woodfuel
+
4. Large-scale agriculture with traditional land users
+
5. Forest/wildlife reserves with traditional land users
+
6. Rural populations and industrial enterprises, especially mining
+
7. Rural populations and large infrastructural projects such as dams
+

Large infrastructure projects

During recent decades disillusionment with large infra- structure projects has grown. Earlier, projects such as the Aswan and Kariba dams went ahead with scarcely any voices of dissent. It was simply assumed that local people would be in favour of progress , and that ecological effects would be minimal. But recently, multilateral organisations have virtually ceased lending on these projects, partly in response to public concern over their environmental effects. However, the fluid enthusiasms of Western ecologists are not entirely shared by the governments of developing countries, as the Three Gorges Dam in China illustrates. Similarly, the Kafin Zaki dam in Northern Nigeria demonstrates how governments persistently associate dams with progress.

Dams are not the only projects of this type: the Jonglei Canal in Sudan has remained alluring despite being entirely unsuitable both ecologically and socially. Fortunately, in this case, insecurity from the war in Southern Sudan has halted almost all progress.

Reserves

Reserving areas of wild land is not a new concept within semi-arid Africa. Forests, usually surrounded by spiritual sanctions, were preserved for hunting or gathering in the precolonial era. Such sacred groves have sometimes survived into the present, and indeed have been interpreted by external agencies as a kernel of indigenous environmental consciousness. They are, however, often threatened by arable expansion and a changing socio-economic context that makes existing cultural prohibitions ineffective against, say, the advance of charcoal burners.

In the colonial era, the policy of creating forest reserves, usually reserved areas where hunting, gathering wood or grazing livestock were prohibited, gave way after the Second World War to the notion of Game Reserves. Prior to that large mammals were perceived to be so abundant that conservation measures were unnecessary. Very large game parks with sporadically effective policing are a feature of the Eastern and Southern African region, in response both to high numbers of colonists and high levels of tourism.

In the colonial era, forest and game reserves were established largely without discussion with local people. Given lower population densities, this was largely unproblematic and a lack of effective policing usually meant that hunting, gathering and grazing continued. Recently, ethical and management issues over reserved land have become more diverse and complex (Box 2).

Within nation-states there is often a conflict between the value-system of local communities who may favour conservation options for reserved areas to protect their future resources and outsiders who may seek to exploit a resource for immediate gain.

In response, strategies underlying development projects with a conservation element have begun to co-evolve with local communities (Barrett and Arcese, 1995). Clearly, without the co-operation and active involvement of local communities no conservation project has a chance unless the state is willing to spend heavily on policing. However, involving local communities is also not simple; there is, for example, no guarantee that any type of pre-existing culturally sanctioned conservation ethos is present. Nomadic pastoralists, for example, who depend on moving once they have used or overused a region of pasture, do not easily become range managers. Agricultural peoples used to cutting trees freely may not immediately see why they should rein in this activity when the trees appear still to be numerous.

Box 2. Conflict over reserved land

1. Changing perceptions of conservation now suggest that categories of environment and species other than large mammals deserve protection.

Apart from this, the community can prove to be an elusive entity. For instance, efforts to return profits from wildlife reserves back to the community which has agreed to cease hunting or gathering in a reserve have proved problematic. Many papers report either long delays in returning revenue, payments to inappropriate interest groups or the disappearance of funds. Unless systems of more direct revenue return can be devised, this problem effectively sabotages schemes, no matter how well designed, of involving the community in wildlife management.

2. The globalisation of markets in products such as ivory and rhino horn make poaching an increasingly attractive economic option.
3. Increased arable farming, grazing and charcoal production have caused the value of reserved land to rise.
4. Communities have become more self-conscious and aware of their rights, especially through the involvement of external NGOs.

Pastoralists and farmers

Dramatic shifts in the economic, climatic or security conditions can make different ecozones more or less attractive to farmers. The demographic literature on West Africa is full of references to the underpopulated Middle Belt, corresponding to the subhumid zone. Demographic syntheses undertaken earlier in the century seem to show this phenomenon, with concentrations of settlement in the humid and semi-arid zones. Exhaustion of soils elsewhere and the rise of cultivation techniques that can compensate for the low yields in the subhumid zone have attracted farmers, creating competition for a resource that was formerly disdained.

Greater security and access to infrastructure have been responsible for the migration of montane populations in West-Central Africa (Ngoufo, 1992). In the years since the 1960s, many small hill settlements have been deserted. Farming systems have changed from intensive cultivation with elaborate soil and water conservation to either shifting cultivation or low-density rainfed cultivation. Such moves do not succeed unless tenure can be established in the face of existing interests; in some cases there were farmers already on the plains. In other cases, the hill-farmers began to farm in rangelands claimed by pastoralists.

Many years of seasonal pastoral migration of cattle herds have created fertile north-south swathes. Committees were established throughout Anglophone West Africa to ensure that established cattle routes were respected by both farmers and pastoralists. These committees functioned into the early years of independence, but have now been largely disbanded. Declining soil fertility in other regions has made these attractive places to farm, outweighing the dangers of possible conflict. In many areas farmers have also been emboldened by taking control of the local or regional administration.

Conflict between pastoralists

Intergroup conflict between pastoralists has often been interpreted as competition for pasture. However, chronic insecurity from livestock raiding has the effect in some areas of deterring herders from exploiting pastures that are not easily defensible. The purpose of raiding is less economic and more to do with the maintenance of group solidarity and

the prestige mechanisms. The result, however, is often patchy overgrazing, as pastoralists are compelled to stay within a region too small to support their herds.

Small farmers and large farms

Large-scale farms and ranches in West Africa have rarely been sustainable and so have not created major resource conflicts. High population densities and a well-organised traditional agricultural sector, together with the absence of true expatriate colonies, have made these enterprises less than viable.

However, in Eastern and Southern Africa, the process of colonisation was accompanied by a major alienation of land >from African smallholders, especially in Kenya, Zimbabwe and South Africa. Indigenous populations ultimately responded with violent opposition, leading to the partial redistribution of such land after Independence. Large agricultural schemes were subsequently established in some countries. For instance, in Ethiopia, tractorised farms were established during the civil war to produce food to pay for arms imports. In Tanzania, the government established large- scale wheat farms with the assistance of the Canadian government. These have displaced considerable numbers of pastoralists whose case has been taken up by various international organisations a trend likely to spread to other sectors and countries in future.

Wetlands: multiple resource claims

Semi-arid regions, because of their patchy resources, also usually have dispersed human populations. Either these move in search of resources that vary annually, such as fish or pasture, or they adapt their cultivation to varying conditions of soil fertility and rainfall. Either way, flexibility is a key element in their subsistence, often at the expense of community coherence (Gallais, 1984). In the same way, patchy resources imply intentionally ambiguous tenure systems that allow multiple claims on them. Wetland areas of West-Central Africa represent a particularly evolved example of such multiple claims on common property resources.

Most conflicts consist of simple oppositions: farmers versus herders, wildlife guards versus hunters. However, rich environments, such as wetlands, attract a multiplicity of users. In West Africa, the two most significant regions are the Inland Delta of the Niger in Mali, and Lake Chad, shared among four countries. Further east, the marshlands of the *sudd* in Sudan represent a classic region of interlocking resource use. Apart >from fisheries, these wetlands produce silt-covered swampy lands that can be used for irrigable crops and rich pastures as the waters recede. In the Inland Delta, deepwater rice has been locally developed to adapt to very rapidly rising floodwaters. These wetlands can moreover be important areas for a diversity of flora and fauna.

Farmers tend to be less concerned than fishermen about renewable aquatic resources and farming practices, such as pesticide use, may poison wide areas. Since the water does not rise to the same level each year, the pattern of flooding is erratic and conventional tenure

and access rights cannot apply to such a changeable resource. This often leads to conflict *within* exploitation systems (Adams, 1995).

Attempts to manage wetlands have a particularly poor record because users are unable to prevent large-scale water extraction upstream, and because joint management arrangements are vulnerable to free-riding. The prognosis for the survival of traditional management of wetlands must be pessimistic, despite numerous analyses showing they are economically productive if left in place.

An Equatorial dichotomy?

The literature on resource conflict in relation to livestock producers suggests a division between two regions of Africa, corresponding crudely to north Equatorial and to East and South and thus to the distribution of occupationally specialised pastoralists. A pastoral zone stretches from Senegambia to the Horn of Africa and to the borders of Tanzania, occupied by peoples who are usually ethnically distinct and tend to be specialised pastoralists. Map 1 shows the approximate spread of these populations. Although there are numerous livestock producers south of this line, often with large herds or flocks, they are almost always cultivators who also keep animals. Non-arable regions such as the Kalahari desert were occupied by hunter-gatherers in pre- colonial times and some few populations remain there.

Apart from the Herero/Himba, there are today no occupationally specialised pastoralists south of central Tanzania, despite a semi-arid ecology and relatively low population densities through much of the region. The consequences of this are significant. Livestock producers are usually of the same ethnic group as the farmers they herd around and tend to be the richer members of those communities. As a result, the specialised sub-forms of pastoralism characteristic of the pastoral zone are absent; there are no camel or sheep herders, for example. Dairying is not a major element in the culture of Eastern and Southern Africa and herders do not depend on the exchange of milk for cereals. This defuses two of the major sources of conflict in the north Equatorial region; religious differentiation and contrasting ethnic/cultural attitudes. In West Africa proper, pastoralists tend to be Muslims, unlike many populations with whom they interact. Even where they are not adherents of a different religion, the pastoral culture of groups such as the Maasai contrasts sharply with the neighbouring farmers.

Another factor is the predominance of maize throughout the east and southern region. Maize stover is not an attractive fodder for ruminants as it is of poor digestibility and low nutritional content. Herd owners have thus no strong motivation to compete for cereal stover. By contrast, in north Equatorial Africa, where the more palatable millets and sorghums predominate, the exchange of manure for stover (and increasingly cash) is major part of pastoralists annual grazing strategies in most regions. This has the effect of creating a network of exchanges in West Africa that are largely without parallel further east. This has a significant impact on the types of conflict likely to occur.

Box 3 summarises some of the key differences between the two regions.

Is conflict increasing?

It is difficult to decide whether the impression of increasing conflict is real or is simply an artefact of increased research. Much of the ethnography of colonial Africa emphasises stability but in reality the socio-economic changes set in train in this period lie at the root of much of the modern conflict. The most important of these are:

- increase in human populations;
- competition with new types of land-use unknown in the precolonial era;
- the establishment of national borders;
- the availability of modern transport, communications and powerful weaponry.

The increase in human populations has had dramatic effects. Apart from more farmers, fishermen and pastoralists trying to make use of the same land area, the demands of cities for meat, fish and cereals induce many producers to keep larger herds as they respond to these demands. Other urban demands, e.g. for water and minerals, as well as attempts to institute large-scale agricultural production, compete for space. Road transport makes possible production for remote markets and places fragile resources under ever greater strain.

Box 3. Key contrasts between north Equatorial and Eastern-Southern Africa

Equatorial	East & South
Occupationally specialised pastoralists	
Yes	No
Species herded	
All	Cattle
Long-distance transhumance	
Yes	No
Ethnic differentiation with farmers	
Yes	No
Religious differentiation with farmers	
Yes	No
Resource competition with hunter-gatherers	
No	Yes
Economic dependence of sales of dairy products	
Yes	No
Nutritional dependence of herds on cereal stover	
Yes	No

At the same time, improved communications and access to a variety of media have meant that communities are more self-conscious. They are aware that their land, water and pasture are valuable to outsiders and shifting whole settle- ments, a common response in the precolonial era, is often no longer possible. Both the establishment of national and internal borders and the higher intensity of human settlement make it worth retaining rights to traditionally-held land.

It is therefore likely that resource conflict is more prevalent than earlier in the century and that this is not merely an illusion generated by more research. There are more people competing for fewer resources and there are more perceived resource arenas.

Conclusion: acknowledging conflict

Acknowledging conflict is essential to a rational development policy; glossing over dissonant elements may be a recipe for short-term approval but can never generate sustainable solutions. Sometimes analyses reflect as much the intellectual history of their period as the situation on the ground. Conflict has negative overtones, but resource conflict is often a major stimulus to the evolution of intricate interlocking patterns of

exploitation. Without initial conflict, the complex patterns of co-operation that characterise the multiple use of many African wetlands would never have developed.

Talking about conflict is easier than putting in place policies to resolve it. Governments are affected by ethnic and economic lobbies and these sometimes lead to simplistic and even violent solutions. They also have a tendency to pursue long redundant policies. Hence, for example, the continuing enthusiasm for settling pastoral nomads, despite numerous demonstrations that this (a) does not work and (b) is not economically viable. Similarly, attempts to resolve the problems of wetlands through land tenure regulation contrary to the widespread observation that effective use of a patchy resource requires a built-in ambiguity in respect of land rights.

A more informed traffic between research insights and policy would be a useful beginning. The major implications for policy apparent from experience over recent decades are:

- Policing any highly mobile group such as pastoralists or hunters can only ever record short-term successes. Only constructive interaction with such groups can succeed in the longer-term.
- There is little empirical evidence that small-scale societies traditionally place any value on conserving their environment or its plant and animal resources. Reports to the contrary usually prove to be romanticism.
- Attempts to fix prices or control the movement of pastoralists who supply meat and milk to the cities are likely to be always half-hearted and certainly unsuccessful. Policies that result in a diminishing supply of these commodities are politically risky.
- Governments are generally unwilling to curb large industrial enterprises, such as mining, from which they derive significant revenue, no matter what the environmental consequences. Even the increased household incomes from small mineral extraction are seen as politically more attractive than the environmental damage they cause. This could be remedied by building in requirements for post-extraction rehabilitation.
- Governments will be persistently attracted by large mechanised farms, no matter what evidence is presented to suggest these do not work.
- The needs of politically articulate urban dwellers are inevitably placed above those of rural producers and where this is a cause of conflict, such as in firewood or water extraction, regulatory frameworks and infrastructure will favour urban dwellers.
- Schemes supposed to either compensate peasants for depriving them of resources or plough back into the community revenues from exploitation of wildlands (such as payments for hunting licenses) rarely do. Conflicts which may appear resolved have a habit of continuing.
- Participatory schemes that involve communities in management of wildland resources seem to have only recorded successes where a significant faunal resource remains and where the community is village-based and thus relatively fixed.

- Governments can expect to see a significant rise in community activism often supported by externally-funded NGOs.

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