

Impact of Tourism on Environment in Kenya: Status and Policy

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ABSTRACT

Tourism is a leading economic activity in Kenya, being the third largest foreign exchange earner after tea and horticulture. Since the 1990s, particularly the second half of the decade, Kenya's tourism industry has faced enormous challenges, including declines in per capita spending, average length of stay, hotel occupancy rates, hotel room rates and service quality. Environmental degradation and deterioration in the quality of tourism products due to mass tourism are some of the factors that have contributed to this decline. Despite the country's policy advocating spatial distribution of tourists in the country, tourism marketing has continued to focus on the traditional attractions, thereby perpetuating concentration.

This paper looks at how tourism has affected the environment in Kenya and what is being done about it. Using existing literature and results of discussions with 17 industry players, the study found evidence, though most of it qualitative, of environmental impacts. The impacts are most severe in crowded and overdeveloped tourist attractions. At the coast, which accounts for close to 60% of the country's total bed-nights, beaches have been seriously degraded and polluted, coral reefs and mangrove forests substantially destroyed and marine species adversely affected. Too many hotels and other tourist facilities have been developed without regard to carrying capacity limits. In game parks, which are the prime motivation for 70–80% of all tourists visiting the country, vegetation has been degraded, wildlife behaviour disrupted, pollution increased, and resources have generally been overutilized.

Sections of the Kenyan tourism industry have implemented some of the mitigation recommendations made at the global level, such as using technology to minimize resource use and to treat wastes, recycling wastewater and other wastes, rehabilitating degraded tourist attractions by planting trees and through other measures, and training staff on conservation. Partnership programmes involving the government, the industry and local communities – such as the Kenya Wildlife Service (KWS) and the Beach Management Programme – are achieving tremendous success.

The majority of the industry's operators, however, routinely ignore environmental regulations and use ecofriendly jargon as mere commercial mantras. Mitigation efforts in the country are constrained by weak institutions; lack of coordination of institutions dealing with tourism; corruption; mismanagement; inadequate political and administrative capacity; policy failure, including the lack of an effective land-use policy; the persistence of a mining mentality in some of the institutions with responsibility overprotected areas; inadequate incentives (such as secure property and access rights) to stimulate interest of local people in conservation; poor tourism performance since the mid-1990s; poor marketing and inadequacy of marketing resources; physical insecurity and rampant poaching; and the high cost of changing these practices.

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ABBREVIATIONS

EIA	environmental impact assessment
ESOK	Ecotourism Society of Kenya
GoK	Government of Kenya
IPCC	Intergovernmental Panel on Climate Change
IRDs	integrated resort developments
IUOTO	International Union of Official Travel Organizations
KATO	Kenya Association of Tour Operators
LCA	life cycle analysis
MTP	maximum tourist population
NIT	negative impact turnaround
STD	sustainable tourism development
TCC	tourism carrying capacity
UN	United Nations
UNEP	United Nations Environment Programme
USD	United States dollar
WRI	World Resources Institute
WTO	World Trade Organization
WTTC	World Travel and Tourism Council

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1 INTRODUCTION

Tourism has emerged as the world's largest industry, with annual revenue standing at USD 476 billion in 2000, according to the World Tourism Organization (WTO). In that year, there were 698 million international tourist arrivals and four to five times this number of domestic tourists. The World Travel and Tourism Council (WTTC) estimates, moreover, that the travel and tourism economy contributed about 10% (or USD 3541 billion) of the global gross domestic product (GDP) in 2002. Tourism is the main source of foreign exchange for at least 38% of all countries worldwide and one of the top five sectors, in terms of exports, for 83% of all countries. International tourism and fare receipts alone account for 8% of global export earnings and for more than 10% of world employment. The sector has provided hope to the least developed countries that lack alternative sources of income. Therefore, tourism is significant or growing in 11 out of the 12 countries that are home to 80% of the world's people living on less than USD 1 a day (Christie and Crompton, 2001).

For many years tourism was generally viewed as environmentally benign: in fact, it was often seen as a key activity within the sustainable development strategy. It is now widely recognized that there is no 'zero-impact' tourism and that tourism as an alternative form of development has its unique impacts on the environment (Collins, 1998). As tourism activity in a destination expands, social, cultural and environmental costs increase – particularly once the carrying capacity of the destination is exceeded – initiating a decline in its visitor rate. This realization has popularized the concepts of sustainable tourism development (STD) and tourism carrying capacity (TCC).¹

¹TCC is defined as the amount of tourism damage a site can assimilate without long-term damage (Collins, 1998).

Despite the popularization of these concepts, empirical evidence on environmental impacts of tourism is scanty. In many countries, Kenya included, the magnitude of the impact, and TCC have not been determined. In Kenya, environmental degradation and deterioration of the quality of tourism products due to mass tourism have contributed to a tremendous tourism decline since the 1990s, which is reflected in the decline in per capita spending, average length of stay, hotel occupancy rates, hotel room rates and service quality. Between 1995 and 1998, for example, the industry recorded its worst performance to date when revenue dropped by about 19.5% annually. Carrying capacity limits of Kenya's coastal and safari resources (which are the backbone of tourism) have been violated. Unique attractions, wildlife and wilderness that attracted high spending tourists have been destroyed through overcrowding, environmental destruction and general strain, seriously eroding the country's appeal.

This paper examines the impact of tourism on the environment in Kenya, the role policy has played in the process, and how the industry is preparing for the implementation of the Environmental Management and Co-ordination Act (1999), which became effective in January 2000. This Act introduced a legal provision which requires that projects provide for environmental impact assessment (EIA) before they are approved. This Act also confers on individual Kenyans the right to a clean and healthy environment and provides for environmental audits and monitoring of activities likely to significantly affect the environment. Finally, the paper suggests policy directions for mitigating the adverse, and enhancing the positive environmental impacts of tourism. Methodologically, we use existing literature and information obtained from discussions with several industry players.

2. THEORY, METHODOLOGY AND EMPIRICAL EVIDENCE

This section reviews the theoretical link between tourism and the environment, provides the methodology to be used in this study and reviews empirical evidence of the environmental impacts of tourism. It ends with a discussion of the efforts being made worldwide to enhance the positive environmental effects of tourism and mitigate the negative ones. The framework presented in this section is used in later sections to analyse the environmental impacts of tourism in Kenya and to assess the efforts being made by government agencies and the tourism industry itself to deal with the impacts.

2.1 Theoretical Issues

The good quality of the natural and man-made environment is essential for tourism. Tourism itself can enhance or destroy this environment; this underscores the significance of sustainable tourism development. By creating economic rationale, tourism can stimulate environmental protection and conservation. On the other hand, when tourism activity expands beyond the environment's ability to cope, negative impacts can gradually destroy the environmental resources upon which these activities are based. Adverse environmental effects of conventional tourism include pressure on local resources (energy, food and other raw materials); deforestation and degradation of scenic landscapes; pollution (air, water, noise and visual); ecosystem degradation, especially in transitional species-rich zones, and the consequent loss of biodiversity; natural habitat loss; and introduction of alien species that disrupt natural ecosystems.

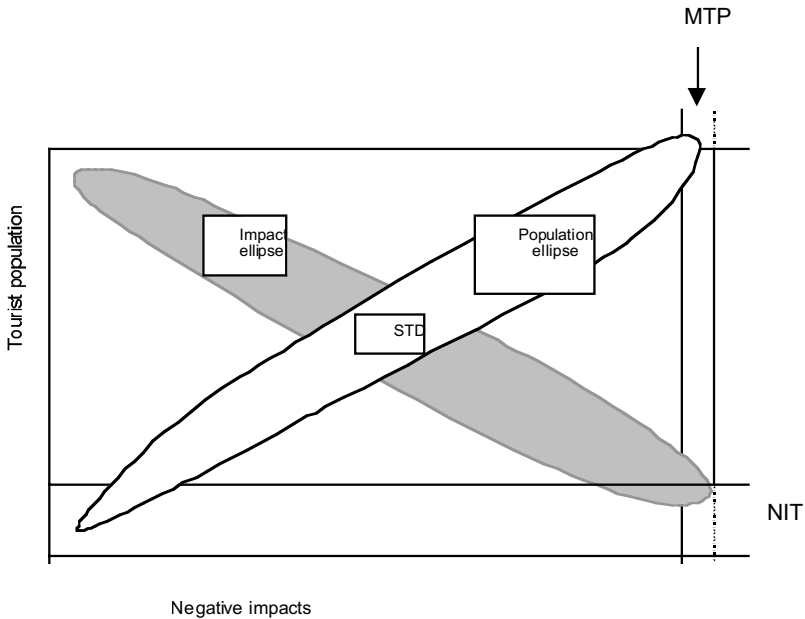
2.1.1 Sustainable tourism development

'Sustainable tourism development' is a concept that recognizes both environmental and socio-cultural limits to tourism development. It also recognizes that as the tourist population increases, social, cultural and environmental costs (such as crime, prostitution, cultural dislocation, pollution and biodiversity loss) increase, particularly once TCC of the destination is exceeded (figure 1).² Once TCC is violated, the destination is perceived as being overcrowded, and its visitation rate drops. The threshold level beyond which arrivals begin to decline is shown in figure 1 as the maximum tourist population (MTP). The drop in visitation rate continues until another threshold level (the negative impact turnaround, NIT) is reached, at which point environmental and social damages begin to repair. Recovery comes after a lag, since time is required for environmental regeneration and for socio-cultural changes to take place (Ikiara, 2001a). In fact, the commercial response of the tourist industry to the drop in visitation may delay recovery. This could happen through competition for the fewer tourists (through heavy discounts, for example) especially when there is excess capacity. Such discounts attract a cheaper class of tourists and lead to quality deterioration, therefore delaying recovery (Ikiara, 2001a). With sustainable tourism development, tourist numbers or tourism activity is not allowed to reach the threshold level (MTP).

Although measurement difficulties (especially for carrying capacity and social-environmental impacts) reduce its utility as a practical tourism-management tool, the model demonstrates to policy-makers and tourism managers the tourism policy tradeoffs (Ikiara, 2001a).

² See Ikiara (2001a) for a more detailed discussion of this framework.

Figure 1: Model of sustainable tourism development (STD)



Source: Lawrence (1994).

A strong sustainability criterion³ is more appropriate for defining STD, since natural capital is typically unique, loss irreversible and non-substitutable owing to its critical role in ecosystem resilience (Collins 1998). Development beyond a certain threshold level cannot, therefore, be sustainable in the strong sense, as it could violate minimum viable populations and lead to irreversible damage. It should be noted, however, that TCC can vary with such factors as seasons, climatic features, duration of exposure to excess tourism demand, management of upstream activities (pollution) and technology (Collins, 1998). The concept of TCC fails to suffice for strong sustainability (or STD) in that even if the threshold level were not violated, future generations may prefer the original level of natural capital to the threshold level (Collins, 1998).

³There are weak and strong variants of sustainability. Weak sustainability assumes perfect or high degree of substitutability between natural and man-made capital, while strong sustainability requires environmental protection or non-declining stock of natural capital over time (Collins, 1998).

Several other terms are commonly used synonymously with sustainable tourism. These include 'ecotourism', 'green tourism' and 'alternative tourism'. These terms lack universally accepted definitions, and the tourism industry has used them as mere 'commercial mantras' (Collins 1998) or 'ecotourism lite' (Honey, 1999) to justify commercial exploitation of fragile natural areas. While the world's Ecotourism Society, for example, defines ecotourism as "responsible travel that conserves natural environments and the well-being of local people", the original definition of the term (by Hector Ceballos-Lascurain, 1987) was "traveling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations" (Fillion et al., 1994).

Strategies often viewed as ensuring STD include (1) small-scale tourism instead of mass tourism, (2) mass tourism organized into integrated resort developments⁴ or 'honeypots of visitor attraction', (3) mass tourism that is spatially dispersed, and (4) tourism with greater local participation and that consumes more local than foreign products and services (Collins, 1998; Weaver, 1999). If local people cannot benefit from conservation, there is likely to be infringement on and degradation of the environment. While the dispersion thesis assumes that TCC is unlikely to be exceeded across the broader set of destinations, studies in Maldives and Nepal suggest that dispersal in the presence of tourism expansion can lead to more spatially penetrating environmental degradation (Collins, 1998).

Many policy instruments have been adopted around the world in an attempt to realize STD. These include market-based incentives (such as

⁴The long-term environmental, economic, and socio-cultural impacts of IRDs, however, are still being debated over.

taxes and subsidies) and command-and-control instruments (such as tourist entry quotas and zoning). The effects of upstream activities on a tourism site (pollution and other externalities) affect the TCC of the site and must be taken into consideration in the design of policy instruments. There is no evidence that market-based instruments have succeeded in improving or maintaining environmental quality at any major destination, while command and control instruments are characterized by enforcement problems (Collins, 1998). Other policy instruments include management of excess demand, that is, peak management through spatially extensive strategic planning to avoid surpassing STD limits in particular destinations. This, however, can transfer unsustainable tourism to neighbouring destinations.

The main challenges facing STD around the world are how to (1) estimate the carrying capacity of an attraction or destination, (2) identify tourism's long-term costs and benefits, (3) ensure that rural areas receive sustainable tourism benefits, (4) integrate environmental planning with normal development, and (5) identify threats to long-term sustainability.

A related framework for analysing the impact of tourism on the environment is 'life cycle analysis', in which a tour is divided into different stages such as decision over travel, sorting out of offers, actual travel, accommodation, catering, and leisure activities (M^lller, 1997). The inputs for each of these stages are tracked and their impacts on the environment analysed. The strength of this analysis, which could be viewed as an elaboration of, rather than an alternative to, the broader STD framework, lies in its recognizing that different stages of the cycle have different implications on the environment.

It should be noted that in estimating the impact of tourism the use of resources or land for tourism must be weighed against their next best alternative use.

2.2 Methodology

This study relies on both secondary and primary data. Secondary data, especially on the magnitudes of the environmental impacts of tourism, are obtained from existing literature. Although most of this literature is not specific to Kenya, it is indicative of the impacts that tourism has on the country's environment. The paper also utilizes information from informal interviews conducted with 17 industry players (4 tour operators, 7 hotel and lodge operators, and 6 other stakeholders such as industry associations, the Ministry of Tourism and Information, the Kenya Wildlife Services – KWS, and Utalii College). Though largely qualitative in nature, the information from these interviews is greatly insightful, especially with respect to the impacts observed by these players and their efforts towards mitigation of adverse environmental effects of tourism. The paper does not attempt to either quantify the impacts or rigorously isolate those associated with tourism from those that would have occurred anyway from other causes.

2.3 Environmental impacts of Tourism

Tourism has a tremendous impact on the environment of both negative and positive nature, especially because of its interaction with wild species and populations, which are highly sensitive to human disturbance. Negative effects of tourism include trail (soil) erosion; air, noise and water pollution; littering; decreased diversity of flora and fauna; and aesthetic degradation (Williams, 1987). The magnitude of these impacts depends on the intensity of tourism development and use, resilience of the ecosystem, long-term versus short-term tourism planning and the extent of modification of the tourism site (Cohen, 1978). The 1992 UN Conference on the Environment and Development in Rio (the 'Earth Summit') recognized that tourism places socio-economic value to wilderness (or natural resources in their original state), therefore

justifying their conservation and protection against development. This way, tourism provides vital funding for national parks and other conservation areas.

Nash (2001) cites examples of tourism's crucial role in environmental conservation:

- Tourism in the Parc des Volcans of Rwanda generates USD 1 million annually, which is used to support the management of all protected areas in the country.
- It has been estimated that in Kenya's Amboseli National Park each lion or elephant herd is worth USD 27,000 or USD 610,000 per year, respectively, in tourism revenue. This economic value motivates wildlife protection and conservation.
- In countries like Madagascar (where 50% of park entrance fees is allocated to sustainable development projects for the local people) and Kenya (where wildlife tourism industry was estimated to employ 55,000 people in 1994) tourism facilitates sustainable development. Direct annual revenue receipts from park entrance fees are conservatively estimated at USD 2–12 billion for developing countries (or benefits of USD 93–233 billion per year when indirect expenditures of ecotourists are included).⁵ This development, plus employment in tourism, draws labour away from environmentally destructive activities. Ecotourism has proved to be a more sustainable development strategy than are extractive uses of land.
- Ecotourism promotes environmental health by providing environmental education to the local people and by building consumer demand for environment-friendly products and services.

⁵ In 1993, the World Resources Institute (WRI) estimated that developing countries earned USD 30 billion annually from ecotourism.

- Tourism contributes to environmental conservation through improved environmental management and planning, for example through control of tourism activities and use of environment-friendly technology.

Negative impacts of tourism on the environment include:

- Cutting down trees or shrubs for firewood, particularly while hiking or camping, has adverse environmental impact (Nash, 2001). In Nepal, for instance, it is estimated that a trekking tourist uses 4–5 kilograms of wood per day (UNEP, 2001).
- Improper disposal of garbage by campers and other tourists leads to pollution and affects wildlife feeding behaviour.
- Transportation emissions, especially from airplanes, are a serious source of pollution. Life-cycle analyses show that the greatest impact of tourism on the environment comes from air transport emissions (Müller, 1997), which have both local and global (global warming) effects. The United Nation's Intergovernmental Panel on Climate Change (IPCC) estimates that aviation contributes 3.5% of climate change and that if corrective measures are not taken this will rise to 15% by year 2050 (People & the Planet, 2000–2001). Travelling the same distance, trains emit only one third of the carbon emitted by airplanes. Moreover, the total warming effect of all emissions produced by aircraft (carbon dioxide, water, and nitrogen oxides) is estimated by IPCC to be two to five times greater than carbon dioxide alone. Global warming or climate change is expected to increase the severity and frequency of bad weather and, therefore, harm vulnerable ecosystems. One reason that pollution from air transport is high is that air fuel is untaxed, which leads to excessive or suboptimal demand. Promoting group instead of individual tourism helps to reduce pollution from transport.

- Ozone-depleting substances generated by some of the equipment and products widely used in the tourism industry such as refrigerators, air conditioning and propellants in aerosol cans are as dangerous as are emissions from jet aircraft.
- Noise from transport affects the feeding and mating behaviour of wildlife, and water pollution harms their health.
- Construction of structures of inappropriate design and size affects local landscape.
- Overexploitation and degradation of resources cause great harm to the environment. The very presence of tourists, especially in excessive numbers, leads to resource strain and therefore environmental degradation. The hotel industry overuses natural resources such as water, land, wood and food, therefore damaging the local environment and compromising the long-term sustainability of the tourism industry. Successful tourism attracts migrant labour, aggravating pressure on infrastructure and environmental resources. Even ecotourism can degrade the environment, because many of the places visited by ecotourists support fragile ecosystems (Budowski, 1976). Structures in ecologically fragile areas destroy habitats. Access roads are often more destructive than the tourist projects themselves. Nature tourism or ecotourism, on the average, tends to have a lower impact on the environment and to require less infrastructure than mass tourism (Alderman, 1994). The desire of tourists to have a closer view of wildlife has increased mobility in national parks – including off-road driving – and led to substantial loss of natural vegetation. In some instances, tourism harasses animals in protected areas.

2.3.1 Coastlines

Beaches, coastlines and islands are the most popular tourism products, accounting for about 60% of all bed-nights in Kenya. Environmental problems associated with tourism activity on coastlines include (People & the Planet, 2000-2001; WRI, 2001; UNEP, 2001):

- Development and urbanization of the coastline have threatened some species with extinction, such as the monk seal, sea turtles, crabs and many plant species.
- Water pollution: Tests in 1997, for example, found that only 125 out of UK's 755 beaches met the Marine Conservation Society's standards for clean water. In 1990 all of Thailand's hotels in Pattaya lacked sewage facilities and discharged raw sewage into the sea; only 60% of the hotels had acquired the facilities by 1996. Sewage runoff damages coral reefs by stimulating growth of algae, therefore interfering with the filter-feeding mechanisms of the corals.
- Beach erosion arising from coastal development such as buildings alters patterns of sand movement. Studies have found up to 70% of the world's beaches to be eroded.
- Building of resorts often damages coral reefs, which are important tourist attractions. Boat anchoring, divers and snorkellers all can damage coral. It is estimated that coral reefs in 90 of the 109 countries that have them are being damaged by these uses, plus sewage and other pollutants and by harvesting of coral either by tourists or for sale to tourists. Dive sites have carrying capacities estimated by some studies to be 4000–15,000 dives per year. Violation of these limits leads to reef degradation. In addition, reefs are over-fished to meet tourist demands. Global warming partly caused by tourism leads to the rising in sea temperature, which is one of the greatest threats to coral reefs.

- Loss of mangrove forests, which provide breeding and feeding grounds for many marine species. Globally, about 50% of mangrove forests have been lost.
- Seven million tonnes of trash is dumped at sea yearly (77% of which is from cruise ships, which are very difficult to prosecute for illegal dumping). In the Caribbean alone, cruise ships are estimated to generate 70,000 tonnes of waste annually. Waste degrades the physical appearance of water and the shoreline and causes death of marine animals.

2.3.2 Mountains

After beaches and coastlines, mountains are the most popular tourist attractions, accounting for 15–20% of world tourism and generating USD 70–90 billion annually in tourism revenue (People & the Planet, 2000–2001). Seven of the 14 key biodiversity hotspots identified in the tropics have at least half their area in mountains. Environmental problems in mountains include trail degradation; deposition of rubbish along the trails;⁶ deforestation arising from excessive firewood use; and traffic emissions of nitrogen oxides, hydrocarbons and lead (People & the Planet, 2000–2001).

2.3.3 Wildlife

Wildlife tourism accounts for 10% of international tourism (People & the Planet, 2000–2001). The main impacts of tourism on wildlife are disruption of their normal behaviour, which affects their feeding and breeding patterns. In the Grand Canyon National Park in the USA, for instance, wild deer had to be shot in 1995 because they had become so

⁶In 1993, for example, two tourists counted 4500 pieces of litter along a 10-kilometre stretch of trail on Mt. Kilimanjaro (People & the Planet, 2000–2001).

used to junk food from tourists that they had lost their natural ability to digest vegetation. In third world national parks, cheetahs and lions have been found to hunt less when surrounded by more than six vehicles (Western and Henry, 1979). On Mexico's Pacific Coast, bright lights from beachfront hotels disorient female sea turtles heading ashore to lay eggs, often preventing successful reproduction (Nash, 2001).

2.3.4 Natural resources

Tourism can be a profligate consumer of natural resources, as demonstrated by the following examples: (1) a large hotel in Egypt uses the quantity of electricity that could be used by 3600 families, (2) the amount of water used by a tourist in 3.6 days is enough to produce rice to feed for a year a whole village in developing countries, (2) a hotel guest in the Philippines uses as much water in 18 days as would a rural family in a year, and (4) a tourist in Spain uses 880 litres of water compared with 250 litres used by a local person.⁷ Golf courses use a lot of water and contribute to pollution from runoff. In the Philippines, for instance, the average golf course has been found to use 24 million gallons of water per month, which would be enough to irrigate 65 hectares of farmland or supply a 2000-room, four-star hotel. In Spain, a golf course in Benidorm uses as much water as would 10,000 people (People & the Planet, 2000-2001). In Thailand, a typical golf course has been found to use 1500 kilograms of chemical fertilizers, pesticides and herbicides a year and as much water as would be used by 60,000 villagers. Chemical runoff from pesticides and fertilizers pollutes rivers and kills wildlife.

Huge potential exists for hotels and resorts to reduce energy and water use through appropriate technology such as recycling, reduction of toilet

⁷ These examples are taken from People & the Planet (2000-2001), which quotes various sources such as UNEP, FAO, and WWF.

flush volumes and use of energy-efficient light bulbs. A hotel in Canada, for example, reduced its waste by 85% by recycling wastewater from washing for use in flushing toilets and in irrigating lawns (People & the Planet, 2000–2001).

2.4 Global efforts to mitigate Environmental impacts of Tourism

Globally, there have been numerous efforts to mitigate the adverse environmental impacts of tourism. Broadly, these efforts can be divided into government efforts and industry initiatives.

2.4.1 Government efforts

Efforts made by governmental and intergovernmental agencies include:

- Establishment in late 1940s of the World Union for Conservation of Nature and Natural Resources to promote active conservation and planned use of locations with indispensable features.
- Advocacy and environmental policy development beginning in late 1950s, by the International Union of Official Travel Organizations (IUOTO), which became the World Tourism Organization (WTO) in 1979. IUOTO policy on the environment was formulated during its 22nd General Assembly held in Ankara (Turkey) in 1971, and encompassed the need for (1) integration of environmental protection in physical planning policies, (2) dealing with the issue of tourist capital protection at the global level, (3) uniformity in national environmental protection practice, and (4) setting up of an inventory of tourism resources. In addition, the policy provided guidelines for resort development that required their planning by a multidisciplinary team of experts.

- Establishment of an environmental committee by WTO and the holding of the World Tourism Conference (in Manila) in 1980. The conference declaration formed part of the joint WTO/UNEP declaration of 1982 that emphasized the importance of environmental protection for tourism, the role of tourism management in environmental and cultural health, the need for environmental and tourism management to be integrated into national policies and coordination of policies and strategies, and the need for WTO and UNEP to promote integrated tourism and environmental development.
- The United Nation's Earth Summit of 1992 produced Agenda 21, which requires the travel industry to increase recycling and reuse of residues, reduce waste, manage and protect waters, increase environmental awareness and establish worldwide policies.
- The UNEP-sponsored World Conference on Sustainable Tourism in 1995 produced a charter on sustainable tourism that calls on governments to draw action plans guided by Agenda 21.
- WTO, the World Travel and Tourism Council (WTTC) and the Earth Council joined to produce a booklet titled '*Agenda 21 for the travel and tourism industry*'. This booklet calls for protection of human health and the environment, adjustment of the prices of goods and services to include the costs of recycling and/or proper waste disposal, and incorporation of voluntary plans to manage products and processes responsibly.
- UN's first meeting on sustainable tourism in April 1999, attended by the tourism industry, national and local governments, trade unions and activist groups proposed that (1) airlines show in-flight videos to educate tourists about environmental and cultural sensitivities of their destinations, (2) governments develop national

strategies or master plans for sustainable tourism and work in partnership with the tourism industry and other groups, (3) the tourism industry continues with voluntary schemes such as the Green Globe, (4) the results or impact of such voluntary schemes be assessed through comprehensive surveys, and (5) tourism be integrated into local government planning, and pilot communities be selected to gauge the results.

- As a way of promoting ecotourism, which is now estimated to account for 7% of the global tourism market, and as a reflection of the increasing support for ecotourism, the UN declared 2002 the International Year of Ecotourism.

2.4.2 Tourism industry's initiatives

In environmental protection, the tourism and travel industry has tended to prefer self-regulation to government regulation. In 1997, for instance, WTTC successfully opposed a UN proposal to tax air travel to fund environmental protection, preferring instead to focus on the industry's self-improvement incentives and light-handed regulation as its millennium vision for the environmental policy agenda in tourism. The following are other initiatives of the tourism and travel industry to mitigate adverse environmental impacts of the trade:

- Production by the Inter-Continental Hotels and Resorts group – an award-winning leader in ecotourism – of a 20-page environmental operations manual in 1991 that has a 134-point checklist to evaluate conservation, waste management and air emissions, among others. Its policy is based on the 'reduce, reuse and recycle' principle and encourages hotels and resorts to choose methods that are the least damaging to the environment. The hotel chain, in addition, has a six-point environmental commitment statement: to conserve natural resources, select products from environmentally responsible sources,

minimize waste, acknowledge the different regional needs, identify ways to participate in local environmental efforts and develop environmental awareness.

- Founding of the International Hotels Environmental Initiative (IHEI), which published a manual closely based on the Inter-Continental one.
- Establishment of an environmental certification scheme, 'Green Globe', backed by WTTC, whose application is increasingly being improved.
- Launching in March 2000 of the Tour Operators' Initiative for Sustainable Tourism Development. This initiative aims to improve the environmental performance of tour business through sharing information and experiences on best practices in environmental management, using new technologies to reduce environmental impacts, conducting audits to reduce the negative environmental and social impacts of tourism, and working closely with other stakeholders (governments, tourism industry and others) to promote development of sustainable tourism. The initiative is proactive and helps members through facilitating workshops, conferences, regional and national working groups on key issues of sustainable development, education or training, and developing and disseminating guides and manuals on specific topics. According to this initiative, best practice includes:
 - Responsibly using natural resources such as land, soil, energy and water
 - Reducing, minimizing or preventing pollution and wastes

- Maintaining or enhancing biodiversity through protecting plants, animals, ecosystems and sensitive areas
 - Maintaining or enhancing cultural diversity through protecting landscapes and cultural heritage
 - Respecting the integrity of local cultures
 - Cooperating with local communities and people
 - Utilizing local products and skills
 - Enhancing cooperation between the tourism industry and national and local authorities and local communities
 - Developing and implementing integrated planning and management of destinations to preserve their quality and future accessibility.
- Emergence of ecotourism in the 1970s and its popularization in the 1990s, based on (1) ecotours, (2) no-trace camping, (3) advocacy for reduced transportation emissions, (4) use of mass transportation, walking, cycling or horseback riding in place of individual tourism, (5) promotion of souvenirs and locally made products that do not damage the environment, (6) increase in park entry fees, limited access to organized tours, and limited number of tourists within a set period, (7) use of environmentally protective technology in all aspects of tourism, including pollution checks on the hotel and travel industry, and evaluation of new tourism projects on how they deal with waste disposal and related pollutants, (8) training tourism personnel to be sensitive to heritage issues, (9) self-regulation codes, and (10) voluntary impact and carrying-capacity studies.

For ecotourism to protect the environment, the area allocated to it should be large enough to support the minimum critical populations of large mammals and the predators required to protect biodiversity. In addition, the ecotourism activity should produce local benefits to serve as an economic incentive for local people. There is consumer demand for tourism that benefits local people and protects the environment. For instance, a 1995 survey by the Travel Industry Association of America found that 83% of travellers were willing to spend more for tours or facilities that conserved the environment; and a 2000 MORI poll for the Association of British Travel Agents found that 64% of UK holiday-makers were willing to pay £10–25 (USD 16.4–41.0 at the exchange rate for 2000) more for their holiday if it benefited local people, charity or the environment (People & the Planet, 2000–2001).

3. OVERVIEW OF KENYA'S TOURISM INDUSTRY

Travel and tourism is an important sector of the Kenya economy, contributing around 8.7% of the country's GDP, 6.8% of total employment and 19.2% of total export earnings in 2002, according to estimates using tourism satellite accounting methodology (WTTC, 2002). Following substantial public sector divestiture in the 1990s, the sector is now largely owned and driven by private investors with the role of the public sector increasingly shifting to regulatory and facilitatory functions (Ikiara, 2001a). Important public sector agencies in the industry include the Ministry of Tourism and Information, the Kenya Tourist Board, the Kenya Tourism Development Corporation, Bomas of Kenya, Utalii College and KWS. Their roles encompass policy formulation and implementation, coordination of marketing and promotion, lending for tourism development, training, and conservation and protection of the country's natural and cultural resources.

Coastal beaches and wildlife are the backbone of the country's tourism industry, although currently there are efforts to diversify the products. While approximately 80% of international tourists visit the country primarily to view wildlife (Filion et al., 1994), close to 60% of all bed-nights are attributable to the coast. The coast and Nairobi have jointly accounted for over 80% of total bed-nights since the 1970s. Conference tourism (especially in Nairobi) is also important. Typically, the tourist spends one night in Nairobi on arrival in the country, takes a two-day or so safari to view wildlife, and then spends the rest of the holiday on the coastal beaches. There is also concentration in tourist source markets, with Europe (principally the UK and Germany) accounting for about 72% of the total bed-nights occupied in 1994. This, however, had dropped to about 54.1% by 1998, and efforts to diversify source markets continue.

An important positive development of the country's tourism sector has been the increase in the share of the trade attributable to East African and domestic tourists. For example, the average length of stay of visitors from East Africa increased from 7.9 days in 1985 to 13 days by 2000. Similarly, the share of domestic tourism, which is critical for sustainability and for reducing over-reliance on foreign tourists, improved from 20.2% of all bed-nights in 1975 to 24.9% by 1998 (Ikiara, 2001b). Owing to the increasingly difficult domestic economic situation, however, the share of domestic tourism had fallen to 22.1% by 2001.

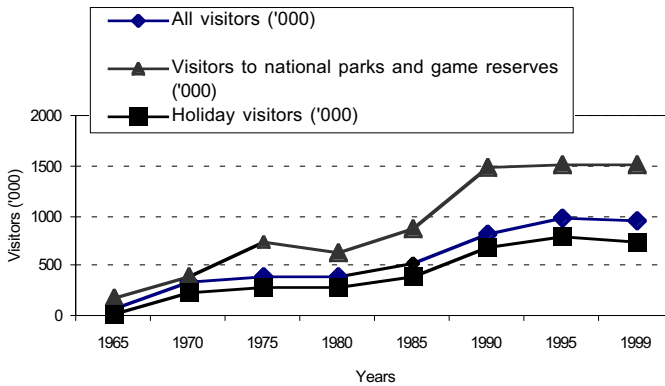
Tourism in Kenya has experienced remarkable growth since independence, although the pace has varied over time.⁸ Visitor numbers increased at an average annual rate of 7.6% between 1965 and 1998, to reach 894,300 (Ikiara, 2001b; figure 2). Growth was rapid in the 1960s (36.2% annually over 1965–1970), slow during 1970–1980 (1.4%), and then rising to 7.5% between 1980 and 1990. Growth, however, slumped again to only 1.2% per year between 1990 and 1998. Between 1995 and 1998 the sector registered an unprecedented negative annual growth, –1.5% for arrivals and –19.5% for tourism revenue, and the country's share of continental tourism revenue dropped from 5.5% to 2.4% (Ikiara, 2001a). Recovery began in 1999 with an 8.4% increase in visitor arrivals. In 2000, arrivals increased further by 6.9%, and in 2001 there was a 4.1% decline, partly because of the 11 September 2001 terrorist attacks in the USA. Other performance indicators include declines in (Ikiara, 2001):

- Average length of stay from 15.9 days in 1985 to only 8.4 days in 2001
- Per capita (international) tourist expenditure from USD 544 in 1990 to about USD 310 in 2001

⁸ See Ikiara (2001b) for a more detailed discussion of the industry's historical performance.

- Hotel occupancy from the average of 58% in 1990 to 33.9% in 1999, and recovery to 40.3% by 2001
- The number of visitors to museums, snake parks and historical sites from 0.9 million in 1990 to 0.68 million in 2001
- Occupancy rate of Kenyatta International Conference Centre from 74.8% in 1980 to 10.7% in 1999, and recovery to 17.5% by 2001

Figure 2: Tourist arrivals in Kenya (1965–1999)



Source: Ikiara (2001a).

Many challenges face Kenya's tourism industry (Ikiara, 2001b):

- Insecurity and political uncertainty (including regional unrest). Up to now the industry has not fully recovered from the blow of ethnic clashes at the coast in 1997, reflecting the high sensitivity of tourism to security. Even though a tourist police force has been established, much more needs to be done to improve security (for example, boosting the morale of the force and providing it with adequate facilities).
- External factors such as the global economic recession and the high cost of travel (due to oil price increases and inadequate market

competition). Other factors include wars (such as the 1991 Gulf War) and terrorist acts such as that of 11 September 2001 in the USA. Using the tourism satellite accounting methodology, WTTC estimates that the impact of the terrorist attack amounts to a 7.4% decline in global travel and tourism demand in 2001 and 2002, and to a 16.1% decline in demand for travel and tourism industry in Kenya over the same period (WTTC 2002). Indeed, WTO reports that world international arrivals declined by 1.3% in 2001, the second time since World War II that tourism has witnessed a decline (WTO 2002).

- Weak institutional, planning, regulatory, governance and policy-implementation frameworks, which is manifested by the lack of a dynamic and consultative policy-making and implementation framework; poor coordination of public and private sector tourism activities; poor macroeconomic management resulting in economic instability; an unattractive investment climate; weak planning; bureaucratic visa procedures; corruption; and poor statistical data. It should be appreciated, however, that some progress has been achieved in rectifying some of these problems. For example, the visa administration process has been improved substantially, and now tourists can obtain visas on arrival at the airport.⁹
- Unsustainable tourism development resulting from overexploitation of coastal and safari resources, poaching, encroachment on wildlife dispersal areas, and physical decline of the environment as exemplified by excision of forest reserves.
- Perception of the country as a mass tourist destination. This has initiated a vicious cycle leading to reduced tourism revenue, which in turn leads to deterioration of service quality and the worsening of the perception of the country as a tourist destination.

⁹ Personal communication with an official of the Ministry of Tourism and Information.

- Poor physical infrastructure and services, including poor road and rail transport services, frequent electricity disruption, water shortage, inadequate health facilities and insufficient air routes or airline link capacity.
- Inadequate enhancement of natural tourist products, including the lack of facilities on Mount Kenya and other attractions, inadequate interpretation and explanation of tourist products, and inadequate supply of tourist information locally.
- Cut-throat competition both locally and internationally and its adverse effect on prices and quality of facilities and services.
- Inadequate and inappropriate marketing and image-making efforts, including inadequate funding, the lack of a public-relations strategy, reliance on only two products (beach and safari holidays), poor coordination of public and private sector efforts, and the lack of recognition of strong industry fundamentals as the most important marketing strategy. Unlike countries such as Egypt, which was able to quickly counter negative publicity associated with the killing of tourists, Kenya is unable to counter much less serious and sporadic negative episodes. Inadequacy of resources is one of the major factors contributing to this.
- Harassment of tourists by beach boys and their poor treatment by government officials such as customs and police officers.
- Domination of tour operations and other tourism activities by foreign enterprises, and the associated consequences.
- Inadequate spatial distribution of tourism (with activity concentrated at the coast and in Nairobi), leading to inequitable distribution of tourism benefits and costs.

4. ENVIRONMENTAL IMPACT OF TOURISM IN KENYA

4.1 Overview

Though largely unquantified, environmental impacts of tourism in Kenya are widely acknowledged as substantial. In fact, all the types of impacts described in section 2.3 exist in Kenya, albeit at unknown levels. Nevertheless, case studies exist for some popular destinations such as the Maasai Mara National Reserve and the Amboseli National Park. Even in these parks, however, the actual impact of tourism activity and visitor capacities has not been assessed.

Kenya has targeted mass tourists (including through promotion of inclusive package tours) for most of the time since independence, which has led to the emergence of high volume tourism (Ikiara, 2001a). With an annual target of 1 million tourists by 1990,¹⁰ tourism development in the country proceeded without limits (Cheeseman, undated). Transition towards mass-market tourism is associated with increasing environmental stress (UNEP, 2001), and in Kenya, mass tourism has cheapened the product and hurt the environment.

The adverse impacts of mass tourism in Kenya have been aggravated by overconcentration of tourist activities in some areas of the country, notably the beaches of the North Coast and Diani in the South Coast, and some national parks and game reserves (Maasai Mara, Amboseli, Nairobi, and Nakuru). Concentration has occurred in spite of the fact that 6–10% of the country has been set aside for conservation of wildlife and biodiversity. The six most popular parks (out of 57) alone accommodated 70.2% of all park visitors in 1995, while the top 15

¹⁰ Clearly this was a mining attitude, considering that despite all efforts this target has not been met to date, yet negative environmental impacts are evident.

accommodated 96.1% of all visitors (Weaver, 1999).¹¹ Only about one half of Kenya's parks have any visitation or visitor services at all (Sindiga, 1996). Within the popular parks, moreover, visitation is also concentrated. A 1973–1974 study of Amboseli National Park, for instance, found that 80% of vehicle use occurred within 4% of the 390-km² park (Western, 1986).

The impact of tourism on the environment is largest where visitation is concentrated. Therefore, in Amboseli National Park visitor crowding (with many safari vehicles often concentrating around a single group of animals) and mismanagement have led to disruption of species such as cheetahs. This has also happened in Masai Mara National Reserve as a result of visitor crowding (Weaver, 1999). The very presence of tourists affects the feeding and mating behaviour of animals. Off-road driving in parks affects the habits of animals too. Other problems in the game reserves include:

- Scavenging by wildlife in garbage dumps. Dangerous animals such as hyenas and baboons are attracted to these dumps, posing danger to tourists. Scavenging has been found to change the natural feeding habits and diets of animals such as baboons, birds and other wildlife (Bhandari, 1999).
- Landscape degradation has resulted from extensive off-road vehicular traffic and construction of facilities to support tourism. This exacts a heavy toll on ecosystem balance. Mass tourism and discriminating tourists (that is, those interested in the 'big five' only) have contributed to environmental degradation and wildlife harassment. A good example is the world famous Maasai Mara

¹¹Maasai Mara and Lake Nakuru received slightly more than 193,000 tourists each in 2000 (GoK 2001). In the same year, visitors to Lake Nakuru, Maasai Mara, Animal Orphanage, Nairobi, Tsavo East, and Amboseli accounted for about 61% of visitors to game parks and reserves.

National Reserve where the number of tourists increased by 9% annually in the 1990s to reach almost 200,000 (Bhandari, 1999). The number of permanent hotels (lodges) also rose from 1 (with 25 beds) in 1965 to 25 (with 2057 beds) by 1997, and the number of vehicles from 2 to 339 over the same period. This number of vehicles excludes those belonging to tented and safari camps located outside the reserve and those that visit and leave the park on the same day. These facilities and the associated infrastructure have caused the loss of habitat and naturalness. The problem of off-road driving is growing at the same rate as the number of vehicles and beds (Bhandari, 1999). Estimation using GIS (geographical information systems) technology shows that 2782.73 hectares of the reserve (whose total area is 1673 km²) is covered by off-road driving tracks (Bhandari, 1999). Off-road driving damages vegetation cover and affects species composition (with particularly large adverse effect on soft grass). It also compacts the soil and therefore reduces infiltration and penetration by plant roots, and leads to soil erosion (and water erosion and landform changes) through the gullies and tracks made. In addition, the gullies physically obstruct animals and human beings. One of the main problems leading to off-road driving is the absence of restriction, as it is only in a very small portion of the Mara that off-road driving is restricted. Where restrictions exist, they are not enforced effectively. Tourists who visit for short stay strive (through off-road and high speed driving) to see as many animals as possible within a short time.

- Traces of lead have been found on vegetation along park roads
- Introduction of viruses and bacteria in remote areas by tourists
- Overuse has caused stress on natural resources such as water, land and marine ecology

On the positive side, tourism has improved environmental awareness and justified conservation among the people living near game reserves. An elephant in Kenya is estimated to be worth USD 14,375 in tourism income for each year of its life, a major justification for protecting elephants (TED Case Study of Kenya).

Tourism at the coast has led to overcrowding and overdevelopment, with substantial environmental degradation. Tourism activity is driving crabs away from beaches, therefore disrupting food chains. By crushing mollusks underfoot, it is harming the inter-tidal zone. High tourist demand for marine products such as lobsters, prawns and crabs reduces their population. Coral reefs have been destroyed to pave way for construction of tourism facilities.

4.2 Impacts reported by the Tourism Industry

4.2.1 Disruption of wildlife behaviour

Industry participants interviewed confirmed UNEP (2001) reports that breeding and hunting behaviour of wildlife in the country has changed due to tourism. For example, intrusion from tourists has forced leopards, which naturally hunt during the day, to hunt at night. The main cause of this is excessive tourism and the accompanying noise pollution. The good performance of the tourism industry in the past and inappropriate policies have increased the numbers of tour operators and tourists so much that they exceed the carrying capacity of some attractions. As a consequence, it is not uncommon in the Maasai Mara to find many vehicles surrounding just one lion in areas without restriction on vehicle traffic. This problem is exacerbated by the practice of tour drivers to drive off the road. Because of the lack of funds, most tour firms hire inadequately trained tour guides who conduct their business in a way that disrupts wildlife. Some hotels and lodges are sited near watering holes and breeding grounds, a factor that has driven animals away.

Interference with the breeding grounds of the wildebeest and the zebra has affected¹² their migrations between Maasai Mara and Serengeti national parks. Under normal circumstances, migration occurs around June–September; but by mid-September 2001, migration for that year had not started. Tour operators can no longer accurately predict the timing of migration. The Loita Plains, which these animals use for breeding, are now completely ploughed for agriculture. While this is mainly what has interfered with the migration pattern, tourism has also played a role.

4.2.2 Loss of vegetation

Violation of carrying capacity limits, construction of tourist facilities and off-road driving have contributed to the destruction of vegetation in Kenya's most popular tourist attractions, resulting in serious soil degradation and deforestation. At the coast, overdevelopment has led to a myriad of environmental problems including poor waste and sewerage disposal, with raw sewage often directed into the sea. Coastal hotels were built without regard to the capacity of existing sewer lines, telecommunications or water systems. The situation is the same in some national parks and game reserves. In Maasai Mara alone, for example, there are about 50 lodges.

The problem of overconcentration is attributed to the marketing of only a few attractions, ignoring other potential attractions such as Kakamega Forest, Lake Baringo, Lake Bogoria, Lake Magadi and Meru National Park. The highly marketed attractions such as Maasai Mara National Reserve and the Amboseli National Park have, as a result, deteriorated

¹² Encroachment from agriculture, drought, poaching and competition among wildlife led to declines estimated at 81% and 50% for wildebeest and zebra populations, respectively, in Maasai Mara between 1977 and 1997 (Ottichilo, 2000).

substantially. Nairobi and Nakuru national parks are other seriously crowded game parks in the country. The overuse of some parks has led to an imbalance in wildlife diversity. In Nakuru National Park, for example, there are too many herbivores compared with carnivores, a factor that has interfered with the functioning of the ecosystem.

As a consequence of the loss of vegetation, disruption of wildlife behaviour and general overuse of natural resources, some wildlife species have been lost in attractions with high visitation rates. For example, it is rare these days to see wild dogs, cheetahs or lions in Nairobi National Park, or leopards in Lake Nakuru National Park.

4.2.3 Pollution

Besides noise pollution, garbage and other hazardous wastes generated in tourist hotels are a source of environmental pollution, particularly where they are dumped into poorly managed landfills or creeks. None of the hotels in the game reserves has installed a proper disposal system for generator waste oil. In Nakuru National Park, pollution has been a serious problem, as the raw sewage directed into Lake Nakuru has caused the death of flamingoes and their migration to Lake Bogoria, and substantially damaged water quality. The Ministry of Environment and Natural Resources and KWS have since redirected the flow of sewage.

Pollution from sewage has affected coastal resources as well. Largely because of the lack of good environmental standards and effective monitoring and law enforcement, some tourist establishments at the coast dispose sewage directly into the ocean. This has led to the disappearance of active corals even in areas like Diani that enjoy environmental protection.

There is also air pollution from vehicular emissions, dust, and smoke generated by power generators.

4.2.4 Overuse of natural resources

Mass tourism has caused overutilization of natural resources in Kenya and led to their degradation. The policy of targeting mass tourists has resulted in an inflow of cheap tourists who come in chartered flights mainly destined for the coastal beaches. This category of tourists is known to be less environmentally conscious than the richer and more sophisticated ones who are often inclined towards ecotourism. The revenue received from mass tourists may not be enough to cover the costs that they impose on the environment.

Harvesting of materials like rocks, sand and timber for construction of hotels and lodges depletes these environmental resources and interferes with animal habitats. Firewood collection for campfires also interferes with animal habitats.

Even without hard empirical data on environmental consequences of tourism in the country, evidence presented in this section shows that tourism is far from being environmentally benign. The activity is imposing substantial costs on its very base – the natural resources and the environment – therefore seriously threatening its own sustainability.

5 KENYAN EFFORTS TO MITIGATE ENVIRONMENTAL IMPACTS OF TOURISM

Efforts that have been made to mitigate environmental impacts of tourism in the country can be broadly divided into policy interventions and industry initiatives.

5.1 Policy interventions

Kenya's tourism policy started off very well at independence by emphasizing sustainable tourism.¹³ This emphasis has continued, as is evidenced by the

- Announcement in the 1965/66–1969–70 Development Plan of the policy of long-term planning to preserve the beauty of the country and avoid such evils as pollution, traffic congestion and the destruction of the environment
- Recognition in Sessional Paper No. 1 of 1963 that low license fees would encourage hunting and lead to rapid depletion of wildlife
- Policy announced in Sessional Paper No. 8 of 1969 and the 1974–1978 and 1994–1996 development plans, of establishing mechanisms to allocate each piece of land to its best use
- Desire to control the noncitizen share of the tourism industry and the rate at which Kenyans were being exposed to foreign consumption and spending habits, expressed in the 1974–1978 Development Plan
- Setting of the main objective of tourism and wildlife development as that of maximizing net returns subject to important social, cultural and environmental constraints, in the 1979–1983 Development Plan

¹³ For details, see Ikiara (2001b), from which this section borrows heavily.

- Policy of involving local communities in the management of wildlife and ensuring that they received some of the wildlife benefits
- Policy of conservation, protection and improvement of the environment and wildlife
- Policy of minimizing conflict between wildlife and other land uses
- Policy of wildlife cropping to achieve optimum populations
- Special protection of such endangered species as the rhino, elephant, Grevy's zebra, Hunter's antelope, leopard and cheetah
- Use of regulation and other policy instruments to ameliorate such negative impacts of tourism as social and cultural pollution and damage to the environment
- Policy of harmonizing private gains from tourism development with its social costs
- Increase in park entry fees to ensure adequate resources for environmental conservation
- Promotion of ecotourism as a tool for achieving rational utilization of environmental and cultural resources
- Introduction of environmental impact assessment studies and 'green certification' as prerequisites for the approval of proposed tourism projects
- Policy of sustainable use of wildlife resources for national economic development and for the benefit of people living in wildlife areas
- Policy of diversification of tourism products and market segments
- Policy contained in the Kenya National Tourism Development Master Plan, of better spatial distribution of tourists to relieve existing

destinations of some stress and therefore minimize environmental degradation (GoK 1995a, 1995b)

- Environmental Management and Coordination Act (1999), which empowers individual Kenyans to sue those who degrade or pollute the environment, and requires environmental audits and environmental impact assessment from businesses, including tourism.

Substantial attention is now directed at the impact of tourism on the environment, particularly in the National Tourism Master Plan, with forms of tourism that contribute to conservation of the environment being favoured. The new policy focuses on conservation and utilization of tourism resources in a sustainable manner, conservation of the environment, preservation of scenic beauty, provision of visitor education on available resources and their interdependence, establishment of active partnerships with all stakeholders in tourism and respect of their rights, equitable distribution of tourism benefits, respect and safeguarding of the local customs and culture, and harmonious development of the tourism sector in tandem with other economic sectors.

Policy implementation, however, is lethargic (Ikiara, 2001b). Therefore, tourist arrival targets are not based on comprehensive carrying capacity studies and the policies have not been pursued consistently, creating uncertainty. In addition, even where regulations (for instance, prohibition of off-road driving in parks) exist for protected areas these are not effectively implemented. Nevertheless, the country has achieved significant success in some aspects, notably in ecotourism.

Kenya is one of the top and most popular ecotourism destinations in the world (Weaver, 1999; Honey, 1999) and was Africa's first country to experiment with ecotourism in national parks and reserves (Honey,

1999). Ecotourism in the country, however, is constrained by conflicts over land, as the trust land adjacent to wildlife reserve areas has been divided and allocated to individuals. This has initiated enormous wildlife-human conflicts.

A policy that has been implemented with significant success is that of tourism benefit sharing with local people as an incentive for conservation. In 1961, as a way of sharing the benefits from tourism with the local people and as an incentive for them to protect wildlife, the Kenya government placed Amboseli and Maasai Mara game reserves under the control of local county councils, becoming the first country in Africa to devolve such a responsibility. The councils started receiving revenue from park entrance fees and tourist facilities located in the reserves, a factor that yielded substantial impact on conservation. Therefore, while the country's elephant (and rhino) population dropped by 85% (and 97%) between 1975 and 1990, those in Amboseli and Maasai Mara stabilized because of reduced poaching (Honey 1999). The previous policy, which emphasized wildlife conservation and tourism use and denied local people access to protected areas, had failed because of illegal hunting, grazing and collection of firewood.

The new policy regime emphasizes the concept of sustainable consumptive wildlife utilization, which entails optimum resource management, efficiency in productivity and equitable sharing of the benefits. KWS has put in place measures to co-opt the support and participation of landowners in the management of wildlife, involving sensitization, mobilization and education of stakeholders and capacity building. KWS encourages individuals and groups to host wildlife on their lands. To facilitate this, KWS now has a 'partnership department' and numerous programmes such as 'Conservation of Biodiverse Resource Areas (COBRA)' and 'Winning Space for Wildlife Conservation'.

Many of these partnerships have been successful, a good example of which is II Ngwesi, a tripartite cooperation involving Lewa Downs Conservancy, the local community (II Ngwesi Group Ranch), and KWS.¹⁴ The Group Ranchers control their livestock populations to accommodate wildlife, and in return receive a share of tourism receipts from II Ngwesi Tourist Lodge and the Lewa Downs Conservancy. The 1990s saw a rapid increase in private wildlife ranches,¹⁵ most of which were owned by white farmers. These ranches cater for a very rich international clientele, but are doing little revenue sharing with the local people or the government, as information is not available on how many people visit them (Honey, 1999). The challenge is how to give local people an adequate share of tourism benefits to ensure their commitment to conservation.

5.1.1 Challenges confronting government interventions

Besides the challenges confronting global official attempts to mitigate tourism's adverse environmental impacts, there are other challenges facing governmental efforts in Kenya. First, environmental management in the country is constrained by weak institutional capacity; the lack of interdisciplinary understanding, sectoral integration or functional coordination; the failure to involve key stakeholders such as non-governmental organizations (NGOs) and local communities; and poor policy implementation in general. Government institutions charged with responsibility over the environment have overlapping mandates and expend substantial energy competing for recognition and resources. Kenya, moreover, lacks political and administrative capacity to check overexploitation of resources and vices such as poaching.

¹⁴This project won an international conservation award at the Sustainable Development Summit held in Johannesburg, South Africa (26 August–4 September 2002).

¹⁵ The number of private wildlife ranches grew from zero in 1963 to 24 by 1999.

Second, the lack of effective land-use planning affects sustainable tourism development. Therefore, wildlife conservation outside national parks has been ignored, yet this is where the bulk of wildlife populations live. Privatization of land even in wildlife migration corridors was allowed, reflecting the failure to perceive the link between rangeland quality on a landscape scale and wildlife preservation (Cheeseman, undated).

Third, poor governance in the form of corruption, mismanagement and political interference has led to institutional disorder and frequent leadership changes, particularly with respect to KWS (ACTS, 1998), seriously constraining conservation efforts.

Fourth, the lack, or the weakness, of institutions focusing on sustainable development has eroded conservation incentives. For instance, even though about 70% of the country's wildlife live outside protected areas, the law does not provide for this, but instead states that all wildlife belongs to the state. In addition, the law has eliminated socially relevant wildlife uses such as consumption of wildlife meat. Therefore, lacking ownership and access rights, private and communal landowners have no incentive to conserve wildlife and other natural resources. Uncompensated establishment of protected areas on traditional Maasai land and inadequate compensation for wildlife damage¹⁶ also have caused serious antagonism (Cheeseman, undated). Benefit sharing or distribution of tourism profits has been constrained by the lack of accountability and corruption, cronyism and inefficiency (Honey, 1999). Consequently, benefits fail to reach the local people, who suffer the actual costs of hosting wildlife.¹⁷

¹⁶ Besides inadequacy of the compensation offered, the compensation system has been characterized by inconsistency, stoppage and excessive bureaucracy and paperwork (Cheeseman, undated).

¹⁷ The local authorities, which are invariably poorly run and characterized by corruption, mismanage the share of revenue intended for the local people.

Fifth, poor marketing and inadequate marketing resources constrain ecotourism development, reducing the inflow of funds that would be used for environmental conservation and protection.

Sixth, the mining mentality towards wildlife and park resources (Cheeseman undated) has aggravated the negative impacts. It is estimated, for instance, that only about 2.5% of the USD 285,000 earned by the Kajiado County Council from tourism activity in the Amboseli in 1969 was ploughed back for the park's maintenance (Western, 1997).

Seventh, physical insecurity, including rampant poaching, not only threatens wildlife populations but also affects tourism performance.

5.2 Industry Initiatives

The tourism industry in Kenya has instituted several initiatives to reduce the adverse environmental impacts of tourism, such as the Beach Management Programme, which focuses on ensuring that the coastal beach is managed as an integrated ecosystem. This programme, a joint effort of the Ministry of Tourism, KWS and beach hoteliers, aims at enhancing the conservation of the coral reef and other forms of biodiversity, and entails control of encroachment on protected areas, regulation of commercial activities along the beaches and provision of visitor safety.

The Kenya Tourist Industry Commission has been created to conduct a countrywide audit of ecotourism resources and products; conduct the requisite environmental impact assessment studies; formulate appropriate policies and guidelines (on land tenure, types of development allowed, revenue sharing, and planning and zoning); and facilitate capacity building, licensing, rating, marketing and planning.

Another example of the tourism industry's initiatives is the Ecotourism Society of Kenya (ESOK), which has been operating since 1996 and has

about 170 members. It brings together commercial, conservation and local community stakeholders to promote sustainable tourism development. ESOK promotes responsible and sustainable tourism and protects the integrity of the natural and cultural attractions by:

- Promoting tourism practices that contribute to environmental conservation and developing strategies to mitigate negative ecological, cultural, social and economic impacts of tourism
- Developing environmental management standards for tourist attractions and facilities
- Publishing ecotourism regulations and codes of conduct
- Increasing environmental awareness
- Carrying out research and pilot tests on new approaches to ecotourism and promoting projects that conform to its dictates
- Providing professional, advisory and consultancy services in all aspects of ecotourism development
- Participating in relevant educational and training programmes and developing professional standards, and certification and licensing systems for ecotourism.

Led by ESOK, the key players in the country's tourism sector (tour operators, hoteliers and lodge and camp operators, among others) are working on a voluntary environmental accreditation system (Kenya Ecorating Scheme) to further the goals of environmental and social value preservation. This scheme is expected to encourage industry players, through green labeling, to pursue sustainable practices in their operations.

NGOs promote ecotourism through public education on conservation, developing codes for sustainable resource use, publishing tourist

information literature, holding workshops and seminars on conservation and environmental management, and promoting local community participation.

One of the key industry associations is the Kenya Association of Tour Operators (KATO), which has 268 members. These control 60–70% of tour operating business in the country even though there are about 3200 licensed tour operators (Pers. Comm.). KATO members are governed by a code of conduct that ensures ethical and responsible business. The association works with the following stakeholders to promote ecotourism:

- With KWS, on the Beach Management Programme and in the development of park use rules
- With the Ministry of Tourism, KWS and the Safari Guides Association on the development and enforcement of a code of conduct for visitors and tour operators
- With the Ecotourism Society and other NGOs on identifying ecotourism potential among various communities and advising on it
- With local communities on capacity building to maximize revenue generation; for example, KATO helped two groups living adjacent to Maasai Mara to raise their revenues from USD 83,000 to USD 2 million within a year

KATO organizes workshops on environmental conservation and promotion of community participation. It also has an environmental committee.

Many tour operators routinely violate park rules, casting into doubt the impact and leverage of KATO on its members. For such industry

associations to effectively enforce codes of conduct they need legal 'teeth', which they currently lack.

Other industry initiatives:

- The Kenya Tourism Board is marketing uncrowded tourist attractions (for example Tsavo, Samburu and Meru national parks) as a way of relieving the overcrowded ones. Moreover, the Ministry of Tourism is opening up new attractions such as Mount Elgon and Kakamega Forest. Another public agency, the National Environmental Secretariat has embarked on certification of tourist developments in game parks to ensure minimum environmental impact.
- Hotels and lodges located in tourism areas (such as Amboseli) have been involved in environmental rehabilitation through tree planting since 1991. For example, the Serena Hotel has planted half a million trees,¹⁸ which has been recognized with environmental awards. The hotel has funded the tree planting activity, although tourists and other donors are invited to contribute. This hotel has also started a Green Turtles Conservation Project at the coast. This project pays local fishermen to locate turtle nests. Eggs collected from these nests are protected and cared for (by a marine biologist employed by the hotel) until they hatch, after which the turtles are released into the ocean. Degradation in Amboseli National Park has been halted by Friends of Amboseli, an organization that has spearheaded tree planting and digging of boreholes, among other rehabilitation activities.
- KWS and the county councils of Narok, Transmara, Olkajiado and Samburu are encouraging hotels to build extensions outside the park

¹⁸Another example is Kilimanjaro Safari Club, which plants at least 2000 seedlings, at a yearly cost of Ksh 100,000, in the various lodges and camps it operates.

in order to reduce crowding. Moreover, KWS now requires environmental impact assessment before hotels are built in national parks. In addition, several stakeholders (provincial administration, KATO, ESOK, community representatives and hotels) have created the Mara Management Committee. This committee and the Ministerial Licensing Commission have agreed on a five-year moratorium over new developments in the Mara, where capacity utilization is only 40%.

- A section of the industry is making efforts to conserve water through using appropriate taps and other implements, recycling water, maintaining equipment to prevent leakage, minimizing water use and educating staff on conservation. In some hotels water consumption has been reduced by up to 10%. Energy conservation is done through using energy-saving bulbs, tapping energy from paper incineration, using solar energy or fuel briquettes (made from coffee husks, cow dung, water hyacinth or other waste materials), putting up notices about switching off electricity when it is not required, frequently checking to switch off unnecessary lighting, sensitizing staff on energy conservation, regularly maintaining energy-using equipment, and through other modern technology.¹⁹ Some hotels do not use firewood for cooking or heating at all.
- Waste management practice is improving, mainly through the use of ecofriendly chemicals such as detergents and shampoos for treating waste. There is also increasing use of other ecofriendly technology such as appropriate refrigeration. Collection of bottles and plastics for proper disposal, incineration of waste paper, composting of organic waste to produce manure for use in flower

¹⁹ The Grand Regency Hotel, for instance, has installed a water heating system that facilitates reheating. This saves the hotel Ksh 150,000 worth of boiler fuel every month (Pers. Comm.).

gardens, giving vegetable waste to farmers, and using wetlands as part of sewerage systems are some of the waste management measures being used. Waste recycling, however, is not widespread or large in scale. It was reported that state-of-the-art technology to manage waste is not easily available in the country.

- Some tour operators abide by the park regulations and create awareness among tourists about the environment, how to avoid causing adverse impact, and park rules.
- Some hotels conduct educational programmes for the communities living around them on how to coexist with wildlife. They also train the relevant staff (such as driver guides) on environmental management.
- The Utalii College has incorporated environmental management issues in all its course groups (Pers. Comm.).
- KWS has an educational department that creates awareness about conservation issues. This department has been instrumental in the tremendous reduction in the human-wildlife conflict.
- Some hotels have formed environmental committees and have written policies on waste management and water and energy conservation. Moreover, some industry stakeholders are involved in wildlife conservation. For example, Sarova Hotels have adopted a baby rhino.
- Eight group ranches in the Maasai Mara have established the Maasai Mara Group Ranches Conservation Association with the objectives of promoting wildlife and livestock coexistence, reducing human-wildlife conflict and checking the large-scale farming that is spreading towards the reserve.

While these efforts are clearly a good start, they need to be amplified. More industry participants need to engage in activities to protect the environment. Few of the industry representatives interviewed were aware of the Environmental Management and Coordination Act (1999) leave alone preparing to comply with it. This implies that compliance is likely to be poor, at least in the initial years of the Act's implementation.

5.2.1 Challenges facing industry initiatives

The main challenge confronting industry initiatives is the high cost of change—for example, the cost of replacing inefficient energy and waste-management systems—coupled with the lack of funds. This has been made particularly difficult by the poor performance of the industry since the second half of the 1990s. Industry players estimate that investment in energy-saving and improved waste-disposal systems costs is as much as Ksh 5–6 million per hotel, which would take 4–5 years to recoup. Another obstacle is the lack of easily available, state-of-the-art waste-management technology in the country.

6. CONCLUSIONS AND POLICY RECOMMENDATIONS

6.1 Conclusions

As in other countries, far from being environmentally benign, tourism in Kenya is a form of development with its unique environmental impacts. Evidence of impacts is widely available but their magnitude is unquantified. Although tourism has created an incentive for wildlife and biodiversity conservation, its environmental impacts are largely adverse and are most severe in crowded and overdeveloped tourist attractions. At the coast, which accounts for close to 60% of the country's total bed-nights, the beaches have been seriously degraded and polluted, the coral reefs and mangrove forests substantially destroyed and marine species adversely affected. Too many hotels and other tourist facilities have been developed without any regard to carrying capacity limits. In game parks, which are the prime motivation for 70–80% of all tourists who visit the country, vegetation has been degraded, wildlife behaviour (including feeding, mating and migration) disrupted, pollution has become significant, and resources have been generally overutilized. But this is happening in only the few parks where visitation is concentrated. In spite of the existence of policy for spatial distribution of tourists in the country, tourism marketing has continued to focus on the traditional attractions. Lethargic policy implementation is one of the main reasons that tourism has had environmental costs.

Global efforts to mitigate adverse environmental effects have been taken by UN agencies and tourism organizations such as WTO and WTTC, but the lack of strong institutions such as treaties and the pursuance of unfettered free tourism trade have constrained progress. Sections of the Kenya tourism industry have adopted some of the mitigation efforts made at the global level. Therefore, some hotels and other industry participants in Kenya are islands of impressive environmental

protection. They are using technology to minimize resource use and treat wastes, recycling wastewater and other wastes, rehabilitating degraded tourist attractions through planting trees and other measures, and training staff on conservation issues, among other activities. The majority of tourism participants, however, routinely ignore the regulations introduced to protect the environment and use ecofriendly jargon only as commercial mantras. Partnership initiatives among the government, the industry and local communities, such as KWS programmes and the Beach Management Programme, are achieving tremendous success.

Mitigation efforts in the country have been constrained by weak institutions and the lack of institutional coordination; corruption and mismanagement; inadequate political and administrative capacity; policy failure, including the lack of effective land use policy; persistence of a mining mentality in some of the institutions charged with responsibility over protected areas; inadequate incentives to stimulate interest of local people in conservation (for example, clear and secure ownership and access rights over wildlife and other natural resources); poor tourism performance since the mid-1990s; poor marketing and inadequacy of marketing resources; physical insecurity and rampant poaching; and the high cost of change.

6.2 Policy Recommendations

To extend the initiatives that the tourism industry is taking to mitigate its adverse environmental impacts, we recommend interventions by the government, public-private partnership institutions, and the private sector.

6.2.1 Government

The Government of Kenya should consider:

- Providing incentives to encourage industry initiatives aimed at protecting the environment – including stiff penalties for activities that injure the environment – coupled with effective and predictable enforcement, fiscal incentives to encourage the use of environment-friendly technology, periodic information on best practice with respect to environmental protection, awards for the most successful initiatives, and public procurement as a reward for outstanding environmental protection record.
- Improving policy implementation. Policies that could be particularly useful if implemented include those on the new environmental protection act, eradication of corruption, dispersion of tourism activity around the country through an incentive system, targeting of luxury or high-spending tourists, diversification of tourism products working in partnership with the industry, and greater use of pricing to disperse tourists to nontraditional attractions.
- Correcting institutional failures by introducing clear and secure ownership and access rights to wildlife and other natural resources that support tourism.
- Strictly enforcing environmental regulations, particularly with respect to fragile and indispensable natural resources, whose irreversibility of damage necessitates such costly command-and-control measures.
- Integrating environmental and tourism policies and planning into national and local government planning frameworks to ensure that all development, tourism included, observes laid down environmental requirements.

6.2.2 Public-private sector partnerships

Some interventions are best made within a partnership arrangement between the public and private sectors. One such intervention is the creation of a vision and a strategy for sustainable tourism development. Such partnerships, moreover, are suitable vehicles for encouraging and securing community support and participation in conservation. For this reason, it is recommended that:

- The government and industry associations spearhead establishment of partnerships involving the government (central and local), the industry, NGOs, donors and local communities. Such partnerships can work well if they have visionary leaders and are supported by technical experts.
- The partnerships fund research to facilitate determination of tourism carrying capacity of various attractions and comprehensive estimation of environmental impacts of tourism.
- Through the partnerships, a framework for information exchange and for awareness creation, through training and other capacity building initiatives, should be established. This is required to raise the environmental awareness of all stakeholders in the tourism industry.
- The partnerships improve enforcement of industry codes of conduct. The government can facilitate this by empowering industry associations through legislation to enable them discipline members who violate the codes of conduct. The government would need, in addition, to play the role of assessing the sincerity of the associations and assisting them to standardize best practice procedures.

6.2.3 *Private tourism industry*

On the part of the private tourism industry, the following actions are recommended:

- Self-regulation and other initiatives to minimize the environmental costs of tourism continue, as the very industry depends on environmental health. 'Ecolabel' schemes should be supported and environmental rehabilitation efforts strengthened.
- Marketing of 'green' tourism products be enhanced as a means of stimulating demand for products that protect or conserve the environment.
- Lobbying of government to secure appropriate policies and incentives should be enhanced.

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