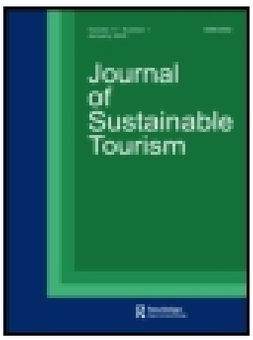

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Trophy Hunting as a Sustainable Use of Wildlife Resources in Southern and Eastern Africa

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Preserving wildlife in a pristine state on a large scale is no longer feasible in view of continued human population increases, economic development, habitat fragmentation and degradation, the introduction of nonnative species, and commercialisation of wildlife products. The wise use of the planet's remaining wildlife resources will depend on management practices which recognise that indigenous people are integral parts of ecosystems. Community-based conservation, which attempts to devolve responsibility for the sustainable use of wildlife resources to the local level, can include consumptive activities, such as trophy hunting, as well as nonconsumptive forms of tourism. The trophy hunting management systems of six countries of eastern and southern Africa are profiled and critiqued, demonstrating a number of essential conditions for obtaining optimal wildlife conservation and community benefits.

In the most comprehensive scientific assessment of the world's animal species to date, IUCN-The World Conservation Union reported in October 1996 that fully one-fourth of all known mammal species are threatened with extinction, along with 20% of reptiles, 25% of amphibians, and 34% of fish (IUCN-The World Conservation Union, 1996). Human population increases and economic development, habitat fragmentation and degradation, the introduction of nonnative species, and commercialisation of wildlife have all played a part in the decline and disappearance of species. In the face of such threats, conservationists now recognise that the preservation of many species depends on establishing their economic value and providing incentives for sustainable use, with the increasing involvement of local communities as wildlife custodians (Cohn, 1994; Butler, 1995; Kelso, 1993; Rihoy, 1995). Both former and enduring communal property arrangements are being examined, and new resource-management concepts developed, tested, and refined, according to local circumstances and the unique attributes of individual species.

Many of these conservation programmes and projects are viewed as experiments in community-based conservation, which recognises that the people who coexist with wildlife are in the best position to oversee its use. Especially in developing countries, central agencies responsible for wildlife management are understaffed, underfunded, ill-trained, and ill-equipped to conserve habitats and species (Kothari, Anuradha & Pathak, 1997). As a result, many conservationists argue that the long-term survival of many species can be assured only by involving local people in wildlife management and allowing communities to derive economic benefits from their wildlife resources (Baskin, 1994; Steiner & Rihoy, 1995; Ecotourism — ethical profits?, 1995).

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One way that local people can benefit from wildlife resources is through trophy hunting. Sport hunters are often prepared to spend large sums of money, and travel long distances, for the opportunity to shoot an unusual or highly valued animal. In the six southern and eastern African countries which permit trophy hunting, for example, various systems of revenue collection and disbursement have been developed which channel hunting proceeds to wildlife conservation and community development. However, the history of the hunting industry in Africa to date, as well as attempts to apply the concept of community-based conservation in several of these countries, demonstrate that hunting by tourists is not always the effective wildlife conservation tool it is claimed to be (Gibson & Marks, 1995). This paper discusses several shortcomings of the trophy hunting management systems in Tanzania, Zambia, Zimbabwe, Botswana, Namibia, and South Africa, and specifies conditions which must be met if this tourist activity is to be a sustainable use of wildlife resources.

Sustainable Utilisation

The phrase 'sustainable utilisation' has its roots in the utilitarian approach to conservation, which was the basis of the early conservation movement in the United States. In 1864, George Perkins Marsh published *Man and Nature: or Physical Geography as Modified by Human Nature*, a monumental treatise on the environmental impacts of human activities. This work, in laying the foundation for utilitarian conservation, questioned the assumption that America's natural resources were inexhaustible and warned that the country's national identity and strength might be weakened if uncontrolled exploitation of natural resources continued (Wellman, 1987). Utilitarians emphasised the wise use of natural resources for the benefit — especially the economic benefit — of humans, balancing long term preservation with short term use, benefit and enjoyment.

In resurrecting this concept in the 1980s and applying it to Africa, international conservationists realised that, no matter how desirable from a conservation standpoint, preserving ecosystems in their pristine state to save endangered species of wildlife was impractical in view of the poverty of most sub-Saharan states (Bonner, 1993). Humans would use natural resources to survive, particularly in rural areas. The focus of conservation efforts would thus have to be on the sustainability of use if individual species are to exist for future generations.

Wildlife resources in Africa have long been exploited through trophy hunting. A form of consumptive utilisation, the killing of animals for recreational purposes has vehement opponents and equally impassioned advocates. Critics, for example, argue that not only is the intentional killing of animals immoral and abhorrent (Satchell, 1993), but also that sport hunting will result in the extinction of even more animal species (Tellecky & Lin, 1995).

Proponents of consumptive use, however, contend that not only is controlled hunting of wildlife desirable, it is preferable to photographic tourism for the following reasons:

- Hunters are not nearly as ecologically destructive as tourists. Hunters require fewer services and accommodations and less infrastructure, thus keeping wildlife habitats more pristine (Bonner, 1993; Butler, 1995; Africa Resources Trust(a)).

- The cost of a hunting safari in Africa is easily double or triple the cost of a regular safari of the same length, and more of that money is spent in and remains in the country of hunt (Morrill, 1993; Bonner, 1993; Africa Resources Trust(a)). A former Director of Tanzania's Wildlife Department has commented that one hunter is worth 100 tourists to the local economy (*Economist*, 1993).
- Areas hosting the most wildlife (in number and variety) are often inaccessible to regular tourists, or practically inaccessible because of poor transportation services and infrastructure (Baldus, 1995). These areas, however are precisely those likely to attract sport hunters, resulting in a greater dispersion of both visitors and benefits (The hunting industry in Tanzania, 1995).
- Overpopulation of certain species can damage if not destroy the natural habitat, thereby threatening the existence of other species. Elephants in particular can be terribly destructive, leaving hundreds of kilometres of land barren of trees — and species dependent on those trees (Kruger elephants, 1996; Baskin, 1994; Chadwick, 1996). The selective killing of overpopulated herds through culling can therefore be imperative to save biodiversity. If a fee is charged for culling, or the animal by-products are consumed or used, so much the better.

Finally, supporters of consumptive utilisation contend that the presence of legal hunters in the bush serves as a deterrent to poachers (Coogan, 1995).

The biological and ecological impacts of trophy hunting are important factors to consider in assessing the sustainability of this form of consumptive wildlife use. For most species, sport hunting is limited to male animals, with an emphasis on the quality of the trophy (the weight of the tusks, length of horns, etc.). Because the specimens taken are usually older males who contribute little to breeding, and because hunting quotas are usually a fraction of natural population growth rates, controlled trophy hunting has a negligible impact on overall population sizes (Morrill, 1993; Africa Resources Trust(b)). In fact, an increase in sport hunting is not seen as an alternative to culling when wildlife populations exceed the carrying capacity of the environment. Adjusting species quotas upwards or downwards depending on the trend in trophy measurements, however, can contribute to the long term sustainability of this use of wildlife resources (Africa Resources Trust(b)).

Community-based Conservation

The argument for sport hunting that is most in vogue, however, is based on the concept of community-based conservation, which recognises that wildlife conservation is not just about animals but also about people. Bonner (1993) argues persuasively that for too long, Western conservationists have imposed their own philosophies of conservation on Third World countries, with little regard for or understanding of what wildlife means to indigenous people. Although preservation of cultural landscapes has become an integral component of park policy in many developed countries (e.g., LaPierre, 1991; US Department of the Interior, 1997), the role of people in African ecosystems and their interrelationships with wildlife are less well documented.

One relationship which has received considerable attention, however, is that of problem animal control. Although animals are a source of meat and nourishment for many local people, wild creatures can also threaten human lives and crops (Butler, 1995). Notions of preserving each and every animal because of its existence value can be antithetical to the interests of indigenous people who must coexist with wildlife (Satchell, 1993; Environmental Consultants (PVT) Ltd., 1992). While it is beyond the scope of this paper to address the voluminous literature on wildlife values (e.g., Anderson & Hill, 1995; Shackley, 1996; Brookshire *et al*., 1983; Shaw & Zube, 1980; Stevens *et al*., 1991; Swanson & Barbier, 1992), it is sufficient to note that use, option, and existence values differ depending on proximity to wildlife and vulnerability to actual and potential damage caused by wild animals.

Most of the people who share habitats with endangered species exist at very basic subsistence levels. The principal argument for community-based conservation is that by allowing these people to derive economic benefits from wildlife, incentives for conservation are provided (Baskin, 1994; Butler, 1995; Rihoy, 1995). Community involvement in wildlife conservation is particularly important in Africa, proponents say, because high population growth, industrialisation and expansion of agriculture are all competing for the land supporting wildlife (Bond, 1993).

The Trophy Hunting Industry

Most African hunting safaris are arranged by specialised companies called 'outfitters', many based in the United States. These companies sell hunting packages which can be customised according to the desires of the client. The outfitters make most or all logistical arrangements for the trip, including acquisition of the necessary permits and the provision of a professional hunter to accompany the tourist.

Outfitters generally charge a daily rate, which can vary according to the length of the safari and to the ratio of tourist hunters to professional hunters. For the 1995/1996 hunting season, for example, Tanzania Game Tracker Safaris Ltd., based in Houston, Texas, charged from US$830 to US$1340 per hunter per day. Other companies do not use daily rates but charge each client a set fee depending on the tourist/professional ratio and number of days. For the 1995/1996 season, one such company charged from US$22,400 to US$30,600 per person per safari.

Tourist hunters may then be charged a range of fees by the host government. These may be collected by the outfitter on the government's behalf or paid directly when the tourist arrives in the country to hunt. These assessments can include a conservation fee, firearms and ammunition permit fees, trophy export fees, airport taxes, etc. Governments may also charge a fee for each animal killed or wounded, which can range from US$10 for a game bird to US$7500 (or more) for an elephant. On top of this, tourist hunters are responsible for international airfare to and from the country of hunt, preparation and shipping charges for any trophies taken home, and other miscellaneous expenses. The total cost of a hunting safari, therefore, is typically around US$50,000, and can go up to US$120,000 or even higher. Hunting host countries also collect revenue directly

from the outfitters, usually through concessions fees, which are passed on to tourist hunters in the daily or safari rates charged by the company.

Six countries in southern and eastern Africa have trophy hunting industries. Not only do their systems of collecting and disbursing revenues differ, the level of conservation and community benefits generated from the industry also differs. The following brief overview of the trophy-hunting management programmes in Tanzania, Zambia, Zimbabwe, Botswana, Namibia, and South Africa provides context for a subsequent discussion of systemic imperfections in the use of hunting revenue for wildlife conservation and community development purposes.

Tanzania

Trophy hunting is authorised in Tanzania's game reserves, game controlled areas, forest reserves and open areas, encompassing some 180,000 square kilometres divided into 150 hunting blocks. The Minister of Tourism, Natural Resources and Environment has the authority to allocate hunting blocks, and quotas are assigned for different species within those blocks based on population estimates provided by a monitoring programme of the Serengeti Wildlife Research Institute. In 1995, 43 private companies were operating sport hunting concessions in the country.

Outfitters collect government fees in foreign currency from their clients and remit them to the Tanzania Department of Wildlife. The charges include hunting permits, conservation fees, trophy handling fees, observer fees and sales taxes. Hunters are also required to pay a fee for each animal killed or wounded according to an established scale. Outfitters pay the government an average of US$7500 in concessions fees per hunting block per year.

All conservation, permit and trophy handling fees are deposited in the Tanzania Wildlife Protection Fund (TWPF), which is used to offset the cost of the government's wildlife management programmes (Planning and Assessment for Wildlife Management, 1993). The per-animal fee is divided between the TWPF (10%), the Central Treasury (25%), District Councils (15%, to compensate local people for damage and loss of life caused by wildlife), and game reserves (50%). For trophy hunting outside of game reserves, a draft policy for the management of tourist hunting would allow local communities to receive 75% of the hunting fees collected by the government. The new plan, under review since 1994, calls for local communities in the hunting authorised areas to form associations and eventually assume oversight and management responsibilities for their wildlife, in cooperation with the outfitter for that particular concession (United Republic of Tanzania, 1994).

Zambia

In 1983, the Zambian Government established a Wildlife Conservation Revolving Fund (WCRF) to serve as an accounting mechanism for redistributing funds from the hunting industry to wildlife conservation and community development. The concept of community-based conservation was formally established in 1988, when the Administrative Design for Game Management Areas (ADMADE) programme was introduced with the assistance of the World

Wildlife Fund (USA) and the US Agency for International Development (USAID). Under ADMADE, Zambia's 33 game management areas are divided into hunting blocks controlled by Wildlife Monitoring Units (WMUs), which are in turn supervised by Wildlife Monitoring Authorities (WMAs) composed of government, private sector, and local representatives. WMAs are responsible for monitoring off-takes, approving quotas, overseeing revenue collection and the expenditure of wildlife proceeds. WMUs, at the chiefdom level, do the actual wildlife monitoring, solve local wildlife problems, identify possible community development projects, and facilitate the implementation of those projects approved by the WMAs (Gibson & Marks, 1995; ADMADE to order, 1997).

All trophy fees and safari concession fees are deposited in the WCRF, as well as 50% of the game hunting license fees. WCRF revenues are then distributed in three ways: 25% goes to the National Parks and Wildlife Service (NPWS) for WCRF administration and other activities; 35% is returned to the local management sub-authority from which the funds originated; and 40% is dedicated to the local field NPWS unit and village scouts serving in the area from which the funds originated. The local management sub-authority receipts can be used for community improvements such as clinics, wells, and schools (Rosenthal & Sowers, 1995).

Zimbabwe

Rhodesia's 1975 Parks and Wildlife Act granted landowners the appropriate authority, or right, to use wildlife on their land. Initially, the legislation principally benefited large commercial farmers; however, the act was amended in 1982 (post-independence) to allow the government to confer appropriate authority status on rural district councils (Murphree, 1996). Trophy hunting is currently allowed in state safari areas, on communal lands, in indigenous forest areas, and on private land (Proposal 10.27: 19; Heath & Machena, 1997).

In 1982, as a result of a dispute mediation process, appropriate authority status was granted to the Shangaan people, who had been evicted from their traditional lands when Gonarezhou National Park was established in 1966. Two additional districts received appropriate authority status in 1988. The devolution of wildlife rights was subsequently formalised in the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE), founded in 1989. Communities participating in the programme are allowed to sell hunting or photographic safari rights to private companies and can cull overpopulated species. Although the Department of National Parks and Wildlife Management (NPWM) sets hunting quotas and trophy fees, local authorities are responsible for overall wildlife protection and management. As of 1997, 32 of 55 local districts have joined the CAMPFIRE programme, which receives support from a variety of internal and external donors (Butler, 1995; Maveneke, 1996; USAID assists CAMPFIRE projects, 1997).

District Councils collect the hunting fees and are permitted to retain no more than 15%. Up to 35% may be allocated to wildlife management activities, and no less than 50% is to be returned to the local 'producer' communities. Some communities have divided the proceeds equally among village heads of households; others have financed community projects, such as schools, clinics,

and grinding mills. Income earned by CAMPFIRE districts from trophy hunting increased from just under US$700,000 in 1989 to over US$13 million in 1995 (WWF Programme Office, Harare). This compares to only one million (US$) which the CAMPFIRE Programme generated from nonconsumptive wildlife tourism in 1995 (WWF Programme Office, Harare).

Botswana

Botswana has a particularly distinctive method of allocating hunting rights. Hunting concessions are awarded through a public auction among companies which submit acceptable management and use plans for the concession areas. Hunting licenses are allocated through a raffle under the principle that citizens should have equal access to the country's resources. The license fee is kept low so that rural people can afford them. Concessionaries have the first option to purchase licenses to hunt in their areas from individuals wishing to sell them (Chatwick, 1995). Hunting fees are collected by Botswana's Department of Wildlife, which turns them over to District Councils (White, 1995).

Under Botswana's 1992 Wildlife Conservation and National Parks Act, local communities can apply for lease rights in Controlled Hunting Areas and Wildlife Management Areas. If granted, the rights permit communities to sell established wildlife quotas to safari operators or to citizen hunters, or to use them for their own local hunting (US Agency for International Development, 1995; Steiner & Rihoy, 1995).

Namibia

Trophy hunting is permitted on approximately 280 hunting farms in Namibia, officially registered and controlled by the Government. Private guest farms and game farms also offer hunting opportunities. In 1988, the Government opened concession areas in the Caprivi and in Bushmanland; concessions are awarded through a tender system, and quotas are sold per hunting block for a three year period on public auction (Proposal 10.26, 1997). Safari operators, hunting, guest and game farms are allowed to set their own rates for services and for trophies, although they are encouraged to adhere to rates recommended by the Namibia Professional Hunting Association. The Government collects revenue through permit fees, and through taxes and duties assessed on private business transactions. These funds are used to maintain Namibia's national parks and for other conservation and research programmes.

In June 1996, the Namibian legislature approved a Conservancy Policy which gives people in all the country's communal areas the right to use and benefit from their natural resources through hunting, tourism, and other wildlife-related enterprises. Establishment of local conservancies is expected to be completed by the end of 1998 (Proposal 10.26, 1997). The conservancies will propose hunting quotas to the Ministry of Environment and Tourism, which will then determine sustainable harvests per unit of population. Once the new system is in effect, the central government will no longer collect fees from trophy hunting in communal areas (Proposal 10.26, 1997).

Republic of South Africa

South Africa allows hunting on private game land and selective trophy hunting in a few game reserves and parks. Professional hunters, who must accompany tourist hunters, negotiate a fee for the desired animal(s) directly with the owner of the land on which the animal is found. They may also be required to pay a land or concessions fee. In 1995, fees and rates levied on trophy hunting for white rhinos alone generated an estimated US$2 million (Proposal 10.28, 1997).

In addition to selective trophy hunting in some game reserves and parks, overpopulated species in these areas may be culled or offered for sale. For example, private game reserves often buy white rhinos from Hluhluwe-Umfolozi Park, paying on the average US$5000 per animal; they can then charge a hunter client almost double that amount to shoot one (Chadwick, 1996).

Is Trophy Hunting a Beneficial and Sustainable Use of Wildlife Resources?

A review of available literature on trophy hunting in these six African countries, in conjunction with interviews of conservationists, hunting professionals, and wildlife officials, suggests that the answer to this question is a qualified 'maybe'. Specifically, trophy hunting management systems must meet the following criteria to optimise conservation and community benefits.

Quotas must be based on scientific population estimates.

Evidence, however, indicates that scientific wildlife population surveys are the exception rather than the rule in Africa. Many conservationists contend that none of the countries in east and southern Africa have ever had reliable population estimates; quotas, therefore, have never been set at sustainable levels (N. Leader-Williams, personal communication, 1995).

In Botswana, Kalahari wildlife populations have dramatically declined (with the exception of elephants) as a result of drought, veterinary cordon fences for foot-and-mouth disease control (which block migratory routes), loss of key resource areas to livestock, poaching and abuse of the citizen hunting system (Perkins, 1995). However, government estimates of wildlife populations remain high. Pat Carr-Hartley (1995: 8), a former professional hunter and entrepreneur in Botswana, takes issue with these estimates:

> {The quota} is not scientifically produced. The aerial counts … are by no means accurate and the Department of Wildlife and National Parks say they use these counts in tabulating their quotas … The only way to accurately count large herds is to photograph them and then count each individual animal in the picture. The method used now is to count ten animals and guesstimate the number of times this goes into the size of the herd.

In Zimbabwe, 'quotas based on the actual number of each species is problematic; aerial surveys only provide estimates for a very limited number of species; they are highly variable for a large number of reasons, i.e., animals move, animal behaviour, sample survey methods. A more rational approach is that of adaptive management, set a quota and monitor, over time, a range of indicators

which can show the effect of the off-take and other factors on the population' (I. Bond, personal communication, 1995).

In Zambia, the Ministry of Tourism's National Parks and Wildlife Services admits that it does not conduct censuses to provide reliable statistics on which to base quotas (except for wetland areas); 'the costs for doing so in most areas are simply too prohibitive' (Lewis, 1993: 28). A 1993 technical assessment of the ADMADE programme noted that not only were hunting licenses frequently oversold, the quotas were not based on hard data and were probably not realistic anyway (World Wildlife Fund, 1993).

The accuracy of wildlife population counts in Tanzania has frequently been disputed. A Tanzanian newspaper reported in July 1995 that the 124 cat quota (64 lions, 60 leopards) given to Tanzania Game Tracker Safaris for the 1995/96 season is 'from areas which do not have them in the first place … According to information available to *The Express*, none of {the concession} areas can absorb the pressure of hunting allowed by the Ministry' (Mpinga, 1995). When two new hunting blocks were created in the Mkomazi Game Reserve in 1994 (see below), the population estimates on which quotas were set were highly questionable. The Tanzania Wildlife Conservation Society, for example, estimated the lion count was inflated by 300% (The hunting industry in Tanzania, 1995: 2).

Quotas can only result in sustainable off-takes if they are comprehensive and enforced.

In several of the African hunting countries, quotas do not include specimens killed for problem animal control, which can be quite high. In Botswana, quotas do not include animals killed under special licenses, for veterinary fence control, for problem animal control, or for rations for wildlife officers (Winer, 1995). In Zimbabwe, 'some (local) councils submit … requests for changes to existing quotas based on different sources of information. There is often pressure to increase quotas especially for problem animal control' (I. Bond, personal communication, 1995). Special hunting licenses have also been a problem in Zambia; during his field visits in October 1993, Roger Cohn noted that 'there were frequent complaints about district wildlife officials who were issuing special, quota-exempt hunting licenses free of charge to well-connected individuals, a practice that the local chiefs and scouts saw as a form of legalized poaching' (Cohn, 1994: 73).

Lavishly wealthy hunters from the Middle East (particularly Saudi Arabia and the United Arab Emirates (UAE)) have for years descended on Africa's wildlands to acquire specimens for their personal zoos and to slaughter wildlife indiscriminately — often under special, open-ended hunting permits. *The Economist* reported in 1990 that the Gulf's new rich were the 'keenest' hunters:

> Their parties, armed with automatic rifles and searchlights, travel with up to 40 four-wheel-drive vehicles, towing water trucks, generators and refrigerators for food and carcasses. Several princes and at least one minister have been involved in the mass slaughter of animals. Local preservation laws, barely enforced by underpaid officials, are waived for very senior visitors. (*Economist*, 1990)

A Tanzanian in the hunting safari business wrote in 1991 that a group of Middle Eastern hunters, regular travellers to Tanzania, would 'shoot everything that

moves — cheetah, lion and leopard cubs, and every form, shape and sex of antelope' (as quoted in Bonner, 1993: 239). In July 1994, a Parliamentary probe team was set up in Tanzania to investigate corruption in the hunting sector, including allegations that the Deputy Defence Minister of the UAE had been allowed to hunt endangered species without regard to regulations or quotas.

In some countries, quotas set by wildlife departments are subsequently increased by higher levels of government. In Tanzania, for example, the Wildlife Conservation Society has complained that 'Ministerial announcements have rescinded earlier allocations … and increased the number of blocks and quotas with no scientific justification' (The hunting industry in Tanzania, 1995: 1). One Tanzanian wildlife expert, who prefers to remain anonymous, reports that

> The past several years have seen a proliferation of hunting companies all vying for blocks in which to satiate their clients' appetite for hunting. The department of wildlife — against all acceptable practices — resorted to subdividing existing blocks and multiplying the quota by the number of fragmented parts of the original quota. The end result has been increasing four- or five-fold the number of animals killed. That cannot be sustainable and reduced Tanzania to a pariah of the hunting fraternity. (Personal communication, 1995)

Hunting concession awards must be limited to reputable, experienced outfitters and allocation must be perceived as fair, transparent, consistently administered and incorruptible.

Not all of the African countries permitting trophy hunting require professional qualifications and experience on the part of hunting concessionaries, nor do they restrict applications for hunting blocks to those companies in good professional standing with no history of abuse of quotas or hunting ethics. In 1994, for example, Tanzania's Ministry of Tourism established two new hunting blocks in the Mkomazi Reserve, which had been closed to hunting since 1990 because of severe ecological degradation caused by uncontrolled livestock grazing, indiscriminate trophy hunting, and poaching (Jackman, 1994). The blocks were awarded to two new companies with no previous experience in the hunting business; one went to the son of Tanzania's Director of Wildlife. The same Director of Wildlife also revoked the allocation of blocks to Tanzania Bundu Safaris Ltd. and awarded them to other companies, two of which were known to be linked to the Director (*Business Times*, 1995).

The secrecy under which hunting concessions are often awarded creates suspicion about the fairness and integrity of the process. One professional hunter, who provided information in confidence, concedes that 'most certainly there is corruption and pay-offs involving the issue of these areas. Who you know is also a factor in most cases and who can assist you'. Tanzania's draft hunting policy notes that 'in the past the system of allocating blocks was not transparent and has resulted in the inequitable distribution of opportunities for outfitters to participate in the industry' (United Republic of Tanzania, 1994: 3). The professional hunter mentioned above has called the system worse than opaque:

> In Tanzania, everyone is paid to do a job, no matter that they are being paid

> by the government to do that job already. The 'grease' … is just a way of doing business. Of course, this type of graft and corruption is rampant in Tanzania and just part of daily life. The under the table grease is certainly a way to obtain anything in that country, hunting areas as well. (Personal communication, 1995)

In a 1994 agreement between the Government of Tanzania and the Tanzania Hunting Operators Association, indiscriminate subleasing of hunting blocks, including to persons who are professionally incompetent in hunting operations, was listed as one practice contributing to Tanzania's poor reputation (Consensus: 3).

The system governing the receipt of fees and return of revenue to local communities must be transparent and accountable.

The return of revenues from wildlife resources to local communities is problematic when the financial system is not transparent and accountable. Ideally, local communities should see a direct linkage between the killing of each animal in their area and an economic benefit returned to them (Baker, 1997). In Tanzania, the Wildlife Conservation Society has cautioned that 'increasingly we see utilisation practice aimed at individual benefit. A hidden process of resource allocation only reinforces this belief' (The hunting industry in Tanzania, 1995: 2). In Zimbabwe, transparency is often lacking:

> Revenue and hunting records are received at the district level. This information is seldom transmitted to subdistrict institutions. In districts where the contract is not based on trophy fees it is very difficult to correlate off-take and revenue received because the operator is paying a proportion of the daily rate and the trophy fee … {further,} wildlife areas and areas of human settlement are normally separate for obvious reasons. This makes it difficult for people to get details and location data on all animals shot. (I. Bond, personal communication, 1995)

Bond (1993: 27) also points out that District Councils are often under severe financial pressure, and returns to households have been 'erratic and infrequent'. During the 1989–1991 period, for example, only 35% of the total revenue generated by the CAMPFIRE programme was estimated to have been returned to the wards and villages in which wildlife was found (Bond, 1993: 27).

In Zambia, a lack of accountability for wildlife revenues has been repeatedly documented through audits of the Wildlife Conservation Revolving Fund. Financial returns to communities have not been distributed as promised due to a range of administrative and financial problems (Rosenthal & Sowers, 1995; ULG Consultants, Ltd., 1994). As a result, village game scouts were neither paid nor equipped for long periods of time, and hostility erupted between ADMADE personnel and NPWS. While

> considerable improvements have been made in the timing and accuracy of distribution of benefits to local communities … there continues to be disparities and complaints as to what is owed and what has been distributed … Fund administration and decision-making remain excessively directive and not yet adequately devolved to the newly recognized

> 'owners' of the GMA's wildlife and other natural resources. (Rosenthal & Sowers, 1995: 42–43)

Rosenthal and Sowers (1995) conclude that, because of former and new accounting problems, it is difficult to say for sure that the concept of community-based conservation is working.

The hunting industry must be competently regulated and internally and/or externally policed to prevent abuses.

In addition to corruption, control of hunting may be lost due to disreputable or irresponsible outfitters and hunters, poor management or a faulty administrative system. Effective, systemic controls (either by government or by the profession) are necessary to ensure rigorous enforcement of quotas and to uphold professional standards and conduct. David Mark of the Friedkin Conservation Fund (part of Tanzania Game Tracker Safaris, Ltd.), for example, cautions that 'companies are not inherently trustworthy' (Personal communication, 1995). Over-hunting in Botswana has been attributed to poor central management:

> At times up to ten different hunting parties have been active in one area at the same time, the majority of them carrying licenses which they had purchased independently. There was little or no control … as to whether quotas were adhered to … leaving the system open to abuse. (Chatwick, 1995: 13)

Carr-Hartley (1995: 8) agrees, adding that over-hunting has been caused by the 'transferring of licenses from one area to another and between one person and another … there have been many instances where a license return has not been endorsed after the animal has been shot. Because there is a lack of control, and the licenses are not checked, people can hunt the animal again and again'. White (1995: 16) has reported that 'there is absolutely no control of hunters during the hunting season. Wounded animals are often abandoned, while over-hunting, illegal and destructive hunting methods, such as chasing and shooting animals from vehicles, are rampant'.

The 1993 technical assessment of Zambia's ADMADE programme noted that hunting licenses were frequently sold after quotas were exhausted. The report attributed this to the fact that those selling the licenses had no access to information on what had been sold previously. Computerisation of licenses was intended to correct this problem, but the delay in entering data still resulted in quotas being exceeded (World Wildlife Fund, 1993).

Even if the above conditions are met, the following observation applies:

Returning economic benefits to local communities will not guarantee equitable sharing of the resources or protection of wildlife.

Patronage and favouritism often result in the inequitable redistribution of hunting proceeds (Gibson & Marks, 1995). Baskin (1994: 733) has commented that 'one detail in particular — how to get development money down to the individual pastoralists through entrenched local power structures that are notorious for siphoning such funds away — may prove to be the policy's undoing'. In the ADMADE programme, for example,

> Chiefs used these initiatives to secure more power and resources for themselves rather than to facilitate local participation or wildlife conservation … Chief's ideas dominated the list of development projects, which were often situated within or near chiefs' compounds. Chiefs' relatives and loyalists obtained many of the new salaried positions, resulting in charges of nepotism. (Gibson & Marks, 1995: 947)

Bonner (1993: 276–7) notes that in at least one district in Zimbabwe, the list of households eligible to receive wildlife proceeds had been padded and had excluded female heads of household abandoned by their husbands.

According to Murphree (1996: 17), it is not surprising that some local councils have been tempted to appropriate the revenues of their constituent producer communities for their own purposes, 'thus replicating at the council level the extractive practices of the pre-CAMPFIRE, colonial government'. In fact, identifying the 'producer community' is one of the major problems facing the CAMPFIRE project in Zimbabwe:

> Rural African communities are not the socially and economically homogenous units as often perceived from the Western perspective — community management is therefore a myth … cash household or individual dividends invariably cause arguments — projects frequently benefit only a small proportion of the population. (I. Bond, personal communication, 1995)

Bond (1993) and Murphree (1996) point out that, because elites are seen to be the major beneficiaries of wildlife utilisation, the majority of local people have no incentive to abide by resource conservation decisions.

Trophy hunting was banned in Kenya in 1977 and has not resumed, although the issue has received much discussion and study in the past few years. Some of those opposed to reopening the industry have expressed scepticism over using existing community political structures to return benefits from wildlife to local people, noting that some communities are infamous for their 'fossilized power structures and mismanagement … if profits from wildlife-based enterprises don't make it all the way to individual farmers or herders, their incentive for permitting wildlife on their lands will vanish — and the animals may follow shortly thereafter' (Baskin, 1994: 734).

Gibson and Marks (1995: 942) note that 'by giving quasi-public goods to communities to abstain from hunting, programmes fail to reward individual behaviour. Consequently, programmes create a free-rider problem in which individuals continue to hunt while receiving the benefits of community-level projects'. In their study, the researchers found that programme designers failed to recognise the social significance assigned to local hunting; ADMADE guards found it to their benefit to pursue and arrest only hunters of big game, while permitting unrestrained local hunting of small game.

Inequitable distribution of wildlife resources across communities can often result in inequitable redistribution of income from those resources, creating animosity and friction between the communities (Butler, 1995: 42). Some districts can earn more from trophy hunting than others because they have more wildlife or more valuable wildlife. Steiner and Rihoy (1995: 21) note that 'depleted wildlife populations in some areas and actual productivity of certain habitats and species

in terms of annual take-off have imposed certain limits on the generation of potential benefits'. In Zimbabwe, for example, eleven District Councils do not have sufficient wildlife in their areas to attract tourist hunters, and in areas where revenues from hunting are marginal and potential beneficiaries are numerous, 'it is virtually impossible for meaningful household benefits to be generated from wildlife' (Bond, 1993: 30).

Conclusion

Conservation of the planet's remaining wildlife resources will depend on management practices which recognise that indigenous people are integral parts of ecosystems (Bonner, 1993; Rihoy, 1995; Butler, 1995). Community-based conservation programmes which establish an economic value for wildlife and provide incentives for sustainable use are an increasingly popular mechanism for returning to local communities the responsibility of managing their natural resources. Trophy hunting in particular has been identified as a lucrative form of wildlife use which may provide both community benefits and incentives for wildlife conservation (Gibson & Marks, 1995; Bonner, 1993).

Trophy hunting, however, is not necessarily a sustainable use of wildlife resources. This paper has identified a number of conditions which must be met in the design and implementation of trophy hunting management programmes if the activity is to promote wildlife conservation and benefit communities. Criteria include scientifically-determined wildlife population estimates, comprehensive quotas which are enforced, reputable and honest outfitters, transparent and accountable revenue collection and disbursement mechanisms, competent management and oversight of the industry, and fair distribution of proceeds at the local level. In the six countries in southern and eastern Africa which allow trophy hunting, management systems have fallen short in these areas to varying degrees, reducing potential conservation and community benefits.

Clearly, operational challenges remain in designing and refining community-based wildlife conservation programmes. In the case of trophy hunting in Africa, problems relate not only to institutional arrangements but also to social, cultural, and political environments. To the extent that wildlife managers can meet the conditions outlined above, however, local communities will have a much greater economic incentive to manage their wildlife resources in a sustainable manner.

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