

Managing southern Africa's Elephants

Southern Africa's elephants have made a dramatic comeback. Under colonial administration, elephants were hunted to the very brink of extinction by 1900. The situation was so desperate that Zimbabwe had less than 4,000 at the turn of the century and there were even less in South Africa. Today Zimbabwe has over 66,000 elephants and southern Africa's total is a minimum of 200,000, roughly a third of the entire African elephant population. Rising elephant numbers in southern Africa has led to increased competition with rural people for natural resources, often resulting in conflict.

Elephants and people : an uneasy relationship

Elephants are regarded with fear, suspicion and hostility by most rural Africans. In a few hours elephant can ruin people's livelihoods by eating their crops or trampling their livestock to death. They also damage houses and schools, cattle sheds, fruit trees, dams and soil contours. Every day local newspapers carry reports of elephant damage. Worse still, rural people are killed by elephant in Africa every year. A dispatch from Zimbabwe stated that over a hundred people were killed by elephant or buffalo in one district during the last 10 years.

Too many elephants spoil the forest

As well as affecting their human neighbours, a high concentration of elephant can severely damage the local environment. An adult elephant eats 150-300 kg (330 - 660 lbs.) of vegetation within a 24-hour period. If there is adequate water it will drink about 200 litres (53 US gallons) in the same period. In forested areas, an elephant destroys an average of 3 trees per day. It plucks seedlings, pushes over mature trees and snaps branches off, sometimes also removing the bark, all with devastating results. Aerial photographs from Sengwa district, in western Zimbabwe, show that between 1960-75, 75% of trees were lost due to elephant damage. Such wide-scale destruction of trees reduces the habitat available to other species, which can result in the loss of biodiversity (see Box).

Box: Elephants in Addo National Park, South Africa

The Addo Elephant Park in the Eastern Cape was proclaimed in 1931 to protect the southernmost elephant population in Africa. However, since the 1970s a major objective of the park has been to preserve intact a viable example of succulent thicket – the regional ecosystem which is of high diversity and endemism. Of a total of 581 species, 12.4% are regional endemics or Red Data book species and 32.2% are not conserved elsewhere. This ecosystem is poorly represented in protected areas and highly threatened by agriculture. Under a stocking rate of 2 elephants/km² biomass, stature and plant diversity within the protected vegetation was reduced and many species were made vulnerable to local extinction as a result of elephant impacts. A solution has been found in the expansion of the park – but as elephants increase to fill their new habitat many scientists fear that ultimately animals will have to be moved or culled to ensure the survival of this unique vegetation.

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However, in areas where the elephant population is small or sufficiently scattered, they help to keep the ecosystem in balance by clearing the scrub and encouraging regrowth. This ensures that the area remains a dynamic mix of woodland and savannah providing the different habitats for other wildlife.

Managing elephant numbers

Far from endangered, elephant are numerous in southern Africa and in many places their numbers exceed ecological carrying capacity. African wildlife biologists are working to conserve sustainable elephant populations and to reduce their impact on rural development and the environment.

One method of alleviating elephant pressure on local environments is through moving them to other national parks, game ranches or conservation areas. Pioneered in southern Africa, elephant relocation involves darting and moving entire family groups to new locations. However, the process is both expensive and dangerous.

South Africa recently completed a R500,000 (roughly US\$150,000) programme to move 150 animals out of Kruger National Park to other parks and ranches. However in the process, one darted elephant fell on its sternum and suffocated before scientists could reach it and this caused trauma among the surviving elephant. There were also protests at the cost - many people thought the money could have been better spent on national development programmes or in more cost-effective conservation projects.

Experiments with elephant birth control

Contraception was tried out as an elephant population control measure in Kenya during the early 1990's. Young female elephant were darted with tranquillisers from planes and helicopters and subsequently injected with a long-lasting contraceptive. However many of the darted elephant showed signs of trauma and the programme was considered prohibitively expensive to be replicated on a larger scale. In addition, it would take several generations before such birth control measures could stabilise elephant numbers. Both elephant relocation and birth control may

contribute in the long term to counteracting the negative impacts of too many elephant. However, in southern Africa there is a pressing need to manage sustainable elephant populations now, before further damage is inflicted on people, fauna and flora. In some areas this necessitates drastic measures to quickly reduce elephant numbers.

Culling : an immediate solution

South Africa and Zimbabwe need to cull hundreds of elephant every year in order to bring elephant numbers to a manageable level. South Africa's showcase national park, Kruger, is fenced and the animals inside are carefully managed to maintain an optimum mix of species. Park staff estimate that the park can carry 7,500 elephants, so 300-600 elephants have been culled annually in the past 30 years. Selected family groups were darted from helicopters, put down and taken to a factory for processing. Every part of the elephant was used - the meat is tinned and dried, leather is made into boots and briefcases, the bones are used for cattle feed and the ivory is also sold. As well as maintaining the delicate ecological balance of the park, Kruger's annual cull yielded about US\$1.5 million for conservation. The culling operations, which were temporarily on hold, have recently resumed.

Hunting : enabling elephants to pay their way

Given that the majority of Africa's elephant live outside its national parks, Zimbabwe has come up with a solution to the traditional conflict between rural people and elephant. Under its Communal Areas Management Programme For Indigenous Resources (CAMPFIRE) rural communities are given legal rights to manage their own wildlife populations. With technical advice and support from the Department of Wildlife and other conservation organisations, rural people undertake wildlife censuses and set sustainable hunting quotas on their lands. Foreign sportsmen hunt wildlife within these quotas and the income is used by rural inhabitants for conservation and rural development projects. A rural community receives a fee of US\$12,000 for each elephant trophy, plus fees for the right to hunt on communal land.

Like any rural development programme, CAMPFIRE, is not without difficulties but many communities have benefited, building schools, grinding mills, health clinics, wells and roads. Although CAMPFIRE funds are generated from other methods of wildlife utilisation such as wildlife tourism and selling natural products, the majority of the funds are raised through elephant trophy hunting. Since the advent of CAMPFIRE, local people have realised the benefits of sharing their resources with elephant and are more tolerant to elephant incursions on their land. Hunting revenues are also used to hire and train local residents as wildlife scouts and many rural communities are actively working to conserve sustainable elephant populations.

How the international community can help elephant management in southern Africa

Due to the emotional appeal of elephant, most population management programmes are controversial. However, elephant numbers are considerably higher in southern Africa, where they are managed carefully, than in other parts of Africa where they are at the mercy of deteriorating environmental conditions and dispossessed and disgruntled rural people.

International policies such as the ivory ban adversely affect elephant management policies in southern Africa. Rural communities had US\$1.6 million in stockpiled ivory in Zimbabwe in 1997. In a breakthrough, CITES allowed a one-off experimental sale of legal ivory from Botswana, Namibia and Zimbabwe after downlisting these range state elephant populations from Appendix I to Appendix II. This sale raised significant revenue for local communities, including those in Zimbabwe. Future legal trade in ivory, however, has been put on hold until the next CITES conference, although South Africa's elephant population also recently joined its neighbours on Appendix II. Experience from rhino horn bans shows that trade bans are unlikely to stop poaching, whereas rural development, based on sustainable elephant and other wildlife management, could provide an alternative. If elephant revenues cannot generate adequate income for rural inhabitants, impoverished people will clear wildlife habitat to make way for more productive land use. The international community can assist southern Africa manage elephant populations sustainably through :-

- ✓ *recognising that elephant are not endangered in southern Africa and supporting ways to generate income for elephant management (such as sustainable harvesting);*
- ✓ *realising that the CITES ban on trade in elephant products does not assist elephant conservation in southern Africa and calling for it to be waived in this region following the successful and controlled experimental sale in legal ivory in 1999;*
- ✓ *supporting the management and regulation of culling and trophy hunting as valid conservation tools; and*
- ✓ *educating people in the North about the realities of living with and managing elephant in the South.*

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