THE HORNS OF A DILEMMA

DARYL BALFOUR

***Above** A dehorned white rhino* Ceratotherium simum *in the Matopos, Zimbabwe. Is dehorning an effective deterrent to poachers?*

The black rhino numbers, estimated at 65 000 in 1970, decline as poachers continue their depredations. Less than 3 000 individuals remain, and only five populations (South Africa 897, Namibia 583, Zimbabwe 381, Kenya 417 and Tanzania 132) contain more than 100 individuals.

Dehorning rhinos seems a drastic but logical step in the fight against poaching. Mounting effective anti-poaching patrols is both dangerous and expensive, and removing the horn could be expected to reduce poaching pressure and substantially cut the cost of anti-poaching patrols. However, it seems this simple solution has drawbacks.

By September 1993 Hwange National Park had dehorned 212 black rhinos and 120 white rhinos. Although the dehorning program was intended to work in concert with continued anti-poaching patrols, the latter ground to a halt following a severe shortfall in funding and personnel as Zimbabwe restructured its economy in response to International Monetary Fund strictures on government spending. From January to May 1993 the park was unprotected and poachers roamed free and continued to shoot rhinos. This begs the question why, when the animals were hornless and theoretically worthless?

The reasons are complex. It is now evident that dehorning has to be performed annually as the horn regrows by as much as 100mm on the anterior horn and 40mm on the posterior. Although these small amounts of regrowth may have value in powdered medicines, if not in Yemeni dagger handles, there is no evidence that poachers have removed horn regrowth, even though they have killed dehorned rhinos, and no horn stubs have turned up in confiscated trade.

Fears that poachers may kill dehorned rhinos in spite, or to drive up the cost of stockpiled horns, seem unfounded, and it is more likely that they kill them simply to avoid wasting time tracking 'valueless' animals. All these factors undermine the effectiveness of the dehorning program, especially in the absence of anti-poaching patrols.

BILL BRANCH

IGBP: A WEATHER BULLETIN THAT REALLY FORECASTS THE WEATHER?

Global climate change is a fact. It is already affecting the lives of millions of people around the world, and sooner or later it is going to affect the lives of every living creature on the face of the Earth. With this in mind, the IGBP (International Geosphere-Biosphere Programme) was launched in the mid-1980s to fulfil the need for improved and reliable information on just what is happening as far as global climate change is concerned. In April, the Southern African Regional IGBP Conference was held in Pretoria to 'review developments, assess their relevance and shape future directions for South Africa's scientific inputs to research and environmental management'.

South Africa is a very active member of the IGBP and many prominent South African scientists lead or are members of IGBP-related committees and bodies, and many of those scientists were in Pretoria for this meeting. These days the IGBP is less concerned with lofty scientific theory than with finding ways of lessening the negative affects of global climate, or even turning it to man's advantage. Many of these issues were discussed in Pretoria, like water resources, suitable food crops and vegetation changes, energy resources, sea-level rise and coastal zones, and greenhouse gas emissions and ozone (naturally), clearly with the objective of coming up with some answers.

In the final summing up of the conference, it was generally agreed that the biggest problem facing all concerned was an apalling lack of communication – between the scientists, the business or industrial sector and government. It was pointed out that although the government had gone to the trouble of setting up the Inter-Departmental Committee on Climate Change, the Committee apparently operated in a vacuum, without reference to either science or industry, and this was generally the case with so many other bodies and sectors. It was agreed that although poor communication was still a factor abroad, the situation was nevertheless better than in South Africa and this country still had a long way to go before it could begin to make any real progress in the field.

DAVID HOLT-BIDDLE

THE WORLD WATCHES

The project to re-establish the highly endangered riverine rabbit *Bunolagus monticularis* at South Africa's Karoo National Park outside Beaufort West, has been highly acclaimed by wildlife enthusiasts as one of the most successful of its kind. There were fears for its success when several members of the breeding colony, settled in an ideal habitat, died in a severe heat wave early this year. However, shortly after this setback, special arrangements were made to provide more shade and the colony settled. Now, several kittens have been produced and are flourishing.

RAMBLER

COLIN PATERSON-JONES

Above *Workers clearing alien vegetation (*Hakea tenuifolia *and* Pinus pinaster*) above Elandskloof in the Western Cape.*

THIRSTY ALIENS

Because South Africa is largely a dry land, water is one of its most precious natural resources. This is especially so in the Western Cape which is dependent on run-offs from its mountains for all its water supplies. With a burgeoning population – Cape Town's urban population is expected to grow by 4 per cent per year to over 6 million by 2020 – water is the one resource which will place critical limits on the region's development, and hence practical constraints on efforts through the Reconstruction & Development Programme to uplift its poor.

The Western Cape's mountain catchment areas are covered in natural fynbos and, increasingly, alien plants such as Australian *Acacia* and *Hakea* species, and several species of pines. These alien species are aggressively invasive and, if left uncontrolled, displace the natural vegetation. It is now well established that the fynbos is a more effective vegetation cover than the alien invaders for water catchment (yielding up to 30 per cent more water), but eradication of the alien vegetation is an expensive operation.

Now, for the first time, a group of ecologists (Brian van Wilgen of CSIR's FORESTEK, Richard Cowling of UCT's Institute for Plant Conservation, and Chris Burgers of Cape Nature Conservation) has provided hard numbers which show that it is cheaper to maintain an effective programme of alien eradication in mountain catchment areas than to leave the invasive pines, hakeas and acacias to grow unchecked and displace the fynbos. Their study was based on long-term measurements of water run-off from nine catchment areas in the Western Cape with varying percentages of alien infestation. From this data, they computed the unit cost of water produced by equivalent water supply schemes, the one including alien clearance (11.8 cents/m^3) and the other without (13.7 cents/m^3).

In the current South African political climate where priorities for government funding are for social upliftment, this study is crucial for securing funding for the conservation of the fynbos. An effective alien clearance programme will not only result in a constant water supply from the Western Cape's mountains (rather than a decreasing supply if aliens are allowed to spread) but the unit cost of this vital resource will be lower. As there are no other practical or economically feasible ways to provide water to the region, conserving the fynbos makes good economic, social and political sense.

COLIN PATERSON-JONES ■

SKY'S THE LIMIT

The Cameroon Government has opened Africa's first ozone-monitoring office and pledged to phase out the use of chlorofluorocarbons (CFCs) which damage the earth's ozone layer. Without denying the global problem of ozone depletion, it is still somewhat puzzling why Cameroon should be prioritizing it. An average Cameroonian annually consumes a tiny 8.7 grams of CFCs per head. With more than half the population lacking access to health services, locals are wondering what the fuss is all about. Environmental activists are pointing out that the Government would do better to stop the rapid commercial logging of forests. Citizens of Yaoundé, the capital, want to know why, when the Government claims to have no money to clear the garbage which threatens to engulf the city, it is launching a media campaign to raise awareness of the dangers of ozone depletion.

THE NEW INTERNATIONALIST ■

Below *Yaoundé, Cameroon*

GERARD SIOEN/RAPHO/NETWORK