

Bushmeat Hunting: A Challenge to Sustainable Ecotourism

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Abstract

This paper offers a ground-breaking perspective on sustainable ecotourism. It argues that the animals in the wild have social, economic, aesthetic, psychological, ecological, medicinal and ecotourism functions. Incidental to or arising from this, hunting has become a threat to the animals in the wild. It is an unprecedented world-wide problem that has led to the extinction of several species. Hence, the necessity for the protection of wildlife from further threats. To this end, this study identifies the current barriers to sustainable wildlife management and conservation as inadequate environmental awareness and education, lack of progress in establishing national parks and gardens, ineffective legislation and weak judiciary, as well as socio-cultural and economic problems. Hence, this study recommends public enlightenment and education for the enhancement of public understanding and appreciation of wildlife, as well as implementation of environmental laws, biodiversity legislation, wildlife conservation acts and ecotourism policies. This paper concludes that bushmeat hunting should be controlled in order to save animals in the wild from further harassment, and for the attainment of sustainable ecotourism.

Keywords: Biodiversity, Conservation, Poaching, Tourism, Wildlife, Exploitation.

INTRODUCTION

Pressures on the earth's natural systems have led to concern about these systems ability to maintain quality of life or even to support present and future population [Hyde and Reeve, 2011:22]. Human activities have posed a great threat to the environment. Millennium Ecosystem Assessment (MA) [2005] argued that the earth's ecosystems have been dramatically transformed through human activities. Also Swiderska et al [2010] asserted that the human actions are fundamental and to a large extent irreversibly changing the earth's diversity. Examples of such activities are population growth and change in land use, illegal grazing of livestock, bush burning, excessive poaching, and human harassment of animals. All these are causing havoc to ecological literacy and sustainable ecotourism.

Phil-Eze [2007] declared that in the effort of man to exploit the maximum actual and potential values of biodiversity, inevitable losses are encountered. He identified the reasons for biodiversity loss as poaching, urbanization, land use changes, the demand for food, as well as industrialization. Likewise, Obi [2002] identified over-exploitation, destruction of habitat, pollution, and deforestation as major causes of biodiversity loss. Other justifications are catastrophic processes, introduction of new species, international trade of biotic resources and several other factors [Miller and Spoolman, 2009; Jay and Scott, 2011; Fatubarin, 2009; Ibimilua and Ibimilua, 2011; Raven et al, 2010; Adesiyun, 2005; Enger and Smith, 2010]. The biological diversity in the environment helps us to maintain the functioning of the ecosystem, provides drugs and medicine, and enhances food security. Above all, it is an indispensable asset to ecotourism.

The values of wildlife are numerous. They include economic, social, cultural, aesthetic, psychological, ecological, medicinal, scientific, genetic, recreational and educational [World Wide Fund, 1999; Regan, 1983; Hunter, 1990; Ajayi and Halstead, 1991; Hummel and Pettigrew, 1991; and Shah, 1996]. Lawal [1995] posited that the presence of wildlife in the environment performs recreational, economic and educational purposes. Specifically, he noted that man's desire to spend his leisure hours relaxing encourages him to want to view animals habitats. In a like manner, Santra [2011] classified the values of wildlife under commodity, amenity, ecological and ethical options. By his classification, the value of wildlife for recreation and tourism falls under amenity. That is, the value of visiting, viewing, and learning about the wildlife and their natural communities.

Wildlife values have also been classified under use values and non use values [Emslie and Brooks, 1999; Redfloyd and Mockrin, 2005; Estes, 1991]. Raven et al [2010] pointed out that wild animals are useful for medicinal, agricultural, industrial, aesthetic, ethical, and spiritual purposes. The most important value humans place on wild animals is for food both for subsistence and commercial purposes [Redford and Mockrim, 2005; IUCN, 1996; Jachman, 1998; Martin and Martin, 1982]. In his own opinion, and from ecotourism point of view, James [1999] advanced that wildlife has recreation, economic and cultural values. Other values of wild animals identified by him are clothing, tools, as well as materials for rituals and handicrafts.

Wild animals are good materials for tourism, research, recreation, school excursion and project, teaching,

animal hire service, advertisement and picnics [see Mackinnon, 1986; Bushell, 2005; McNeely, 2005; Gauthier, 1995; Shaller, 1993; Davies, 1990; Nelson, 2007]. It should be pointed out that in Zimbabwe and other African nations, some ranchers now earn more money managing native species of wildlife for ecotourism in a biodiverse landscape than they would from raising cattle in a landscape with reduced biodiversity [Enger and Smith, 2010: 47-48]. Nevertheless, all over the world, the hunt for wild animals has caused a drastic reduction in the species of the animals in the wild. As a result of its numerous values, wild animals are being hunted (worldwide) at an alarming rate that poses a threat to environmental sustainability.

A remarkable menace to environmental sustainability (including sustainable ecotourism) is bushmeat hunting. The Wildlife Protection Act 1972 [quoted in Joseph, 2009: 254] defined hunting as the act of capturing, killing, poisoning, snaring and trapping of any wild animal. Also, it includes an attempt to do so or even driving an animal for the purpose. Researchers have confirmed that the phrase 'bushmeat hunting' is mostly associated with the hunting of wild animals for their highly prized meat and feet [see World Wide Fund, 1999; Fellmann et al, 2007; Emslie and Brooks, 1999; and Joseph, 2009]. The consumption of bushmeat (the meat of wild animals) is a widespread custom because wild animals are believed to be sweeter, richer in protein and contain lower cholesterol than domesticated animals. Bushmeats are consumed by people living in towns and cities as well as rural dwellers. It is a delicacy in countries like Nigeria, Congo and Cameroun in West Africa as well as Belgium, Brazil, Paris, Brussels and France. A review of literature revealed that wild animals are also hunted for their hides and skins for clothing, leather, bones and ivory. World Wide Fund [1999] noted that wild animals are hunted for traditional medicine, food, jewelries, bone, bile and other parts. Moreover, many animals are hunted for protective charms, egg collection, mask and amulet. Wild animals are also hunted for the purpose of education, research and management, or for zoos and museums.

Another major cause of wildlife hunting is international trade in wild animals. Researches have confirmed that illegal sale of endangered and threatened species has forced many animals to extinction [see Jack, 1999; IUCN, 1996; Karen, 1996; World Wide Fund, 1999; Martin and Martin, 1982; and Bushell, 2005]. Bush meat hunting is responsible for environmental pollution, atmospheric ozone depletion, global climate change and biodiversity loss. Ganderton [2000] submitted that the indigenous people see hunting in their traditional ways as the art of carrying on their traditional lifestyles and commercial interest. He reiterated further that the aboriginals do not have much consideration for the protection of biodiversity or ecotourism.

Critics have mentioned however, that a wild animals can be hunted when it becomes dangerous to human life. In this sense, animals are hunted in self defense [Emslie and Brooks 1979; Technical Centre for Agriculture and Rural Cooperation, 2004; Joseph, 2009; Martin and Martin, 1982; Jachmann, 1998]. Apart from bushmeat hunting, there are other stresses that put the wild animals at risk. This include industrialization, housing, poisoning, urbanization, increasing level of ecotourism, pollution, wastes, and other environmental challenges. To this end, James [1999] opined that negative effects of bushmeat hunting include over exploitation, habitat loss, indifference to ethical and intrinsic values, as well as conflicts with various forms of land use. Several other researches have also revealed that bush meat hunting that are associated with bush burning is having the adverse effects of loss of soil, pollution (air, land and water), loss of trees, reduction in grazing land, loss of farm land, as well as loss of biodiversity [see Hunter, 1990; Ajayi and Halstead, 1991; Joseph, 2009; Redford and Mockrin, 2005; and Adetuberu, 2011].

Bushmeat hunting is a peril to sustainable ecotourism. When it is left uncontrolled, it leads to the extinction of rare species. It endangers some species in the wild and makes others to be vulnerable. Uncontrolled hunting denies ecotourists of the distinct identities of different wild animals. Over hunting of bushmeat can have disastrous impact on ecotourism as it can lead to decline in the patronage of ecotourist attractions. This will invariably reduce the people's awareness about the wide varieties of wild animals. Thus, for the attainment of sustainable ecotourism, illegal and uncontrolled hunting as well as over-harvesting need to be discouraged in all ramifications.

BUSHMEAT HUNTING

The art of stalking for bushmeat is as old as history. Fellmann et al. [2007] noted that the craft is as old as mankind itself. They narrated that the early man depended on plant and animal foodstuffs they could secure with the limited variety of rudimentary stone tools and weapons at their own disposal. Fellman et al [2007] reported further that increase in population, civilization, and improved technology have increased the rate of exploitation of environmental resources. Hunting for bushmeat provides food and income to rural households. Researches have revealed that bushmeat hunting is a source of employment opportunity and invariably a source of income for hunters, wholesalers, retailers, market traders and cafe owners [James, 1999; Hummel and Pettigrew, 1991; World Wild Fund, 1999; IUCN, 1996].

Emslie and Brooks [1999] noted that the high demand for bushmeat in hotels, restaurant s, and other eateries is responsible for the reckless hunt for the animals in the wild. They indicated further that this situation is also responsible for the escalated prices and invariably the illegal dealing in wild animals. The horns, bones and

hoofs of wild animals are used in making beads, jewelries and other ornamental materials. Likewise, the skins, blood, dung and urine of wild animals are used in curing several illness conditions and emergencies including epilepsy, cerebrovascular diseases, gonorrhoea, hepatitis, convulsion, typhoid, asthma, food poisoning, jaundice, tuberculosis, restlessness, severe burns and haemorrhages [Martin and Martin, 1982; Kamanda et al, 2008; Jack, 1999; James, 1999; McNeely et al, 2005; Bushell, 2005]. This is very common in China, India, Taiwan and many African Countries.

Apart from food and medicinal values, wild animals are also hunted for ivory trade, international wildlife trade, hide and skin, land reclamation, and egg coursing. Bushmeat hunting is done for family consumption or as a business. It may equally be done for recreation, or to manage invasive or over abundant species. Hence, we have the categorizations like sport hunting, subsistence hunting, hunting from protected areas, and others. James [1999] classified the reasons for bushmeat hunting under fur trade, market hunting, subsistence hunting, over-exploitation and outright profligacy. There are many other reasons for hunting. For instance, some animals in the wild are hunted and sold to zoological gardens, aquaria, biomedical research laboratories, and pest stores [i.e Raven et al, 2010; Boo, 1990; Wilson, 1985; Estes, 1991; Joseph, 2009].

Researches have also confirmed that some wild animals have negative values [Redford and Mockrin, 2005; Hunter, 1990; Estes, 1991; Wright and Boorse, 2011; Environmental Investigation Agency (EIA), 2003]. These come in form of feeding on domesticated livestock, destruction of farm products, maiming of livestock and humans, or transmitting of communicable disease to livestock or humans. Some animals are killed because their lifestyles cause problem for humans [Raven et al, 2010: 380]. Examples of these are Carolina parakeets, Nigerian grass cutters and bush pigs as well as South African carals. In some of these countries, trained dogs are also used for hunting these wild animals. Other remote causes of bushmeat hunting are agricultural practices, oil and gas exploration, forest fires or bush burning, road and dam construction, mining, as well as timber harvesting.

Emslie and Brooks [1999] reported that wars, civil unrest, poverty, influxes of refugees and corruption are other causes of bushmeat hunting. Likewise, World Wide Fund [1999] submitted that other causes of bushmeat hunting are economic collapse, corruption, collusion, nepotism, as well as staggering failure of law enforcement authorities. Overall, bushmeat hunting is done for socio, cultural, economic, medical and recreational reasons. Nevertheless, it also has the adverse effects on local communities, plants, animals, and even humans. It leads to decline in local ecological knowledge, makes some species vulnerable and endangers some other rare species. Also, humans have hunted several species in the wild into oblivion. Other effects of bushmeat hunting are distortion or modification of habitats, disruption of ecosystems, as well as threat to sustainable ecotourism.

ECOTOURISM

One of the world's fastest growing and largest industries, tourism is the epitome of the globalized world [Bushell, 2005: 143]. Tourism can be perceived as the science, art, and business of attracting and transporting visitors, accommodating them and catering for their needs and wants [Aremu, 2001: 20]. Tourism abounds in different forms or types. Examples are ecotourism, mountaineering, cultural, adventure, sports and agritourism. Others are disaster religious, archeological, bicycle, garden, heritage, female sex, and pilgrimage tourism. Specifically, ecotourism refers to the enterprises that are involved in promoting the tourism of unusual ecological sites [Wright and Boorse, 2011:639]. It involves the responsible travel to natural areas where the environment is conserved for the sustainable livelihood of the local people.

Ecotourism involves travelling to relatively undisturbed natural areas so as to admire, enjoy, and study the natural environment of the area. The activities involved in ecotourism include photography, cultural events, mountaineering, diving and bird watching to mention a few. It includes a tour that is designed to entertain the clients. As such, ecotourism activities are coordinated by professional tour guides and/or interpreters. Also, ecotourism services include transportation, food, as well as accommodation.

Gauthier [1995] opined that ecotourism represents the ecological way of conserving wildlife resources and other species, and that it promotes the ecological, spiritual, ethical, aesthetic and non-destructive values. Similarly, Boo [1990] noted that ecotourism entails the need to adequately protect rare, threatened, vulnerable and endangered species from disturbance and threat, as well as to meticulously care for their habitats. In this respect, ecotourism is seen as a form of governance of nature. Ecotourism is nature-based tourism that involves education on and interpretation of the natural environment as it is managed to be ecologically sustainable [Marguba, 2001:15]. Participation in ecotourism makes environmental knowledge to be more in-depth and valuable.

The resources of an area play a vital part in attracting tourists. They also determine what sorts of tourism are available [Ganderton, 2000:183]. Ecotourism resources that attract visitors include rare species of fauna and flora, landscapes, historical monument and cultural festivals. For any particular site or location to qualify for ecotourism, the natural landscape must be relatively undisturbed for people to study, enjoy, and admire the scenery and its wild animals and plants in their natural state [Marguba, 2001:15]. Wildlife form a sound base for

ecotourism. They are non-domestic animals and plants which live outdoor. Animals in the wild are good potentials for ecotourism in form of watching, filming, or simply being with them. The presence of wildlife in the environment inspires people to make more time for outdoor enjoyment.

Ibimilua [2009] identified the level of attraction of the destination, vis-à-vis the facilities provided as the major factors affecting the level of patronage of a tourist attraction. Other factors identified by him are price levels in the destination, income, education background, purpose of visit, age, occupation, available transportation system, cultural, political, religious and social differences. In a like manner, Ibimilua and Ibimilua [2011] recognized the presence of wild animals as one of the destination attractions in recreation and tourism. Hence, zoological gardens, parks, sanctuaries and havens are often located inside or very close to other tourist attractions. However it is always good to manage wildlife as well as their habitats in order to achieve sustainable ecotourism. Wildlife conservation is a sustainable approach to ecotourism. The abundance of wildlife in an environment is a huge attraction to visitors. Gauthier [1995] asserted that wildlife management increases our understanding of the biology and ecology of species and ability to wisely manage human interrelationships with wildlife. Hence, he submitted that wildlife management encompasses conservation, resource management, and sustainable development. Thus, for successful transition to sustainable development, there is the necessity to conserve the environment and its biological diversity. Wildlife conservation and management increases our knowledge and awareness of natural resources.

A review of literature revealed that ecotourism is a very significant economic, social and cultural asset [Kamanda et al, 2008, Afolabi and Mohamed, 2010; Hall and Lew, 1998; Boniface and Cooper, 1994; Martins and Mason, 1987 and Ibimilua, 2009]. The economic rewards include balance of payment, foreign exchange earnings, government revenue and employment opportunities. Also, the socio-economic benefits include its effects on social behavior and cultural values. Ecotourism has become a vital source of income for nations such as Costa Rica, with its rainforests; Australia, with its Great Barrier Reef; Belize with its reefs, caves, and rainforests; and Kenya and Tanzania with their savanna wildlife [Jay and Scott, 2011: 173]. For short, ecotourism brings socio-economic profits to the home country. Also, the distinct identities of different animals gives a strong 'sense of place'.

BUSHMEAT HUNTING AND SUSTAINABLE ECOTOURISM

Nature and humanity form a continuum, and the existence of people and nature is the result of a history of interaction as old as our species [McNeely, 2005:1]. A major form of man-environment interaction is the use of wild animals for a variety of purposes including food. Wildlife plays a prominent role in enhancing the quality of people and the environment. This accounts for the wide chase of the animals in the wild. For much of human existence, hunting has been seen as a valid way of food gathering but in some cases it has taken the species to the edge of extinction [Ganderton, 2000:324]. Uncontrolled hunting, over-hunting and illegal hunting are not sustainable for animals in the wild and for ecotourism.

It is ideal that man should harness environmental resources for his continual existence and survival. The fact that it is mandatory for man to exploit natural resources implies that some damage to such resources becomes unavoidable [Lawal, 1995:60]. Nevertheless, it is also commonsensical that exploitation of natural resources at the present time should not jeopardize the ability of future generations to make use of such resources. In some parts of the world, some animals are hunted, killed and wasted because of superstition beliefs. Also, many species of chimpanzees and gorillas in Africa have been endangered as a result of the destruction of their natural habitats.

Researches have shown clearly that uncontrolled hunting is perilous to sustainable ecotourism [Emslie and Brooks, 1999; Tall and Gueye, 2004; Ajayi and Halstead, 1991; Adetunberu, 2001]. Specifically, Emslie and Brooks [1999] submitted that the two species of African rhinoceros, the black rhino (*Diceros bicornis*) and the white rhino (*Ceratotherium Simum*) have been driven to near extinction in recent years. They asserted that the future of the rhinos depends on the development and operation of effective conservation strategies at local, national, and regional levels. Hence, they solicited for conservation efforts directed towards safeguarding the animals in the wild. Several other researches have also shown that many wild animals are likely to suffer from genetic problems like loss of genetic variation and inbreeding, if incessant bushmeat hunting is not controlled [Boo, 1990; Department for International Development, 2002; Chapin, 2004; McNeely et. al. Jack, 1999]. Unsustainable hunting of vulnerable bushmeat species can also drive wild animals into extinction.

Apart from being a menace to sustainable tourism, bushmeat hunting is intimidating to scientific researches. The Wildlife (Protection) Act, 1972 stated explicitly that hunting also include injuring or destroying or taking any part of the body of animals or birds or reptiles or even damaging their eggs or disturbing their nests [Joseph, 2009:254]. The non-availability of any of these important components of the ecosystems is a commination to perpetual scientific research and invariably ecotourism. The wild animals become exposed to insecure livelihood, which puts their survival at the mercy of hunters and poachers [Lawal, 1995:44]. Studies have also shown that bushmeat hunting disturbs the flow of energy and materials through an ecosystem [Asthana and

Asthana, 2012; Jack, 1999; Wilson, 1985]. This is another form of menace to sustainable ecotourism. A report on the destruction of tiger habitat in India by Environmental Investigation Agency (EIA) [2003] submitted that the major causes of habitat destruction are industrial encroachment into forested areas, mining and dereliction, poverty, urban sprawl, as well as inadequate and ineffective environmental conservation techniques. Examples of wild animals that have been endangered as a result of human activities are the rhinoceros in India, dugong in Australia, panther in Florida, alligator in Louisiana, monk seal in Hawaii, lemur in the United States of America, as well as cobra in South Africa. Sustainable ecotourism is at the cross-road in many parts of the world as a result of reckless human activities. Hence, there is need to urgently save world's wildlife from further harassment.

ISSUES AND CHALLENGES IN WILDLIFE CONSERVATION AND MANAGEMENT

Wild animals are useful for as many purposes as possible. They have economic social, psychological, recreational, religious, spiritual, cultural, ecological, and aesthetic values. As a result of this, they are being hunted, killed, eaten, used for other purposes, and endangered at an alarming rate. This problem is also compounded by human population growth, high level of urbanization, poverty, industrialization, economic systems and policies that fail to value the environment and its ecological services, as well as technological advancement. Tuokumbur [2010] noted that human activities such as hunting, bush burning, and other forms of habitat exploitation have enhanced the potential of endangering preys, predators, and other wildlife resources. The biological diversity of the world is fast depleting due to natural resources exploitation and man-made pollution of earth's environment [Santra, 2011:59]

Santra [2011] opined that the fast rate of extinction (globally) necessitates the conservation of wildlife either through in-situ or ex-situ programmes. Several researches have also confirmed that bushmeat hunting is a major cause of species endangerment [see Raven et al, 2010; Jack, 1999; Adetunberu, 2001]. People in some developing countries are beginning to realize that the biological richness of their environment may be their most valuable resources and that its preservation is vital for sustainable development [Cunningham and Cunningham, 2006:143]. Unregulated hunting can be disastrous to the sustainability of the environment. Bushmeat hunting has put several species into extinction. For instance, Jack [1999] identified the animals that have disappeared from Nigeria in recent times as black rhinoceros, manatee, giraffe, giant eland, pigmy hippopotamus and cheetah. Also at the risk of extinction are animals like the orangutans of Indonesia, Ethiopian wolf, Scottish wild cat, American mink and South American guinea pigs.

Moreover, many animals in the wild are critically endangered as a result of human activities. Examples are Florida Panther, Asian bears, American turtles, as well as the gorillas and chimpanzees of Africa. Others are the snow leopard of Central Asia, giant panda of China, Siberian tiger, golden lion tamarin of Brazil, as well as the Arabian oryx of Middle East. Poaching combined with inadequate field protection has also decimated many animals in the wild. The destruction of the habitat prior to, or during hunting activities contributes tremendously to the extinction of some of these animals in the wild. Boo [1990] decaed that harassment is a major cause of wildlife loss. Similarly in a case study of bears, WWF [1999] revealed that loss of habitat and increased human-caused mortality pressure are having devastating effects on bears in Asia.

Bushmeat hunting is hazardous to the hunted species. It can also jeopardize sustainable ecotourism. Other imperilments are pollution, global warming and other anthropogenic and natural disasters. The conservation and management of the wild animals is inevitable. It is necessary for the restoration of the highly cherished ecosystems. Consequently it is indispensable to cater for the species in the wild. Wildlife can be conserved either in their area of origin or outside their area of natural occurrence (i.e. in-situ or ex-situ respectively). Also, management techniques include catching, relocating, culling of animals and provision of intensive care. Conservation and management bring about environmental sustainability through the recovery of threatened habitats and species. Environmental Investigation Agency [2003] documented that saving the wild is not just about saving the species alone, but also about sustainable development.

Wildlife management entails that animals in the wild are exploited without jeopardizing their renewal. It is a strategy for the restoration of ecology. The problem with us is that we are only able to hunt, kill and eat wild animals without being able to breed, preserve and keep them as means of replenishment for sustainability [Adejmilua, 2001:17]. In the contemporary time, wildlife are conserved and managed in zoos, gardens, forest reserves, sanctuaries, parks, heritage sites, and other areas of nature in which wild animals and their habitats are protected from over-exploitation and destruction. Botkin and Keller [2012] gave the reasons for conserving wild animals as utilitarian, ecological, aesthetic moral, cultural, spiritual, inspirational and recreational justifications. These are some of the key elements of environmental sustainability and sustainable tourism.

The conservation and management of wildlife and other biological diversity is faced with many problems. These include physical, cultural, administrative, managerial, and economic predicaments. Francis and Paul [2003] identified the major challenges to development and sustainable use of natural resources as poverty, heavy reliance on natural capital, rapid population growth, urbanization, political instability and ineffective

environmental laws and policies. Other challenges in environmental resources governance are land fragmentation, poor environmental ethics and low level of environmental education and awareness.

RECOMMENDATIONS

Bushmeats have socio, economic, pharmacological and ecotourism values. However, the rate at which animals are being hunted calls for serious concern at local, national and international levels. Saving the species in the wild from vulnerability and extinction requires the collective responsibility of individuals, local institutions, private organizations and non-governmental organizations. Also, it requires multi-disciplinary approach. It necessitates the collaborative effort of environmentalists, planners, conservationists, biologists, zoologists, as well as indigenous people. Wildlife conservation implies the preservation of genetic species and ecosystem diversity. It enhances environmental sustainability and curtails the wasteful exploitation of resources. Also, it reduces environmental pollution and habitat loss. The prevention of species in the wild from threat involves the role of decision makers and others whose actions affect the conservation of biodiversity.

Protection of wild animals requires the development and exhibition of environmentally-friendly attitude that forbids indiscriminate bush burning and uncontrolled bushmeat hunting. Wild species should be managed in order to help their population and conservation. They should be managed for people to appreciate value and enjoy. Wildlife conservation strategies include the establishment of sanctuaries, national parks, game reserves, natural beauty spots, nature reserves, forest reserves and animal research centers. There is need to rescue the vulnerable and endangered species from extinction. This requires the intensification of efforts on environmental education, publications, enlightenment campaign, seminars, film shows, as well as the formulation and implementation of environmental and natural resources laws and regulations. This effort should also be complemented by conflict management, criminal justice system, active involvement of local communities, as well as the management of the countryside and open spaces.

The attainment of sustainable wildlife tourism and ecotourism depends upon the role of international treaties, encouragement of private land owners to protect endangered species, enforcement and strengthening of the Endangered Species Act, establishment of wildlife refuge, as well as the implementation of the common agreements of conventions like the World Heritage Convention. Convention on International Trade in Endangered Species, Convention on Biodiversity, as well as the Convention on Wetlands. All these convention support the promotion of wildlife management, habitat conservation, prevention of over-hunting, conservation of natural habitats strengthening of local institutions, protection of endangered and vulnerable species, as well as the creation and management of protected areas. These are the basic canons of environmental sustainability.

CONCLUSION

Bushmeat hunting constitutes a great threat to wildlife tourism, ecotourism and environmental sustainability. Effects of uncontrolled bushmeat hunting include loss of biodiversity, disruption of ecosystem, distortion or modification of habitats, extinction of rare species of plants and animals, as well as threat to sustainable ecotourism. In order to save the species in the wild from further jeopardy, and for the promotion of sustainable ecotourism, there should be perpetual environmental protection, change in public behaviours towards biodiversity, conservation of natural habitats, poverty eradication, establishment of protected areas, as well as restriction of wildlife hunting.

REFERENCES

- Adejmilua, F. (2001), *Synthesis of nature, environment and life-support resources: Theory and practice of sustainable development*, Dejemco, Lagos.
- Adesiyan, S. O. (2005), *Man and his biological environment*, University Press, Ibadan.
- Adetunberu, J. O. (2001), Bush burning and its environmental consequences on fallow lands in Ekiti, South Western Nigeria, *unpublished Ph.D thesis*, Ekiti State University, Ado-Ekiti, Nigeria.
- Afolabi, F. I. and N. Mohammed (2010), *Ecotourism: Principles, potentials, practices and pitfalls*, Mercy, Ilorin, Nigeria.
- Ajayi, S. S. and J. Halstead (1991) *Wildlife Management in Savana Woodland*, Taylor and Francis, London.
- Aremu, D. A. (2001), The history of tourism in Nigeria, in *Cultural and ecotourism development in Nigeria*, edited by D. A. Aremu, pp 20-34, Hope Publication, Ibadan.
- Asthana, D. K. and M. Asthana (2012), *A textbook of environmental studies*, S. Chand & Company Ltd., New Delhi.
- Boniface, B. G. and C. Cooper (1994), *The Geography of Travel and Tourism*, Butterworth-Heinemann, London.
- Boo, E. (1990), *Ecotourism: The potentials and Pitfalls*, World Wide Fund, Washington, D. C.
- Botkin, D. B. and E. A. Keller (2012), *Environmental Science*, John Wiley and Sons Inc., New Jersey.
- Bushell, R. (2005), Building support for protected areas through tourism, in *Friends for life: New partners in support of protected areas*, edited by J. A. McNeely, pp. 141-151, UICN, Gland, Switzerland and Cambridge.

- Chapin, M. (2004), *A challenge to conservationists*, Worldwatch Institute, Washington, D. C.
- Cunningham, W. P. and M. A. Cunningham (2006), *Principles of Environmental Science*, McGraw-Hill, Boston.
- Davies, M. (1990), Wildlife as a tourism attraction, *Environment*, 20 (3) 74-77.
- Department for International Development (DFID) (2002), *Wildlife and Poverty Study*, DFID, London.
- Emslie, R. and M. Brooks (1999), *African Rhino: Status survey and conservation action plan*, IUCN/SSC African Rhino Specialist Group, IUCN, Gland Switzerland and Cambridge., UK. Ix+ 92 pp.
- Enger, E. D. and B. F. Smith (2010), *Environmental Science: A study of interrelationship*, McGraw-Hill, Boston.
- Environmental Investigation Agency (EIA) (2003), *Undermined: Destruction of tiger habitats in India*, EIA, London.
- Estes, R. D. (1991), *The behavior guide to African mammals including hoofed mammals, carnivores and primates*, Freidman Books, Russell, South Africa.
- Fatunbarin, A. (2009), *Man and his environment*, Keynotes, Ilesha, Nigeria.
- Fellmann, J. D., A. Getis and J. Getis (2007), *Human Geography*, McGraw-Hill, New York.
- Francis, K. L. and M. M. Paul (2003), Sustainable use and development in Sub-Saharan Africa, in *Proceeding of the 2nd Pan-African symposium on the Sustainable use of natural resources in Africa*, edited by N. M. Bihini, pp 31-40, IUCN, Gland, Switzerland and Cambridge.
- Ganderton, P. (2000), *Mastering Geography*, Macmillan, London.
- Gauthier, D. A. (1995), The sustainability of wildlife, in *Resources and environmental management in Canada*, edited by B. Michell, pp 207-235, University Press, Oxford.
- Hall, M. C. and A. A. Lew (1998), *Sustainable tourism: A Geographic perspective*, Longman, New, York.
- Himmel, M. and S. Pettigrew (1991), *Wild Hunters: Predators in Peril*, Key Porter Books Ltd., Toronto.
- Hunter, M. L. (1990), *Wildlife, forests and forestry: Principles of managing forests for biodiversity*, Prentice Hall, Englewood Cliff, New Jersey.
- Hyde, P. and P. Reeve (2011), *Essentials of Environmental Management*, IOSH Services Ltd., Leicestershire.
- Ibimilua, A. F. (2009), Tourism participation: Attraction, influences and key trends in Ekiti State, Nigeria, *African Research Review*, 3 (3) 244-258.
- Ibimilua, A. F. and F. O. Ibimilua (2011), *Aspects and topical issues in human Geography*, B. J. Productions, Akure, Nigeria.
- International Union for Conservation of Nature and Natural Resources (IUCN) (1996), *Red list of threatened animals*, IUCN Species Survival Commission Publication, 378pp, Gland, Switzerland and Cambridge.
- Jachman, H. (1998), *Monitoring illegal wildlife use and law enforcement in African Savana rangeland*, Wildlife Resources Monitoring Unit, Lusaka.
- Jack, D. R. L. (1999), Extinction versus sustainable development challenges, *NEST FORUM* 7 (1) 43-44.
- James, G. T. (1999), Trends in ownership of wildlife resources: Who owns wildlife anyway? In *Tenure and sustainable use*, edited by O. James, pp 63-70, IUCN, Gland, Switzerland and Cambridge, UK.
- Jay, W. and B. Scott (2011), *Essential environmental*, Pearson, San Francisco.
- Joseph, B. (2009), *Environmental studies*, Tata, McGraw-Hill, New Delhi.
- Kamanda, M., V. Ndiweni, V. E. Imbayarwo-Chikosi, J. Muvengwi and A. Musakwa (2008), The impact of tourism on Sable Antelope (*Hippotragues Niger*) Vigilance behavior at artificial waterholes during the dry season in Hwange National Park, *Journal of Sustainable Development in Africa*, 10 (3), 299-314.
- Karen, A. (1996), *Environmental Science*, Rinehart and Winston, Auston, Holt.
- Lawal, M. B. (1995), Wildlife conservation management, in *Education for sustainable development*, edited by M. B. Lawal et al, pp 41-62, Nigerian Conservation Foundation, Lagos.
- Mackinnon, J. (1986), *Managing Protected areas in the tropics*, IUCN – UNEP, Gland, Switzerland.
- Marguba, L. B. (2001), The relevance of tourism (cultural and ecotourism) in Nigeria towards our 21st century National Economic Development, in *Cultural and ecotourism development in Nigeria*, edited by D. A. Aremu, pp 11-19, Hope Publications, Ibadan.
- Martins, E. B. and C. B. Martin (1982), *Run Rhino run*, Chatto and Windus, London.
- Martin, W. H. and S. Mason (1987), Social trends and tourism futures, *Tourism Management*, 8 (2), 112-114.
- McNeeley, J. A., K. H. Redford, and A. S. Carter (2005), A taxonomy of support: How and why new constituencies are supporting protected areas, in *Friends for life: New partners in support of protected areas*, edited by J. A. McNeely, pp 11-20, IUCN, Gland, Switzerland and Cambridge.
- McNeely, J. A. (2005), Introduction: Building broader support for protected areas, in *friends for life: New partners in support of protected areas*, edited by J. A. McNeeley, pp 1-9, IUCN, Gland Switzerland and Cambridge.
- Millennium Ecosystem Assessment (MA) (2005), *Ecosystems and well-being: Biodiversity synthesis*, Island Press, Washington, D. C.
- Miller, T. G. Jr, and S. E. Spoolman (2009), *Living in the environment: Concepts, connections and solutions*,

- Brooks/Cole, Belmont, C. A.
- Nelson, F. (2007), Emergent or illusory? Community wildlife management in Tanzania, *Dryland Issue Paper 146*, International Institute for Environment and Development, London.
- Nigerian Conservation Foundation (NCF) (2000), *Nigerian endangered animal species*, NCF, Lagos.
- Obi, F. B. (2002), Conserving biological diversity in Nigeria, *Roan Journal of Conservation*, 1 (1) 10-15.
- Phil-Eze, P. O. (2007), Biodiversity and environmental problems in Nigeria, in *Geographical perspectives on environmental problems in Nigeria*, edited by Ofomata, G. E. K. and P. O. Phil-Eze, pp 33-52, Jameo, Enugu Nigeria.
- Raven, P. H., L. R. Berg and D. M. Hassenshal (2010), *Environment*, Wiley, New Jersey.
- Redford, K. H. and M. Mockrin (2005), The role of hunting in promoting protected areas, in *Friends for life: New partners in support of protected areas*, edited by J. A. McNeely, pp 49-63, IUCN, Gland, Switzerland and Cambridge.
- Regan, T. (1983), *The case for animal rights*, University of California Press, Los Angeles.
- Santra, S. C. (2011), *Environmental Science*, New Central Book Agency, Kolkata.
- Schaller, G. B. (1993), *The last Panda*, University of Chicago Press, Chicago.
- Shah, N. (1996), *Wildlife trade in Sindh, report by World Wide Fund Pakistan*, Lahore, Pakistan.
- Swiderska, K. D. Roe, L. Siegele and M. Grieg-Gran, (2010), *The governance of nature and the nature of governance: Policy that works for biodiversity and livelihoods*, International Institute for Environment and Development, London.
- Tall, S. M. and M. B. Gueye (2004), *Local agreement in the Sahel: An Instrument for the co-governance of natural resources*, International Institute for Environment and Development, London.
- Technical Centre for Agriculture and Rural Cooperation (CTA) (2004), *Land tenure: Property security and equity*, CTA, Montpellier.
- Tyokumbur, E. T. (2010), *Environmental practices for human well being*, Hope Publication Limited, Ibadan.
- Wilson, E. O. (1985), The biological diversity crisis: A challenge to Science, *Issues in Science and Technology*, 2 (1) 201-229.
- World Wide Fund (WWF) (1999), *Wanted alive: Bears in the wild*, WWF, Switzerland.
- Wright, R. T. and D. Boorse (2011), *Environmental Science: Toward a sustainable future*, PHI Learning Private Limited, New Delhi.