EQUITY IN CAMPFIRE: WILDLIFE AS A COMMUNAL PROPERTY RESOURCE IN ZIMBABWE

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Abstract

Zimbabwe's Communal Areas Management Programme for Indigenous Resources (CAMPFIRE) is a national programme which is attracting international attention as an innovative approach to sustainable resource management. Conceptually it transfers the "ownership" of natural resources in communal lands from the State to resident communities. It has been argued that a communal property regime (CPR) exists only when the production and management functions concur with proprietorial and beneficial rights in a single institution. This is a prerequisite for most CPRs.

In reality wildlife is the only resource currently being addressed in CAMPFIRE. It is an interesting resource with which to contemplate 'Inequality and the Commons': it is a resource which may realise significant and immediate financial returns; it may also inflict considerable costs; and it is a fugitive resource. The fugitive nature of wildlife means institutional arrangements which satisfy equity criteria are problematic. Unless participants in CAMPFIRE consider equity in the distribution of benefits from wildlife is being addressed satisfactorily, the efficiency with which the resource is used will be threatened.

This paper seeks to identify some of the contradictions which abound in discussions of equity and benefit when related to wildlife; contradictions which exist because wildlife is one of the few CPRs with the capacity to inflict costs, both tangible and intangible. Examples are given of a variety of approaches being adopted in various districts which have been granted the authority to manage their wildlife. The question is asked whether such approaches will satisfy beneficiaries' needs effectively.

Introduction

Zimbabwe's Communal Areas Management Programme for Indigenous Resources (CAMPFIRE)(Martin, 1986) is widely regarded as an innovative approach to sustainable natural resources management. Conceptually, it acknowledges the fact that the State, in which name the communal areas (CAs) and their natural resources are vested, is incapable of effective management. The reality that exploitation under *de facto*, but ill-defined, local management will acquire the characteristics of an 'open-access' system is already evident in many of Zimbabwe's CAs. But it is unlikely that rational human beings will deliberately undermine the environment upon which their livelihood depends. The reason for such degradation is attributable to the fact that the people living in the CAs have rights of usufruct only. Without clearly-defined proprietorship rights, which *inter alia* include powers of access to and exclusion from resources, the future for many of Zimbabwe's natural resources is in jeopardy. CAMPFIRE seeks to transfer proprietorship of these resources from the State to local communities and, hence, facilitate the conversion of open-access to common property. The evidence to date suggests such conversion is taking place.

At the present time it is true to say that CAMPFIRE is a misnomer; it is <u>not</u> a Communal Areas Management Programme for <u>Indigenous Resources</u>, it is a programme focusing on the wildlife resources resident or transient in the CAs. The primary reason CAMPFIRE has concentrated on **wildlife** is the fact that it

originated in Zimbabwe's Department of National Parks and Wild Life Management (DNPWLM), a department within the Ministry of Environment and Tourism (MET) with no authority over resources other than wildlife.

There are other reasons why wildlife has been the main focus. The safari hunting industry in Zimbabwe has an international reputation and generates considerable foreign exchange. This potential to realise significant, and immediate, financial returns is an important factor in stimulating community organisation for the management of this resource. Conversely, wildlife is capable of inflicting substantial costs. These costs may be tangible, for example, physical damage to crops, livestock, property and, indeed, human life; or intangible, such as the anxiety induced by living in close proximity to dangerous wild animals. Generally, such costs are carried individually whilst the benefits from wildlife accrue communally. These costs can be considered to be 'contributions' by individuals to the maintenance of the communal property resource (CPR). This begs the basic question of equity:-

> "do individuals get a reasonable and fair return on their contribution to a collective undertaking to regulate a common?" (Oakerson, 1984:15).

The answer to this question is central to the sustainability of a CPR because equity and efficiency of resource-use are closely related (Oakerson, 1984). If some individuals do not feel the benefits from wildlife outweigh the costs there is every likelihood that any collective effort to manage the resource will collapse. Free-riding strategies will be adopted by those disadvantaged and the consequent inefficiency in resource use will result in the degradation of the resource.

Considerations of equity are complicated by the fugitive nature of wildlife. The potential for it to inflict costs within one community whilst benefits from its use accrue in another is very real. It is clear that wildlife as a resource affects, and is affected by, a variety of user groups - one or more may be small and reasonably homogeneous; others, because of the nature of the resource, will be larger and more heterogeneous. "These overlapping jurisdictions generate complex management problems which require innovative institutional arrangements." (Buck, 1989:130).

This paper examines the variety of approaches being advocated or adopted by the different stakeholders in CAMPFIRE in order to address the question of equity. The next two sections identify these stakeholders and their various perspectives in this regard. This is followed by three case studies which attempt to reflect the validity, or otherwise, of these perspectives.

Stakeholders in CAMPFIRE

The CAMPFIRE concept arose out of the **Parks and Wild Life Act, 1975** which designated owners of private land or the lessees of State land (collectively termed 'alienated land') as the 'appropriate authority' to manage their wildlife resources. This meant that, effectively, they became the proprietors of these resources. A 1982 amendment redressed the inherently discriminatory nature of the 1975 Act by extending the interpretation of the term 'appropriate authority' to include district councils (DCs), the administrative authority for the CAs and the smallest, legally-accountable body to which appropriate authority could be granted.

Whilst the DNPWLM, under the MET, remains the 'responsible authority' for wildlife in Zimbabwe (the Minister may withdraw appropriate authority from a council not conforming to the conditions and objectives under which it was granted [DNPWLM, 1992]), it is those DCs which have been granted appropriate authority status which are, effectively, responsible for wildlife management in their CAs. Hence "Councils have the statutory authority and the responsibility which goes with it." (Murphree, 1991a:2).

It is useful, at this juncture, to look briefly at the institutional framework which exists in Zimbabwe and the relationships between DCs and local communities on the one hand, and DCs and the Ministry of Local Government, Rural and Urban Development (MLGRUD) on the other.

In 1984, the Prime Minister issued a Directive with this objective:-

> "To define the administrative structures at provincial and district level and the relationships and channels of communication between all participants in development at provincial and district level in order to achieve the co-ordinated development of provinces and districts in Zimbabwe." (GoZ, 1984a)

An ancillary objective of this policy of decentralisation was to increase the involvement of local communities in the planning and development of their areas. Village Development Committees (VIDCOs) were identified as the fundamental planning units. Each VIDCO would represent 100 households (approximately 1,000 people). The committee would submit plans on an annual basis to the Ward Development Committee (WADCO). The WADCO, representing six villages (approximately 6,000 people), would coordinate the plans from all VIDCOs in its jurisdiction. It would then submit this ward plan to the District Development Committee (DDC). The DDC would incorporate ward plans into an integrated district plan for approval by the DC.

District councils were created at Independence in 1980. Although they comprise the elected chairpersons from the WADCOs within each DC area, they have yet to become autonomous 'local government' entities. The role of the District Administrator (DA) is pivotal in this respect. The DA is the Chief Executive Officer of the council and is appointed by the Ministry of Local Government, Rural and Urban Development (MLGRUD). Whilst they are expected to act in an advisory capacity to DCs, DAs are accountable only to the Ministry which appoints them. In terms of the District Councils Act, a council is required to delegate all administrative and executive duties to 'its staff' whilst it deals with matters of policy and deliberative and legislative functions. The potential for conflict is great - on the one hand DAs have to implement government policy, whilst on the other hand they are expected to act in an advisory capacity to council.

A notable exclusion from this institutional structure was any representation by traditional leadership. Moreover, VIDCO and WADCO boundaries were not necessarily aligned with the coexisting communal boundaries, thereby creating uncertainties over institutional jurisdiction. Hence, the creation of DCs undermined significantly the role of traditional leaders; their powers to allocate land and to deal with other aspects of resource management were vested in the DC. The imposition of VIDCO and WADCO structures led in many cases to their exclusion from the planning and decision-making process. Predictably, the transition from traditional and chiefly authority (i.e. local, hereditary and long-standing) to elected and bureaucratic authority (i.e. transient and possibly immigrant) has been a source of conflict.

Figure 1 shows the hierarchical structure established by the 1984 Directive.[1] This institutional framework presents the various stakeholders as points on a continuum along which questions of equity proliferate. Because appropriate authority status is granted by the State to DCs, it is suggested that the parties with an interest in CAMPFIRE include the MET (through the DNPWLM), the MLGRUD, the DC, ward, village, and the household.

Perspectives of the different stakeholders

At the national level, the two major stakeholders are the MET and the MLGRUD. There has been little in the way of liaison between these two ministries. However, at the request of the MLGRUD, the DNPWLM (1991) produced a set of guidelines for DCs to use. These guidelines embody a number of principles clearly written from the perspective of the DNPWLM.

The first principle was that benefits should be returned to producer communities; "Councils are required to return <u>at least 50%</u> of the gross revenue from wildlife to the community..... ..... which produced it (e.g. where the animal was shot)." This

[1] It should be noted, in order to avoid confusion, that this structure anticipated the amalgamation of Rural Councils, the local authorities governing the predominantly European-owned commercial farming areas, with DCs to form Rural District Councils. This amalgamation has not taken place to date.

FIGURE 1
INSTITUTIONAL STRUCTURE ESTABLISHED BY 1984 DIRECTIVE

CENTRAL GOVERNMENT

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PROVINCIAL DEVELOPMENT COMMITTEE
Comprising Provincial Administrator [Chair], Provincial Heads of Government Ministries and Security Organisations, Chief Executive Officers of Rural/District Councils, co-opted members of other organisations working within the Province

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RURAL DISTRICT DEVELOPMENT COMMITTEE
Comprising District Administrator [Chair], Senior Executive Officer [Secy], District Heads of Government Ministries and Security Organisations, co-opted members of non-government organisations

|

RURAL DISTRICT COUNCIL
Comprising of WADCO chairpersons

|

WARD
WADCO - comprising Ward Councillor (chairperson), chairperson and secretary of each VIDCO, 1 member each from ZANU-PF's Womens' League and Youth Brigades

|

x 6

|

VILLAGE
VIDCO - comprising 4 village members, 1 member each from ZANU-PF's Womens' League and Youth Brigades

|

x 100

|

HOUSEHOLD

|

INDIVIDUAL

(N.B. The 1984 Directive anticipated the amalgamation of Rural and District Councils which has yet to take place - see text.)

principle sought to forestall the bureaucratic impulse, encapsulated in what is colloquially known as 'Murphree's Law', viz:-

> "There is an in-built tendency at any level in bureaucratic hierarchies to seek increased authority from levels above and resist its devolution to levels below." (Murphree, 1989:4).

A second principle defined the size of the 'producer community'; "The ideal size for a producer community is 100 to 200 households because this is large enough for a wildlife programme, and small enough that all households can be involved in the programme and accountable to it." This principle sought to qualify the unit of proprietorship. It is in accord with the commonly-held view that:-

> "The conversion from open-access to common property will be facilitated in those instances in which the size of the user group is small, the users are reasonably homogeneous in important socio-economic characteristics, and the users reside in close proximity to the resource." (Bromley and Cernea, 1989:24).

An implicit assumption in quantifying the number of households which constitute a producer community is the spatial uniformity of settlement in the CAs. Whether or not this assumption is based upon Government's centralisation policy, such uniformity is currently exceptional. Similarly, identifying a producer community in this way disregards the fugitive nature of wildlife, and the associated implications for equity in costs and benefits.

A third principle stipulated that "Producer communities must be given the full choice of how to spend their money, including both projects and cash payments..... **Where communities value cash above projects, they should be allowed cash.**" (Emphasis added). This principle acknowledges the importance of livestock in the rural African economy. Livestock and wildlife both depend on CPRs in the CAs - grass, browse, water - but livestock is privately-owned and may be realised by the household in times of need. Wildlife is communally-owned "and unless revenues from wildlife are translated into disposable individual or household benefits decisions on wildlife/livestock options will be skewed towards livestock options even in situations where it is apparent that the wildlife option is collectively more productive." (Murphree, 1991b:18).

Although these guidelines may appear too prescriptive, they serve to counter a contrary perspective which has often reinforced 'Murphree's Law'. The following two statements are examples: in the first case, it is implied the MLGRUD does not **fully** embrace the distribution of household cash dividends; in the second case, the concept of the 'producer community' is explicitly dismissed.

In his closing address to the first AGM of the Campfire Association (an association of DCs with appropriate authority), the Minister of Local Government, Rural and Urban Development stated:-

> "The producer communities (must) decide for themselves how to allocate these benefits. Here they must be allowed a full choice of options **whose aim is to improve the well-being of the people by providing direct benefits, through improved social services like schools, clinics, infrastructural projects, like water, grinding mills etc** or by paying cash dividends **where this is felt extremely necessary.** Councils must assist the producer communities in identifying projects that address their felt needs so that this source of new wealth is not put to waste."
> (MLGRUD, 1991) (Emphases added)

More recently, in his opening address to a provincial seminar on CAMPFIRE, the Provincial Administrator for Matebeleland North Province, a senior official in the MLGRUD, made the following points:-

> "It has come to my notice that in some areas, monies received are distributed to the people. It is needless for me to point out such management strategy does not make optimum use of the resources. Benefits should not be individual based but community based. Having given individual money, there is nothing to show for it the very next day. However upgrading the district through provision of infrastructure such as clinics, schools, playcentres and community centres has long-term benefits. .....
> The giving of financial handouts does not necessarily uplift standards but on the contrary creates a dependency syndrome. **May I also point out that the distribution of the benefits should be district oriented and not area based. Those areas that do not have animals or game need not be left outside.**"
> (Mzilethi, 1992).(Emphasis added).

Two more opposing extremes of perspective could not exist. They lie at opposing ends of the equity continuum. The one view, that of the DNPWLM, considers equity is achieved only when the household receives its share of the revenues generated from within a limited parochial area - the microcosmic view. At the other end of the continuum lies the MLGRUD; in this case equity is achieved when that same revenue is used 'communally' to benefit a district-wide constituency - the macrocosmic view.

The microcosmic view claims that it satisfies the principle that those who carry the costs of living with wildlife should receive the benefits from its utilisation. Murphree has argued against a wider equity, suggesting that:-

> "(those) communities which still possess good wildlife assets are those which subsist on lands marginal for cropping and which have largely been by-passed by the development process. This also is an historical cost to these communities and to argue on the grounds of equity that they should now share the benefits of the growing value of wildlife with their more affluent neighbours is highly tenuous." (Murphree, 1991b:17)

This is a valid argument against the macrocosmic view, but it does not address the needs of the wider community which **is** affected by wildlife **because** it is a fugitive resource. The potential for costs to be incurred in one community whilst benefits accrue in another is very real.

The following case studies examine some of the assumptions of those stakeholders at the national level and provide some insights into the perspectives of those participating at a more local level. The first case examines intra-district variability in wildlife and agro-economic potential and questions whether equity issues are likely to be addressed satisfactorily if wildlife revenues are used to benefit the district as a whole.

Case Studies

Guruve District Council.

Guruve district straddles the Zambezi escarpment in the Mashonaland Central Province of northern Zimbabwe (Figure 2). It is of particular interest when considering questions of equity because of the agro-economic characteristics occasioned by this geographical feature. Below the escarpment eight wards constitute the Dande Communal Land which is bordered by Mozambique to the north, the Chewore Safari Area to the west and the Rukowakoona Mountains (which make up the escarpment) to the south. The area falls wholly within Natural Region IV, a region which "experiences fairly low total rainfall (450-650 mm) and is subject to periodic seasonal droughts and severe dry spells during the rainy season. .... The farming system ..... should be based on livestock production, ..." (GoZ, 1984b). The incidence of tsetse fly (*Glossina spp.*) in the Zambezi valley has precluded cattle as a viable livestock option.

Above the escarpment, a further 12 wards make up the Bakasa, Kachuta and Guruve Communal Lands. Bakasa and Kachuta Communal Lands, comprising only three wards between them, fall in Natural Regions IIa and III. Guruve Communal Land, containing nine wards, is entirely within Natural Region IIa, a region which enjoys moderately high rainfall (750-1 000 mm) "and normally enjoys reliable conditions, rarely experiencing severe dry spells in summer. The region is suitable for intensive systems of farming based on crops and/or livestock production." (GoZ, 1984b).

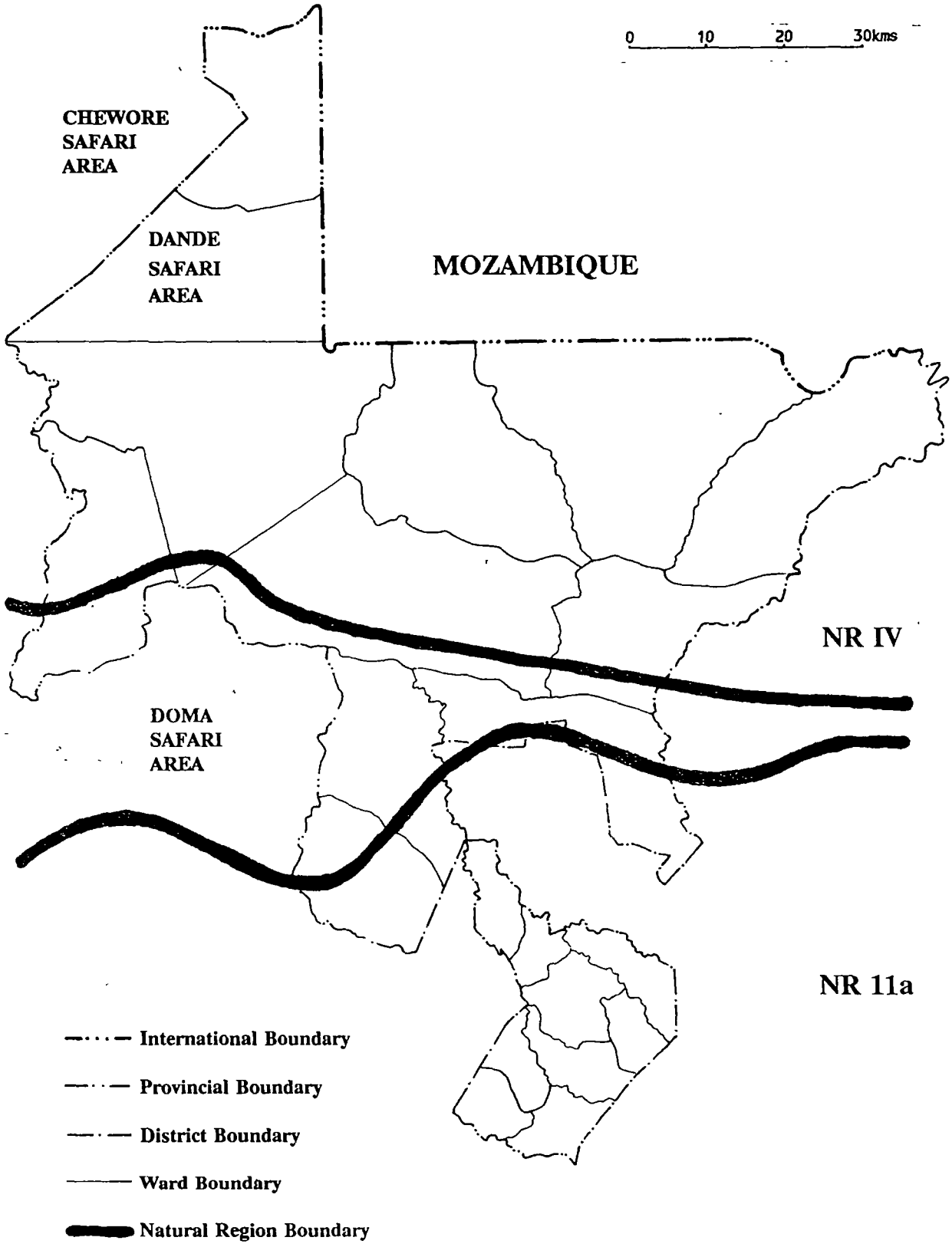

FIGURE 2: GURUVE DISTRICT

Figure 2 delineates the wards which comprise Guruve district. A measure of the inequality of agricultural potential within the district may be measured by the relative sizes of the wards. Local government reorganisation in 1980 and the subsequent directive from the Prime Minister in 1984 sought to delineate wards in terms of the numbers of households within them. Each ward was expected to contain, on average, some 600 households. In the Dande Communal Land the average area of each of the eight wards is 520 km^2. This stands in stark contrast to the situation in Guruve Communal Land which covers 572 km^2 in total, such that the average area for each of the nine wards is only 63,5 km^2.

At the time of the last population census (1982) it was estimated that some 40 000 people inhabited Guruve Communal Land, an average of 70 persons km^{-2}. At the same time only 18 000 people were living in Dande Communal Land, an average of 4 persons km^{-2}. The significance of these differences is the strong positive correlation between population density and potential economic well-being. It would be useful to compare household economic returns from crop and livestock production between the two areas. Based on the population figures quoted here, it is clear people considered their livelihood security was more assured in Guruve Communal Land than in the valley below; at least, prior to the implementation of CAMPFIRE.

Guruve district is not unique in this respect; other districts similarly cut across natural regions. However, whilst appropriate authority in CAMPFIRE is granted to DCs, the programme is generally being implemented in the most marginal areas within those districts. For example, CAMPFIRE in Guruve district is being implemented only in the eight wards of Dande Communal Land. In these circumstances, it is iniquitous to suggest that equity is more properly addressed when the benefits from wildlife resources are distributed evenly across the whole district.

The next case study examines two district councils with relatively homogeneous characteristics. From the institutional perspective it is interesting because it reveals the fact that traditional relationships between communities often transcend imposed jurisdictional boundaries.

Bulilima Mangwe/Tsholotsho District Councils.

Bulilima Mangwe District Council is situated in the south-west of Zimbabwe and forms part of Matebeleland South Province. Some 70% of the district lies in Natural Region IV, whilst the southern 30% is in Natural Region V (Thomas, 1992). It borders Tsholotsho district in the north with Botswana forming its western boundary. Tsholotsho District Council, situated in the west of Zimbabwe, is in Matebeleland North Province and has a common boundary in the north and west with Zimbabwe's Hwange National Park (Figure 3). The whole district is in Natural Region IV. Both districts experience a short rainy season and a long dry

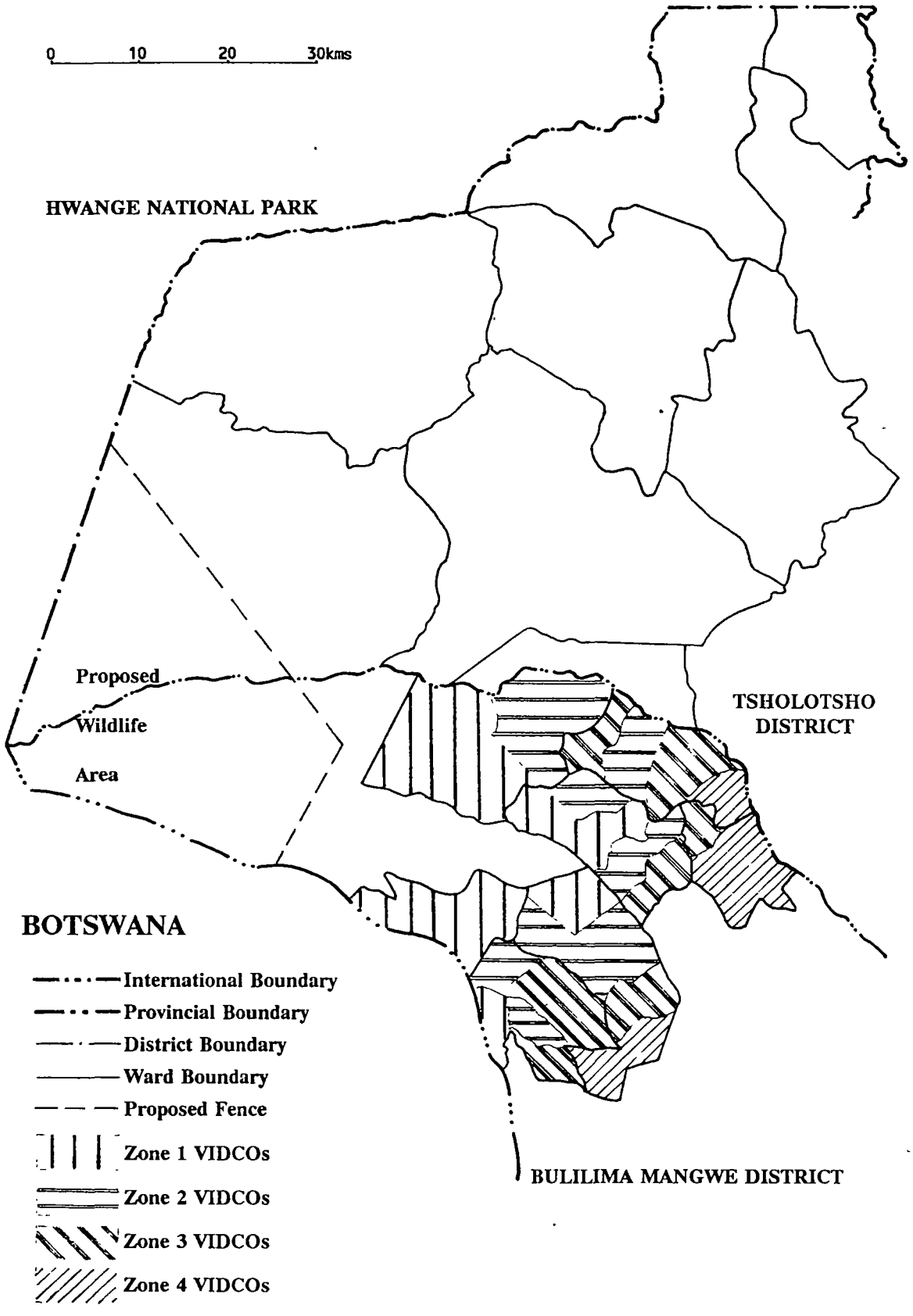

FIGURE 3: BULILIMA MANGWE/TSHOLOTSHO DISTRICTS

season. Unlike the Zambezi valley, this area is not affected by tsetse fly and, as a consequence, the rural economy has been based on extensive agro-pastoralism for many years with cattle predominant. It is this predominance of cattle which resulted in the development of a joint CAMPFIRE initiative between these two districts.

The origins of this initiative are based in the traditional movements of cattle and their access to winter grazing in the far west of Bulilima Mangwe. "In this area, traditional grazing rights long predate the current district and ward boundaries." (Peterson, 1991). Both DCs realised that, in adopting CAMPFIRE, they would need to rationalise their land use in order to optimise benefits from both cattle and wildlife. They planned to establish a wildlife area in the western portions of each district, along the Hwange National Park and Botswana borders. The plan required an electric fence to be erected along the eastern border of the proposed wildlife area, traversing both districts. The fence would prevent cattle from moving into the wildlife area and provide some measure of protection from the predations of wild animals. It was quite clear that such a plan would require both districts to coordinate the grazing rights of their communities, and that their CAMPFIRE project would be feasible only as a joint project.

The traditional transhumance system of livestock management in these areas has an affect on wildlife movements in Bulilima Mangwe. The western wards in this district suffer significant elephant damage to their crops during the summer rainy season. The rainy season is not the most-favoured season for hunters; the black-cotton soils make it difficult to move, even in 4-wheel drive vehicles, and high humidity and mosquitos make life particularly uncomfortable. The result is that most of the safari hunting is effected in the dry season when wildlife in Bulilima Mangwe is being increasingly disturbed by cattle moving into the winter grazing area. Consequently, most of the hunting takes place in Tsholotsho.

In 1990, eight of the nine elephants which formed the basis of the joint hunting quota were successfully hunted in Tsholotsho wards. Only one elephant was taken in Bulilima Mangwe. At the end of the year, the joint wildlife committee decided that revenues from five of the elephants should accrue to Tsholotsho with revenues from the other four going to Bulilima Mangwe. This apparent recognition of the costs carried by Bulilima Mangwe and the need for inter-community equity, however, was reached only after strong DNPWLM representation. Interestingly, such a decision would contravene the guidelines later to be developed by the DNPWLM.

The seven wards involved in the CAMPFIRE programme in Bulilima Mangwe agreed that these revenues should be divided equally amongst them. Their decision was based on the fact that rights of access to winter grazing were distributed widely and, as such

rights were affected by the wildlife project, benefits from wildlife should be distributed amongst those wards with grazing rights. One might feel that no other decision could have been made; only one elephant was hunted in a 'producer community' as defined by the DNPWLM's guidelines.

Hawkes (1991), in a study of the variability of wildlife damage in Bulilima Mangwe district, found inter- and intra-ward variability so great that "simply to compare wards with reference to wildlife damage obscures the real differences by area." (Hawkes, 1991:1). In an attempt to explore these patterns of damage, Hawkes classified the 41 VIDCOs within the wards into zones (see Figure 3); the first zone being adjacent to the wildlife area, the second zone only being reached by wildlife which had travelled through the first zone, and so on. Not surprisingly he found that crop damage by elephants was heavily concentrated in the first zone; similarly livestock was much more at risk from predation by hyaenas in this zone. Hawkes concludes:-

> "Elephants are a serious problem only for the quarter of the households who live in the frontline area (Zone 1). However, the returns from safari hunting will go to the whole area covered by the seven wards. Aside from questions of fairness, is this enough return from elephants to give residents of the frontline the sense of proprietorship.....that the CAMPFIRE philosophy assumes must develop?" (Hawkes, 1991:8).

Tsholotsho District Council terminated the joint hunting concession with Bulilima Mangwe at the end of 1991. This is not surprising since, on balance, and in the terminology developed within CAMPFIRE, they are the major 'producer' of the two districts. Elephants, though, will continue to be a serious problem for those frontline VIDCOs in Bulilima Mangwe.

This example emphasises the difficulty of determining guidelines which address the issue of equity in wildlife satisfactorily. The term 'producer community' would appear to define each of the 13 frontline VIDCOs referred to by Hawkes. They are providing the 'differential inputs' in tolerating the predations of these large mammals, without which the wider community would be unlikely to benefit as an 'end-user'. Yet the first principle of the CAMPFIRE guidelines states categorically:-

> "Councils are required to return <u>at least 50%</u> of the gross revenue from wildlife to the community ..... which produced it (<u>**e.g. where the animal was shot**</u>)."

Murphree (1991b) proposes a number of principles for consideration in discussing policy for viable communal property regimes, one of which is that "differential inputs must result in differential benefits." (Murphree, 1991:6). He acknowledges that:-

> "Wildlife assets are distributed unevenly in any national context; equally the cost of sustaining and managing these assets is unevenly distributed. ..... Policy must ensure therefore that benefit is directly related to input." (Murphree, 1991b:6).

The final case study examines one way in which a DC has attempted to address these complex equity issues. A fundamental failing of current policy in CAMPFIRE, in terms of the guidelines which promote it, is a perspective which equates the specific geographical area where a wildlife asset is realised with the area where it was 'produced'. The previous example has shown this is simply not the case for the majority of the high revenue-earning species, such as elephant. Unless this fact is addressed, gross inequities are likely to continue in the name of CAMPFIRE.

Nyaminyami District Council.

Nyaminyami District Council was the first DC to receive appropriate authority status in 1988. The district borders the southern shore of Lake Kariba and comprises three communal lands, Omay, Gatshe Gatshe and Kanyati (Figure 4). Some 75% of the district is in Natural Region V (Thomas, 1992) and, in concert with much of the Zambezi valley, has suffered a history of tsetse fly infestation. In terms of wildlife resources, especially large mammals, Nyaminyami is probably the richest CAMPFIRE district in the country (Child, 1991).

In order to administer and implement its wildlife management programme, Nyaminyami District Council decided to constitute a Trust, the Nyaminyami Wildlife Management Trust (NWMT). The abundance of wildlife, whilst having the potential to provide significant benefits, was responsible for inflicting heavy costs on communities in terms of crop and livestock damage. A priority issue in the early days of NWMT was that of problem animal control (PAC). Unless local people could be assured that the costs they incurred from problem animals would be met in some tangible way, the programme was unlikely to be adopted. Accordingly the Trust developed plans to improve the reporting of problem animals. A system for monitoring crop and livestock damage was introduced and compensation payments were made to those households suffering such damage. At the same time, the idea of an insurance scheme to cover loss of life was discussed (Peterson, 1991).

These plans to compensate and insure against crop and livestock damage and loss of life were innovative. It is argued that such schemes more closely address issues of equity than any of the foregoing case studies. Those that incur the costs of living with wildlife, and hence contribute either directly or indirectly to producing it, benefit from their inputs.

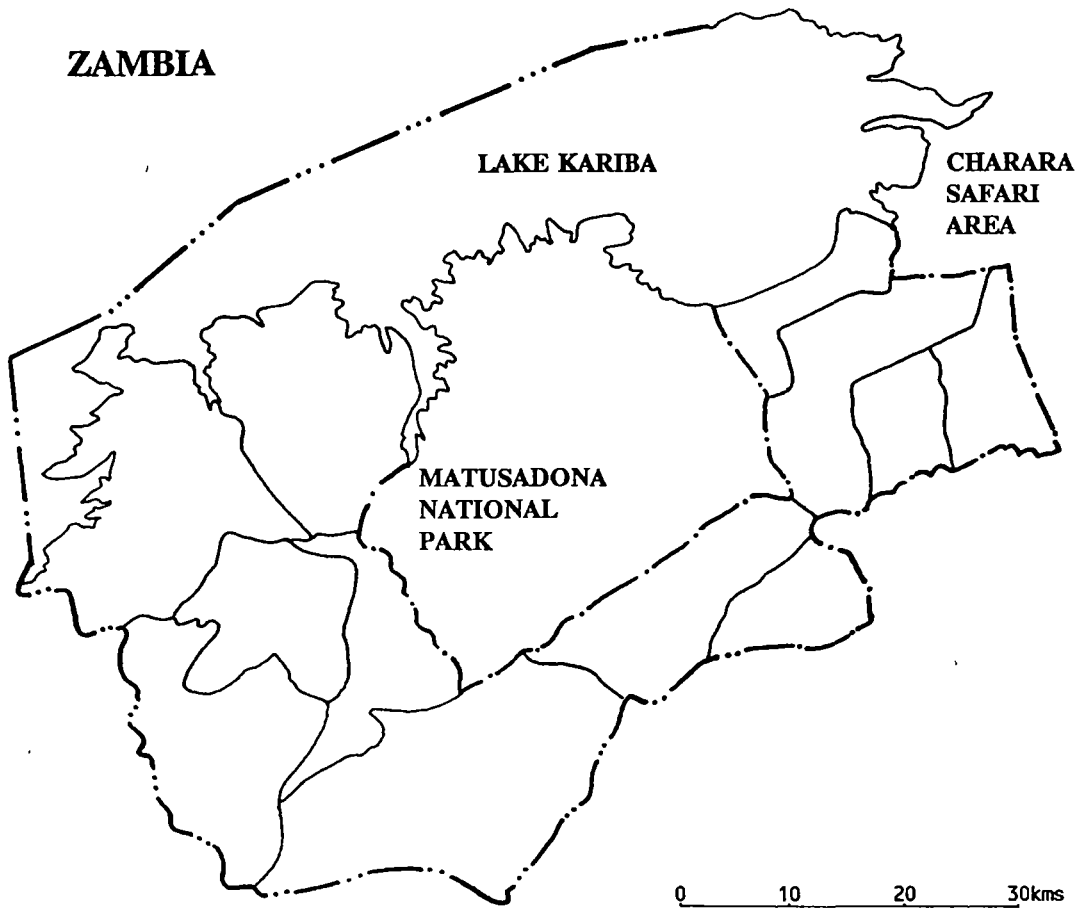

FIGURE 4: NYAMINYAMI DISTRICT

In 1989, the first year in which a crop compensation scheme operated, NWMT paid Z$26 000 to 160 families (Nyaminyami District Council, 1991; Peterson, 1991). The following year, NWMT received 666 PAC reports; elephant and buffalo were the most common problem animals. The records show that 90% of these reports were investigated with 14 elephant and seven buffalo killed as a

consequence. Eventually Z$42 000 was paid in compensation to 360 families but, as the following extract from the minutes of a Board of Management meeting indicates, the full extent of the claims for compensation were more than double that amount.

> "Mr.Nobula (Wildlife Manager) explained that Z$38 700 had been paid in compensation. Compensation still to be paid amounted to Z$48 000. In the budget there was only Z$40 000. ..... This meant no more compensation could be paid. After this statement the meeting broke up in confusion." (Nyaminyami District Council, 1990).

The potential for compensation payments to absorb wildlife revenues progressively was realised. NWMT abandoned the scheme in 1991; this decision would enable a greater amount of the revenues to be distributed to the wards as dividends, and ward committees would be in a better position to monitor crop damage and decide whether or not to compensate members accordingly. The debate has continued at the ward level although the issue has not been satisfactorily resolved as the following notes indicate.

> "In Mola A ward the community felt that it is up to them to decide how compensation can be effected i.e. whether in kind or in money; after, of course, looking at the amount available and with the assistance from the Council employees and other organisations. On domestic animals, the community said that these should be compensated as follows; goat $30, chicken $7, duck $20, dog $20, donkey $120 and pigeon $10." (Zimbabwe Trust, n.d.)
>
> "In Negande A and Negande B wards, the community expressed concern at themselves carrying out the compensation issue, which they feel could lead into dishonesty among the leaders and general people." (Zimbabwe Trust, n.d.)

Compensation for crop and livestock damage using the revenues generated from wildlife would appear to provide an equitable solution to the problem of defining a 'producer community'. In this way differential inputs receive differential benefits. However, as has been seen in this case study, the number of claims and the scale of damages may easily escalate. Such systems are also open to abuse. The level of monitoring and adjudication required may contribute to increasing overheads, such that compensation-related costs are seen to be disproportionate in relation to the revenues available for distribution.

Conclusions

The foregoing has provided but a brief overview of equity concerns in CAMPFIRE; the range of issues which could have been discussed under this heading is exhaustive. This paper has focused on the opposing perspectives of the 'national' stakeholders. On the one hand, the DNPWLM wants to see wildlife revenues distributed as household cash dividends in producer communities; on the other hand, the MLGRUD wants these revenues invested in projects in the district.

The perspective of the DNPWLM more closely resembles criteria which have been shown to be key elements in successful common property resource regimes (see, for example, Bromley and Cernea, 1989). The fugitive nature of wildlife resources, however, makes the concept of the producer community an anomaly. This is particularly so when the larger species, such as elephant, are considered. Nevertheless, it is a fact that the programme has been most successful where DCs have followed the 'Guidelines' and returned revenues to 'producer communities' (*sic*).

The case studies have examined the relevance of these national perspectives, and provided some insights into those at a more local level. The extreme view, that benefits from communal property resources should be distributed across the district, ignores the integrity of the unit of proprietorship. "Proprietorship ..... cannot be separated from production, management and benefit and is a fundamental component in a communal resource regime." (Murphree, 1991b:7). The Guruve case study has emphasised the inequality of resource distribution within a district and suggested that, for this reason alone, this view is inequitable.

The Bulilima Mangwe/Tsholotsho case study demonstrates how difficult it is to avoid contradictions when considering what is fair and equitable. In this case the DNPWLM played an influential role in the decision to distribute revenues more evenly between these two districts than would have been the case if their 'Guidelines' had been in force. The decisions made by the ward communities in Bulilima Mangwe to distribute revenues equally between them similarly ignored the concept of the producer community, either as defined by the DNPWLM or, indeed, as more realistically identified by Hawkes (1991). Their decision was based on peoples' rights of access to winter grazing which emphasises the inter-relatedness of communal resources.

Finally, the Nyaminyami example showed how a DC sought to more closely relate differential input costs (crop and livestock damage) to differential benefits through the medium of compensation. It remains to be seen whether the various wards in Nyaminyami will develop their own compensation schemes in this district.

Clearly the range of options for distributing wildlife benefits is wide. CAMPFIRE is a dynamic programme which demands that management be adaptive. Perspectives change; in the past year there has been clear evidence of a greater acceptance by the MLGRUD towards the devolution of authority below DC level. In some districts cash has been distributed to wards, whilst in other districts ward communities have opened bank accounts. This dynamic requires that guidelines, incorporating sanctions and incentives, are not overly-prescriptive. The risk is such guidelines become interpreted religiously and leave little or no room for DCs or communities to be flexible in their application. It is, after all, local communities living with their communal property resources who will decide whether, as individuals, they get a reasonable and fair return on their contribution to them.

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