A Political Ecology of Wildlife Conservation in Africa

Samantha Jones

This short review summarises research and key debates in the conservation and management of wildlife, biodiversity and valued environments in Africa. It is broadly grounded in a political ecology approach, and indicates the importance of considering ways in which power and meanings conferred on the landscape play out in the realm of conservation. The review highlights the paradigm shift that has occurred in thinking about African environments and shows how this has shaped approaches to conservation. It considers factors that influenced the origin of conservation initiatives in Africa, including the preservation of game for hunting and the establishment of national parks in the United States. The shift from an early fortress conservation model to later community conservation approaches is traced and a summary of the critique of community conservation with a analysis of the CAMPFIRE programme in Zimbabwe, is presented. More recently the conservation agenda seems to have turned towards transfrontier conservation. The conclusion cautions that despite the weight of critical analyses of community conservation, its abandonment would be somewhat premature and potentially detrimental to desirable conservation and development outcomes.

Current approaches to the management of wildlife, biodiversity and valuable habitats in Africa are perhaps best contextualised through the lens of history. These approaches have been shaped historically by views of nature, or ways of 'seeing' the environment, by powerful groups in society. Political ecology provides a valuable approach for reviewing changes in wildlife conservation in Africa; it is attentive to the role of historical factors, social constructions of the environment and power relations in shaping environmental change. It represents a confluence between ecologically rooted social science and the principles of political economy (Peet and Watts, 1996). Like political economy approaches, it demonstrates a marxist orientation alongside an emphasis on the role of a wider political and economic context in exploring processes of environmental change (see, for example, Simmons, 2004); with ecology, it shares a consideration for local specificity and heterogeneity in analysing ecological conditions (see Bryant, 1992 and 1998). In general, political ecology examines the politics of struggles over the control of, and access to natural resources (e.g. Duffy, 2006). However, as some early political ecology analyses were criticised for their 'overly deterministic vision of social structure' and an overemphasis of material struggles (Moore, 1993), more recent attempts have tended to both afford greater agency to the land user (examining, for example, the 'politics of resistance') and consider the role of competing meanings or constructions of the environment (combining, for example, analyses of 'symbolic struggles' with those of material contests over resource use). The latter have been loosely termed post-

ISSN 0305-6244 Print/1740-1720 Online/06/030483-13

DOI: 10.1080/03056240601000911

structural political ecology approaches. Yet while political ecology has been widely adopted as a framework for analysing agricultural environments in Africa (e.g. Awanyo, 2001; Bassett, 1998; Batterbury, 2001; Bell and Roberts, 1991; Gezon, 1997, 1999; Moore, 1993; Park, 1993, Schroeder, 1993), it has been less frequently applied to the exploration of 'conservation environments'.

Beinart and McGregor (2003) summarise the paradigm shift evident in views of African environmental history. The older paradigm conveys images of eroding soils, shifting sands, retreating forests and desiccating water resources - a decline from a prior state of pristine wilderness. Implicit in such a perspective is the justification of an interventionist and control-oriented management of the environment. The new paradigm suggests a greater resilience of the African environment and hails the ability of rural societies to interact with nature constructively. The validity of indigenous knowledge is emphasised and indigenous rights to resources advocated. Within the context of this paradigm shift, much of the literature on the social history and political economy of wildlife conservation is concerned with mapping two things: first, how a top-down centralised approach has given way to a more participatory and community-oriented approach and, second, the respective problems of these approaches. Furthermore, lively debates exist around the role of factors such as population change, which may have impacted upon deforestation and degradation dynamics, thus affecting wildlife distributions and levels of biodiversity (e.g. Cline Cole et al. 1990; Tiffen et al. 1994, Fairhead and Leach, 1996; Jones and Carswell, 2004). However, these are beyond the scope of this short review, which focuses on the management of valued species and habitats; and considers people-park relationships (including the distribution of rights and benefits arising from conflicts over resources between different stakeholder groups), and the extent of conflict or complementarity between conservation and development activities. Exactly how people-park relationships are mediated by actual resource use emerges as a key theme in the literature.

The Historical Expansion of Protected Areas: Land from People?

Many of the protected areas in Africa owe their origin to the practice of hunting. Historically widespread throughout Africa, hunting has played an essential role in livelihood provision (game meat, hides etc.) and social functions (rites of passage, social cohesion). Hunting for 'the thrill of the chase' (sport) also existed among colonial elites, starting in the nineteenth century. As colonial hunters tried increasingly to establish a monopoly over game resources in Africa, tensions with subsistence hunters mounted. Hunting controls were designated and 'protecting game became part of the larger concern of the empire' (Beinart and Coates, 1995:28). Controls were not particularly effective; game reserves (hunting parks) were thus established in the latter part of the 1800s. These were a far cry from the meaningful protection of wildlife, for their purpose was to preserve game for sport.

Early support for conservation in the late nineteenth and early twentieth century took the form of concern over the threat of species extinction. For example, the Royal Society for the Protection of Birds (RSPB) was established in 1891, and was a largely female initiative against the plumage trade which was causing the extinction of certain birds. In 1900, the 'Convention for the Preservation of Wild Animals, Birds and Fish in Africa' was signed by European countries with colonies in sub-Saharan Africa, with the aim of protecting fully a few species considered to be under threat of extinction. Such concerns reflected scientific interest in zoology, botany, natural

history and evolution at the time. As ecology began to emerge as a discipline in the 1920s, however, conservation of the whole habitat or ecosystem became a higher priority (Beinart and Coates, 1995), representing a shift away from the privileging of selected animals (slaughtering certain predators and deliberately breeding others). Nonetheless, less attention was devoted to forest, wetland and marine habitats, when compared to semi-arid savannah areas (Barrow et al. 2001), not least because of the latter's endowment of large and charismatic species.

It was the US National Parks model, though, to which Africa owes much of its approach to the management of protected areas, notably as many hunting reserves and game parks were reclassified as National Parks in the 1940s. This model prioritises 'recreation' and 'preservation'. The implication of the former, particularly in South Africa, was that protected areas became a source of white nationalism - wildlife tourism was of no interest to indigenous populations. Later, with the rise of international tourism and powerful conservation organisations, it came to represent the subjugation of local interests to national and international interests, notably when the distribution of costs and benefits is taken into consideration (Wood, 1993). The implication of preservation was that protected areas had to be 'depeopled' to allow 'Europeans to impose their image of Africa upon the reality of the African landscape' as there existed 'a wish to protect the natural environment as a special kind of "Eden" (Anderson and Grove, 1987:4) – a natural wilderness. This model did not pose a uniform challenge across Africa. In East Africa, land gazetted for conservation tended to be of poor agricultural potential, historically of low population densities, and commonly under customary tenure and extensive land management. In Southern Africa, on the other hand, many of the wildlife-rich areas had been alienated and converted to private tenure (Barrow et al. 2001). The provision or availability of water resources in parks helped to minimise conflict with neighbouring landholders by retaining wildlife in protected areas. Conflict was magnified, conversely, by the forced removal of African villagers from parks, often to waterless sites (Beinart and Coates, 1995), and thereby concentrating pressures around parks.

This model for the management of protected areas has come to be known as protectionism, 'fortress conservation' or the 'fences and fines' approach, the key rationale being that local people constituted the principal threat to forests and wildlife (Dwivedi, 1996). It involves delimiting the valued environment and placing it under state control; minimising human impact on such environments through monitoring and policing (often using armed patrols); excluding or removing resident peoples from such areas and, in preventing consumptive use of the environment (Ghimire, 1994), ignoring customary rights (Nepal and Weber, 1995, Fairhead and Leach, 1994) while at the same time amplifying individual and societal vulnerability (Naughton-Treves, 1997). The costs to local people in terms of crop damage and, sometimes, loss of life have been substantial, generating hostility among local populations or, at the very least, antipathy towards protection measures (Ghimire, 1994). But while wildlife patrols which were well financed by powerful states facilitated the protection of species such as elephants in southern African countries, this was not the case in East Africa where mega-fauna populations declined dramatically. In countries such as Angola and Mozambique, where ivory could be traded for arms, poaching by non-local and well resourced gangs escalated. Thus the fortress model secured neither conservation nor development.

The New Paradigm in Conservation

A new generation of ideas to secure wildlife conservation based on community involvement emerged in the 1980s and spread rapidly. The new approach has been variously called 'community conservation', 'community wildlife management' and 'community based natural resource management', although it has been suggested that the first two of these descriptions should apply to protected areas, and the remaining one reserved for forest management, watershed protection, etc. (Campbell and Vainio-Mattila, 2003). The approach is underpinned and informed by the notion of participation and participatory development, and parallels a fundamental shift in development thinking (Barrow and Murphree, 2001). In some cases this amounts to a decentralisation of natural resource management ('the systematic and rational dispersal of power, authority and responsibility from central government to lower level institutions', according to Plummer and FitzGibbon, 2004), something which has also occurred widely in the area of forestry in the developing world (Agrawal and Ostrom, 2001). Much scholarship on the decentralisation of natural resource management asserts the superiority of decentralised solutions over centralised approaches on grounds of efficiency, equity or sustainability (Agrawal and Ostrom 2001). However, it may in practice sometimes amount only to information provision and passive participation to legitimise types of conservation interventions.

Community conservation has been defined as 'those principles and practices that argue that conservation goals should be pursued by strategies that emphasise the role of local residents in decision-making about natural resources' (Adams and Hulme, 1998). Key elements of the community conservation narrative involve the imperative for 1) allowing people in and around protected areas or with property rights in such areas to participate in the management of conservation resources; and 2) linking conservation to local development needs. These objectives create 'a space within which a great variety of different kinds of conservation interventions lie' (Adams and Hulme, 1998). Here, an examination of Jones's (1999) distinction between 'Park and Neighbour' and 'Community Based Natural Resource Management' will suffice, although it is worth noting that Wolmer and Ashley (2003), for example, highlight four types of conservation interventions.

The Park and Neighbour approach is designed to minimise conflict between parks and neighbouring populations rather than to develop sustainable livelihood alternatives (Ghimire, 1994). It operates primarily through offering compensation to affected populations (Infield and Adams, 1999). Thus while the conservation of species, habitats and ecosystems is the primary objective, public relations, consultation, revenue sharing and the promotion of community development are 'added on' to compensate for the negative effects of living near a protected area. This is a biocentric approach which recognises the intrinsic value of nature while meeting few utilitarian goals (Adams and Hulme, 1998). Buffer zones around national parks provide a good example. According to Neumann (1997), buffer zones extend state authority over settlement and land use well beyond protected area boundaries. Indeed, Adams and Infield's (2003) study from Uganda suggests that while revenue sharing can lessen community grievance, it does not compensate for the cost of park creation, although others cast revenue sharing in a more positive light (Archabald and Naughton-Treves, 2001).

The Community Based Natural Resource Management approach (CBNRM) tends to be more empowering, as it is based on the premise that local populations have a

more intricate knowledge of local ecological processes, and are more able to effectively manage local resources through 'traditional' forms of access (Brosius et al. 1998). It is an anthropocentric approach and may do little to preserve species with little economic value. Typical activities include revenue generation within protected areas (based on photo tourism, live animal sales, safari hunting, timber production etc.); sustainable use of protected area resources (e.g. thatching grass, poles, firewood, medicinal products, bee products, small animals, fish, marine resources, gums, leaves, vegetables, fruit, roots, berries, rodents, insects, wild plants, etc.); promotion of more sustainable on- and off-farm activities and diversification (e.g. agroforestry, local handicrafts); and training and capacity-building. CBNRM is suited to the many environments in which human use has shaped local ecology and biodiversity value, although this anthropogenic influence has tended to be overlooked by international conservation organisations aiming to protect biodiversity (Fairhead and Leach, 1994; Homewood and Rodgers, 1987; and Agrawal and Gibson, 1999). As stronger local proprietorship over land and resources is a feature of the approach, it is also more appropriate where pre-existing customary rights were expunged as part of the establishment of a protected area.

Pioneered by the CAMPFIRE programme in Zimbabwe (see below), community conservation has become the model for protected areas management throughout Africa (see Wainright and Wehrmeyer, 1998 and Gibson and Marks, 1995 for Zambia; Alexander and McGregor, 2000; Matzke and Nabane, 1996; Campbell et al. 1999 and Murombedzi, 1999, 2001, for Zimbabwe; Songorwa, 1999 and Gillingham and Lee, 1999 for Tanzania; Sharpe, 1998; Mayaka, 2002 and Abbot et al. 2001 for Cameroon; Kepe et al. 2001 for South Africa; Peters, 1998 for Madagascar; Infield and Adams, 1999; Adams and Infield 2003; Naughton-Treves 1997 for Uganda; Jones, 1999 for Namibia; Kellert et al. 2000 for Kenya and Twyman, 1998, 2000, for Botswana). And while there are numerous examples of successful community conservation (Abbot et al. 2001, Matzke and Nabane, 1996), significant critical discourses exist as the following section shows.

Critical Reflections on 'Community Conservation'

Although communities have been regularly treated as homogenous with members having complementary interests in 'community conservation' efforts, they are dynamic, factional and internally differentiated by gender, caste, wealth, ethnicity, age and origin, etc. (see Li, 1996; Belsky, 1999; Brosius et al. 1998; Moore, 1998; Twyman, 1998; Sharpe, 1998; Leach, Mearns and Scoones, 1997; Nabane and Matzke, 1997 and Agrawal and Gibson, 1999). Interventions at the aggregate community level do not capture the differential resource access and benefits for women, children and the poor (Nabane and Matzke, 1997). New institutional arrangements may reproduce the social relationships that marginalise groups like women and the poor (Martin and Lemon, 2001; Wolmer and Ashley, 2003), as the representiveness, transparency, democracy and accountability of such arrangements cannot be guaranteed. Social and ecological resilience may be undermined by the imposition of formal rules (Turner, 1999; Twyman, 1998). This has led some to call for greater attention to power relations, institutions and differentiated interests in CBNRM initiatives (Kepe et al. 2001; Kull, 2002; Agrawal and Gibson, 1999).

Critics also note that the success of schemes has been limited (Kellert et al. 2000; Gibson and Marks, 1995). Aside from issues of poor planning, policy formulation and participation in practice (Mayaka, 2002), more fundamental concerns arise over the prevalence and effect of corruption (Archabald and Naughton-Treves 2001; Naughton-Treves, 1997) and the limited extent to which decentralisation has actually taken place. Different levels of rights can be devolved. Under CBNRM, communities have been allowed management responsibility for conservation but governments are still reluctant to grant communities tenure over resources, including wildlife (Goldman, 2003; Murphree 1997). There are concerns that decentralisation (particularly the establishment of buffer zones) has been primarily a rhetorical devise, as higher level rights are retained by the state with only lower level rights being transferred to local populations (Goldman, 2003; Neumann, 1997). Furthermore, conservation efforts may be jeopardised by excluding perceived 'outsiders' (Dzingirai, 2003).

Unlike its forebear, 'fortress conservation', which assumed that a trade-off existed between conservation and development, community conservation assumes that conservation and rural development are compatible. Some of the critiques of community conservation, from both conservation and development angles, emphasise trade-offs. For example, despite the growth in protected areas in the recent past, even in countries less well known for their protected areas such as Malawi, Rwanda, Senegal and Togo, where these areas cover 11-14 per cent of national territory (Schroeder, 1999), conservationists argue that 'pockets' of protected areas are insufficient and that more environmentally benign practices are needed over larger areas (Homewood, 2004). At the same time, the more extreme end of the proconservation critiques of 'people-oriented approaches to conservation' advocates a renewed emphasis on authoritarian protection to safeguard critically threatened species (for a convincing critical review of the resurgent protectionist argument see Wilshusen et al. 2002). Pro-development writers, in contrast, question the wisdom of sequestering more land in protected zones, particularly in the context of increasing demand for food, shelter and other basic needs (Ghimire, 1994; Wood, 1993). Furthermore, numerous studies have documented how systems of range, forest and soil management practised by Africans have not only been responsible for producing the 'wild' areas which are subsequently targeted for protection, but also for maintaining these areas in existence (Schroeder, 1999).

Wolmer (2003:267) notes, first, that 'the ubiquitous community based natural resource management seems to have lost some of its cutting edge 'of the moment' flavour, as institutional fatigue has set in'; and, second, that as CBNRM debates became more complicated, and increasingly focused on weaknesses rather then strengths, donors and practioners started to look for a new paradigm. Transboundary natural resource management (also known as transfrontier conservation areas or 'peace parks') has thus become the new 'cutting edge development' with a potential for replication (Duffy, 2006). Wolmer notes that recent years have witnessed 'the emergence of an ostensibly surprising coalition of interests around the notion of transboundary natural resource management in Southern Africa' (Wolmer, 2003). For example, the notion of 'bioregions' has been invoked as a route to re-establishing natural systems that have been interrupted by political boundaries (Ramutsindela, 2004). Indeed, transbounday conservation presents an opportunity for restoring connectivity to isolated habitats in national protected areas (Duffy, 2006).

Ramutsindela (2004) argues that transfrontier parks have included notions of community participation, economic development and empowerment to win the support of communities and donors. However, both Wolmer (2003) and Duffy (2006) describe transfrontier conservation areas as the latest in a line of top-down, centralising and undemocratic market-oriented interventions. The Great Limpopo

Transfrontier Park (straddling Zimbabwe, South Africa and Mozambique), for example, has been implemented with next to no consultation with local communities (Wolmer, 2003). Communities that will be directly or indirectly affected by the proposals have been largely sidelined, generating fears that substantial numbers of people will be displaced. At the same time, Virtanen (2003) notes, attempts at creating institutions of control with supranational powers are easily perceived as an infringement by 'the North' on the sovereign rights of 'the South'. These sentiments are echoed by Duffy (2006), for whom 'this global form of control through environmental governance has invoked memories of imperial expansion and a creation of European style states in Africa'. Furthermore, van Ameron and Buscher (2005) are concerned that the effectiveness of transfrontier conservation has been hindered by the domination of national interests and that peace parks can and often do exacerbate inequalities between states. This might heighten tension, thereby confounding hopes that these transfrontier parks would both facilitate and promote regional peace (Wolmer, 2003).

Case Study: CAMPFIRE

Although early explorers and pioneers in Zimbabwe used wildlife to subsidise their activities, wildlife became an impediment to agriculture and ranching as Europeans began to settle (Gibson, 1999). During the colonial period, white settlers appropriated much of the best agricultural land and removed resident people to 'Native Reserves' (now known as communal land) (Jones and Murphree, 2001). Game reserves were established and African hunting was criminalised. Despite strong notions of 'wilderness' prevailing in the discourse justifying the establishment of protected areas, Wolmer (2005:264) argues that wilderness was manufactured, with the Gonarezhou National Park, for example, being 'stitched together from a wide variety of designations on the basis of ad hoc negotiations between various actors'. In reality, not only had the area been subject to frequent boundary changes; but large areas had previously been inhabited and cultivated; and large-scale tsetse control and military activity had altered the ecology, vegetation patterns and wildlife numbers, sometimes significantly.

Although some resentment towards wildlife and the establishment of game reserves existed among the white population, it was even greater among black Africans whose 'native reserves' were less suitable for cultivation, and more likely to host populations of wildlife, although the methods that might have been used to protect crops from wildlife (snares, traps and nets) were outlawed (Gibson, 1999). Yet, the tenure system that facilitated indirect colonial state control of land and natural resources through chiefs was retained following independence to ensure continued post-colonial state control over land (Murombedzi, 1999), despite prior promises by nationalist leaders to reverse such exclusionary measures (Gibson, 1999). Indeed, control over wildlife presented the independent state with a valuable natural asset (Gibson, 1999).

In 1975, the Rhodesian Parks and Wildlife Act had allowed private landowners (almost all at that time former European settlers) to own wildlife on their land for the first time (Adams, 2004). With farmers thus having an incentive to encourage wildlife, Duffy (2000) notes that sport hunting became the major revenue earner within the private game ranch industry (growing from a value of \$195,000 in 1984 to \$13 million in 1993). In the 1980s a newly-independent Zimbabwe took steps to enable smallholders on communal land to similarly profit from safari hunting through a 1982 amendment to the Wildlife Act (Adams, 2004; Gibson, 1999).

CAMPFIRE (Communal Area Management Programme for Indigenous Resources) was established to facilitate the capture of some of the benefits of wildlife and the sustainable utilisation of natural resources by residents of communal areas. It has become renowned for enabling local people to play an active role in the management of resources, and in the generation and distribution of benefits. It has devolved authority for the management of mega-fauna from the state to rural district councils. More specifically, CAMPFIRE usually involves local authorities advertising hunting rights, selecting and contracting safari companies, setting quotas, organising anti-poaching activities and collecting and disbursing the revenue generated from the wildlife operations (Campbell et al. 1999).

As Gibson (1999) notes, nearly all analyses of CAMPFIRE praise its innovativeness, particularly its decentralisation of authority over wildlife. There are definitely success stories. For example, Matzke and Nabane (1996) report that under the centralised (conventional) model of conservation, the village of Masoka was the source of poachers, but that through empowerment conferred by the CAMPFIRE programme, local people have been transformed into 'a bastion of support for wildlife protection and enhancement'. Murphree (1997) also cites a positive example from Chapoto District near the Mozambique border. Here, communities fix/change quotas for elephant and buffalo depending on the quality of trophy (tusk weight or horn size) as highest revenues come from trophy quality. He describes this as local environmental science, elegant in its simplicity. The approach is effectively regulating wildlife populations.

There have been some criticisms of CAMPFIRE, however. Campbell et al. (1999) note that schemes are strongly differentiated by the quality and diversity of wildlife and the density of human and livestock populations; and Murombedzi (2001) concludes that CAMPFIRE has only been successful in small, discrete and relatively homogenous communities with access to extensive wilderness (cited by Adams 2004). In fact, wildlife, 'so beloved of donor and NGO programmes' (Wolmer, 2003), may not be uniformly attractive or valuable to local people outside areas like Chapoto, where a marginal agricultural environment encourages a heavy dependence on wildlife revenues (Murphree, 1977). Wolmer (2003) explains that labour migration, remittances and transborder trade are the mainstays of local livelihood systems, and are often more important than wildlife. Similarly, Murombedzi (1999) argues that people prioritise agriculture over wildlife, even with the high revenues from the latter, because wildlife do not represent the primary source of household income.

CAMPFIRE has also been criticised on the grounds that there needs to be further devolution from rural district councils to producer communities:

Attempts to foster people's participation in conservation through the distribution of revenues from resource utilisation without devolving rights to resources to local people will not necessarily improve local stewardship of resources, regardless of the extent of the revenues generated (Murombedzi, 1999:289).

Moore (1998) offers a more radical critique, suggesting that CAMPFIRE represents an unprecedented and unregulated penetration of private lands by the state and private business (cited by Dzingirai, 2003). Clearly also, the reconciliation of values at different levels poses an ongoing challenge. In this connection, Murphree (1997) argues quite simply that local values are the sustainable utilisation of resources while global values are those of species preservation and biodiversity; the global

and local are clearly intertwined. Unless local values are accommodated, Murphree suggests, international values and goals will be subverted by local responses. Nonetheless, he argues tensions (will) continue to exist, given that local incentives indicate devolution of proprietorship, while the international-level bureaucratic and technocratic mind upholds the centralisation of authority and regards devolution as the surrendering of professional management to unsophisticated peasants Murphree, 1997).

The land occupations in Zimbabwe in 2000 and 2001 have impacted upon the success of wildlife conservation efforts. Wolmer (2005) provides an example of the Chitsa people who have re-occupied a northern portion of the Gonarezhou National Park. While ZANU(PF) had been keen to present the land occupations as renationalising farms in white hands, the Chitsa people's grudge was actually about the initial loss of their ancestral lands to the park. The Ministry of the Environment and Tourism severely censored this park occupation, which it saw as jeopardising plans for the Great Limpopo Transfrontier Park. Balint (2006) cites another example of the impact of the post-2000 social and economic crisis in Zimbabwe. He notes that there have been revenue losses from a previously highly acclaimed project in the Mahenye area near Gonarezhou National Park following the decline in game viewing tourism. This did not jeopardise the success of the project however, because trophy hunting appeared to be less affected by political unrest. Yet, the combination of a loss of donor funding, NGO withdrawal and the collapse of local governance did precipitate a sharp deterioration in the performance of the 10-year old project. Balint (2006) notes that as the ruling party turned its attention to consolidating its power at the national level, the traditional chief and his family took advantage of this to assert control over the local CAMPFIRE committee and co-opt project benefits. In this respect, despite the criticisms levelled at transfrontier conservation noted in the previous section, success in attracting donor funding to continue to support conservation may be beneficial, particularly if it helps to maintain mechanisms to ensure transparency and accountability.

Conclusion

This brief review has considered wildlife conservation in Africa giving some attention to historical forces, ways of seeing the environment, and power relations. Wildlife, biodiversity and valued environments are clearly not static resources, and their distribution and prevalence are fluid and intimately linked with policy and politics. Neo-liberal policies favouring consumptive use of the environment shape local ecologies as some species become more valuable than others. Wildlife policies and their outcomes reflect attempts by individuals and groups to gain private advantage or manipulate existing conditions or create new ones in order to achieve their ambitions (Gibson, 1999; Ramutsindela, 2004). Competing agendas and ways of seeing the environment among different interest groups at local, national and global levels with differing levels of power and capacities to negotiate and resist, add to the complexity of the story of conservation and present significant challenges to environmental governance.

Given the diversity and dynamism of people-nature interactions in Africa, a prescriptive approach to community conservation could be as fallacious as fortress conservation approaches. Yet there is considerable potential for community conservation to maximise positive conservation and development outcomes. Despite the weight of criticism surrounding aspects of community conservation, abandoning efforts now could undermine previous successes (Balint, 2006). Transfrontier conservation, superceding community conservation as the 'cutting edge' of conservation in parts of southern Africa at least, has been shown to be replete with potential pitfalls, in addition to raising questions concerning policies towards, and the role of, powerful international organisations in conservation. Left unaddressed, these could potentially 'undo the meagre gains of CBNRM and recentralise natural resource management' (Wolmer, 2003). At the very least, they possess the potential for magnifying tension among competing interest groups. For this reason, as for many others, local livelihoods need to remain at the core of conservation efforts.

Samantha Jones is Senior Lecturer in the School of Applied Sciences, Northumbria University, UK, and can be contacted at samantha.jones@northumbria.ac.uk.

Bibliographic Note

Abbot, J. I. O., D. H. L. Thomas, A. A. Gardner, S. E. Neba & M. W. Khen (2001), 'Understanding the links between conservation and development in the Bamenda Highlands, Cameroon', World Development, Vol. 29, No. 7, 1115-1136.

Adams, W. M. & D. Hulme (1998), 'Conservation and Communities: Changing Narratives, Policies and Practice in African Conservation', Paper 4, Community Conservation Research in Africa: Principles and Practice, Institute for Development Policy and Management, University of Manchester.

Adams, W. M. (2004), 'Against Extinction: The story of conservation', London: Earthscan.

Adams, W.M. & M. Infield (2003), 'Who is on the gorilla's payroll? Claims on tourist revenue from a Ugandan National Park', World Development, Vol. 31, No.1, 177-190.

Agrawal, A. & C. C. Gibson (1999), 'Enchantment and Disenchantment: The role of community in Natural Resource Management', World Development, Vol. 27, No.4, 629-649.

Agrawal, A. & E. Ostrom (2001), 'Collective action, property rights and decentralisation in resource use in India and Nepal', Politics and Society, Vol. 29, No.4, 485-514.

Alexander, J. & J. McGregor (2000), 'Wildlife and politics: CAMPFIRE in Zimbabwe', Development and Change, Vol. 31, No.3, pp. 605-

Anderson, D. & R. D. Grove (1987), Conservation in Africa: People, Policies and Practice. Cambridge University Press, Cambridge.

Archabald, K. & L. Naughton-Treves (2001), 'Tourism revenue sharing around national parks in Western Uganda: early efforts to identify and reward local communities', Environmental Conservation, Vol. 28, No. 2, 135-149.

Awanyo, L. (2001), 'Labor, ecology and a failed agenda of market incentives: The political ecology of agrarian reforms in Ghana', Annals of the Association of American Geographers, Vol.9, No.1, 92-121.

Balint, P. J. (2006), 'Improving community based conservation near protected areas: the importance of development variables', Environmental Management, Vol.38, No.1, 137-148.

Barrow, E. & M. Murphree (2001), 'Community Conservation: From Concept to Practice', Ch. 3 in D. Hulme & M. Murphree (eds.) (2001), African Wildlife and Livelihoods: the Promise and Performance of Community Conservation, Oxford: James Currey.

Barrow, E., H. Gichohi & M. Infield (2001), 'The Evolution of Community Conservation and Practice in East Africa', Ch. 5 in D. Hulme & M. Murphree (eds.) (2001), African Wildlife and Livelihoods: the Promise and Performance of Community Conservation, Oxford: James Currey.

Bassett, T. J. (1988), 'The political ecology of peasant-herder conflicts in the northern Ivory Coast', Annals of the Association of American Geographers, Vol.78, No.3, 453-472.

Batterbury, S. (2001), 'Landscapes of diversity: A local political ecology of livelihood diversification in SW Niger', Ecumene, Vol.8, No.4, 437-464.

Beinart, W. & D. Coates (1995), Environment and History: The Taming of Nature in South Africa and the US, London: Routledge.

- Beinart, W. & J. McGregor (2003), Introduction in *Social History and African Environments*, in W. Beinart & J. McGregor (eds.), Oxford: James Currey; Cape Town: David Philip & Athens: Ohio University Press.
- **Bell, M. & N. Roberts** (1991), 'The political ecology of dambo soil and water resources in Zimbabwe', *Transactions of the Institute of British Geographers*, Vol.16, 301-318.
- Belsky, J. M. (1999), 'Misrepresenting communities: the politics of community-based rural ecotourism in Gales Point Manatee, Belize', Rural Sociology, Vol. 64, No.4, 641-666.
- Brosius, J. P., A. Lowenhaupt Tsing & C. Zerner (1998) 'Representing communities: histories and politics of community-based natural resource management', Society and Natural Resources, Vol.11, 157–168.
- Bryant, R. (1992), 'Political ecology: an emerging research agenda in Third World studies', *Political Geography*, Vol.11, No.1, 12-36; (1998), 'Power, knowledge and political ecology in the third world: a review', *Progress in Physical Geography*, Vol.22, No.1, 79-94.
- Campbell, B., N. Bryon, et al. (1999), 'Moving to local control of woodland resources can CAMPFIRE go beyond the mega-fauna?' Society and Natural Resources, Vol. 12, 501-509.
- Campbell, L. M. & A. Vainio-Mattila (2003), 'Participatory development and community-based conservation: Opportunities missed for lessons learned', *Human Ecology*, Vol. 31, No. 3, 417-437.
- Cline Cole, R. A., H.A.C. Main & J. E. Nichol (1990), 'On fuelwood consumption, population dynamics and deforestation in Africa', *World Development*, Vol.18, No.4, 513-527.
- **Duffy, R.** (2000), 'Killing for conservation: Wildlife policy in Zimbabwe', Oxford: James Currey; (2006), 'The potential and pitfalls of global governance: The politics of transfrontier conservation in Southern Africa', Political Geography, Vol.25, No.1, 89-112.
- **Dwivedi, R.** (1996), 'Parks, people and protest: some observations on the mediating role of environmental action groups in grassroots resource conflicts', *Institute of Social Studies Working Papers* 228, The Hague.
- **Dzingirai, V.** (2003), 'CAMPFIRE is not for Ndebele migrants': The impact of excluding outsiders from CAMPFIRE in the Zambezi Valley, Zimbabwe, *Journal of Southern African Studies*, Vol. 29, No. 2, 445-459.

- Fairhead, J. & M. Leach (1996), 'Misreading the African Landscape: society and Ecology in a forest-savanna mosaic', Cambridge: Cambridge Uni-versity Press; (1994), 'Conservation Forests: Modern Conservation and Historical Land Use in Guinea's Ziama Reserve', African Affairs, Vol. 93, 481-512.
- **Gezon L. L.** (1997), 'Political ecology and conflict in Ankarana, Madagascar', *Ethnology*, Vol.36, No.2, 85-100; (1999), 'Of shrimps and spirit possession: Toward a political ecology of resource management in northern Madagascar, *American Anthropologist*, Vol.101, No.1, 58-67.
- Ghimire, K. (1994), 'Parks and people: livelihood issues in national park management in Thailand and Madagascar', *Development and Change*, Vol. 25, No.1, 195-229.
- Gibson, C. C. & S. A. Marks (1995), 'Transforming rural hunters into conservationists: an assessment of community based wildlife management programs in Africa', World Development, Vol. 23, No. 6, 941-957.
- **Gibson, C. G.** (1999), 'Politicians and Poachers: The political economy of wildlife policy in Africa', Cambridge: Cambridge University Press.
- Gillingham, S. & P. C. Lee (1999), 'The impact of wildlife-related benefits on the conservation attitudes of local people around the Selous Game Reserve, Tanzania', *Environmental Conservation*, Vol. 26, No.3, 218-228.
- Goldman, M. (2003), 'Partitioned nature, privileged knowledge: Community-Based Conservation in Tanzania', *Development and Change*, Vol. 34, No.5, 833-862.
- Homewood, K. & W. A. Rodgers (1987), 'Pastoralism, conservation and the overgrazing controversy' in D. M. Anderson & R. Grove, *Conservation in Africa: People, policies and practice*, Cambridge: Cambridge University Press.
- Homewood, K. M. (2004), 'Policy, environment and development in African rangelands', *Environmental Science and Policy*, Vol. 7, No.3, 125-143.
- Infield, M. & W. M. Adams (1999), 'Institutional sustainability and community conservation: a case study from Uganda', *Journal of International Development*, Vol. 11, No.2, 305-315.
- Jones, B. (1999), 'Policy lessons from the evolution of a community-based approach to wildlife management, Kunene region, Namibia'. *Journal of International Development*, Vol. 11, 295-304.

- Jones, B. & M. Murphree (2001), 'The evolution of policy on community conservation in Namibia and Zimbabwe', Ch. 4 in D. Hulme & M. Murphree (eds.) (2001), African Wildlife and Livelihoods: the Promise and Performance of Community Conservation, Oxford: James Currey.
- Jones, S. & G. Carswell (2004), 'The Earthscan Reader in Environment, Development and Rural Livelihoods', London: Earthscan.
- Kellert, S. R., J. N. Mehta, et al. (2000), 'Community natural resource management: promise, rhetoric, and reality', Society and Natural Resources, Vol. 13, 705-715.
- Kepe, T., B. Cousins, & S. Turner (2001). 'Resource tenure and power relations in community wildlife: the case of Mkambati area, South Africa', Society and Natural Resources, Vol. 14, 911-925.
- Kull, C. A. (2002), 'Empowering pyromaniacs in Madagascar: ideology and legitimacy in community-based natural resource management', Development and Change, Vol. 33, 57-78.
- Leach, M., R. Mearns & I. Scoones (1997), 'Challenges to community-based sustainable development: Dynamics, entitlements, institutions', IDS Bulletin, Vol. 28, No. 4, 4-14.
- Li, T. M. (1996), 'Images of community: discourse and strategy in property relations', Development and Change, Vol. 27, 501-527.
- Martin, A. & M. Lemon (2001), 'Challenges for participatory institutions: the case of village forest committees in Karnataka, South India', Society and Natural Resources Vol. 14, No. 7, 585-597.
- Matzke, G. E. & N. Nabane (1996), 'Outcomes of a community controlled wildlife utilisation programme in a Zambezi valley community', Human Ecology, Vol.24, No.1, 65-85.
- Mayaka, T. B. (2002), 'Wildlife co-management in the Benoue National Park-Complex, Cameroon: A bumpy road to institutional development', World Development, Vol.30, No.11, 2001-2016.
- Moore, D. S. (1993), 'Contesting terrain in Zimbabwe's eastern highlands: political ecology, ethnography, and peasant resource struggles', Economic Geography, Vol.69, No.4, 380-401; (1998), 'Clear Waters and Muddied Histories: Environmental history and the politics of community in Zimbabwe's Eastern Highlands', Journal of Southern African Studies, Vol. 24, No. 2, 377-403.

- Murombedzi, J. C. (1999), 'Devolution and stewardship in Zimbabwe's CAMPFIRE programme', Journal of International Development, Vol.11, No.2, 287-293; (2001), 'Committees, Rights, Costs and Benefits: Natural Resource Stewardship and Community Benefits Stewardship in Zimbabwe's CAMPFIRE Programme', in D. Hulme & M. Murphree (eds.) African Wildlife and Livelihoods, Oxford: James Currey / Portsmouth: Heinemann.
- Murphee, M. W. (1997), Synergising Conservation Incentives: From Local-Global Conflict to Compatability, Community Conservation Research in Africa, Principles and Comparative Practice Working Paper No. 4, IDPM, University of Manchester, Manchester, UK.
- Nabane, N. & G. Matzke (1997), 'A gender sensitive analysis of a community-based wildlife utilization initiative in Zimbabwe's Zambezi valley', Society and Natural Resources, Vol.10, No. 6, 519-535.
- Naughton-Treves, L. (1997), Farming from the forest edge: Vulnerable places and people around Kibale National Park, Uganda, Geographical Review, Vol. 87, No.1, 7-47.
- Nepal, S. K. & K. E. Weber (1995), 'Prospects for Co-existence: Wildlife and Local People', Ambio, Vol. 24, No.4, 238-245.
- Neumann, R. P. (1997), 'Primitive ideas: Protected area buffer zones and the politics of land in Africa', Development and Change, Vol. 28, 559-582.
- Park, T. K. (ed.) (1993), 'Risk and Tenure in Arid Lands: The political ecology of development in the Senegal River Basin', University of Arizona Press, Tuscon.
- Peet, R & M. Watts (1996), 'Liberation Ecologies: Environment, Development, Social Movements', London: Routledge.
- Peters, J. (1998), 'Sharing national park entrance fees: forging new partnerships in Madagascar', Society and Natural Resources, Vol.11, 517-530.
- Plummer, R. & J. FitzGibbon (2004), 'Some observations on the terminology in co-operative environmental management', Journal of Environmental Management, Vol. 70, 63-72.
- Ramutsindela, M. (2004), 'Glocalisation and nature conservation strategies in 21st-century Southern Africa', Tijdschrift voor Economische en Sociale Geographie, Vol.95, No.1, 61-72.
- Schroeder, R. A. (1993), 'Shady practice: gender and the political ecology of resource stabilisation in Gambian gardens/orchards', Economic

Geography, Vol.69, No.4, 349-365; (1999), 'Geographies of environmental intervention in Africa', *Progress in Human Geography*, Vol. 23, No.3, 359-378.

Sharpe, B. (1998) "First the forest": conservation, "community" and "participation" in south-west Cameroon', *Africa*, Vol. 68, No. 1, 25-45.

Simmons, C. S. (2004), 'The political economy of land conflict in the Eastern Brazilian Amazon', *Annals of the Association of American Geographers*, Vol.94, No.1, 183-206.

Songorwa, A. (1999), 'Community-based wildlife management in Tanzania: are the communities interested?', World Development, Vol. 27,No. 12, 2061-2079.

Taylor, M. (1998) 'Governing natural resources', *Society and Natural Resources*, Vol.11, 251-258.

Tiffen, M., M. Mortimore & F. Gichuki (1994), 'More People, Less Erosion: Environmnetal Recovery in Kenya', Chichester: Wiley.

Turner, **M. D.** (1999), 'Conflict, environment change, and social institutions in dryland Africa: limitations of the community resource management approach', *Society and Natural Resources*, Vol. 12, 643-657.

Twyman, C. (1998), 'Rethinking community resource management: managing resources or managing people in western Botswana?', *Third World Quarterly*, Vol. 19, No.4, 745-770; (2000), 'Livelihood opportunity and diversity in Kalahari wildlife management areas, Botswana: rethinking community resource management', *Journal of Southern African Studies*, Vol.26, 4, 783-805.

Van Amerom, M. B. Buscher (2005), 'Peace parks in Southern Africa: bringers of an African Renaissance?' *Journal of Modern African Studies*, Vol.43, No.2, 159-182.

Virtanen, P. (2003), 'Local management of global values: Community-based wildlife management in Zimbabwe and Zambia', *Society and Natural Resources*, Vol.16, No. 3, 179-190.

Wainwright, C. & W. Wehrmeyer (1998), 'Success in integrating conservation and development? A study from Zambia', World Development, Vol. 26, No. 6, 933-944.

Wilshusen, P. R., S.R. Brechin, C.L. Fortwangler & P.C. West (2002), 'Reinventing a square wheel: Critique of a resurgent 'protection paradigm' in international biodiversity conservation', Society and Natural Resources, Vol.15, 17-40.

Wolmer, W. (2003), 'Transboundary Conservation: The politics of ecological integrity in the Great Limpopo Transfrontier Park', *Journal of Southern African Studies*, Vol.29, No.1, 261-278; (2005), 'Wilderness gained, wilderness lost: wildlife management and land occupations in Zimbabwe's southeast lowveld', *Journal of Historical Geography*, Vol.31, 260-280.

Wolmer, W. & C. Ashley (2003), 'Wild resources in southern Africa: Participation, partnerships, ecoregions and redistribution', *IDS Bulletin*, Vol. 34, No.3, 31-40.

Wood, **D.** (1993), 'Forest to Fields: Restoring tropical lands to agriculture', *Land Use Policy*, Vol.10, No.2, 91-107.