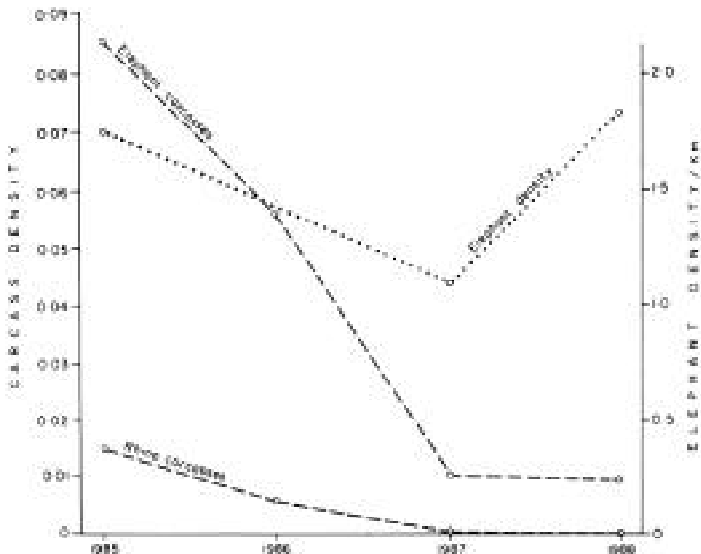


# Zambia's Pragmatic Conservation Programme

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**Fig 1.** Number of fresh poached carcasses found during patrols in Lower Lupande expressed as number per sq km. Given also are elephant density estimates for the 55 sq km monitoring zone for 1985, 1987 and 1988.

Over the past ten years illegal hunters have killed nearly 95% of Zambia's black rhinos and more than 50% of its elephants have suffered the same fate. While not so precipitously, numbers of most other species of wildlife have declined as well. In response to the statistics, Zambia re-examined its policies, and a new and radically different approach to the conservation of wildlife has emerged. It started in Chief Malama's area just outside South Luangwa National Park where a dozen young residents of the area volunteered to help protect the wildlife. They worked under the supervision of their local village leaders and the National Parks and Wildlife Service (NPWS) and became known as Village Scouts; their success in reducing illegal hunting was overwhelming. Today, Zambia has a formal Village Scout training programme and each year over 120 scouts are assuming duties in their respective Chiefdoms throughout the nation.

## The Source of Policy

Village Scouts, local village leaders and technical extension officers of NPWS now form a partnership in Zambia's wildlife conservation. As a result resources are being conserved and sustainable uses are offering benefits ranging from employment for local residents to revenue earnings which pay for management costs and community development projects. The significance of this partnership is that traditional village leadership is encouraged to help formulate conservation practices with an African perspective and therefore with greater public acceptability. Consequently the administration of wildlife management in rural areas has become more effective in combining views and ideas from both technical staff of the government and the local residents; national parks' personnel have had their customary roles as law enforcement officers modified to function more as servants of the rural people.

This new policy of conservation in Zambia is called the Administrative Management Design (ADMADE) and applies specifically to land designated as game management areas, of which there are 32 surrounding most of Zambia's 18 national parks. By strengthening their role as buffer zones to the national parks, ADMADE is reducing the incidence of illegal hunting in these protected areas while also minimising other human activities disruptive to park management. The policy design of ADMADE was formally presented in a government document prepared by NPWS (Mwenya, Kaweche and Lewis 1987) and is obtainable from that department.

## Simplicity and Adaptability

If third world countries have a poor record for putting conservation high in their national planning priorities it may well be because conservation, as traditionally defined, does not adequately address the needs and aspirations of their people. ADMADE does not emphasize conservation *per se*, since "conservation" in rural Africa often has the connotation of regulations, law enforcement and restrictions, but stresses the benefits to and responsibilities of local residents who are prepared to share their lands with wildlife. Neither does it dictate the methods used to achieve such a reconciliation between wildlife and rural residents. Instead, ADMADE provides a simple design for administering wildlife management through local participation and leadership together with guarantees that certain revenues accrued from the area will return to the local villages in the form of employment and community development. The way village participants use this design will reflect their traditional respect for the area, tribal customs and an appreciation of the legal uses now available to them under the programme, giving ADMADE flexibility and adaptability in dealing with local issues concerning wildlife resources since solutions now come from the local residents themselves.

To understand how ADMADE achieves this requires an appreciation of Zambia's ethno-geography and political system. Within its national borders Zambia has a vast cultural diversity with a total of 73 tribes having different dialects or languages as well as different land-use practices. In most cases a game management area (GMA) is within a single tribal area but in some more than one tribe is involved. ADMADE has established for each suitable GMA a policy-making body comprised of the ruling chiefs for the area, resource officers and senior-level government leaders including the area's Member of Parliament, District Governor and District Political Secretary. This body is referred to as a Wildlife Management Authority. When convened, tribal customs and the values of the traditional rulers merge with the technical views and opinions of the resource specialists and government. The District Governor, the highest ranking political leader in the district (or county), is Chairman and he along with the other government and Party officials can use their influence to facilitate the recommendations of the Authority.

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## What is Needed

A necessary precondition for the establishment of a Wildlife Management Authority is that its respective GMA be able to sustain sufficient annual income from wildlife to support the needs of management, such as the local Village Scout programme, and to fund the projects identified by local residents for community improvement. An area from which revenues are generated and in which they are utilized is referred to as an ADMADE Unit. Units correspond to GMAs except where the latter are too large to be administered effectively as a single Unit; a NPWS officer is designated Unit Leader.

The Authority's task is to adopt an annual programme of wildlife management as recommended by its Unit Leader and to approve budgets to support this programme and that for community development projects. These must be within the allowable limits of a revenue sharing formula adopted by ADMADE under which the Wildlife Conservation Revolving Fund, which retains the initial earnings from each unit, allocates 40% of these revenues to the Unit's wildlife management costs and 35% to community development. The remaining 25% is shared between NPWS to help support the management costs of the adjacent national park and the Ministry of Tourism for the promotion of tourism. Once these budgets are received by the Wildlife Conservation Revolving Fund the respective amounts are transferred into two separate accounts which are administered by the Authorities themselves and are subject to periodic inspection by an independent audit.

## Responsibility

The programme of wildlife management adopted by the Authority is administered by the Unit Leader who also supervises the work of those local residents employed by or serving voluntarily under the Authority, Village Scouts being the main source of permanently employed manpower. The role of Unit Leader is therefore particularly important to ADMADE's success and a special six month training programme is required prior to his assignment. He is expected to reside in the Unit as an effective member of the community, learn the local dialect and establish close ties with chiefs and headmen to promote discussion and understanding of issues affecting wildlife management.

One specific way a Unit Leader does this is by serving as secretary to the Wildlife Management Sub-authorities which are formed for each chiefdom. Each Sub-authority is chaired by its own Chief; the headmen and other prominent individuals of the community are members. The agenda for Sub-authority meetings typically relate to issues concerning the wildlife resources in the chiefdom. There may be a need, for example, to discuss disciplinary measures to be taken in respect of a particular Village Scout, a policy on the coordination of early burning, ways to reduce crop damage from wildlife, and employment provided by the professional hunter in the area. The purpose of these meetings is to identify problems and resolve them with the full involvement of the local community. The Unit Leader ensures that solutions are kept within the law and encourages rational uses of wildlife to help underpin the management and development needs of the Unit. Wildlife Management Sub-

authorities also have the responsibility of agreeing on improvement projects they wish the Authority to finance from the share for community development and only proposals agreed on by the Sub-authorities will be considered by the Authority for funding. It is therefore in the interest of the Chief to see that his own Sub-authority convenes and that the best local expertise is recruited to help carry out the needs of wildlife management for his area. In this way the resource will return a growing amount of net revenue. To encourage such an attitude of leadership and responsibility for improved wildlife management ADMADE requires that Village Scouts be recruited only by the Chiefs. Thus traditional leadership in the community is recognized in order to promote a more positive relationship with NPWS and hence advance the objectives of ADMADE.

## Contentious Concepts

ADMADE depends upon hunting certain species to finance the preservation of wildlife in general. To many the idea of safari hunting is repugnant and ADMADE also depends on donor assistance to help provide some initial investments to enable its Units to operate effectively. However, aid often comes from institutions whose support originates from societies having ethics that clash with the idea of killing any wildlife. Zambia is convinced that if conservation is to succeed and gain acceptance within its own boundaries the means must conform to the needs and realities of socioeconomics. An examination of the impact ADMADE has had on the local elephant and rhino populations in Lower Lupande Unit may provide an assurance that ADMADE's policy is the best of all possible solutions that can be offered. The following data are made available from the Lupande Development Project (Lewis, Kaweche and Mwenya 1988) which was the precursor to ADMADE and has become the model Unit for the national programme.

## Elephants

In South Luangwa National Park and its adjacent areas, including Lupande, a 40% decrease in elephant numbers occurred from 1979 to 1985 and the decline was attributed to illegal hunting (Lewis 1986). During this period elephant poaching was a serious problem but unlike the park, where the preferred weapon for hunting was an automatic firearm, in Lupande the chosen weapon was the traditional muzzle-loading gun (Lewis, Kaweche and Mwenya 1988). As an index of change in elephant numbers in relation to the work of Village Scouts, a 55 sq. km area within Lower Lupande was monitored for elephant density during the implementation of the Lupande Development Project. In addition field patrol reports made by Village Scouts throughout the whole area were used to substantiate any new sightings of elephants where their presence had not been previously noted. Rates of poaching were measured as the ratio of total carcasses suspected of having been poached (i.e. tusks removed, bullet wounds, etc.) to the total area covered during a year's patrolling. From 1985 to 1988 poaching rates in Lupande decreased substantially (see Fig. 1). Although elephant density remained relatively unchanged in the 55 sq. km monitoring zone, in areas considered the outer limits of the elephants' range sightings were made in 1988 where none had been made in 1985 (unpub. data, 1989).

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## Rhinos

Considering the critical plight of black rhino conservation in all of Africa, the story of Lupande's black rhinos is even more spectacular. Specific details will be omitted from this paper for security reasons, but based on two separate surveys undertaken in 1984 (Chimbali, 1984 and 1988; Lewis and Chanda, 1988), as well as annual field patrol reports, it is clear that the rhinos in Lupande are breeding and their numbers are not decreasing. Furthermore, the rhino poaching rates have dropped abruptly during this period; from 1986 to 1988 there has been no reported rhino carcass throughout Lupande.

Much of the credit for this trend must be given to the local Village Scouts who have demonstrated their abilities and concern for protecting their own wildlife resources from illegal uses. The unseen or unknown variable is the extent of social resistance to poaching within the local communities where villagers might engage in poaching themselves or indirectly by giving outside hunters lodging in exchange for meat. Indications from the attitude survey taken in Malama area show perceptions toward wildlife conservation are changing and that the people's recognition of the legal benefits from wildlife may be discouraging illegal uses (Lewis, 1988).

## Money: the Motive Power

Fuelling this entire process of change is the money generated from safari hunting which in 1988 totalled US\$ 511,000 from the 12 ADMADE units in operation. While donor assistance of US\$ 120,000 made most of the necessary investments for capital improvements more than 90% of the recurrent costs of the Units were met from the 40% share of the safari hunting concession fees. As local involvement in the management of wildlife improves and intensifies, the capacity of these Units to generate increasing revenue on a sustained-yield basis will most certainly enlarge. Furthermore, non-consumptive uses, such as tourist lodgings, sales of live animals to game ranches, etc. will be identified and exploited. Regardless of these other uses, however, ADMADE recognizes that revenue earned from safari hunting represents the largest net profit that wildlife can sustain to help

meet the Unit's management costs and it is for this reason that the Managing Director of the safari hunting company with the concession for a given Unit is a full member of that Wildlife Management Authority and the resident professional hunter operating in a chiefdom is a member of the Wildlife Management Sub-authority.

## A Look to the Future

At the end of each year an annual planning workshop is convened to bring together all Unit Leaders and senior NPWS officers for a review of each Unit's progress and to solve any problems under ADMADE that require a departmental decision or policy change. It was remarked during the 1988 workshop by the NPWS Chief Wildlife Research Officer that "ADMADE started off as a baby, able only to crawl. Then it learned to stand and soon began running. Now it must develop its brain to know where it needs to go". ADMADE is evolving a "brain" and it is doing so at an astonishing pace that perhaps reflects the involvement that ADMADE seeks from so many levels of expertise and background. Its very foundation is the local community, the traditional rulers and the appointed government leaders. Within its first year when more than 15 Wildlife Management Authority meetings were held, important issues of wildlife management were discussed and resolved. In Sichifula-Mulobezi a problem of encroachment by village settlers on land important for wildlife was taken up and the local chiefs exercised their own powers to solve the problem effectively. In Mumbwa over-hunting by non-residents was condemned and the Authority refused entry to licensed hunters until a more effective system could be implemented to protect their area from this abuse. In Lunga-Lushwisi the Authority recognized that the Unit had too few camps to adequately police their area against illegal hunting, and in their first year three new camps were constructed for deployment of their Village Scouts. In Munyamadzi the Unit Leader needed somewhere to live, and the local community supplied a government house that was built for a school teacher who never occupied it. The list goes on, but the message is clear: a new and successful "grass-roots" approach to conservation has taken shape, one in which Zambians have determined the techniques and style.

## References

- D. Chimbali, Chendini Survey of Black Rhino, unpublished report for National Parks and Wildlife Service, Zambia, 1964.
- D.M. Lewis, Survey of perceptions toward wildlife for two village communities with different exposure to a wildlife conservation project *ADMADE Research Publication No.2*, Associated Printers, Lusaka, 1966.
- D.M. Lewis, G.B. Kaweche and A.N. Mwenya, Wildlife conservation outside protected areas - a lesson from an experiment in Zambia, *ADMADE Research Publication No.2*, Associated Printers, Lusaka, 1988.
- D.M. Lewis and G. Chanda, Chendini Survey of Black Rhino, unpublished report for National Parks and Wildlife Service, Zambia, 1988.
- A.N. Mwenya, G.B. Kaweche and D.M. Lewis, *Administrative Management Design for Game Management Areas (ADMADE)*, National Parks and Wildlife Service, Government Printers of Zambia, Lusaka, 1987.
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