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Towards strengthening collaborative ecosystem management: lessons from environmental conflict and political change in southern Africa

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Ecosystem conservation in southern Africa (in particular South Africa, Zimbabwe, Botswana, and Namibia) is characterised by high levels of past and present conflicts During the apartheid and colonial periods indigenous people lost their rights to use land and natural resources Protected areas were seldom established in consultation with local communities, and, between 1900 and 1990, millions of citizens were forcibly removed from areas proclaimed as nature reserves, national parks, or game reserves Conservation conflicts in southern Africa escalated because of i) the many and complicated issues at stake, ii) the large investment by communities and conservationists in the main causes of the conflict — land and natural resources, iii) communities and conservationists harming each other, rather than striving towards common goals, iv) negative perceptions on both sides, v) weak and infrequent communication between role players, vi) the hostile relations between them, and vii) the use of violent and coercive tactics on both sides

In the late 1980s and early 1990s a wave of democracy swept across southern Africa, and with it came new policies that allowed communities better access to natural resources, called for their participation in protected area management, and facilitated the restitution of land from which they had been forcibly removed This resulted in a number of tangible and intangible gains for conservation and communities, respectively The short-term effect on the underlying causes of conflict was positive Relations and communication improved, communities and conservationists identified common goals, and tactics became less hostile than before

There are still, however, a number of causes for concern Both parties now have even more invested in the new agreements than before, and the number of complicating issues has increased rather than decreased New conflicts and power struggles are emerging, this time between different factions in communities and conservation agencies, respectively The high expectations on both sides that the new approach will yield significant tangible short term benefits are a further cause for concern Experience and provisional research have shown that the financial benefits from wildlife, forestry, and tourism are mostly overestimated

The conventional assumption, that devolution of power to the smallest local group will inevitably result in good governance and sustainable resource management, could be flawed It is essential for government to recognise this problem and identify appropriate

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strategies such as mediation services at the local level, the creation of new, locally made rules and their enforcement, engaging in collaborative research with local communities, and adopting adaptive management approaches, characterised by regular monitoring and flexibility. Relying on the simplistic and romantic principle that traditional knowledge is pure and intrinsically valid, and creating unrealistic expectations about the benefits of co-management, could invite new conflicts that may be more difficult to manage than the tensions of the colonial and apartheid eras.

Keywords community conservation; co-management; democracy; participation; policy

INTRODUCTION

A history of conservation in southern Africa

Conflicts over natural resources and land are not unique to southern Africa, but seem to be more pronounced in the subregion than elsewhere (Roe et al. 2000). The deprivation of African communities of access to land, wildlife, water, and forests started during the colonial period of the early and mid nineteenth century. Game animals were an important resource for both social groups for their subsistence value as well as the value of animal products such as ivory and hides, because of the growing trade networks that resulted from European colonisation. The growth of southern Africa's conservation estate during that period — and the apartheid era in South Africa — frequently meant the exclusion of indigenous people from national parks and forest reserves. These reserves were seldom established in consultation with people living in or along their borders and seldom earned the consent or respect of these peoples (Abel & Blaikie 1986). The result has been a widespread feeling of apathy, if not outright hostility, by indigenous people towards conservation authorities (Anderson & Grove 1987; Beinart 1989; Caruthers 1989).

Skukuza, meaning "he who sweeps clean", is the name given to the first and most famous rest camp in the Kruger National Park. Tsonga tribesmen who were evicted from their homesteads during the establishment of the park gave this title to the park's first ranger, Major James Stevenson-Hamilton (Koch et al. 1990). The name enshrines the link between conservation and forced removals in the minds of rural people, and many people in South Africa still refer to the entire Kruger National Park as Skukuza. Elsewhere, on the border of the Greater St Lucia Wetland Park in Kwazulu Natal, a peasant was asked what he thought of conservation attempts in the area. The old man lifted his arms, crossed his wrists, and said, "handcuffs" (Koch et al. 1990). According to a Herero elder living in the northern parts of Namibia, "When my cattle were starving nature conservation chased them out of the Skeleton Coast Park — the last place where there was still food. They said the area was for wild animals and they would shoot cattle that came in. I had to put my cattle in a kraal and watch them die, knowing that just down the river, inside this park, there was fodder. So why doesn't nature conservation keep its elephants away from our food?" (Jacobsohn 1993).

Similar attitudes can be found across southern Africa. "The alienation of indigenous peoples by conservation authorities has been reinforced by the sharp discontinuity that has developed between the social and economic situations inside and outside African nature reserves. Nature reserves (today) generally represent active economic centres with high income generation potential based on sustainable land-use practices. In contrast, indigenous people surrounding nature reserves generally have low-income generating potential, and are poorly educated.... As population numbers increase and the demand for resources grows, the frequency and intensity of conflict between protected areas and local indigenous people will increase." (Venter et al. 1994).

A recipe for conflict

One of the characteristics of the colonial and apartheid eras was the level of intensity, and the personal nature of conflict between conservationists in the field and their neighbours on communal land These conflicts inevitably escalated over time, in accordance with classical conflict theory The factors causing conflict to escalate include (Deutsch 1973, Anstey 1999)

The number of issues at stake Conflict managers widely accept that the level of conflict increases as the number of issues causing tension proliferates In the case of conservation, the issue of access to natural resources and land in many instances became complicated by "add-on" grievances over heavy-handed and unfair treatment of community members, violence on both sides, unilateral decisions over boundaries and quotas, nepotism in the appointment of staff, and increasingly disruptive and illegal actions by communities Many communities living next to protected areas have experienced significant livestock losses and crop damage because of wildlife, and conservationists have been notoriously slow in dealing with these

The level of investment by role players According to conflict management theory, conflict is positively correlated with the amount of resources invested by the different parties in the issues at stake Rural communities' investment in natural resources is considerable, and most of southern Africa's rural people rely extensively on wild plants and animals for building materials, fuelwood, fodder, and protein Conservationists, on the other hand, have invested heavily in biodiversity conservation by making personal sacrifices such as working exceptionally long hours, risking their lives during law enforcement operations, and personally contributing to the construction of infrastructure such as roads and fences These investments accumulated over time and became aggravating factors in the conflict Add to this the fact that communities carried much of the cost of conservation, in the form of lost land, crop damage, livestock predation, and heavy policing, without receiving any of the benefits, and it becomes clear that southern Africa was adopting an unworkable and inappropriate conservation model that invited conflict

Meeting of goals When all the parties are doing well the potential for conflict is low, but conflict escalates rapidly when some role players lose, or when one or more role players harm the others While it is true that conservation in the apartheid era hurt rural communities through forced removals and disenfranchisement, there was little gain for conservation In fact, resource use outside protected areas became increasingly unsustainable because of the removal of people from protected areas Removals resulted in elevated population densities in resettlement areas and local people's alienation from wild plants and animals It also led to the erosion of traditional resource management institutions such as the system of chiefs and headmen with their associated authority and rules At Dwesa Nature Reserve on South Africa's eastern seaboard, the removal of people from the protected area and the gradual clampdown on harvesting of forest and marine resources in the reserve put intense pressure on the small pockets of forests outside the reserve and on the limited mussel beds adjacent to it At the neighbouring Cwebe Nature Reserve, people historically preferred the productive grasslands inside the protected area closer to the coast After displacement, larger areas of poorer quality grasslands were required to sustain livestock (Fay 1999) At St Lucia, displaced people started moving into the Dukuduku forest that was more fragile than the grasslands of the eastern shores from where they had previously been removed (Barker 1997) At the Kalahari Gemsbok National Park, the San people who were moved out of the park joined a 'coloured" community in an informal settlement at Mier and started farming with livestock (Chennels 1998) The effects of overgrazing in Mier resulted in unstable sand dunes and loss of biodiversity and productivity on the mobile soils (Van Rooyen 1999)

Perceptions. When perceptions are non-evaluative, conflicts tend to remain at manageable levels, but when the role players engage in negative stereotyping and "enemy" perceptions, conflicts often escalate sharply. Many conservationists were (and still are), for example, highly skeptical about the sustainability of common property resource management, in keeping with sentiments expressed by early theorists such as Garrett Hardin (1968) in his essay "Tragedy of the Commons". Conservationists also had a weak understanding of rural livelihoods and the importance of natural resources and land in local people's lives. Communities, on the other hand, saw conservation field staff as the evil perpetrators of land evictions and heavy-handed policing, whereas the latter were often mere pawns in a political game.

Communication. Low levels of conflict are associated with open and regular communication, while the absence of communication or the selective giving of information is associated with heightened conflict. Many of the past conflicts arose from differences in knowledge and understanding between communities and conservationists. Conservationists, for example, had a weak understanding of the intensity of landless people's desire for land and access to resources, while rural communities were ignorant about the global and regional biodiversity crisis. One of the consequences of rural people's alienation from natural resources has been the collapse of local rules and traditional organisations that in the past regulated natural resource use. These institutions, enforced by the tribal authorities, ensured regulation of natural resources, but because colonial laws made it almost impossible for ordinary rural folk to lead a normal existence without breaking some or other conservation law (Summers 1999), local laws started becoming less and less relevant. These institutions also played the role of negotiating forums where conservationists and communities could agree on locally relevant rules, and their collapse further widened the communication gap between conservationists and local communities.

Relations. In areas where forced removals had taken place, communities' attitudes to conservation and conservationists had by 1980 become extremely hostile. The association of conservation with injustice and suffering, especially because of forced relocation from traditional land, had a lasting effect on displaced people. At Dwesa and Cwebe Nature Reserves, for example, illegal livestock grazing inside the reserves and poaching increased, and communication between conservationists and all neighbouring people (not only those who were displaced) broke down. As stated above, local communities mostly associated conservation with hardship, fines, and fences.

Types of tactics used. Conflicts remain low when problem-solving tactics are employed, but when these are replaced by coercive behaviour, threats, or violence then conflicts tend to grow. Over the past century, strategies and actions on both sides became increasingly violent and coercive. Communities tended to respond to unjust treatment by government with the only source of power at their disposal, subversive behaviour. Poaching of wildlife increased dramatically and at Dwesa, for example, red hartebeest (*Alcelaphus bucelaphus*) became locally extinct while the blesbok (*Damaliscus dorcas phillipsi*) herd was reduced from 300 to 4 animals (Timmermans 1999). At Mkambati Game Reserve on the Wild Coast, protest has taken a less visible but equally destructive form (Kepe et al. 1999). Local youths would hunt wildlife with dogs and firearms at night while others would set wire snares, knowing that being apprehended would result in arrest or physical abuse. Fire was used to attract wildlife closer to the perimeter fence, which was countered by burning by conservationists to draw wildlife towards the centre of the reserve. At St Lucia in Kwazulu Natal, people who had been relocated from the national park settled with others in the nearby Dukuduku forest and refused to move. This community has subsequently grown

and is a major threat to the conservation of the forest Efforts and negotiations to relocate them have until recently been violently resisted (Barker 1997) At nearby Ngome forest, 900 people who were relocated from the Ntendeka Wilderness Area in 1966 invaded the wilderness area in November 1997, damaging the ecosystem and causing a major political problem for the new government The Minister of Water Affairs and Forestry had to apply for a court order to evict them These people are now part of the neighbouring community of Ngome (Barker 1998) and are bound to impact negatively on the conservation of the wilderness area in future

The cumulative effect of the above factors was the rapid escalation of conflicts between conservationists and local communities, to a point where the future and sustainability of conservation was being endangered The rural poor had begun to see conservation as the "enemy" and conservation's main support base lay in the affluent suburbs of the subregion's cities and towns, and with overseas donors and conservation pressure groups

The advent of community conservation

More recently, after 1990, a wave of democracy swept across the subcontinent With it came land restitution, and greater participation by local people in natural resource management Conservation and forestry agencies in particular responded to the move towards democratisation by changing their strategies and policies to facilitate greater levels of community involvement, and devolution of decision-making power to communities The rise in popularity of community conservation in southern Africa can be attributed to five main factors

Firstly, it was precipitated by the need for economic growth through conservation and tourism, especially in rural areas This took a variety of forms but it is generally agreed that Zimbabwe's Communal Areas Programme for Indigenous Resource Extraction (Campfire) played a pioneering role The research and analytical framework at the Centre for Applied Social Sciences at the University of Zimbabwe and the Worldwide Fund for Nature (WWF) in Harare played an important facilitating and monitoring role Similar programmes were started in Zambia in the Luangwa Valley and on conservancies on communal land in Namibia In South Africa, the principles of integrating development with conservation were implemented, ironically, in some of the then independent homelands, the Mtethomusha Game Reserve in KaNgwane and the Pilanesberg and Madikwe Game Reserves in Bophuthatswana, where state resources were used to create new protected areas, unlike the programmes in other countries where wildlife based development programmes were based on communal land In Mozambique, communities, donors, and non-government organisations (NGOs) designed and implemented the Tchuma-Tchato reserve, primarily as a rural development initiative

In Botswana, the government realised that livestock development programmes promoted by government were taking place at the expense of traditional resource use by remote rural communities (Boggs 1999) More recently in South Africa, the government has launched a number of Spatial Development Initiatives (SDIs) to diversify the rural economy, notably the Wild Coast SDI (Kepe et al 1999, Timmermans 1999), the Maputo Corridor, and the Lubombo SDI, all of which are aimed at stimulating new nature tourism industries based on the landscape, wildlife, and other natural assets of these regions All three programmes stress the need for rural residents, previously excluded from the mainstream of the rural economy by discriminatory practices, to participate as entrepreneurs and beneficiaries in the new resource-based industries being stimulated

Secondly, conservationists found great difficulty in enforcing conservation laws, yet also wanted to conserve wildlife outside protected areas This was the original motivation for the Campfire movement, the early Namibian conservancies, the allocation of concessions

to communities in Botswana, and, more recently, the development of joint management institutions at Dwesa on the Wild Coast. The steep decline in numbers of habitat-specific, slow-breeding, and conspicuous species such as black rhinoceros, elephant, and sable antelope was becoming evident and conservationists started fearing that they were losing the battle. The community game guard system, driven by an NGO in Namibia, demonstrated that communities could indeed contribute to putting an end to illegal activities (Jones 1999). At Dwesa and Cwebe and other localities in Eastern Cape, e.g., Kowie Nature Reserve (Timmermans 1999; C. Fabricius pers. obs.), communities made promises to police themselves, which gave conservationists hope that their new policies were beginning to work.

Thirdly, communities and politicians started exerting pressure for more equal distribution of land. During the early and mid 1990s a number of communities also began lobbying for land reform and began organising to claim back title to land in protected areas from which they were removed in colonial and apartheid times. The Makuleke region of the Kruger National Park, the Riemvasmaak land claim against the Augrabies National Park, the San Bushman land claim in the Kalahari Gemsbok Park, and the Mdluli land settlement in the southern parts of the Kruger National Park were all examples of this popular pressure for integrated wildlife and development programmes to become an important aspect of land reform. Various NGOs began to play an important support role in this regard (International Union for the Conservation of Nature – South Africa 1998).

Fourthly, conservation strategies were developed to expand the number and size of protected areas by incorporating communal lands. South Africa, in particular, is still far from achieving the international target of 10% of its land surface being formally protected. Conservation agencies were in some instances able to expand the size of the protected wildlife estate by entering into negotiations with local residents. This has resulted in a new category of protected area called "contractual parks", where communal land is incorporated into game reserves so that it can be used for conservation and development purposes. The Richtersveld and West Coast National Parks in South Africa and the more recent agreement with the Makuleke people for co-management of the northern parts of the Kruger National Park are examples of this development (Archer 1999; Steenkamp 1999).

Fifthly, governments began to realise that rural voters were important. In Zimbabwe, the government soon started claiming responsibility for the successes of Campfire and simultaneously gave its district councils an increasingly controlling role in the programme (Hasler 1999). In Zambia, the Luangwa Integrated Rural Development Project (LIRDP) gained the acceptance of President Kenneth Kaunda on the basis of its political benefits (B. Dalal-Clayton in litt.; Richard Bell pers. comm.). The Madikwe Game Reserve in the Northern Province of South Africa was initially established to speed up development in the former "homeland" of Bophuthatswana, in line with the South African politics of the late 1980s. More recently, the Makuleke land claim, by which a portion of land inside the Kruger National Park was transferred to a community (Steenkamp 1999), showed that the politics of land reform played an important role in expediting the claim. The Minister of Land Affairs wanted to demonstrate that the pace of land reform was not as slow as was claimed at the time. Simultaneously, a new National Parks Board had been appointed and South African National Parks (SANP), the parastatal agency responsible for the management of Kruger National Park, had to demonstrate its commitment to democratic values. In Namibia, communal conservancies were established following the example of successful conservancies on white-owned freehold land (Jones 1999), in part because of an attempt by the post-apartheid Namibian Government to redress the imbalances of the past.

Latter-day conservation policy changes and their effects

This shift towards community-based approaches in southern Africa led to new conservation strategies and policies which allow communities access to natural resources from which they previously had been barred, provide for revenue sharing agreements between protected areas and communities, move towards greater commercialisation through the more effective use of biodiversity through tourism and consumptive use, i e , making conservation pay, involve communities in decision making, and recognise communities' historical rights of tenure to resources and land (Fabricius et al unpubl data)

The new approach coincided with two additional contributing factors transformation at the top in conservation organisations, and the emergence of a number of NGOs that played an important facilitating role The short-term effects have been that both conservation and communities appeared to have gained from the process

Repercussions for conservation

Surprisingly, the main ecological benefit of the new conservation approach has been the increase in conservation land, for example, an increase in the size of Kruger National Park after the Makuleke land claim (Steenkamp 1999) and a rezoning of Cwebe Nature Reserve to include a previously excluded coastal zone (Timmermans 1999) The Makuleke agreement also contributed to the establishment of a "transfrontier" park between South Africa, Mozambique, and Zimbabwe Campfire contributed to the conservation of land outside protected areas in Zimbabwe, between 1980 and 1999 the proportion of Zimbabwe's land surface under wildlife management increased from 12 to 33% (Hasler 1999) Wildlife populations also benefited directly through community protection Examples include the Community Game Guard System in Namibia, which caused a spectacular increase in wildlife numbers in the Kunene region, including a three-fold increase in numbers of endangered black rhinoceros (*Diceros bicornis*) since the system's inception (Jones 1999) In Zimbabwe, Campfire resulted in a wildlife monitoring system of repute, and wildlife populations are reported to be stable in that country (Hasler 1999)

New conservation options and models have emerged during this renewal process Examples include lease agreements, in which land which has been handed back to communities on condition that its conservation status does not change is being rented from them by the state (e g , at Dwesa and Kruger National Parks), collaborative management agreements, where communities accept shared responsibility for the management of protected areas (e g , at Kruger, St Lucia, and Dwesa), "Contract Parks", which allow communities to be co-owners of conservation land (e g , Kruger National Park), and commercial use of a limited portion of conservation land by communities coupled with joint management (e g , the Kalahari Gemsbok National Park) (Chennels 1998, Forse 1998, Steenkamp 1999, Timmermans 1999)

The direct ecological disadvantages, on the other hand, included some land losses to conservation, for example, at Riemvasmaak in Northern Cape, where communities insisted on using their newly claimed land for farming rather than for conservation In some instances communities have continued their illegal harvesting of wildlife and marine resources, for example, at Dwesa, despite collaborative management arrangements and a successful land claim An unexpected disadvantage is the high "transaction cost" of community conservation Far from representing a cheap conservation option, the new approach to conservation is costly and requires well-trained and experienced staff to be successful (Inamdar et al 1999)

Repercussions for communities

Communities gained financial and non-financial benefits On the financial side, communities gained through direct access to wild resources, lease fees, employment, and their participation

in joint tourism ventures with established companies. These financial benefits were found to be greatest where communities were small and resources valuable, such as the "big five" hunting concessions in Botswana and Namibia (Boggs 1999; Jones 1999). The total benefit from wages, lease agreements, hunting quotas, and levies to 50 households at Sankuyo in the Okavango Delta, Botswana, was US$4700 per year per household in 1998 (Boggs 1999). Household income from Cochineal, harvested from prickly pear by a community of 230 San people in Botswana, was estimated at US$7200 per year (Jones 1999). At Madikwe in North-West Province, South Africa, the main source of revenue is employment. Here, 131 people (4% of the community) are employed at an average salary of US$350 per month (Magome et al. 1999). Communities' income from lease fees after claiming back protected area land from which they had been removed during the apartheid era (such as Dwesa and Makuleke) will be substantial, although such income has not yet materialised.

A number of new commercial initiatives have recently emerged as a result of the SANP policy of establishing business partnerships with neighbouring communities (Andrew et al. 2000). These include cultural tourism initiatives such as those in the Kalahari Gemsbok and Kruger national parks, new developments to involve communities on the Eastern Cape's Wild Coast in tourism through the SDIs, and the possibility of hunting concessions being allocated to the Makuleke community who have won a land claim in Kruger National Park.

There is, however, a tendency among communities and conservationists to overestimate or oversell the benefits from conservation. Tourism initiatives in particular are long-term investments that only start yielding significant benefits after 15–25 years and often show a loss during their first 10 years of operation (Magome et al. 1999). This is difficult to understand for people who live with poverty, especially when promises of wealth have been made to them (Magome et al. 1999). In very large communities where harvesting is strictly controlled, the household benefits appear to be negligible. The average maximum possible household benefit (including shared benefits) from Campfire across Zimbabwe in 1996 was Z$100 (less than US$5.00) per annum, while the actual household benefit was estimated to be US$2.50 (Hasler 1999, quoting WWF Zimbabwe). The total replacement value of wild resources per household at Dwesa is about US$20 annually (Timmermans 1999). However, it should be borne in mind that even small benefits can make a large difference to the lives of very poor people who use wild resources disproportionately. Access to forest and wildlife products in many instances means the difference between survival and starvation for the poorest.

The non-financial benefits to communities from conservation appear to be more significant than the financial benefits. Ashley (1988) highlighted a number of specific non-financial achievements, such as adaptable institutions, well-defined membership, accountable leaders, and improved participation that included women, cohesive groupings, the development of new skills, the development of natural resource management systems for the benefit of local communities, experience and confidence in dealing with outsiders, the gaining of recognition by communities, their pride, and sense of ownership and control. Training and capacity development is another important benefit that has emerged directly, as a result of training and capacity development programmes, and indirectly as a result of the negotiation and communication process leading up to communities' participation in joint ventures, collaborative management, or land claims. The Sankuyo community in Botswana is receiving bursaries for higher education of community members from their joint venture partner (a private tourism operator) (Boggs 1999), while a sponsored community training centre has been set up in the Makuleke community to prepare them for the management of their portion of the Kruger National Park (Steenkamp 1999). The communities at Dwesa have become much more cohesive than before as a result of their land claim (Timmermans 1999), and one of the most

important achievements of the Campfire movement has been its positive effect on rural politics in Zimbabwe Campfire has made rural people more aware of their needs and rights, and has enabled them to respond collectively to new challenges (Hasler 1999)

The implications for conflict management

It is clear that, in the short term, the new conservation approach has achieved much for communities and conservation But have these changes and their consequences had an effect on conflicts? And what are the predictions for the future? We will look at the key conflict-escalating factors and evaluate how the new conservation approach has affected the underlying causes of conflict

Are fewer issues at stake?

Despite the positive short-term changes outlined above, the issues currently at stake in conservation, relative to those during the apartheid and colonial eras, remain extremely diverse and complex On the positive side there has been a noticeable decrease in grievances about heavy-handed treatment of community members by field staff This is partly because of new policies, but also because of changes in formal and informal training and the retrenchment or retirement of staff who had embraced the "fines and fences" approach As far as demands for land are concerned, a number of unsettled claims for land in protected areas still exist, while crop and livestock losses continue Conservationists are now much more willing than before to deal with these issues, but nowadays budget constraints are preventing them from taking real action or from compensating those who have suffered losses

Whereas the number of issues has remained more or less similar, the nature of the issues at stake has changed During the colonial and apartheid eras the key issue was land and access to resources Although the demands for land and resources have not disappeared overnight, the new key issue for conservationists and communities is expectations of jobs and other financial benefits The management of communities' expectations is predicted to be come the primary cause of conflict in the new era Experience thus far has shown that even where the benefits from conservation and tourism exceeded the benefits from alternative land use such as cattle ranching, communities became even more dissatisfied than before when the actual benefits received were not as high as they had been led to believe (Magome et al 1999)

Another new complicating issue is the implementation of management strategies that simultaneously satisfy the development needs of communities and meet the requirements of conservation The Makuleke community, for example, recently advertised for tenders for elephant and buffalo hunting on the Makuleke Contractual Park portion of Kruger National Park Hunting, however, is not allowed in the Kruger National Park because of its perceived incompatibility with non consumptive tourism and the implications for public relations This created a dilemma for the SANP authorities, because activities in the park need to take place within the context of a management plan, and the Makuleke's hunting initiative clearly did not meet the criteria (South African National Parks 2000a)

We predict that in future the number of issues at stake will increase rather than decrease when the new agreements start producing tangible benefits The new land and resource tenure agreements are experimental, and discrepancies and contradictions are bound to emerge as relationships mature and the detail of agreements is put to the test

Less investment by role players?

Since 1990 communities and conservationists have invested large amounts of their time in negotiations and claims and have more to lose now than before Natural resource management authorities have established specialist units such as the SANP's "social ecology" department, the Natural Resource Management Project (NRMP) in Botswana and other southern African

countries, and the Living in a Finite Environment (LIFE) project in Namibia. These units strive to find solutions towards managing natural resources more sustainably, and addressing the imbalances of the past. Community leaders and "ordinary" community members have sacrificed their personal time and private livelihoods in their quest for lasting solutions.

The most important investment by communities at Makuleke, Madikwe, Richtersveld, and Dwesa has been to forfeit the use of productive agricultural land in favour of conservation and tourism. In arid areas such as Sankuyo in Botswana (Boggs 1999) and the Namibian conservancies (Jones 1999) this sacrifice has been less substantial, because of the low agricultural potential of the areas where these initiatives are located. In the case of the Campfire movement in Zimbabwe, Murombedzi (1999) argued that communities are not willing to make the sacrifice of reduced agricultural activity because they continue to invest their dividends from the programme in livestock and crop farming, knowing that this will clash with the objectives of Campfire.

Are the role players' goals being met?

One of the key success factors in negotiations between communities and conservationists in the new era has been their willingness to shift their positions and goals to those which are attainable. Major breakthroughs have been made where park authorities have moved away from the goal of retaining power, towards more strategic goals such as attaining more land for conservation and reducing conflicts between neighbours. Communities, on the other hand, have made progress by moving away from simply redressing the wrongs of the past, towards improving the sustainability of their livelihoods and their quality of life (Steenkamp 1999). The SANP has in recent times identified the concept of "mutually beneficial partnership projects", implying that any new initiatives must contribute to the goals of parks as well as to those of communities (Andrew et al. 2000). It is also becoming clearer that communities' goals are not simply to benefit financially, but also to attain the intangible benefits discussed above. Jones (1999), for example, concluded that communities and private landowners in Namibia practice wildlife ranching for intangible gains such as risk minimisation and for aesthetic reasons.

Are perceptions improving?

The historical perception of conservationists as perpetrators of unjust laws is slowly but surely disappearing among local communities. The specialist units within conservation organisations and NGOs have played an important facilitating role in changing such perceptions. The inclination of natural resource management agencies to employ social scientists, and new staff development policies that provide special employment opportunities for black people and women, have also played an important role in "softening" communities' perceptions.

Perceptions of communities among ecologists and conservation biologists have also changed, but there are still a number of obstacles that need to be overcome. Rural communities are faced with the challenge of having to continuously prove their ability to sustainably manage high-value or scarce resources such as mega-herbivores. As a senior SANP ecologist put it, "I, with a PhD, don't even know for certain how to manage the park. How will these people [with reference to the Makuleke community] be able to do it?" These perceptions of communities' irresponsibility towards natural resources are often fuelled by illegal activities by some community members, strong evidence of unsustainable resource use on communal land, and the realisation that traditional ecological knowledge can be seriously flawed (Boggs 1999).

Is communication more regular and open?

Perhaps one of the most significant changes in the new conservation era has been the improvement in communication between communities and conservationists. Joint

management committees have been formed, or are in the process of being set up, for most protected areas Park authorities have started communicating the possibilities of new business partnerships to neighbouring communities, and have begun with inventories of the needs and skills of their neighbours (Andrew et al 2000) In Botswana, Namibia, and Zimbabwe, communities and conservationists regularly interact on issues such as harvesting quotas and management strategies (Boggs 1999, Jones 1999) In SANP the social ecology staff have played an important role in opening up communications between park staff and neighbouring communities (South African National Parks 2000b)

Have relations become more positive?

In response to new conservation policies and strategies, relations in southern Africa have improved at two levels At the macro level, senior officials have started taking local communities seriously in the face of increased media attention and political pressure Provincial and national conservation agencies have had to adjust their policies and practices in response to the new powers and legal status gained by communities The SANP, which manages national parks outside Kwazulu Natal, has formulated a new policy not to oppose land claims, but to assist with the process Provincial conservation agencies such as the Kwazulu Natal Conservation Service and the Eastern Cape Ministry of Economic Affairs, Environment and Tourism have stated their intention to encourage mutually beneficial partnerships with communities, to assist them in running their own parks and tourism ventures (Independent Online, 7 August 2000, http //www iol co za) At the field level, protected area managers began to recognise their neighbours as essential role players and started treating them with more dignity than previously

There are, however, early warning signs that ongoing arbitration and concerted efforts will be required to maintain friendly and sincere relationships As stated earlier, ecologists are concerned about the continued poaching of wildlife and marine resources in protected areas or on land where communities have been given ownership of wildlife (Boggs 1999, Timmermans 1999) Another source of contention is conservationists' and NGO domination, in some instances, of joint management committees (Reid 1999) This could result in communities feeling vulnerable and powerless (Chennels 1998)

Conservationists and communities have come to realise that participatory management is a long and continuously evolving process, and that there is a real danger that the weaker partner will be passively carried along (Magome et al 1999) The facilitation and monitoring of beneficiary communities' active participation in conservation management remains a priority

Have tactics become less violent and coercive?

In the short term, communities' subversive tactics seem to have abated and been replaced by more constructive approaches to contentious issues such as land and resource tenure Many groups are adopting a "wait and see" approach, to evaluate whether their investment of time and land will yield benefits Facilitators have played an important role in moderating tensions, and the "doves" (proponents of peaceful and constructive solutions) on both sides are currently taking the lead More "hawkish" conservation field staff seem to have responded to newly formed policies by either changing their attitudes and approaches, or by withdrawing

A complicating factor is that conservation professionals with different backgrounds and value systems tend to disagree on the appropriateness of the new strategies and actions Because collaborative management is risky and experimental it is prone to being discredited The proponents of the heavy handed tactics of the previous era (the "hawks") can easily once more gain the upper hand if agencies are not prepared to accept short-term mistakes The erosion of communities' powers and the reversal to more autocratic approaches is

advocated by some role players, even though it is clear that there is no turning back and they are generally not taken seriously (Hulme & Murphree 1999). The continuance of the current situation depends entirely on the extent to which expectations on both sides will be met over the next 20 years, when the newly formed agreements are due for renegotiation.

CONCLUSIONS

Although the short-term prospects for community conservation are positive, there are many uncertainties and several causes for concern. The first concern is the high expectations among communities and conservationists of substantial benefits from the new approach. Available data indicate that, except where communities are small and resources valuable, the individual benefits from conservation will not be significant and are often overestimated. A second concern is whether the "doves" on both sides will continue to lead, and whether the "hawks" will be allowed to take over once the inevitable flaws in the new system start appearing.

A third, and more serious concern, is the emergence of new conflicts, this time between different factions within communities and within conservation institutions. Communities are complex and heterogeneous, and constantly change and redefine themselves. Within rural communities there are significant class and gender inequalities, and new power struggles are unfolding as a result. The newly formed community institutions are becoming centres of acute conflict, and it will require exceptional measures to resolve this dilemma. External monitoring and rules to prevent the manipulation of community-based organisations for factional interest may often be necessary. Local level state authorities, especially those that have the capacity to do so and are regarded as legitimate, can play this role. This may require some "top-down" intervention by national governments.

Within conservation organisations, new tensions are unfolding between the new political appointees and the "old guard" of the previous era. In many instances this is confounded by politics and tensions associated with political change in the region, while the job insecurities associated with transformation in conservation agencies no doubt play a role.

Mediation services are needed to resolve internal community conflict around benefits from conservation and tourism. Experience has shown that the assumption that devolution to the smallest local group will inevitably result in good governance and sustainable resource management (Murphree 1998) could be flawed. Participatory research and monitoring, where communities and scientists share informal and formal knowledge about ecosystem functioning and human impacts, will contribute towards improving relations and strengthen the scientific basis of co-management. It is important that such collaborative research should lead to adaptive management and locally made rules that are enforced in a responsible manner. Relying on the simplistic and romantic paradigm that traditional knowledge is pure and intrinsically valid, and establishing unrealistic expectations about the benefits of co-management, could invite new conflicts that may be more difficult to manage than the tensions of the colonial and apartheid eras.

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