

Wildlife-Based Tourism, Ecology and Sustainability of Protected Areas in Kenya

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Abstract

Tourism plays a hugely significant role in Kenya's economy, contributing to approximately 25% of Kenya's Gross Domestic Product (GDP). Wildlife tourism to Kenya's numerous National Parks and Reserves represents a substantial part of this, with around 70% of tourism revenue in Kenya coming from wildlife tourism. Ecotourism has been recommended as a sustainable development option particularly for the ecologically depressed and underdeveloped regions of the world which have little potential for development. Tourism has been recommended as a sustainable development option particularly for the economically depressed and underdeveloped regions of the world that have little potential for development (Akama, 1999). McIntyre (1993, p. 10) defined sustainable development as: A process which allows development to take place without degrading or depleting the resources which make the development possible. This is generally achieved either by managing the resources so that they are able to renew themselves at the same rate at which they are used, or switching from the use of a slowly regenerating resource to one that regenerates more rapidly. In this way, resources remain able to support future as well as current generations.

1. Introduction

Wildlife tourism can be an eco and animal friendly tourism, usually showing animals in their natural habitat. Wildlife tourism, in its simplest sense, is watching wild animals in their natural habitat. Wildlife tourism is an important part of the tourism industries in Kenya and many other countries. It has experienced a dramatic and rapid growth in recent years world wide and is closely aligned to eco-tourism and sustainable-tourism. Wildlife tourism is also a multi-million dollar industry offering customized tour packages and safaris. Arguments have therefore been advanced in favour of ecotourism as opposed to mass-tourism as the preferred means of ensuring sustainability of the ecology of a place (Cottrell, 2001; Grumbine, 1994; Hvenegaard, 1994; Pigram, 1990). Moscardo (1999) outlined the core principles of ecologically sustainable tourism as offering quality experience to the tourist as well as improving the quality of life of the communities.

Nature-based ecotourism is a growing market and Kenya with its abundant wildlife, can certainly benefit from this particular niche market. However, for ecotourism to be successful or effective, it must be incorporated at all levels of the planning process and must also include the concerns and interests of local communities (Wight, 1993). The principle of ecotourism has guided Kenya's tourism which has emphasised a high spending and low volume tourism approach (McIvor, 1994). The Kenya government has capitalised on its wildlife resource that should be properly sustained to meet both human and ecological needs of the present and future generations (Government of Kenya, 1996).

There are many groups who are affected or affect the decisions of a firm, from investors, suppliers, and employees. Sustainable tourism literature lists many stakeholders in the tourism industry: investors, legislators, government agencies, environmentalists, the media, the scientific community, competitors, special interest groups, the general public and local communities (Hurrell & Kingsberg, 1992; Reed, 1997; Vigor & Healy, 2002). If stakeholders' interests are not taken into consideration, they can hamper the sustainability of the tourism industry. Interests seem to differ depending on the developmental continuum of a country. In developing countries in particular, the indigenous communities' interests are generally ignored in the development of tourism. Sindiga's (1996) research in Kenya noted that lack of consultation of the indigenous people in tourism planning and development led to conflict between indigenous people and tourism operators on the usage of tourism facilities.

Because of the competing interests, it became difficult to come up with a tourism plan which was acceptable to all stakeholders. In Kenya, there are many stakeholders in the wildlife-based tourism resource. In order for the wildlife-based tourism to be sustainable and preserve the natural ecological systems, the interests of all stakeholders must be considered. However, there is a tug-of-war, as the stakeholders' interests often conflict (McDermott, 2001). There is need to consider the hidden or ignored stakeholders, the very poor and women who are the traditional resource users and have used the natural resources sustainably. Kenya is no stranger to the

concept of sustainable tourism development. Kenya has great faunal and floral diversity including forests, woodlands, swamps, grasslands of many different varieties and 7,800 plant and animal species. Of all the varieties of plants, 25% comprise of shrubs and trees of which 5% are considered endangered while 8% are rare. Kenya's forests, covering no more than 2% of the land area, also host many endangered and endemic plant and animal species. There are fifty-seven prominent mammal species in Kenya, including thirty-three species of horned animals, twelve large carnivores and others such as rhinos, elephants and giraffes. The Kenya Wildlife Service (KWS) manages wildlife on behalf of the state through a system of protected areas.

Kenya lacks major exploitable mineral resources and arable land is scarce. The main economic activities are based on the primary sector, predominantly agriculture which is both a source of food as well as a revenue earner. Ecologically sustainable tourism should be viewed as part of society's policy objectives of sustainable development (Muller, 2000). Sustainable wildlife-based tourism can only be achieved through involvement of communities that are most affected by wildlife-based tourism. Sustainable wildlife-based tourism development is now more pertinent in Kenya as a result of the land reform programme which has had serious effects on the economy as a whole.

In Kenya, exclusive wildlife reservations were carved out of lands which were previously used by traditional pastoral peoples. These national parks and reserves which are now managed by the Kenya Wildlife Service (KWS) date back to the period immediately following the Second World War. They denied local people invaluable herding and agricultural resources and in some cases fishing rights thereby creating conflicts between the demands of Kenya's wildlifebased tourism and the well-being of local people who also continue to suffer the destruction of life and property. Kenya provides an African example where there is "the clearest relationship between the business of tourism, the demands of land of an ever increasing population, and the conservation of delicate ecologies" (Economist Intelligence Unit, 1991, p. 64).

2. Tourism in Kenya's economy

Kenya's tourism industry is relatively well developed. Tourism is the country's leading foreign exchange earner and a significant portion of this tourism is wildlife-based (Kenya, 1979, 1989, 1994a). The wildlife component yields substantial and increasing economic returns. However, the major proportion of tourism expenditures remains with entrepreneurs elsewhere, far removed from communities adjacent to the country's parks and reserves (Burnett & Conover, 1989; Sinclair, 1992; Sindiga, 1984, 1994). Tourism may bring in "hard" currency and help a nation to balance its accounts, however, the local consequences of tourism development are often neglected. For decades, wildlife's impact on local people was ignored thereby generating resentment to parks and reserves, and to tourism (Akama, Lant & Burnett, 1995; Olindo, 1991). Local communities make demands to use park resources, for pastoral or agricultural development.

2.1 Wildlife based tourism

Kenya has 57 protected areas dispersed widely across the country. These parks and reserves are the basis of Kenya's thriving wildlife safari tourism. Two other major attractions are coastal beaches, and museums and archaeological sites. Most tourists, however, combine wildlife safari with "sun, sand and sea" perhaps because of the proximity of wildlife areas to the coast (Dieke, 1991).

Kenya's tourism developed on the basis of up-country wildlife conservation in national parks and reserves which have become important tourist destinations. Initially most tourists came for big game hunting, collection of trophies, sport-fishing and generally experiencing the wild in habitats preserved in a near-natural state. In the contemporary time, game hunting is banned in Kenya and the tourists come to see the animals and make photographic safaris. However, significant tourist traffic is going to the Indian Ocean coast which draws most of its clientele from Western Europe, mainly Germany, Italy, and Switzerland.

Presently, Kenya's parks and reserves cover about 44,000 km² or about 8 per cent of the country's land area (KWS, 1990). Most protected areas are located in the arid and semi-arid areas; a zone that comprises over 87 percent of the national land. This region experiences low and unreliable rainfall and very high evapotranspiration rates. It cannot support substantial cultivation and resident communities practise one or another form of pastoralism (Sindiga & Burnett, 1988). The parks and reserves are at varying levels of development. The tourism industry uses only about two dozen of them. The most visited protected areas are Lake Nakuru, Maasai Mara, Amboseli, Nairobi and Tsavo. The visitor capacity in both Maasai Mara and Amboseli as well as several other protected areas has been exceeded given the current level of park infrastructure. In fact, lodges and camps have proliferated especially in Amboseli and Maasai Mara.

2.2 Negative Impacts of Wildlife Tourism

Wildlife tourism can cause significant disturbances to animals in their natural habitats. The growing interest in traveling to developing countries has created a boom in resort and hotel construction, particularly on rain forest and mangrove forest lands. Wildlife viewing can scare away animals, disrupt their feeding and nesting sites, or acclimate them to the presence of people. In Kenya, for example, wildlife-observer disruption drives cheetahs off their reserves, increasing the risk of inbreeding and further endangering the species.

Direct Impacts are effects that wildlife tourism will have on wildlife depend on the scale of tourist development and the behavior and resilience of wildlife to the presence of humans. When tourists activities occur during sensitive times of the life cycle (for example, during nesting season), and when they involve close approaches to wildlife for the purpose of identification or photography, the potential for disturbance is high. Not all species appear to be disturbed by tourists even within heavily visited areas. *Disturbing Breeding Patterns:* the pressures of tourists searching out wildlife to photograph or hunt can adversely affect hunting and feeding patterns, and the breeding success of some species. Some may even have long-term implications for behavioral and ecological relationships. *Disturbing Feeding Patterns:* Feeding of wildlife by tourists can have severe consequences for social behavior patterns. Artificial feeding by tourists cause a breakdown of the territorial breeding system. Territories are abandoned in favor of sites where food can be begged from tourists, and this has had a negative effect on the breeding success. Artificial feeding can also result in a complete loss of normal feeding behaviors. Overfeeding by tourists when so extreme, then stopped, some lead to animals being unable to locate their natural food sources. *Disruption of parent-offspring bonds:* Wildlife tourism can also cause disruption to intra-specific relationships. *Increased vulnerability to predators and competitors:* The viewing of certain species by wildlife tourists can make that species more vulnerable to predators. Evidence of this phenomenon has been recorded in birds, reptiles and mammals.

3. Ecology and Sustainability

Ecology is the branch of science that studies the distribution and abundance of living organisms, and the interactions between organisms and their environment. The environment of an organism includes both its physical habitat, which can be described as the sum of local abiotic factors like climate and geology, as well as the other organisms which share its habitat. Ecology is a multi-disciplinary science, drawing on many other branches of science. Applied ecology is the practice of employing ecological principles and understanding to solve real world problems.

Sustainability has been a leading goal in the strategic plans and policies of many countries. The concept is not equivalent to a no-growth situation as moving towards an ecological definition of sustainability may reduce access to the natural resources upon which the industry depends. The concept of sustainability basically suggests that there may be limits to how much development of tourism or other industries is appropriate. Sustainability denotes the condition at which activities are economically feasible and economically viable. A sustainable solution occurs at the intersection of what is socially desirable, ecologically viable, and economically feasible. In some countries, ecological viability serves as the ultimate constraint.

Scale is an important part of the sustainability discussion, and there are 3 important aspects of sustainability scale: time, space and function. Time concerns the fundamental question of over what period do we measure the sustainability of the development. Spatial dimension is concerned with whether we judge sustainability at the community, country or regional scale. Function is a functional mismatch that occurs because many systems are complex, even though human actions and guiding institutions, such as laws and implementing agencies, are necessarily specialized. The concept of sustainability has been criticized because it largely emphasizes developmental and conservation perspectives with very little guidance to resolving complex resource allocation decisions. However, recognizing resource use limits in development is a key component of sustainability, where development beyond such limits leads to overexploitation.

4. Tourism and the Environment

(Roe et al 1997) states that while it can be argued that tourism creates an incentive for environmental conservation, tourism is also responsible for damage to the environment. The natural environment is an important resource for tourism. With increasing urbanization, destinations in both industrialized and developing countries with significant natural features, scenery, cultural heritage or biodiversity are becoming increasingly popular sites for tourist destinations. Efforts to preserve and enhance the natural environment should therefore be a high priority for the industry and for governments. Environments where past human interaction has been minimal are often fragile. Small islands, coastal areas, wetlands, mountains and deserts, all now popular as tourist destinations, are five of the six 'fragile ecosystems' as identified by Agenda 21 that require specific action

by governments and international donors. The biophysical characteristics of these habitats often render them particularly susceptible to damage from human activities.

As the scale of tourism grows, the resource use threatens to become unsustainable. With a degraded physical environment, the destination is in danger of losing its original attraction, increasing the levels of cheaper mass tourism and forcing more "nature-based" tourism to move on to new destinations, which are likely to be even more inaccessible and fragile.

Some of the different kinds of impacts that tourism development and operational activities can have include: threats to ecosystems and biodiversity – loss of wildlife and rare species, habitat loss and degradation, disruption of coasts – shoreline erosion and pollution, impact to coral reefs and fish spawning grounds, deforestation – loss of forests for fuel wood and timber by the tourist industry also impact on soil and water quality, bio-diversity, integrity, reducing the collection of forest products by local communities, water overuse – as a result of tourism / recreational activities e.g. golf courses, swimming pools, and tourist consumption in hotels, urban problems - Congestion and overcrowding, increased vehicle traffic and resultant environmental impacts, including air and noise pollution, and health impacts, exacerbate climate change – from fossil fuel energy consumption for travel, hotel and recreational requirements and unsustainable and inequitable resource use - Energy and water over consumption, excessive production of wastes, litter and garbage are all common impacts.

Mass Tourism and discriminating tourists, who are only pre-occupied with the "big five" mentality have in the past years contributed to the degradation of the environment and harassment of wildlife. The concept of Eco-tourism has been championed by the tourist destinations globally with a view to changing the big "five" mammal mentality and developing other environmentally friendly types of tourism. Eco-tourism is thus an important concept in tourism development. The latter incorporates a strong commitment to nature and a sense of social responsibility. In this respect, the present and future generations are urged to conserve the environment while the Government is committed to strengthening and enforcing anti-poaching and nature based conservation policies which will ensure the development of responsible tourism in the country.

Eco-tourists prefer the use of local resources and expertise which in turn translates into import savings. The use of local resources and expertise also translates into environmentally sensitive patterns and local participation in the travel industry. Its emphasis on local resources and employment makes it attractive to Kenya and other developing countries, which though rich in natural resources are disadvantaged by rural poverty and lack of export earnings. The value of biodiversity is more widely appreciated in the whole world. However, pressure on wildlife and their natural habitats is increasing due to encroachment of human activities and intensified resource extraction. Accordingly conservation of biodiversity must be seen within the wider context of national economies, social goals and aspirations.

5. Categories of protected areas in Kenya

Wildlife conservation areas are designated as National/Marine Parks and National/Marine Reserves; in addition, there are game reserves. This categorization implies a concept of the ownership and management of wildlife conservation areas which is important when discussing policies for the distribution of benefits accruing from wildlife. National parks are essentially state lands which are managed exclusively for the conservation of fauna and flora (Kenya, 1975, 1985a, 1989).

Among the objectives of protected areas are to preserve these resources for aesthetic, scientific and cultural reasons; to provide educational and recreational facilities; to provide attractions for tourists and serve as a major basis for the economically profitable tourist industry; and to sustain such other activities as commercial photography and to act as water catchments (Kenya, 1975). As such, wildlife management in Kenya has numerous stakeholders. Certain activities, in particular cultivation, pastoralism, timber harvesting and consumptive wildlife utilisation (sport hunting, live animal capture, cropping for meat and trophies, and game ranching) are excluded from national parks (Kenya, 1975, 1985a). Kenya banned sport hunting in 1977 followed by an embargo on curio and animal parts in 1978.

In terms of financial arrangements, all receipts by National Parks from tourism and wildlife activities go to the KWS which is the custodian of all wildlife in Kenya. Taxes on tourist expenditures, however, go to the central government. Also, the KWS shares surplus park revenues with local authorities although this aspect has proved controversial. In contrast, National Reserves are created on any type of land. They are declared by the government with the consent of the relevant local authority. Their objectives are similar to those of parks except that other land uses by local communities and others may be specifically and conditionally allowed. Finally,

county council game reserves are similar in many respects to national reserves.

The game reserves are declared and managed by county councils or any other local government (Kenya, 1975). Local authorities collect gate fees from National Reserves; in all cases the KWS collects licensing fees for tourism facilities located in protected areas. Marine parks are somewhat like national parks in both administration and management. They are restricted to the Indian Ocean Coast and start at the highest spring water mark and extend to some distance into the sea. These parks are of varied sizes. The marine national reserves extend beyond the parks and are managed by the KWS. So far, local authorities have not been involved in their management although they share in the revenues. Certain types of fishing are allowed in the marine reserves. The establishment of marine parks and reserves was intended to conserve fragile marine ecosystems but it was realised that tourists had invaded coral gardens in the reefs to collect corals and shells thereby exploiting ornamental marine life (Musyoki, 1992). In addition, coral gardens had become important venues for snorkeling which could lead to the degradation of these marine resources.

6. Sustainable Consumptive Wildlife Utilization and Ecotourism

The concept of sustainable consumptive wildlife utilization has been formulated so as to counter the negative trends that were inherited from the wildlife based tourism and wildlife management policies that existed during and soon after the colonial period up to late 1970's. By then, conservation and tourism policies overlooked the interests of the local people by emphasizing control and regulations while neglecting incentives that would contribute to the success of wildlife conservation and management programmes in the country. The local people were denied an opportunity to make their contributions towards wildlife conservation and management as they were kept off protected areas.

There was initially a lukewarm acceptance of the policy guideline that "Kenya had an obligation of protecting the country's fauna and flora for posterity" by the local communities in whose areas the attractions abound. Equally, educational approaches and extension efforts were not very successful as the local communities were not benefitting directly from those resources within their areas. Empirical research however, indicate that direct sharing of benefits accruing from wildlife conservation and tourism were better appreciated by the local communities. These inadequacies were inherent in the conservation policies of the 1970's thus led to the current concept of sustainable wildlife utilisation whereby economic sense and the utility of the product supersedes other considerations and in the process ensuring that the resource is managed on a rational and sustainable basis. The concept entails optimum resource management, efficiency in productivity as well as equitable sharing of the benefits.

The Kenya Government, through its conservation arm, the KWS has put in place measures that ensure co-opting the support and participation of land owners in the management of wildlife. This involves sensitization, mobilization as well as education of the stakeholders. KWS has also put in place appropriate measures aimed at capacity building by the relevant institutions in order that all stakeholders become competent wildlife managers with adequate knowledge and skills regarding the contribution of wildlife visa-a-vis such alternative land uses as livestock keeping and agriculture. Sustainable consumptive wildlife utilisation may only be achieved after area specific feasibility studies are carried out to determine its viability and compatibility with non-consumptive uses.

Another important consideration is the sensitivity to the disparity in culture, ecology, and topography in the context of changing technology pertaining to game cropping, culling, game ranching, game farming and sale of live animals. The concept also entails accommodation of public interest without necessarily compromising private and community interests.

7. Wildlife and forestry/agriculture

Wild animals exert significant influences on food production systems which may be positive or negative. Positive influences include the role of wild animals as seed dispersal and pollination agents as well as use of wild animal droppings as fertilisers. Many species of birds and mammals such as bats, monkeys, baboons and squirrels spread fruit trees by their feeding action (Alexandra, 1978).

On the negative side, some wild animals species are known as reservoir or intermediate hosts for parasites and disease pathogens which can be transmitted to man and his domestic stocks. Wild animal species including both vertebrate and invertebrate species cause destruction to food and cash crops both during crop development and post-harvest storage. Vertebrate damage involves a wide range of wild animal species and a variety of crops. The activities of the pest may result in direct crop losses, i.e. actual destruction of the food by the feeding of the pest and contamination or indirect losses which may occur through damage to production systems and equipment.

Major vertebrate pests causing crop damage in Africa include a wide range of rodents and birds (Elliot, 1979; Taylor, 1984; Ntiamoa-Baidu, 1988; 1989 (a); (b); Elias, 1988). Birds can cause serious damage to grain fields. The main losses result from feeding of the birds on maturing crops, but losses at storage sites can also occur through feeding activity of the birds and contamination by roosting birds.

8. Community Partnership in Strategic Planning for Sustainable Tourism Development

The rich cultural diversity is an integral part of our tourist attractions since it is one of the main reasons why visitors travel to the outlying rural areas of Kenya. This product is therefore being developed and promoted as this type of tourism can strengthen a society's culture and create employment at local levels thereby serving as an incentive for young people to stay in rural areas rather than migrate to urban areas in search of employment. It is with the foregoing in mind that made it necessary that sustainable tourism development be based on the ethics of care and respect for the respective communities' culture. This approach ensures that the development is both people oriented as well as conservation based. Sustainable tourism in other words, means, using tourism constructively so as to support the conservation of the environment, reinforcing the cultural heritage of indigenous people as well as enabling them to benefit directly from revenue accruing from tourism and related activities.

8.1 Competing interests at community level

Studies on impacts of tourism have confirmed the importance of involving local communities at various stages of tourism development from planning through implementation to its evaluation (Murphy, 1985). Failure to involve local communities has resulted in resentment and negative social and environmental impacts (Sofield, 1991). The success of the community based sustainable resource management is based on a number of assumptions that there is decentralization of decision making to the community, the user group is homogenous and small; and benefits derived from resource management should benefit communities mostly affected by their proximity to the resource, or because they have to change their life style to accommodate wildlife. A good example is of the Masai people of Kenya who were moved from their traditional habitat in order to make way for the creation of community based wildlife parks.

8.2 Competing interests at state level

Wildlife in Kenya is considered a national heritage, the ownership and control of which is vested in the State on behalf of the nation. Wildlife is a unique resource which, if not managed correctly, can lead to the irreversible loss of species and so diminish the natural heritage and quality of life of future generations. Government has, as a result, a fundamental obligation to conserve Kenya's wildlife. In addition, government has an obligation to serve the economic and human needs of the country through the provision of food, shelter, health, education and other basic human needs. In trying to meet its obligations to its citizens, the government has created administrative structures in the form of ministries and departments. The issue of conservation is spread among diverse government ministries with competing interests. The increases in population and the pressures for improved living standards are raising the question of land use to the highest level of government.

Land use under wildlife is one form of land use. Other government ministries with other mandates inevitably perceive such land use as only an alternative and not necessarily a desirable alternative to many land use options. Lack of policy consensus exacerbates disagreement on the ground as to what the best use of a particular piece of land should be. The Ministries with conflicting interests are the Ministries of Environment and National Resources, Tourism, Lands, Agriculture and Local Government. The Ministry of Environment and Tourism's mandate is the development and promotion of tourism in general and wildlife-based tourism in particular. Through the KWS and NEMA, the Ministry is also concerned with the conservation and sustainable utilisation of wildlife within the protected areas. The Ministry of Lands, Agriculture and Local Government on the other hand have different mandates from those of the Ministry of Environment and Tourism. They are tasked to guarantee food security and spearhead resettlement of people from crowded communal areas. This has been promoted through the government resettlement programmes which has resulted in squatters and some spontaneous settlements in conservancies and some parts of national parks. The perception is that land with wildlife is an idle land that can be used productively for farming, hence the reluctance to evict such people. Moreover, contrary to the initial spirit of the conservancies which was to try and breed endangered species of flora and fauna, activities such as tourism, hunting, and game farming, have proliferated in recent years as the benefits of such utilisation have become more evident. This, it has been argued, is a result of the benefits from wildlife that is perceived as a cheap way for land use in comparison to planting crops or keeping cattle.

The government seems to be interested only in the success of crop and animal farming where they have come up with a clear policy of encouraging both commercial farming and small -scale farming. No similar structures are

in place for wildlife farming. Illegal squatters, some of whom claim to be returning to their ancestral homes, have occupied wildlife farms and conservancies. The new settlers in wildlife areas are posing a new threat to the ecological system of the area that they occupy. They engage in poaching of the endangered species that were being bred in the conservancies. There is also massive destruction of trees and burning of grass to clear the area for crop farming thereby endangering the flora and fauna of Kenya.

Nature viewing and wildlife dominate tourism in Kenya. Their sustainability is however in jeopardy given the nature of competing interests. Bold political decisions must be made regarding the land issue and the ecological systems on it. Should governments deny communities access to these resources in order to maintain wildlife-based tourism which is critical for the balance of payments for the country or should it allow communities who are experiencing a fall in incomes to strip the environment for their survival? Which ever policy decisions are taken, should take on board participation of local communities. If the country is to continue with its' sustainable wildlife-based resources, there is need for government intervention by coming up with wildlife protection strategies.

9. The importance of planning for sustainable wildlife watching tourism

The management of wildlife watching tourism can be affected by development of regional infrastructure for tourism. The nature of the tourism cycle means that tourism rarely stops at a low level of visitation, unless there are very firm – generally physical – limits in place. As any locality becomes better known, and as access becomes easier, tourism can begin to grow rapidly, at a pace that can make it difficult to ensure that growth is coordinated and well planned.

There are several implications of rapid tourism growth for wildlife watching: first, there is likely to be a greater demand for wildlife watching activities, and this demand may exceed the limits for sustainable wildlife watching, particularly at the more accessible viewing sites. Without effective controls to keep visitation within sustainable limits, disturbance of the watched animal populations will increase, and the quality of the wildlife watching experience will be affected by overcrowding. New local tourism operators are likely to become established, and may be less committed to supporting conservation and working to generate benefits for local communities and there may also be pressure on areas used for wildlife watching from unanticipated and competing tourism activities.

Managing these issues requires a combination of strong spatial and land use planning, and effective management of wildlife watching tourism sites, for example in licensing concessions, setting standards for wildlife watching and habitat protection, and ensuring that tourism operations comply with these standards. This in turn can only be achieved if wildlife and conservation managers have the necessary legal authority and political support.

9.1 Sustainable wildlife watching tourism

With the continued expansion of wildlife watching, and the increasing impacts and risks this poses for watched animal populations and their habitats, it is important to ensure that future management of wildlife watching tourism, and associated development of tourism facilities and infrastructure, is better planned and far more systematic than has often been the case in the past. Wildlife watching can only be sustainable if it contributes to the conservation and survival of the watched species and their habitats, provides benefits for local communities and community development, offers good quality tourism in line with market expectations, and is commercially viable. The requirements that are needed to attain long-term sustainability of wildlife watching are Long-term survival of population and habitats, minimal impact on behaviour of watched and associated species, improvement to livelihoods of local people, increased awareness of and support for conservation activities amongst all stakeholders, plans for sustainable management of wildlife watching, conservation and community development based on set limits of acceptable change and adaptive management, ability to manage access to wildlife watching resources and to limit future development and supportive legal and planning frameworks combined with commitment from national and local government.

Achieving each of these elements involves different sets of skills and expertise, including the ability to access tourism markets, to work with local communities, and to manage wildlife resources. They can best be brought together through participatory approaches to planning for wildlife watching tourism, involving the tourism sector, local communities, local government authorities and wildlife managers. Wildlife-based tourism will not be appropriate in some locations for conservation, social, market or commercial reasons, or a combination of these – it is therefore important to identify and focus on places where there is a realistic potential to develop sustainable wildlife watching tourism. There are four areas in particular that need to be addressed to improve the sustainability of wildlife watching tourism, particularly in relation to developing countries like Kenya: Improve understanding of the biology of watched species and monitoring of the effects of tourism on them, Improve guide training and interpretation, Evaluate the conditions required for wildlife watching tourism to be a viable

option particularly for generating revenues for conservation and benefits for local communities and Improve planning and management of protected areas and viewing sites

9.2 Understanding the biology of watched species and the effects of tourism on them

Relatively little is known about the biology of watched species and the effects that wildlife watching tourism may have on them. Most wildlife watching guidelines are based more on attempting to minimise the most visible stress that can be caused to animals, for example by crowding from wildlife watching tours, or through feeding and contact with tourists, or disturbance during breeding periods. However, even for big cats, great apes, whales and dolphins, and some bird species which have been the subject of most research, understanding of the effects of wildlife watching tourism is still quite limited e.g., differences between the way different species are affected by tourism are now becoming apparent, such as differences between lions and cheetahs, and reflect biological and behavioural differences. As a result, wildlife watching codes developed for one species cannot be assumed to be appropriate for other species within the same group.

Research is also starting to reveal that the general background levels of activity in areas where wildlife watching takes place can have significant effects on watched animal populations, in addition to the effects of close observation by tourists. As wildlife watching increases in popularity, general background effects from tourism are likely to have an increasing effect on watched species and their habitats, and to reduce the possibility for watched populations to have access to areas free from disturbance from tourism. Managing the overall development and expansion of wildlife watching tourism will therefore be as important as managing the close interactions between tourists and watched animals, in order to minimise disturbance and adverse effects. As a first step to more effective management of wildlife watching tourism it is therefore important to improve the understanding of the biology of watched species, and to monitor the effects that tourism has on them to enable wildlife watching codes of conduct and regulations to be formulated so that they are more effective in minimising disturbance while ensuring quality viewing.

9.3 Wildlife watching tourism for conservation revenue and benefits for local communities

Although there are plenty of examples of sites which gain significant income from wildlife watching tourism, these are mostly located in areas of high tourism potential with relatively good access and infrastructure. Other sites may have excellent wildlife, but are located further away from main tourism areas, and therefore have lower tourism potential, while at some sites access may need to be restricted for conservation reasons or because of the wishes of local communities. Some areas may also lack effective capacity to manage commercial tourism. And in sites with significant levels of tourism, there is no guarantee that a fair share of tourism income will accrue to the local communities and that they will be able to establish livelihoods based on tourism.

At present little attention has been given to understanding the conditions under which wildlife watching tourism can be a sustainable and viable option for conservation and community development. Because of this, there is a risk that wildlife watching activities may be developed that do not match realistic tourism demand and market expectations, or in ways that do not deliver benefits for conservation or local communities. It is important to gain a better understanding of the conditions necessary for successful and sustainable wildlife watching tourism, so that guidance can be provided on when it is an appropriate option for conservation and community development.

10. Conclusion

Successful wildlife-based tourism requires sound plans to provide the basis for management of the watched populations and their habitats. Because of the uncertainties associated with understanding of the effects of wildlife watching on animals, and with the dynamic nature of tourism, it is particularly important to use adaptive management approaches for management of wildlife-based tourism. Adaptive management requires plans and objectives for wildlife and tourism combined with continuous monitoring and evaluation of tourism and its effects on wildlife to check if objectives set in the plans are being met. Where they are not, management actions are adjusted as necessary to bring wildlife watching tourism into line with the planned objectives. Effective implementation of plans often requires interactions of a range of different stakeholders particularly tourism businesses and local communities, as well as wildlife managers and there is a need to understand better the roles of these stakeholders in making wildlife-based tourism operate successfully to provide high quality tourism, and conservation and local community benefits. There is also a need for greater understanding of the costs and benefits of managing protected areas for wildlife-based tourism, including the costs of providing the necessary visitor facilities, such as trails, sanitation and waste management, and their maintenance, as well as the costs of providing interpretation and, in some cases, habitat restoration.

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