

ACCESS RIGHTS AND CONFLICT OVER COMMON POOL RESOURCES ON THE JOS PLATEAU, NIGERIA

Report to WORLD BANK/UNDP/DFID-JEWEL (Jigawa Enhancement of Wetlands Livelihoods Project)

Extracted from a report on three states submitted to the World Bank

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4. Plateau State

4.1 Conditions of the study

Plateau State has been the scene of very serious inter-communal conflict since 2000 and indeed insecurity caused this section of the mission to be postponed. A violent conflict in Jos in September 2001 has had serious repercussions in the countryside, while ongoing guerrilla warfare in the Wase-Langtang area continues to cause many deaths and displacement of pastoral communities. In the light of this, the size of the mission was reduced, and only attempted interviews in regions recent information suggested were safe. This meant that the areas of Riyom, Vom and Miango were excluded as well as the large arc of country between Langtang and Shendam. Given the state of insecurity, it is highly unlikely that *fadama* users could anyway benefit from Local Development Plans. The mission conducted interviews between 31/5/03 and 10/6/03. Annex 7 gives the composition of the mission, places visited and individuals encountered.

4.2 Background and ecology

Plateau State (Map 1) was created in 1976 from the former Benue-Plateau State, and was reduced in size in 1991 with the creation of Nassarawa State. It now consists of the Jos Plateau and the arc of territory leading down to Shendam and Wase up to the Benue River. There are no recent overviews of the State, but Ames (1934) is a useful gazetteer of the former Plateau Province. Plateau State is sharply divided by the geographical feature that gives the State its name, the Jos Plateau, a granite upthrust rising some 1000 m above the surrounding plain. The Jos Plateau varies in elevation from 900m to 1700m in the Shere Hills, east of Jos. In the south and west it is bounded by a steep scarp but in the east and north it falls to the plain in a series of steps. The Plateau itself is of a younger granite of volcanic origin and many of the extinct cones

have crater lakes and these are often heavily cultivated (Grove, 1952; Alford and Tuley, 1974). Below the Plateau, a much larger region of savannah lowland falls gradually to the valley of the Niger-Benue confluence. The vegetation of the lowlands of Plateau State is sub-humid savannah, conventionally divided between the 'high plains' of Hausaland and the Benue valley trough. In the west more fertile soils have led to major concentrations of population. The centre of the State is largely open savannah but the tree cover becomes denser towards the Benue river.

Annual rainfall in Plateau State varies between 750 mm and 1500 mm although this is not distributed on a north-south gradient. The lowest rainfall is in the east around Bashar, and the highest is in the south and west of the Plateau in the region adjacent to Kaduna State. The length of the rainy season varies from 160 days in the north to 220 days along the Benue River. Otherwise, Plateau State is not well supplied with groundwater, and the main affluents of the Benue River that cross it, the Dep and the Mada, can fail at the height of the dry season.

The Plateau was formerly open savannah woodland but now is almost entirely grassland, and most of the trees presently growing are exotics, such as eucalyptus, or imports from the lowland. Elaborate rock formations and stony soils make agriculture problematic, but terrace agriculture has made effective use of the sparse soil. However, the advent of colonialism brought about two important changes; tin-mining and the expansion of pastoralism. Tin-mining still continues, although not on the scale of the period up to the Second World War. Failure to make good on environmental damage has resulted in many areas made unusable with tall heaps of waste and ponds with high levels of heavy metals leached from the mine tailings (Bagudu 2001). Indeed a key feature of Plateau State that makes it rather distinct from the other regions studied is the absence of any large rivers; mine-ponds represent an important locus of dry-season cultivation¹. The other aspect of the Plateau environment is the high pressure on grazing from pastoral cattle. Fulbe seem to have first entered the Plateau in numbers shortly after 1900, attracted by the low levels of disease and the wide grasslands. It is likely that their cattle would have been too vulnerable prior to colonialism, when slave-raiding was the principal interaction of the indigenous populations with their neighbours further north. Very large numbers of cattle have caused degradation on a massive scale and sheet and gully erosion are omnipresent. Indeed, the consequent lack of open grazing has paradoxically driven the pastoralists to keep their cattle off the Plateau for most of the year.

4.3 Human populations

Plateau State is distinctive for its high level of ethnolinguistic diversity, and it is populated by a great variety of small groups living in hamlets, with a complex clan organisation and ritual kingship systems. This has ensured that no one language or people is dominant, although the largest ethnic groups are probably the Berom, Ngas and Tarok. Gunn (1953) gives a useful overview of the main ethnic groups of the Plateau region.

Fulbe movement into the lowland regions is less well chronicled, but it is generally more recent than the movement onto the Plateau. A low human population, low levels of tsetse and mosquitoes and unlimited grassland drew Fulbe pastoralists from all over the semi-arid regions. Fulbe established themselves in all parts of the Plateau and originally lived alongside cultivators with minimal friction. To judge by interviews, Fulbe settlement began in the late nineteenth century but was given a great boost by the end of warfare consequent on colonialism (Morrison 1976). Bruce (1982) discusses how Fulbe camps have spread outwards from those in Bauchi, through Tafawa Balewa and into the Gindiri region. Most of the pastoral Fulbe in Plateau State appear to have come from the north-east. However, during this century, the development of trade routes and communications in central Nigeria has attracted Fulbe from many regions and clans from Niger, Kano, Katsina and Sokoto States have settled in the lowlands, along with the older-established groups from Bauchi and Borno. Hickey (1978) has described aspects of the social organisation of the Fulbe of Bokkos. The history of Fulbe movement onto the Plateau is described by Awogbade (1983), whose monograph also covers the social organisation of the Gashish Fulbe.

¹ It is striking that many of the fresh vegetables sold in Nigeria's capital, Abuja, come from horticulture based on mine-ponds on the Jos Plateau, and it is therefore likely that many of the nation's elite are ingesting high levels of heavy metals.

The capital of Plateau State, Jos, is a colonial creation, set up by the tin miners who came to the Plateau soon after the imposition of indirect rule, and sustained by the missions who established their headquarters in the State (Morrison, 1976). Jos has attracted migrants from all over Nigeria to work in the tin mines and related service industries (Plotnicov, 1967; Freund, 1981) and its human population may be as much as one million. Jos is well known as an island of southern, and largely Christian-oriented populations in the otherwise Muslim north.

4.4 Subsistence systems

The farming systems of Plateau State are dominated by rain-fed cultivation, but vegetables are grown on the damp soils exposed in the dry season in the volcanic crater lakes of the Plateau. The Plateau used to have a very distinctive agriculture based on the production of two cereals in particular, fonio (*acha*) and iburu, which are uncommon elsewhere in Africa (Portères, 1955). Davies (1946) conducted a comprehensive survey of the Gyel area, inhabited by the Berom people, which showed that some 60% of the total land surface was used for farming, with fonio the dominant crop. Fonio gives good yields on eroded soils and its stover is recognised as an important feed for stock. Other crops grown include sorghum, millet, maize, iburu, yams, cocoyams, sweet potatoes, Irish potatoes and a variety of vegetables, both local and exotic. Livestock are dwarf cattle, sheep, goats, pigs, chickens, ducks and turkeys. A distinctive feature of farming on the Plateau is the use of *keraana*, a spiny euphorbia, as live fencing, which makes an effective barrier to the entry of livestock into cropped fields.

However, the last thirty years has seen a significant change in the farming systems, with important implications for the economy of the Plateau, as well as for the interaction between pastoralists and farmers. Dry-season, or *lambu*, farming was probably brought to the peri-urban regions of Jos in the mid-1960s by migrants from Hausaland. They initially cultivated vegetables, typically peppers and potherbs, using the *shaduf* lift. At this period, the mine-ponds and river valleys were virtually unused and there was no competition for the land. Shortly afterwards, the dry-season cultivation of sugar-cane and potatoes was introduced, perhaps through agricultural extension. At any rate, in many areas this was remembered as the first impetus towards dry-season gardens. However, the cultivation of vegetables soon became more profitable, as the expatriate population expanded in the 1970s and regional products began to be shipped long distances within Nigeria. Migrant Hausa appeared in greater numbers, but, perhaps surprisingly, many of the settled Fulbe began to buy or rent land and began gardening. Uptake by the indigenous farming populations was much slower, but by the 1970s it had begun in villages close to Jos. Since then it has been gradually spreading throughout the Plateau, with remoter communities only adopting it in the late 1990s. A major change in the production system occurred in the early 1980s when small pumps for lifting water became available. These were distributed by the ADPs in Bauchi but seem to have been available on the open market in Jos. Even those who could not afford pumps hired them from entrepreneurs thereby expanding their potential size of plots and making possible large-scale commercial market-gardening. With the growth of Abuja in the 1990s the market for vegetables was stimulated still further, making almost all riverine plots extremely valuable.

Another quite different change was the spread of two New World crops, the Irish potato² and maize, in the rainfed areas. Maize was known on the Plateau prior to the 1970s but only grown in very small quantities as a garden crop. With the coming of the ADP system in the late 1970s, with hybrid seed and heavily subsidised fertiliser and tractor hire, it became a very attractive crop and many farmers desisted from the traditional fonio, sorghum and millet to plant maize. With the cessation of funding from the IBRD in the early 1990s, subsidies ceased and in many regions farmers reverted to their original cropping system³. The spread of the potato is less obvious since it was not heavily promoted by any one agency. Nonetheless, it is perceived as a highly prestigious food, rather like wheat, and farmers able to grow it can often get high prices at the farmgate. From the 1980s onwards, the potato has been the major cash crop in the Bokkos area, SE of Jos. Its cultivation expands every year, but it seems the market is expanding still faster. The typical production system in the Bokkos area is now potato intercropped with maize, a system that depends entirely on fertiliser and is economic only because of the high price of potatoes.

² So named in Nigeria, to distinguish it from the well-established sweet potato (*Ipomoea batatas*)

³ Although the ADPs had encouraged them to take out trees to ease tractor-ploughing, thereby exposing the fragile soils of the Plateau to greater levels of wind erosion.

Neither maize nor potatoes produce residues that are either palatable or nutritious for cattle, and as a consequence, the residues have very limited attraction to the herders. Where once the cattle stayed close to the homestead, now they must leave in search of areas where sorghum and millet are still grown, for example around Mangu. The overall pattern is that cattle have little or nothing to contribute in many areas and are regarded more as a nuisance than as potential contributors to soil fertility.

Off the Jos Plateau, the elaborate escarpment farms on the southern edges, are a farming system with few parallels elsewhere in Nigeria. The use of terracing and intensive composting to keep hillside farms fertile has been described in some detail by Netting (1968) and Stone (1996). Many of these hill-farms have been abandoned in favour of rainfed plains cultivation of cereals. Findlay (1945) observed that when colonial policy compelled the Dimmuk people to move down to the plains they reverted to slash-and-burn cultivation. In the lowlands, the basis of subsistence is rain-fed cereal cropping, especially of sorghum and maize. Remarkably, dry-season *lambu* gardening is very rare and most rivers remain accessible to pastoral herds.

The Fulbe have historically depended on riverine grazing for part of the year and indeed they regarded this as land over which they had some rights. But as more and more land has been turned to gardens, this not only has the effect of blocking access to water for their stock, but reduces the basis for interchange between farmer and herder. Vegetable residues are typically fed to goats and pigs and farmers are not willing to allow Fulbe to enter the plots; indeed they try very hard to exclude the cattle. Effectively, in many areas, Fulbe have accepted that all they can hope to retain are access tracks, and even these are in danger of being encroached. For this reason, herders now only leave the bulk of their herd on the Plateau for a relatively short time every year. The changes are discussed in more detail in Annex A3a.

There has thus been a major shift in migratory patterns among pastoralists. They originally established bases on the Jos Plateau because its high-value grasses and presumed their large herds could pass the majority of each wet season there. They began to farm and indeed took on many of the values of their agricultural neighbours. However, as the density of farmed land increased it became necessary for the cattle to spend longer in the dry season grazing areas off the Plateau and only return during a specific window when the rain has fallen but the crops were not yet above ground. As it became more and more difficult to remain on the Plateau as the wet season advanced, most pastoralists began sending their herds to Bauchi, more particularly the open and still sparsely populated areas off the eastern edge of the Plateau. This also required more labour since the herds had to be managed while in movement for most of the year and thus the pastoralists had to hire increasing numbers of herdboys from other tribes. The situation is now that most herds make a brief visit at the beginning and end of the wet season but essentially live elsewhere for most of the year.

This has had a further impact on other aspects of pastoral production; herd-splitting. Typically, herders split their stock into a milking herd, which stays by the homestead and provides income for women, and nutrition for the household. However, this also has labour costs and pastoralists are finding it increasingly difficult to keep their children at home, an unwanted consequence of improved educational access. As a consequence some herders are now dropping the milk-herd, buying powdered milk and keeping their entire herd in one place. Women have thus lost a significant source of income and are switching to other systems of income generation such as small ruminant keeping.

4.5 Experience of resource conflict

The Jos Plateau attracted pastoralists in the nineteenth century when its human population was relatively sparse. The discovery of tin and the subsequent growth of Jos, inevitably brought a major expansion of the farming population, and all but very marginal land was brought into cultivation. Colonial officials were already noting instances of farmer-grazier conflict on the Plateau as early as the 1940s (Davies, 1946:113), while Awogbade (1983:76 ff) documented similar problems in the 1970s. During the 1980s, some Fulbe from the Plateau moved permanently into the lowlands, especially into the forested region along the Benue, where farming populations are still sparse. Nonetheless, the low-disease environment and wide grasslands of the Plateau were too attractive to pastoralists and many began to settle and integrate with local communities.

While most indigenous Plateau populations depended on upland rainfed cultivation, and the principal cereal crops were sorghum and millet, this provided a significant basis for interaction between the two groups. The farmers kept few cattle (although populations of the indigenous *muturu*, a humpless longhorn were probably higher than today) and the Fulbe could graze their cattle on the crop residues, with the farmers benefiting from the manure. However, once dry-season gardening began to take off, the river edges that had provided lush grazing were increasingly populated by farms. Moreover, the tubers and vegetables mainly grown there did not provide attractive residues for cattle and the farmers increasingly preferred fertiliser. At the same time, the ADP system encouraged a switch to maize while the growth of potato cultivation made even crop residues in upland areas unsuitable for cattle.

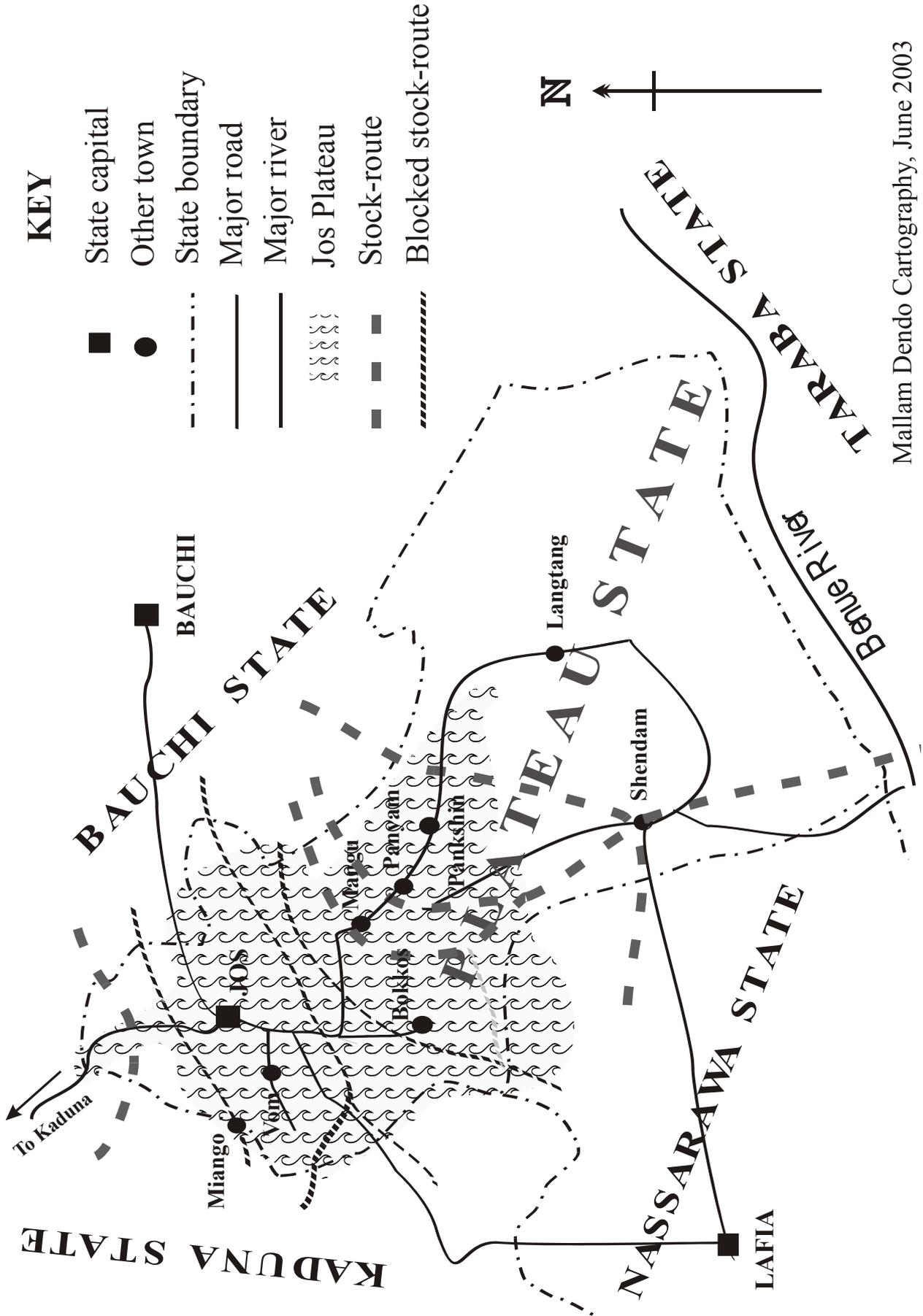
These agronomic changes did not take place without problems; pastoralists came to river-banks previously covered in grass to find tomatoes. Young men herded their cattle between upland cereal fields and the cattle strayed into the crops. However, these types of conflicts were usually settled informally and the types of violent clashes characteristic of some other northern states were not characteristic of Plateau. However, from 2001 onwards the situation has changed dramatically in character, with urban conflicts being replayed in rural areas with unattractive consequences for all sides. On the 8th of September, 2001, serious religious conflict broke out in Jos, and riots between Christians and Muslims led to substantial loss of life and property. Once the news filtered through to rural areas, there was significant pressure for the indigenous farming populations to attack the resident Fulbe pastoralists. This occurred at several sites around Jos, notably Miango, Vom and Riyom, leading to numbers of deaths, burnings of houses and property and theft of stock. Elsewhere in rural communities, emissaries were sent to urge these attacks, but fortunately more pacific counsels prevailed and the peace was kept. Nonetheless, many pastoralists were forced to flee Plateau State and reached Bauchi, which has a reputation for being more sympathetic to Muslims. The governor offered to open up Forest Reserves and it is there that many of the refugees are now settled; few have any intention of returning to Plateau State. In June 2003, some herds were encountered making their way on to the Plateau on an experimental basis; but relations remain very tense.

One of the other bases for interchange between Fulbe and farmers was the hiring of boys to herd cattle. Most Fulbe herds are too large to be herded by the family labour alone, and indeed many Fulbe household heads noted that their sons would rather hang around in towns than herd cattle, as a result of education. But it was common for many of the larger tribes to send their sons herding with the Fulbe; usually they would be paid with a one- or two-year old bull after one year or a heifer after two years. Such animals have become the basis for small village herds now kept by many indigenous groups. However, since the crisis, a breakdown of trust has meant that many of the larger groups, such as the Irigwe and the Berom have withdrawn their children and many other groups are now more sceptical.

A major consequence of the crisis has been that a number of key stock routes across the Jos Plateau, especially those passing near Miango, Riyom and Vom are now permanently blocked and are unlikely to re-open in the near future. Map 1 shows the stock-routes across Plateau (excluding those in the southeast, which are also in disarray) and marks those which have been blocked.

There has been a response to this, albeit hard to interpret. In October 2002, a series of attacks by well-armed groups on villages in the Jos area began and continued through into 2003 with the Berom people of Rim and Bachit the principal victims. The attackers are widely believed to be mercenaries, coming either from Niger or further north in Nigeria, and their goal seems to be creation of mayhem rather than theft. It is widely believed that this is revenge exacted by the Fulbe for the earlier killings, but this seems unlikely. More probable is that elite northern interests are taking advantage of the situation to foment disorder. The consequence has been to further sow distrust in rural areas but also to give the resident farming populations a powerful rationale for permanently taking over valuable Fulbe farmland along rivers.

Map 1. Plateau state stock-routes, showing those blocked since 2001



Mallam Dendo Cartography, June 2003

If this were not enough, at the other end of the state, an even more serious outbreak of hostilities has turned the region into a virtual no-go area. Box 1 narrates the history of conflict between the Fulbe and the Tarok people in the Langtang area;

Box 1. Conflict in the Langtang area

In June 2002, a serious conflict broke out in the Langtang area, some 200 km. SE of Jos, and was still current in May 2003. The main inhabitants of the region are the Tarok people, principally farmers, but the large open savannah between Langtang and the Benue river has long attracted nomadic Fulbe graziers. There are also neighbouring smaller tribes such as the Boghom as well as substantial settlements of Hausa, notably at Wase (east of Tarokland towards the Benue) and the ferry-crossing at Ibi (southeast). The Tarok have maintained good relations with the Fulbe for a long time and are now themselves substantial cattle owners, often as a result of sending their sons to be trained in herding by the Fulbe. The Tarok are overwhelmingly Christian, although traditional religion also plays an important role in maintaining social order, whereas the Hausa and Fulbe are strongly Muslim. The Tarok, moreover, have a long tradition of military service, and many of their leaders are ex-generals.

Apparently, a fight broke out in Yelwa, near Shendam (in SE Plateau State) at the end of June 2002 between Christian and Muslim residents, resulting in the burning of churches. Fleeing Tarok families brought the news to Langtang South, inciting attacks on Hausa-owned businesses in various settlements in the region. Prompt intervention of the security services brought about a temporary calm. However, it appears that a substantial number of Hausa and Fulani, armed with modern weapons and some at least from outside the region, regrouped and began attacking Tarok settlements from a base near Wase. Local people claim that mercenaries from Niger and Chad were involved although this is hard to verify. At this point, Tarok church leaders seem to have turned funds collected for evangelisation to the purchase of modern weapons. Traders appear to have had some guns in readiness for self-defence and were soon able to supply automatic weapons from Enugu. In general, government reaction seems generally to have been inaction, although there is a report of a pitched battle at Kadarko, near Ibi, where the Mobile Police were forced to retreat. Government-controlled media made no mention of the situation for some three weeks, when they reported (falsely) that things were back to normal. The lack of official action was so marked that one of the leaders of the Tarok, Rev. Maina, took the unusual action of placing newspaper adverts in the independent press pleading for a more effective response from government.

Since this date there has been open armed warfare between Tarok and Hausa /Fulbe and the whole region is a no-go zone. Women and children have fled into refuges and well-organised groups regularly burn down villages in remote areas. Soldiers have been sent to key flashpoints such as Wase, but since they will not enter the bush and meet the armed groups on their own terms, this is a largely ineffective. A worrying consequence has been the uncharacteristic arming of small communities and the development of weapons workshops. Although a few hunters have always had Dane guns, their manufacture is now widespread and even herdboys now go to the fields armed. Peace summits between Jos-based leaders have had little or no impact. The elections in May 2003 distracted the political elite in Jos in the preceding months from paying attention to this rather serious situation. In the first months of 2003 there were a series of minor outbreaks of violence culminating with another major conflict in Langtang in March. In June, the well publicised murder of Muslim travellers passing through Langtang lorry-park has reminded the indigenous populations that the conflict is alive. A visit to Langtang towards the end of June was marked by unnaturally quiet roads and a collapse of commerce and services such as water and electricity. Roads in this region of Plateau State have become effectively divided between Muslim and Christian blocks. Pastoralists who are usually grazing the fresh grass at this season were conspicuous by their absence.

The most striking feature of this rural strife is the absence of any effective response from government. After a conflict occurs, police and army roadblocks are set up for a week or so, but then are removed once there is no immediate fighting. Refugees are settled in rural areas or have moved to towns such as Langtang and Jos to stay with relatives. Insecurity has discouraged farming in many areas and severe food shortages are beginning to be felt, especially in the southeast.

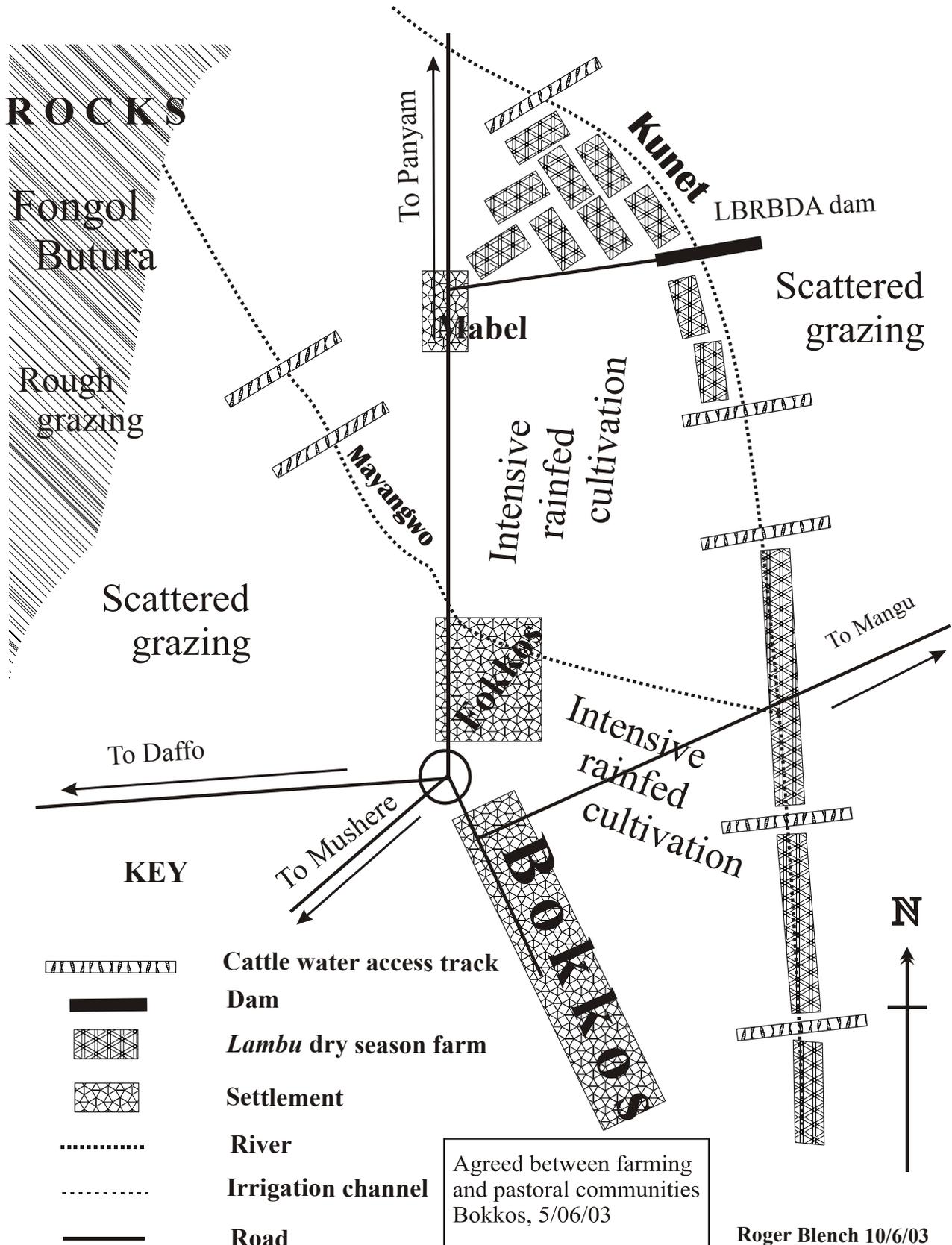
These episodes illustrate the problems in dealing with community conflict. What are originally conflicts for resources are being transformed through religious affiliation; the original issue may not have been the Fulbe, but they have been drawn in. The consequences of government failure to restrain expanding private ownership and trade in modern weapons is now highly apparent. They also show that the churches have now become wealthy and are no longer willing to remain passive. They are highly organised and willing to fund ethnic agendas and confront armed attacks. This is unlikely to provide fertile ground for the LDPs proposed by *Fadama II*.

4.6 Conflict management mechanisms in use

These serious conflicts in some regions might make it appear that developing community associations and effective resource use planning under these circumstances is difficult. But strangely, elsewhere in Plateau, relations between farmers and pastoralists are generally good. Indeed, in most of the interview sites, farmers and herders have developed good relations over a period of nearly a century. In many places, regular consultative meetings are held between herders and indigenous farmers to ensure that good relations are maintained. Map 2 illustrates the resource use map of Bokkos, south of Jos, where such meetings have ensured peaceful interactions between farmers and herders;

Map 2. Bokkos resource use map

Resource use map of dry-season farming and cattle access around Bokkos, Plateau State



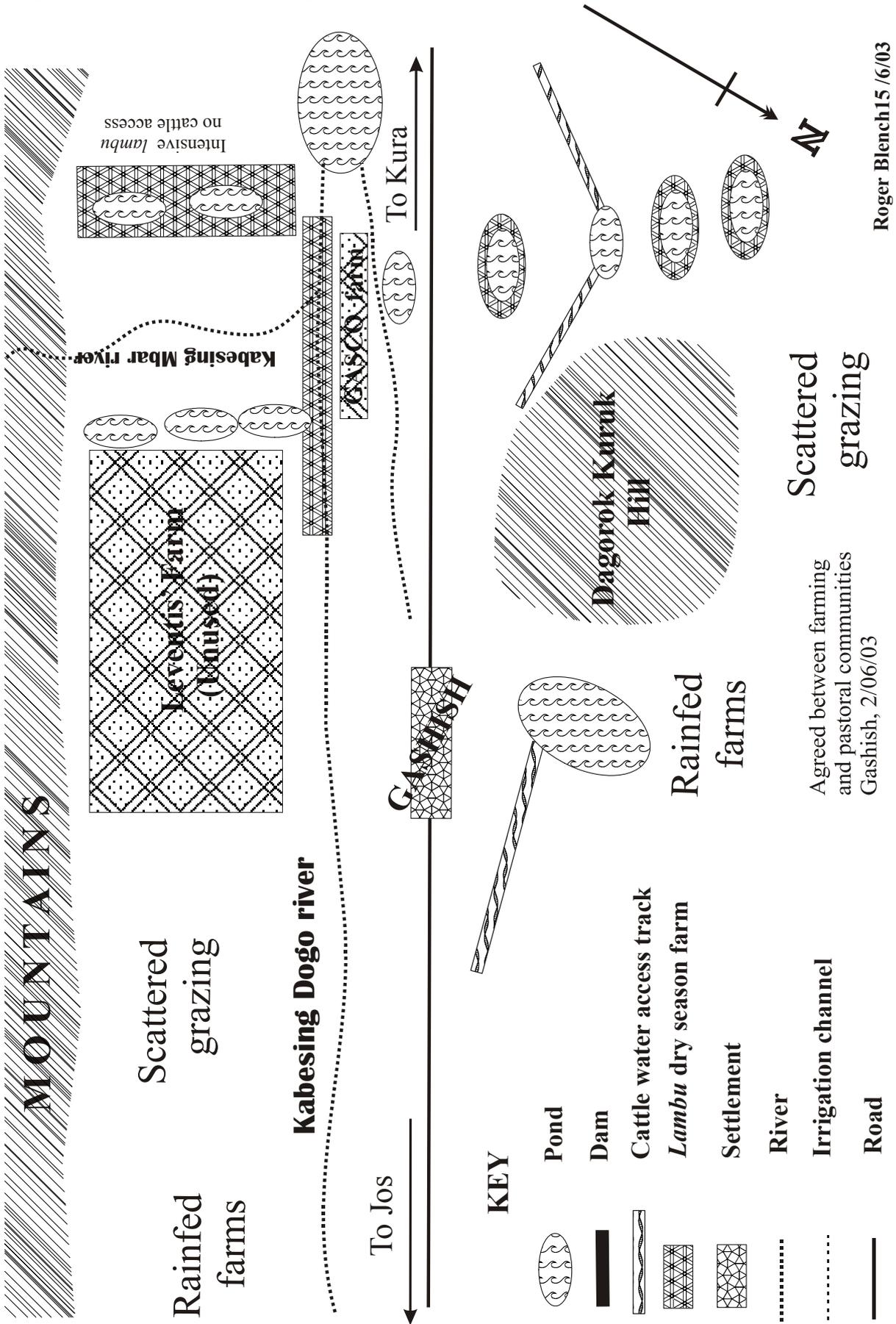
As in Kebbi State traditional rulers are the key to this type of understanding. In general, the key issues are damage to crops by the herds and encroachment of stock-routes by farmers. It is not uncommon for this to be settled directly between the two parties. If not, then it is usually carried to a meeting between the *Ardo* of the Fulbe and the *Mai Unguwar* of the farmers. If still this does not settle matters, it is then carried to the

District Head (*Sarki* or *Hakimi*). Even this last case is relatively rare. Going to the police is considered a last resort and all the traditional rulers considered this a sign of social collapse. Moreover, only farmers go to the police. The police are considered predatory in most areas and will usually extract substantial fines from any herders they incarcerate, so farmers may do this when they want to punish Fulbe.

The response to the Jos crisis is a good example of the system operating. In most areas, once the news reached the Local Government, local rulers, Hausa migrants and pastoralist leaders called meetings and each agreed to tell their communities to keep the peace. Significantly this did not occur in Riyom, Vom and Miango and attacks followed. In the months afterwards, most other communities held subsidiary meetings to follow-up on the peace message. This is particularly striking, since the great majority of non-Fulbe leaders are Christians, or at least not Muslims. Comparing the situation with northern Kebbi State, where the antagonists are both of the same religion illustrates the importance of developing institutions for dialogue. The interpretation of the attacks is problematic, but it noteworthy that in these areas (which are almost urban) there are significant bodies of unemployed youth and moreover, *fadama* land had been sold to the Fulbe long ago. Since the expulsion of the herders all this land has been reclaimed by the original owners.

The role of Local Government is somewhat restricted in Plateau State although responses are highly variable. In some interview sites, Local Government is seen as helpful in arranging peace meetings, and individual counsellors as showing concern over local issues. Elsewhere, however, Local Government is seen as inactive and parasitic. An important observation made by a number of traditional rulers is that they are in a good position to know if a situation is tense and likely to get out of hand. However, even when they report the matter to Local Government for forwarding to the State, high-level inaction is the usual result. This has the effect of subverting their authority as a failure to follow up suggest that they have no real influence.

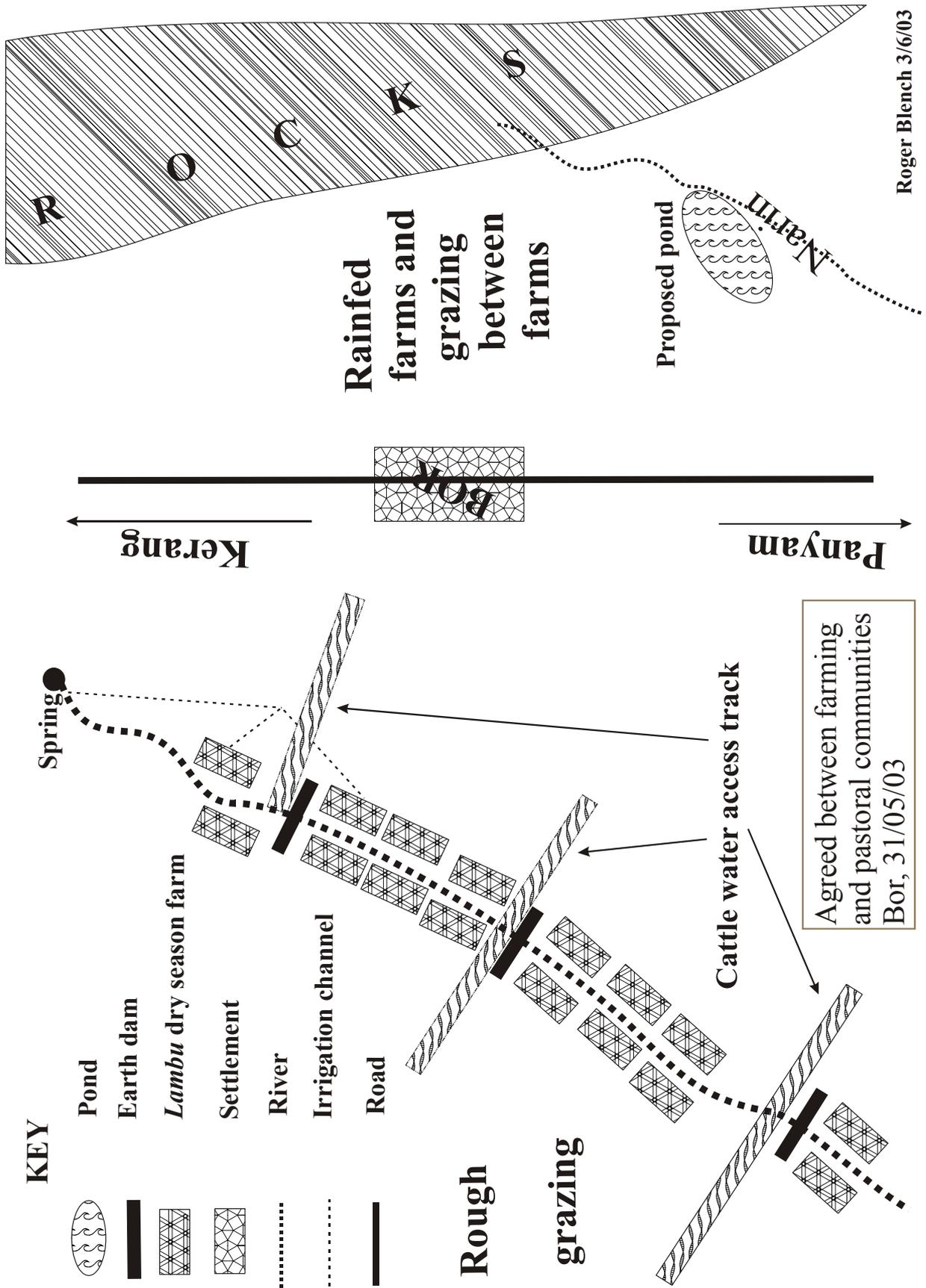
Map 3. Gashish resource use map



Holding meetings is a tool, but in practice how are livestock and crops kept apart? Plateau farmers are long-used to issues of livestock control, as they also keep cattle and pigs, which are potentially very destructive in tuber farms. The use of spiny euphorbia to fence fields clearly reduces the incidence of crop damage.

However, in some cases, farmers have gone further and fenced the cattle water access routes making entry into fields almost impossible. It is very likely that this practice will spread in the next few years. Map 3 illustrates the situation in Gashish, south of Jos, where the majority of dry-season farms are around the spring-fed ponds that are a common feature of the landscape. The land is so valuable that most ponds are entirely surrounded by gardens and have no cattle access. However, in most cases, the tracks are clearly marked and agreed between the two communities. This is always the case in the rainfed areas where the fields are too extensive to fence. Cattle tracks are obviously attractive to hard-pressed farmers and they are occasionally tempted to encroach on them. In several cases, pastoral leaders described how the Ward Heads officially sanctioned the destruction of crops across tracks. Map 4 shows the situation in Bor, south-east of Jos, where cattle-tracks are fenced off;

Resource use map of dry-season farming and cattle access around Bor, Plateau State
Map 4. Bor Resource use map

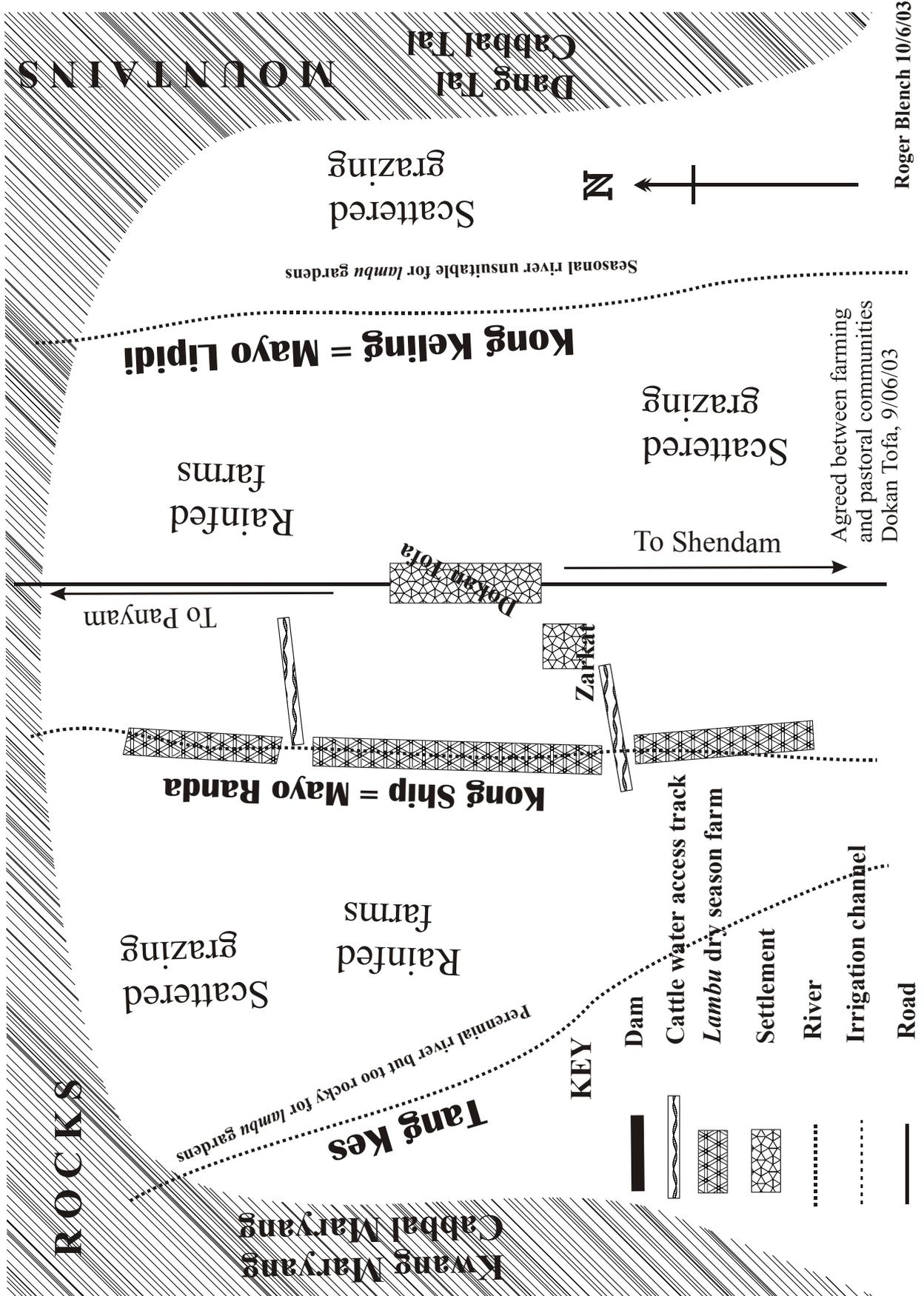


Roger Blench 3/6/03

The other side of this is that pastoralists are aware of the difficulties of using unskilled labour (as they are obliged to hire local herd-boys) to manage cattle in densely farmed areas. As a consequence, they have gradually been reducing the amount of time the cattle stay on the Plateau. The original production system seems to have been to send the cattle to the lowlands in the dry season and keep them on the Plateau in the wet, so they could benefit from post-harvest residues before going down. Similar systems of vertical

transhumance are also known from the Himalayan region. As farming density has increased, so the time spent on the Plateau has reduced and now the main body of the herds simply visit between their dry and wet season grazing. Map 5 shows the situation in Dokan Tofa, off the Plateau towards Shendam. Indigenous farmers depend on rainfed cereals, particularly sorghum and the *lambu* gardens are farmed principally by migrants, who lease the land. Two of the rivers in the region are too steep and rocky for gardens and there are agreed cattle access tracks to the third river. As a consequence, relations between pastoralists and farmers are generally amicable.

Map 5. Dokan Tofa resource map



Despite the problems in parts of Plateau State, the community solutions that have developed to reduce conflict in many areas are more effective than elsewhere. They consist of four major elements;

- ❖ pre-emptive and post-conflict inter-community meetings to resolve potential problems
- ❖ authority of traditional rulers generally respected once decisions are made
- ❖ increasing use of passive mechanisms to prevent crop damage
- ❖ reduction in period when cattle and growing crops are present together

Community relations are fluid in many areas and increased population and further expansion of dry-season farming has the potential to cause friction. Sensitive facilitation of Local Development Plans *based on existing community solutions* will help integrate the production systems of all stakeholders.

4.7. Gender issues in Plateau State

Plateau State represents an interface between societies where women have a considerable amount of personal and economic freedom and those where their activities are highly circumscribed. Increasingly restrictive Islamic practices have meant that many women, even in rural areas, enter purdah after their marriage and cannot freely circulate until some two decades have passed. However, among the non-Muslim groups, women can move around freely and they are allowed to retain earnings from farm and other activities. The rise of dry-season vegetable

Photo 1. Mapun women's work-party



Photo 2. Artesanal tin-mining near Gashish



farming has encouraged the formation of many women's groups (Photo 1) with the consequence of improved nutritional status for children and increased rates of school attendance. Women are also able to pursue a wide range of other economic strategies, the most important of which is trading, especially foodstuffs. Almost all the vegetable traders selling to the Abuja trade are women. In rural areas they also hire themselves out for farm-work and engage in small-scale artisanal mining for tin (Photo 2).

Among the Fulbe, women traditionally have access to the income raised from the sale of dairy products and this is still the case with the transhumants, who are to be seen selling in most markets. However, increased Islamisation and a declining market for milk products has caused many communities to place greater emphasis on the production of meat for sale. Although most communities still keep a small dairy herd at the homestead, some herders observed that even this practice was disappearing. The consequence has been a major shift of economic power away from women as men largely control meat sales.