



FINDING SPACE FOR WILDLIFE BEYOND NATIONAL PARKS AND REDUCING CONFLICT THROUGH COMMUNITY-BASED CONSERVATION: THE KENYA EXPERIENCE

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ABSTRACT

Protected area coverage has expanded rapidly in the last few decades and is set to span 17 per cent of the world's terrestrial area by 2020. Despite the conservation gains, biodiversity is declining and human-wildlife conflict (HWC) is increasing, especially in Africa. Recognizing that vertebrates require far more space than the protected areas cover and that most biodiversity resides in human-modified landscapes, conservation efforts are turning to rural landscapes. Biodiversity conservation in rural lands hinges on landowners accommodating wildlife, and resolving HWC that undermines their willingness to conserve. We look at policies and practices embedded in community-based conservation in Kenya that address HWC through devolved rights and responsibilities for wildlife management dating from the 1970s, drawing on lessons from traditional practices rooted in coexistence.

Key words: human-wildlife conflict, Kenya, community-based conservation, protected areas policy and practice

INTRODUCTION

The loss of wildlife and natural habitat over the last century has been tempered in part by growing sensibilities for nature, the birth of environmental sciences, national conservation policies and a widening variety of land use practices. The modern conservation movement spawned by environmentalism in the early 20th century was founded on setting aside protected areas and sustaining open space and natural habitat for outdoor pursuits (Hays, 1999). The protected area system has shown remarkable success in expanding the terrestrial area coverage from 10 to 15.4 per cent since the launch of the World Conservation Strategy (IUCN/WWF/UNEP, 1980; Bertzky et al., 2012; Venter et al., 2014; World Parks Congress, 2014; Juffe-Bignoli et al., 2014). In large part, the expansion has occurred by widening the early preservationist goals of parks to include a variety of other values such as economic benefits, ecosystem services and human wellbeing.

The prospects of expanding space for wildlife through coexistence in human-dominated landscapes were largely ignored in the course of the national parks

movement because of the prevailing sentiment that parks should remove all human influence except tourism and research (Parker & Bleazard, 2001). The prevalent biological view that human modified areas afforded little scope for wildlife also thwarted efforts to conserve wildlife in human-dominated landscapes. HWC has, as a result, been treated as an unwelcomed and unwanted by-product of protectionist and utilization policies and tackled as an animal control problem through displacement, deterrence and destruction (Western & Waithaka, 2005). Strategies and methods that have been used to address HWC have varied depending on the species, nature, extent, intensity and impact of conflict and a variety of other social, economic and political circumstances (Nelson & Sillero-Zubiri, 2003; Madden, 2004; Woodroffe et al., 2005; Western & Waithaka, 2005; WWF, 2008).

There is now a growing recognition of the scope for conserving wildlife in the rural landscape (UNEP, 1988; McNeely & Keeton, 1995; Biodiversity in Development, 2001; Leibel, 2012; Jonas et al., 2014). Several factors contribute to the prospects for wildlife and biodiversity



Community members meet to discuss the importance of Maasai culture in conserving their livestock economy, wildlife and the health of the land © David Western

conservation beyond protected areas. They include biological sciences highlighting the need for ever larger areas and spatial connectivity to conserve viable populations; the inadequacy of protected area design and coverage; the expanded goals of conservation to protect all forms of life, ecosystem functions and ecological services; and finally a growing recognition that most biodiversity lies outside protected areas in human-modified landscapes. Whereas protected areas conserve a less altered more confined nature, the rural landscape offers great scope for a more altered largely unconfined nature (Western, 1989; Butchart et al., 2012; Jonas et al., 2014; Kullberg & Molainen, 2014; WWF, 2014). Other factors add urgency to finding space for wildlife in the human-dominated realm. They include evidence that the goals and strategies set by the Convention on Biological Diversity (CBD, 2002; UNEP, 2002) failed to halt the decline in biodiversity by focusing on the symptoms rather than causes of loss (CBD, 2010a, b); by findings that parks are also losing biodiversity and wildlife populations (Craigie et al., 2010); mapping exercises showing the majority of the biodiversity falling outside protected areas; dwindling government resources in the face of a growing raft of conservation challenges; a rising tide of democracy, rights and demands for locally-based conservation initiatives; the diversity of views and interest groups vying for their special conservation interests, and climate change.

These among other factors call for the integration of conservation and development (UN, 1992; Biodiversity in Development, 2001; MEA, 2005; IUCN, 2005; UNEP, 2012; UN, 2014), a landscape and regional approach to biodiversity conservation, and the need to address the causes of decline rooted in poverty, inequality and the lack of means and opportunity to benefit from biodiversity (Western, 1994; Mittermeier et al., 2003; Turner et al., 2012). Expanding the arena of conservation is vital to buffering protected areas from extrinsic human impact, conserving biodiversity and ecological services on a large scale and in addressing the root cause of ecosystem breakdown and species loss (IUCN, 2005; Mora & Sale, 2011; Jonas et al., 2014). Scaling up biodiversity conservation to the rural landscape also calls for minimizing HWC using principles, policies and practices that promote coexistence through expanded benefits and offsetting the losses to those living with wildlife. Key to coexistence, minimizing conflict and the need for direct control of wildlife has been the emergence and evolution of community-based conservation (CBC) and community-based natural resource management (CBNRM) in Africa (Western et al., 1994; Hulme & Murphree, 2001; Borrini-Feyarabend et al., 2004). Both have become paradigms for pluralistic, inclusive and integrative conservation approaches to winning space and a place for wildlife and biodiversity in the rural landscape.

This paper looks at the expanding policies, strategies and approaches to conservation beyond protected areas first raised at the World Parks Congress in Bali in 1982 under the rubric 'Parks for Sustainable Development'. We specifically draw on Amboseli National Park in Kenya as a pioneering effort to develop a CBC approach and look at the subsequent evolution of policies and practices aimed at devolving the rights and responsibilities for wildlife conservation and management.

EVOLVING PLURALISM AND DISTRIBUTED CONSERVATION

Although eastern Africa has retained the richest wildlife herds on Earth, most still occur outside protected areas in the pastoral regions (Western et al., 2009) and populations have fallen steeply (Ogutu et al., 2011). Conflict with rural populations has also risen sharply in recent decades (KWS, 1995a; Western & Waithaka, 2005; Okech, 2011; KWS, 2012a). The strong upsurge in pro-wildlife sentiments in Kenya, spurred by a burgeoning urban and youthful population seldom encountering wild animals, has masked the growing intolerance of rural communities gaining no benefits from wildlife and having little say in national policy (Akama et al., 1995; Western, 2001, Munira & Udoto, 2012). The focus of influential international conservation and animal rights organizations on poaching and tougher wildlife protection has further detracted attention from HWC as a serious threat to conservation (Bonner, 1993; Conover, 2002; Clarke, 2013).

The threat posed by the growing intolerance of wildlife was recognized by Daniel Sindiyo (Sindiyo, 1968), a game warden from a pastoral background. Sindiyo advocated conserving wildlife by revitalizing customary values and the skills of coexistence lost by colonial conservation policies. The earliest steps to conserve wildlife at an ecosystem scale and engage local communities in sharing the benefits was undertaken in Amboseli National Park in the early 1970s (Western, 1982). An annual grazing fee, now called Payment for Ecosystem Services (UNEP, 2008), was paid to the surrounding pastoral community commensurate for supporting the migratory wildlife herds. The community was encouraged to set up tourist accommodation on its lands to derive direct benefits and secure conservation coverage of the entire Amboseli ecosystem (Western, 1982).

An immediate measure of success of the Amboseli CBC initiative was a halt to ivory poaching that had reduced the Amboseli elephant population from 1,500 to 500 between 1972 and 1977 due to a ten-fold increase in the price of ivory (Western, 1994). Despite the continued loss

of elephants in adjacent Tsavo National Park and across Kenya that saw the national population fall from 167,000 to 19,000 by 1989 when a CITES ivory ban halted the slaughter, the Amboseli elephant herd doubled over the same period. Wildlife populations grew steadily across the ecosystem following the engagement of the Amboseli communities (Western, 1994; Kioko et al., 2006).

The principle behind the Amboseli initiative was to turn wildlife from a liability to an asset for local communities in wildlife rich areas. The Amboseli experiment was adopted as national policy in 1977, aimed at expanding the protection of protected areas to an ecosystem scale and encouraging community-based conservation. Similar policies and practices became widespread across Africa and internationally in the 1980s and 1990s (Hulme & Murphree, 2001) and were promulgated by the CBD in the form of recognizing indigenous interests and equity in biodiversity conservation and benefits (IIED, 1994; CBD, 2002).

Adoption of the wildlife policies in Kenya in 1977 led to the amalgamation of the former National Parks and Game Department under the Wildlife Conservation and Management Department (WCMD), aimed at integrating wildlife conservation and management beyond park boundaries and across ecosystems. As a government department low on the development totem pole, WCMD was given a paltry subvention by Treasury and failed to arrest the steep rise in poaching, HWC and abuses of wildlife compensation claims. In 1989, WCMD was replaced by the Kenya Wildlife Service (KWS), a semi-autonomous agency under a board of trustees charged with conserving and managing parks and collecting wildlife income without reversion to Treasury.

The first steps taken by KWS were to launch a new policy framework with a strong commitment to CBC and integrated conservation planning on a national scale (KWS, 1990). A community Wildlife Development Fund (WDF) was established to support conservation and development initiatives in prime wildlife areas. Although WDF did much to promote CBC, it failed to address HWC, made worse by the repeal of wildlife compensation and by elephant populations spreading into agricultural areas in the aftermath of the ivory ban of 1989 (KWS, 2012a). Communities and politicians complained that KWS was more responsive to elephant poaching than the rising number of people killed by elephants.

To address the growing national problem of HWC, KWS undertook a countrywide public review of HWC in 1994 to understand the view of communities and stakeholders throughout Kenya on the nature and causes of conflict



Maasai herder in southern Kenya © Equilibrium Research

and to gather views on mitigation policies and practices (KWS, 1995a). The underlying principle of the recommendations in the HWC review lay in lowering the cost of conflict by raising the direct benefits communities could gain from wildlife, and by devolving the rights and responsibilities for conservation action to the lowest effective and accountable levels. Special attention was given to important wildlife areas around and beyond national parks. A Minimum Viable Conservation Area (MVCA) framework was adopted in 1997 for conserving wildlife and biodiversity nationwide and as the basis for ecosystem planning, HWC management, community engagement and integrating national parks into the wider landscape (Western & Waithaka, 2005).

To further promote protected areas, which had largely been viewed by Kenyans as tourism destinations, KWS launched a 'Parks for Kenyans' campaign in 1997 to promote citizen visitation and a 'Parks Beyond Parks' campaign to encourage local conservation initiatives outside parks and promote ecotourism (KWS, 1997). The Parks Beyond Parks campaign was bolstered by two trust funds established by the European Union, the first a Biodiversity Conservation Program (BCP), the second a Tourism Trust Fund (TTF). The funds were available on a competitive basis to communities wishing to establish and manage their own wildlife conservancies and tourism enterprises within the MVCA network. Landowner associations were free to form partnerships with tour operators, investors, NGOs, KWS or other organizations on a voluntary collaborative basis in order to set up ecotourism enterprises, hire and train community scouts and implement conservation and management plans. The underlying goal of the trust funds was to promote new collaborative ventures and innovative conservation measures. The first community wildlife sanctuary (later dubbed conservancies) was established in 1997 at Kimana, near Amboseli, based on the foundational CBC programme established around the national park.

Following the recommendations of the HWC report, KWS established a training programme for community scouts as a means of devolving security and HWC skills and management capacity to wildlife associations and conservancies. The rights and responsibilities were based on the classification of species. Endangered and threatened species remained the responsibility of KWS and KWS established a Problem Animal Management Unit (PAMU) for dealing with species beyond the scope of communities (Western & Waithaka, 2005). PAMU focused on HWC hotspots identified by national surveys (KWS, 1995b). The aim of the wildlife policy was to devolve as much opportunity and responsibility to landowners and their partners as possible, and to reduce the need for destructive animal control measures.

A detailed analysis of the outcome of the policies for reducing HWC in Kenya and winning space for wildlife beyond protected areas has been conducted by Western and Waithaka (2005). The study showed that tolerance of problem animals rose and conflict fell in response to the wildlife benefits accrued and conflict mitigation measures, leading to fewer animals killed in reprisal.

CASCADING CONSERVATION DOWNWARDS

Although KWS created an enabling environment for mitigating HWC through community engagement, the real momentum and innovation emerged from a medley

of collaborative ventures on the ground. The KWS Wildlife Development Fund (WDF) gave the initial impetus to community initiatives, but the far larger TTF and BCP funds soon replaced and far exceeded the WDF stimulus. Most grants were awarded for setting up conservancies and to ecotourism enterprises. The Parks Beyond Parks campaign was buoyed by national and community based institutions such as Ecotourism Kenya¹ and a growing number of wildlife and landowner associations. NGOs found a new conservation lease of life in supporting CBC initiatives. The national and local associations became the mainstay in building up community capacity in business enterprises, security operations and conservation planning and management.

In reality the devolution of rights and responsibility for conservation added very modestly to existing livelihoods of landowners (Homewood et al., 2009). In most wildlife areas the primary source of community livelihoods remains livestock, though small-scale farming is rising in significance in wetter regions. The opportunity to derive wildlife incomes without sacrificing their major livelihoods has seen private landowners and communities incorporate conservation enterprises into their land use practices (Waithaka, 2004). As a result, the early initiatives in setting aside small wildlife exclusive sanctuaries have given way to far larger conservancies practising rotational grazing and grass banking to sustain mixed herds of wildlife and livestock through droughts².

Community scouts trained by KWS initially played a vital role in giving landowner associations the capacity to patrol and protect their own wildlife and natural resources, provide security for tourists and tackle HWC that does not call on the specialized skills of the KWS's PAMU. The scouts have given communities a strong sense of control and pride in their own capacity to benefit from wildlife and ability to anticipate and manage HWC. As the number of trained scouts has grown, NGOs with the funding and requisite skills, including Big Life³ and landowners associations such as the Northern Rangeland Trust (NRT)⁴, have taken on an ever larger role in training community scouts and diversifying their functions.

A second cadre of local conservation agents, the resource assessors (RAs), has emerged from the devolution of rights and responsibilities for wildlife management and the information demands of better planning and management. The RAs draw on the role that young lale'enok Maasai scouts traditionally played in pastoral communities. The lale'enok scouts monitored all aspects of range condition, wildlife distribution and pending

threats in order to make informed collective decisions on livestock deployment, health and protection. Trained by scientists attached to NGOs such as the African Conservation Centre, and community associations such as the South Rift Association of Land Owners (SORALO)², the contemporary RA scouts collect and feed information on rangeland conditions, opportunities and threats directly to the community for herd deployment and land use planning. Information on likely conflicts with wild herbivores and predators helps in designing strategies for HWC mitigation. The growing importance of the RAs has led to the creation of community knowledge-action centres which bring together RAs, scouts and scientists to pool, communicate and act on shared information².

NRT, SORALO, Laikipia Wildlife Forum (LWF)⁵, the Maasai Mara Management Association and the Amboseli Ecosystem Trust (AET) are some of the many landowner associations that now play the primary role in conserving and protecting wildlife outside national parks, addressing HWC and integrated wildlife and land use planning. In an innovative step for local conservation stewardship, AET in 2014 undertook a Strategic Environmental Assessment (SEA) of an Amboseli Ecosystem Management Plan (AEMP), drawn up in collaboration with conservation partners. The approval of AEMP by the SEA process sets the stage for legal gazettelement of the plan by the National Environmental Management Agency.

The CBC initiatives are matched by a national effort to map biodiversity, assess the conservation threats and opportunities, value and assess ecosystem services and set up a national framework to audit and monitor Kenya's natural capital (Kenya's Natural Capital, 2015). The national initiative will encourage and complement devolved and collaborative policies that stimulate local conservation practices, complement national parks and reduce HWC. The passage of a new Wildlife Act in 2013, in line with the Kenya Constitution 2010, explicitly devolves wildlife management responsibilities to county governments, landowners associations and their representative bodies.

THE GROWING IMPACT OF CBC

How effective has CBC been in Kenya, based on the growth of the movement and its success in engaging communities and conserving wildlife?

Measures of conservation success can be gauged by various indicators (Margoulis & Salafsky, 1998). Here we use direct measures of the success of CBC initiatives drawn from the area set aside as conservancies, wildlife

Table 1. Percentages of wildlife found in areas of differing conservation status averaged for the 1990s based on Western et al., 2009.

Conservation Status	Wildlife totals	% of all wildlife
National Parks	83,633	10
Maasai Mara National Reserve	214,045	25
Privately Protected Areas	334,263	40
Remaining populations (non-protected areas)	214,711	25
Total National Population	846,652	100

trends, and local engagement using the growth in community scouts, community-based organizations and ecotourism facilities as a measure of employment.

Since 1991, when KWS formally began promoting community-based conservation, the number of conservancies has grown from fewer than 10, all on private ranches, to 230 in 2014, most on community lands. Over the same period the area under conservancies has grown from some 100 km² to 43,600 km² (Kenya Wildlife Service, pers. com). The current area of conservancies includes 7.5 per cent of the land surface area of Kenya compared to 7.9 per cent under national parks and reserves. The growth of conservancies coincided with the levelling off of protected area set-asides (Kenya's Natural Capital, 2015) and is likely to exceed them within the next few years, based on current rates of growth. The status of wildlife in conservancies compared to national protected areas and non-protected areas is presented in Table 1.

National parks account for approximately 10 per cent of all Kenya's wildlife and national parks and reserves for 35 per cent of the total (Western et al., 2009). Private and community conservancies account for 40 per cent of all wildlife, more than all nationally protected areas combined.

Wildlife trends in national parks and reserves declined by 38 per cent over the three decades from the late 1970s (Grundbatt et al., 1995) to early 2000s, roughly matching the national decline of 41 per cent (Western et al., 2009; Ogutu et al., 2011). The only comparative data available on wildlife in private and community conservancies show most to be holding their own or increasing (Western et al., 2007).

Indirect measures also testify to the growing importance and engagement of private and community initiatives in conservation. The first 15 community scouts were established by the Amboseli Tsavo Group Ranch Conservation Association in 1991. The scouts were poorly trained and managed and proved ineffective. In 1997 KWS trained 60 community scouts at its Manyani field training centre⁶, deployed them to community areas and forged close communications and operational links. The community scouts soon proved effective in combating rustlers and poachers and became a vanguard of security for communities across Kenya. The number of scouts had grown to some 2,200 by 2014, compared to some 3,000 KWS rangers on active field duty. The number of community scouts is likely to exceed KWS rangers in the next few years, supported entirely by community revenues, NGOs and multilateral agencies. The community scouts have become highly effective in combating poachers.

The growth in community-based organizations, landowner associations and national organizations also testifies to the success of CBC. Since the first CBC organization, the Kitengela Landowners Association, was established in 1990, a large number of community-based organizations (CBOs) have been established. A number of umbrella bodies such as the Kenya Wildlife Conservation Association (KWCA)⁷ and the Rangelands Association of Kenya (RAK) have been set up to represent the CBOs nationally and have strongly influenced wildlife legislation.

Tourist lodges and camps on wildlife lands outside national parks provide a measure of the growth in wildlife tourism enterprises set up by communities in collaboration with the tour industry and NGOs. From the first ecotourism lodge, Ol Doinyo Uas, established in the Amboseli ecosystem in 1985, the number has since grown to 15 facilities outside the park, compared to two lodges inside Amboseli National Park. In the Maasai Mara ecosystem 140 lodges and campsites are spread across private and communal lands in the ecosystem compared to seven inside the Maasai Mara National Reserve.

DEVOLVING HWC RESOLUTION

The growth of private and community engagement in conservation bears directly on the extent and nature of HWC and on how it is viewed and managed nationally and locally. Ironically, as tolerance of wildlife grows with changing values and widening benefits, conflict increases due to greater protection, habituation and encroachment into human-dominated landscapes (Sterba, 2012). The



Over 2,500 community scouts are now deployed in protecting wildlife and averting human wildlife conflict in the 150 conservancies in Kenya © John Kamanga

intensified conflict between elephants and people following the CITES ivory ban has been well documented in Kenya (Western & Waithaka, 2005). The conflict was aggravated by a vacuum in policy for mitigating conflict and slow response times. HWC mitigation has been further hampered by a poor understanding of animal-human interactions on the one hand and, on the other, more commitment to protecting elephants from poachers than people from wildlife (KWS, 1995a; KWS 2005; KWS 2012b; Martin 2012; Capoccia, 2013). KWS has also shown reluctance to take early action on problem animals for fear of publicity backlash from protectionist groups and the media.

Devolving mitigation measures from centralized control is inevitable in view of the expanding scale and scope of wildlife conservation, deepening HWC, the shrinking capacity of government and the rising tide of democracy and rights fostering local decisions. The biggest challenge to devolved action lies in reversing decades of reliance on government to deal with HWC and the loss of traditional skills for coexisting with wildlife. With government efforts primarily devoted to control and compensation, scant attention has been given to the root cause of HWC and the skills of living with wildlife. Such skills reside in communities, not government agencies.

NGOs working in collaboration with communities have begun to fill the HWC void in light of conservation devolution and limited capacity and skills of government agencies. Kenya has seen a rapid growth in NGO and community efforts to protect threatened and endangered species by averting conflict in non-destructive ways. These include Living with Lions⁸, Lion Guardians⁹, Rebuilding the Pride¹⁰, Big Life³ and Space for Giants¹¹. Increasingly, CBOs such as NRT, LWF, AET and SORALO are taking on responsibility for tackling all forms of HWC by deploying specialized scouts, engaging researchers, planning and managing land uses and developing and deploying techniques to avoid and tackle conflict. These decentralized conservation initiatives, coupled with a rising tolerance of wildlife and willingness of CBOs to suffer some losses as a *quid pro quo* for more rights and responsibilities, is leading to a better understanding of human-wildlife interactions. Such understanding is based on new methods of mapping and detecting potential threats and conflict, and using scouts and RAs to map and disseminate information on aversive measures using social media and CBO networks.

Out of necessity and opportunity, devolution of conservation rights and responsibilities is moving HWC from a one-size-fits all approach to wildlife control to

new collaborative and locally-based approaches. The Borderlands Conservation Initiative¹² for example, has forged a collaborative arrangement between government agencies, CBOs, NGOs and researchers in the 120,000 km² Tanzania-Kenya borderlands to conserve viable meta-populations of elephants and lions by connecting protected areas across community lands.

Despite such advances, HWC remains more of an afterthought than centrepiece of national conservation policies and strategies. Little attention is given to the largely traditional and rapidly disappearing skills that foster coexistence (Finger & Schuler, 2004; Vira & Kontoleon, 2010). In the concluding section we look at a few examples of traditional knowledge and practices, drawing heavily on our collective experience working within and among communities to point to a new horizon for coexistence principles rather than control as a central tenet of HWC aversion.

THE NEXT HORIZON

Understanding the perceptions of communities towards wildlife is essential for successful CBC. In general, perceptions of wildlife range from threatening to useful and neutral (Brown-Nunez & Jonker, 2008), and vary with circumstance and location. Devolving and localizing HWC mitigation calls for an understanding of coexistence and how it varies with context, species, attitudes and society (Waithaka, 2012; Weller, 1931). The varied circumstances call for pluralistic and locally adaptive solutions, rather than a uniform prescriptive approach that has typified centralized conservation policy and responses.

Little attention has been given to traditional skills of coexistence, most of which have been lost as societies have transitioned to market economies. In East Africa, pastoral communities held a mixed and varying view of species, depending on their perceived threat, utility and symbolism (Roque de Pinho, 2009; Brown-Nunez & Jonker, 2008; Goldman et al., 2010). On balance, wildlife was abundant because its benefits in complementing livestock production greatly outweighed losses. There is, however, little information in literature on the ecological and behavioural basis of coexistence, excepting some insights on the relationship between lions and Maasai (Hazzah et al., 2009; Western, 2012). We draw on our first-hand knowledge of growing up in a traditional pastoral community (JK), research and management of human-wildlife conflict (JW) and long-term research on human-wildlife interactions (DW) to highlight salient factors explaining coexistence. Losses were seen as the inevitable cost of living with wildlife that, among the Maasai, were considered as second cattle

(Western, 1997) because of the many material and cultural values that were derived from wildlife. These ranged from food, to medicines, clothing, housing, weapons, environmental indicators and totems. Pastoral communities in particular saw wildlife as cohabitants of their living space and foraging range and communities used an array of techniques for averting conflict when possible and managing, deterring and controlling it when necessary. Above all, an intimate knowledge of animal movements and behaviour was crucial to sharing living space with minimum threat and loss.

Techniques for containing conflict ranged from seasonal migrations to daily herding and husbandry practices that limited threatening contact. Other techniques include, the protection of herds through vigilance, routing patterns, aggregating herds, collective guarding, night corralling, and ritual deterrents. As a last resort, threatening animals were pursued and killed, continually reinforcing the fear that high-threat species had of humans. Lions and elephants can distinguish Maasai from other peoples and show an elevated fear and escape response (JK pers. ob.). Personal responsibility for avoiding and deterring predator attacks on livestock was reinforced by group sanctions to prevent carnivores from becoming habitual killers and attacking livestock of fellow herders.

With the assumption of wildlife control by the state and prohibitions against traditional uses and deterrence, wild animals lost the many customary values they held and were regarded as government cattle (Western, 1997). HWC rose steeply once government took responsibility for wildlife protection and problem animal control, leading to a loss of traditional knowledge, the skills for coexistence and tolerance of wildlife.

Policies for devolving rights and responsibilities for wildlife use and management back to communities should therefore re-establish the underlying principles that fostered coexistence and contained HWC. They include the varied traditional values of wildlife that were sustainable and socially acceptable nationally; new values such as ecotourism and sustainable consumptive utilization; collaborative natural resource management on a scale sufficient to sustain viable wildlife populations, and conservation education, including traditional knowledge and skills for coexistence. Offsetting losses through compensation, deterrence and control should be considered within the larger context of coexistence and localized and internalized as far as possible, excepting threatened and endangered species and those calling for specialized skills.

The erosion of traditional values raises the spectre of wildlife being viewed entirely negatively (Akama & Burnett, 1995), leading to growing intolerance and deepening HWC. The negativity can, however be offset where tourism and other new wildlife values contribute significantly to livelihoods and welfare (Githaiga, 1998; Western & Nightingale, 2004; Waithaka, 2004; Homewood et al., 2009; Glew et al., 2010). Nevertheless, development of tourism and other wildlife-related enterprises and programmes is more feasible in pastoral areas than in agro-pastoral or crop farming situations due to high human populations and incompatible land use practices.

CONCLUSION

HWC has been largely ignored in policy and tackled mainly through deterrence and control by government personnel poorly trained and usually ill-equipped to respond in a timely fashion. HWC has become a focal point of interest in wildlife conservation in recent years (IUCN, 2005), spurred in part by the realization that protected areas, however vital, have limited capacity to protect all wildlife and conserve biodiversity. The necessity of, and scope for, conserving biodiversity in the human realm has drawn conservation interest in the last three decades, leading to the growth of community-based conservation (Western et al., 1994; Hulme & Murphree, 2001). Turning wildlife from a liability into an asset reduces the perception that the conservation interests of the state are at odds with primary livelihoods of communities. Devolving the rights and responsibilities for biodiversity conservation from national to local levels calls for resuscitating the incentives and skills for making wildlife an important component of livelihoods, based on maximizing the benefits and minimizing the costs and conflicts. Paradoxically, such devolution draws the focus of conservation back to the skills and methods of coexistence traditionally residing in communities which is not available to or considered by national agencies and NGOs.

ENDNOTES

- ¹ www.ecotourismkenya.org
- ² www.Soralo.org
- ³ www.biglife.org/
- ⁴ www.nrt-kenya.org
- ⁵ www.laikipia.org/
- ⁶ www.kws.org/about/training/manyani.html
- ⁷ www.kwcakenya.com/
- ⁸ www.livingwithlions.org/
- ⁹ lionguardians.org/tag/kenya/
- ¹⁰ www.soralo.org/rebuilding-pride/
- ¹¹ www.spaceforgiants.org/
- ¹² www.borderlandconservation.org

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David Western has studied human and wildlife interactions in Kenya since 1967. Formerly director of the Kenya Wildlife Service, he directed Wildlife Conservation Society programmes internationally, established Kenya's Wildlife Planning Unit, chaired the African Elephant and Rhino Specialist Group, and was founding president of The International Ecotourism Society. He founded and is currently chairman of the African Conservation Centre in Nairobi. Western's publications include *Conservation for the Twenty-first Century* and *Natural Connections: Perspectives in Community-based Conservation*. He recently served on a government task force redrafting Kenya's environmental legislation and is chief editor of *Kenya's Natural Capital: A Biodiversity Atlas*.

John Waithaka is a conservation biologist with extensive experience in biodiversity conservation research, wildlife management and policy development. He has worked with a broad range of conservation practitioners in Africa, North America and Europe, and held various positions, including: Zoology Lecturer, Kenyatta University; Executive Director, African Conservation Centre; Deputy Director, Kenya Wildlife Service; Manager, European Union's Biodiversity Conservation Program, and Conservation Biologist at Parks Canada. He is an active member of the World Commission on Protected Areas. John holds a M.Sc. in Biology of Conservation and a Ph.D. in Zoology.

John Kamanga has been trained in community development and African cultures and has worked with various communities across the rural areas of Kenya for over fifteen years. He is currently the director of the South Rift Association of Land Owners (SORALO) and works to promote conservation and tourism in the area between Maasai Mara and Amboseli national parks. He has been the chairman of the Olkiramatian Group Ranch for the past ten years. John was awarded the Cincinnati Zoo and Botanical Garden's Conservation Leadership award for 2013.

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RESUMEN

La cobertura de áreas protegidas se ha expandido rápidamente en las últimas décadas y se espera que para el año 2020 abarque el 17 por ciento de la superficie terrestre del mundo. A pesar de los beneficios de la conservación, la biodiversidad está disminuyendo y los conflictos entre los seres humanos y la vida silvestre (HWC) son cada vez mayores, sobre todo en África. Reconociendo que los vertebrados requieren mucho más espacio del que cubren las áreas protegidas y que la mayor parte de la biodiversidad reside en paisajes modificados por el hombre, los esfuerzos de conservación se están desplegando hacia los paisajes rurales. La conservación de la biodiversidad en las tierras rurales depende de propietarios de tierras que den cabida a la vida silvestre y de la resolución de los conflictos HWC que obstaculizan su disposición a conservar. Consideramos las políticas y prácticas incrustadas en la conservación comunitaria en Kenia que abordan HWC a través de la delegación de derechos y responsabilidades para la gestión de la vida silvestre que datan de la década de 1970, extrayendo las enseñanzas derivadas de las prácticas tradicionales arraigadas en la coexistencia.

RÉSUMÉ

Les dernières décennies ont connu un accroissement rapide de la superficie des aires protégées et il est prévu d'ici à 2020 que ces zones atteignent 17 pour cent de la surface terrestre de la planète. Malgré ces gains de conservation, la biodiversité est en déclin et les conflits entre l'homme et l'habitat sauvage sont en augmentation, en particulier en Afrique. Conscients que les vertébrés ont besoin de bien plus d'espace que n'en offrent les aires protégées et que la biodiversité subsiste surtout dans les paysages modifiés par l'homme, les conversationnistes orientent leurs efforts vers les zones rurales. La conservation de la biodiversité dans ces zones repose sur la volonté des propriétaires terriens à accepter la faune, et à résoudre les conflits qui compromettent leur volonté de préservation. Nous examinons les règles et les coutumes de conservation observées par les communautés au Kenya qui abordent ces conflits en tenant compte de droits en matière de gestion de la faune datant des années 1970, et tirons des leçons à partir de pratiques traditionnelles enracinées dans la coexistence de l'homme et de son habitat.