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## MANAGEMENT ETHICS AND STRATEGIES TOWARDS SUSTAINABLE TOURISM DEVELOPMENT IN JOS WILDLIFE PARK, NIGERIA.

\*Ijeomah, H. M., \*Alarape, A. A., and \*\*Ogogo, A. U.

\*Department of Wildlife and Fisheries Management, University of Ibadan, Ibadan, Oyo State, Nigeria.

\*\*Department of Forestry and Wildlife Resources Management, University of Calabar, Cross Rivers State, Nigeria.

### ABSTRACT

People increasingly embark on tourism because of the huge economic benefits, which it accrues on daily basis without considering the impact on the tourism sites, which are always ecologically fragile. The study examined the management ethics and strategies adopted and maintained to harmonize income generation, conservation, ecological impact, visitor number, quality of visitor's experience and chances of citing games at the Jos Wildlife Park (JWLP) which have enabled it to remain open since the year 1977 till date. Data for the study were obtained through observations, in-depth interviews and review of records. Results show that species are subjected to intensive, semi intensive and extensive systems of management. Jos Wildlife Park is rich in various endangered, rare, vulnerable and abundant species of wildlife. Irrespective of season, games are viewed at ease in the park from 10.00am to 6.00pm everyday. Some animal species are managed under more than one system. The park is congested and polluted during festivities. Many animal species such as the Lion (*Panthera leo*), Pigmy hippopotamus (*Choeropsis liberiensis*), Derby eland (*Taurotragus derbianus*), Leopard (*Panthera pardus*), etc. have bred in the park. The park was gazetted in 1972 for the purposes of conservation, education and tourism. Thus suggestions have been made towards ensuring that the conservation objectives are not compromised in the face of increasing revenue generation.

**Key words:** Sustainable tourism, management strategies, management ethics, Jos Wildlife Park

### INTRODUCTION

Whatever the reasons that prompted national parks and game reserves to be opened to the public, it is obvious that tourism and recreation must be inclusive. Tourism is one of the non-consumptive utilization of nature reserves. Ecotourism has become the fastest growing sub-sector of the tourist industry. Ecotourism refers to traveling to relatively undisturbed or uncontaminated natural area with the specific objectives of studying, admiring and enjoying the scenery and its wild plants and animals as well as existing cultural manifestations (Lascurain, 1992). It focuses on natural zones, which are protectively untouched by human activities. The search for activities involving new experiences and personal enhancement is typical of ecotourism. A survey reported that 40% of American travelers are interested in 'life enhancing experiences as compared with 20% who are interested in 'seeking the sun' (Lascurain, 1996).

The potentials of a tourist industry in terms of species, especially endangered, threatened and rare species; the ease with which games are viewed; the natural or near natural condition of the scenery, micro climate, habitat and the culture determine the

fate of ecotourism business therein. Tourism is really a spinner of benefits: source of foreign exchange, economic empowerment, employment opportunities and poverty alleviation. But the benefits a country or region derives depends largely on the tourists in-flow, calibre of tourists, the fare charged and enabling environment.

Nevertheless, for overriding global interest, human beings in their quest for economic development and enjoyment of the riches of nature must come to terms with the reality of resource limitation and the carrying capacity of ecosystem and must take into account the needs of Future generations (IUCN *et. al.* 1980). However, events in our recent history along with world wide trends in conservation, ecotourism, poverty alleviation, environmental management and ecological policies and politics have brought about the need for management strategies that would guarantee an "all-round and continuous development," (NEST, 1991) sustainable development. In the same vain, sustainable tourism development is a notion, a movement and an approach which has developed into global area of concerns, study, political mobilization and organization around human needs and rights, recreation and the twin

issues of environmental protection and economic development (World Commission on Environment and Development, 1987; NEST, 1991; Aina and Salau, 1992; and Ijeomah, 2003). Simply put, it is an industry which attempts to make a low impact on the environment and local culture, while helping to generate income, employment and the conservation of local ecosystems (WTO, 2003).

Consequently, Ijeomah, et al. (2005) emphasized that suitable management strategies to take care of the desired values need to be adopted and maintained to harmonize income generation, conservation, ecological impact, visitor number, time and seasons of visit, quality of visitors' experience and chances of citing games. This paper is a report of a field survey carried out in Jos Wildlife Park. The park was set up in 1972 by the Plateau State government purposely for tourism, conservation and environmental education.

## METHODOLOGY

### The study area:

Jos Wildlife Park is located 4 kilometers east of Jos, along Jos-Miango Road, Off Yakubu Gowon Way, Jos, Plateau State in the core middlebelt region of Nigeria. Jos Wildlife Park is bounded in the East by Tudunwada Community, in the West by Dong Community and Federal Lowcost Housing Estate in the South by Kabon Community. The bearing is on latitude  $9^{\circ}52'1''$  N and on Longitude  $8^{\circ}52'1''$  E. The park covers an area of eight square kilometers of land enclosing hills, streams and varied highland vegetation. It has about 150 kilometers network of safari track passing through animals and bird enclosures. The state is characterized by uplands that stand at an average of 1200m above sea level with mean annual temperatures which vary between  $22^{\circ}\text{C}$  on the Jos plateau in the North to  $27^{\circ}\text{C}$  in the south of the state.

### Method of data collection

Information pertaining to management ethics and strategies of Jos Wildlife Park were collected through observation, in-depth interviews (IDIs) and reviews of files and record. Activities carefully observed include: Routine feeding of animals, daily cleaning of enclosures, examination of animals, treatment of sick inmates, procurement and transfer of animals, conditioning of newly procured inmates, tourist and vegetation management. IDIs were conducted with randomly selected tourists and residents of Dong, Tudunwada, Kabon and Federal lowcost housing to know

about tourist satisfaction and management relationships with communities that neighbour the Jos Wildlife Park. Concerning the management ethics and strategies of the park; IDIs were also conducted with purposively selected persons: Assistant general manager (Wildlife) of Plateau State Tourism Corporation (PSTC), project manager of JWLP, all the sectional heads and experienced workers who have minimally been with JWLP since the year 1975 (three years after it was gazetted) till date. The information obtained were presented using descriptive statistics.

## RESULTS AND DISCUSSION

The Jos Wildlife Park (JWLP) incorporate zoo management into protected area management. Thus the park manages wild animals under three different systems: intensive (ex-situ), semi intensive and extensive or free range (in-situ). A species of animals could be managed both under intensive and extensive systems.

### Intensive System

Species managed under this system as presented in Table 1 include Chimpanzee (*Pan Troglodytes*), Lion (*Panthera Leo*), Stripped Hyaena (*Hyaena hyaena*), African Savanna Elephant (*Loxodonta africana*), Royal Python (*Python sabae*), Nile Crocodile (*Crocodylus niloticus*), Monitor Lizard (*Veranus nilitica*), Anubis Baboon (*Papio anubis*) Tantalus Monkey (*Cercopithecus tantalus*), Patas Monkey (*Erythrocebus patas*), Martial Eagle (*Polemaetus belliococcus*), Civet cat (*Viverra civetta*), Tawny eagle (*Aquila vapax*), Bateleur eagle (*Teraithopius ecandautus*), Palmnut vulture (*Gypohirax angolensis*), Hooded vulture (*Neophron monachus*), Black Kite (*Milvus migrans*), Band owl (*Tyto alba*), Fennec Fox (*Fennecus zerda*), Rosy owl, White headed vulture (*Aegyptius occipitalis*), Red king hen, Guinea pig (*Cavia porcellus*) and Short nosed crocodile (*Osterlaemus tetraspis*). This is the type of management system in zoos. Animals are fed on a specific time schedule, closely observed and carefully monitored on a daily basis by animal keepers. There is routine medication for the animals. The animal houses are cleaned and also disinfested at intervals. However, the animals are housed in different sizes, types and shapes of cages, enclosures and pools depending on their physical strength and behaviour.

**Table 1: List of animal species managed under intensive system**

Common Names	Scientific Names	No.
Chimpanzee	<i>Pan troglodytes</i>	4
Lion	<i>Panthera leo</i>	2
Stripped hyaena	<i>Hyaena hyaenia</i>	3
African savanna elephant	<i>Loxo donta africana</i>	2
Royal python	<i>Python sabae</i>	2
Nile crocodile	<i>Crocodylus nilotica</i>	2
Monitor lizard	<i>Veranus niloticus</i>	1
Anubis baboon	<i>Papio anubis</i>	8
Tantalus monkey	<i>Cercopithecus tantalus</i>	1
Patas monkey	<i>Erythrocebus patas</i>	3
Martial eagle	<i>Polemaetus bellicocus</i>	2
Civet cat	<i>Viverra civetta</i>	1
Tawny eagle	<i>Aquila vapax</i>	1
Bateleur eagle	<i>Terathopius ecaudatus</i>	1
Palmnut vulture	<i>Gypohirax angolensis</i>	2
Hooded vulture	<i>Neophron monachus</i>	1
Black kite	<i>Milvus migrans</i>	5
Band owl	<i>Tyto alba</i>	1
Fennec fox	<i>Fennecus zerda</i>	4
Red king hen	-	1
White headed vulture	<i>Aegyptius occipitalis</i>	2
Rosy owl	<i>Rosus pelicanus</i>	1
Guinea pig	<i>Cavia porcellus</i>	17
Short nosed crocodile	<i>Osteolaemus tetraspis</i>	1

### Semi Intensive System

Animal species under this system are under routine feeding regimes by the JWLP management but also feed on their own in their various enclosures and pools. Animal species under this system as shown on table 2 include: Lion (*Panthera leo*), Pygmy hippopotamus (*Choeropsis liberiensis*), Kob (*Kobus kob*), Ostrich (*Struthio camelus*), Red river hog (*Potamochoerus porcus*), Derby eland (*Taurotragus derbianus*), Warthog (*Phacochoerus aethiopicus*), African buffalo (*Syncerus caffer*), Duiker spp., Red fronted gazelle (*Gazella rufifrons*), Tortoise (*Kinixys erosa*) and Desert tortoise (*Gophensis agazziziz*). The lion in the wild can also hunt in spite of meat that is given to it daily. The antelopes graze freely in their various enclosures. The pygmy hippopotamus leaves its pool at night and even during the day, moves to many areas outside the pool to graze thereby supplementing/augmenting the water-grass and potatoes that it is fed on by

the JWLP management. The red river hogs dig out roots at will in their enclosures to supplement the feed given to them.

These animals are housed in enclosures that are closer to their natural environment than that of the intensive system. Many animal species here could conveniently hide inside their enclosures without being seen. The pygmy hippopotamus can conveniently hide inside the 'hippo pool' without being seen by visitors. The lion in the large open-air-enclosure that is covered by very thick vegetation is hardly seen by visitors except zookeepers during routine feeding. This conforms to the work of Bailey (1982) that animals when in a vegetative enclosure may avoid being seen are considered free ranging.

This is unlike what happened on the 11<sup>th</sup> of December 1982 when the leopard -spark gave birth to three kittens around 4.00pm. The presence of visitors made the leopard restless under the intensive system, as it had nowhere to hide the kitten. Out of fear of being seen, the male leopard carried one of the kittens with its mouth for safety. Consequently, the JWLP management stopped visitors from seeing the spark leopard.

All animal species in both the intensive and semi-intensive system are provided with water unless for those that do not need water. Every animal in these systems are supposed to be provided with mates except those that reject mates. But the study revealed that many animal species in Jos Wildlife Park are either single or of the same sex. For cost effectiveness, animal species under these management systems are mainly fed with food that are common in the locality and balanced with supplements. The non-human primates are fed with banana, orange, cabbage and sugarcane. Ostrich is fed with compounded feed (flour). Pygmy hippopotamus is fed with Irish potatoes and very succulent water-weed. The red river hogs and the tortoise are also fed with sugarcane, Irish potato and cabbage. The grazers and browsers are fed with vegetation supplied on daily basis by the unit of JWLP called "grass cutters". Cows are slaughtered for the carnivores on weekly basis. The tortoise and kobs being ecologically separated in feeding are housed together. The study reveals that elephants like feeding on citrus vegetation (lime). In place of saltlicks the herbivores are given ash to supplement potassium, which aids digestion in the animals. The carnivores are given liver, which is a source of cod liver oil.

**Table 2: List of Animals managed under semi intensive system of management**

Common Names	Scientific Names	Population of animals
Lion	<i>Panthera leo</i>	1
Pygmy hippopotamus	<i>Choeropsis liberiensis</i>	1
Kob	<i>Kobus kob</i>	5
Ostrich	<i>Struthio camelus</i>	10
Red river hog	<i>Potamochoerus porcus</i>	2
Derby eland	<i>Taurotragus derbianus</i>	11
Warthog	<i>Phacochoerus aethiopicus</i>	1
African buffalo	<i>Syncerus caffer</i>	1
Red flanked duiker	<i>Cephalophus rufilatus</i>	4
Grimms duiker	<i>Sylvicapra grimmia</i>	1
Red fronted gazelle	<i>Gazella rufifrons</i>	2
Tortoise	<i>Kinixys erosa</i>	2
Desert tortoise	<i>Gophensis agazziziz</i>	1
Ducks	<i>Pteronetta hartlau bii</i>	18
Horse	<i>Equus ceballus</i>	1
Donkey	<i>Equus asinus</i>	4
Peafowl	<i>Pava cristatus</i>	4

### Extensive Management System

The animals under this system are not fenced for by the JWLP management. The animal species as shown in table 3 below, include Patas monkey (*Erythrocebus patas*), Tantalus monkey (*Cercopithecus tantalus*), Bushfowl (*Francolinus bicalcaratus*), Rats, shrews and many species of birds. The management does not even know all the animals in this system. They are under free range; hence move freely as in the Yankari National Park and other game reserves in Nigeria. The animals are neither housed, fed, nor given any medical attention by the management. Nevertheless, some animal species may leave the park environment without coming back. Some may also bring other animal species into the park.

**Table 3: List of Animals species under Extensive system of management.**

Common Names	Scientific Names	Population of animals
Patas monkey	<i>Erythrocebus patas</i>	Unknown
Tantalus monkey	<i>Cercopithecus tantalus</i>	Unknown
Bush fowl	<i>Francolinus bicalcaratus</i>	Unknown
Rat	<i>Rattus rattus</i>	Unknown
Shrew	<i>Crocidura flavescence</i>	Unknown
Many species of birds	-	Unknown

### Conservation Practices

Fire regimes are tools used to destroy ecto-parasites and disease transmitting vectors. It is also used to encourage the growth of palatable vegetation for herbivores (Ayodele *et al.*, 1999, Anderson, 1991). Bare grounds are either seeded or patched with grasses to induce faster growth and to check erosion.

The study revealed that quite a large number of species have bred in the park, which could be attributed to the favourable environmental condition of Jos, couple with good management. Nevertheless, there is no park in the world that has a static number of animal species. Animals die and are replaced. The utmost factor of importance in assessing animal is to consider whether the animal lived and exhausted its natural life span. The study shows that apart from those species that die due to inadaptability or during conditioning, others especially the big games always live for a long time before dying. For instance, two red river hogs donated by A. G. Leventis in 1992 are still alive till date. Nonetheless, several cases of cannibalism and competition for food have been observed in the park.

Cordial relationship between the park management and residents around the park has reduced poaching to a very bearable minimum. Absence of lodges has probably reduced negative impact of the visitors on the residents, unlike in Ngorongoro National Park in Kenya and Masai Mara conservation areas in Tanzania (Kamuaro, 1996). With permission, residents are allowed to harvest grasses for their thatch houses. Occasionally they are also invited to perform their cultural Asharuwa dance, which attracts some financial benefits. Nonetheless, they are hardly always favoured when there are employment opportunities. Also they are not involved in the management of the park. Some animal species are being habituated by human presence. In many cases visitors have fed the primate species and the African

savanna elephant, which may lead to transmission of zoonotic diseases. During festivities the park gates are ever kept open until trampling is about to result due to overcrowding (Ijeomah *et al.*, 2005a).

### Tourism

The study shows that JWLP has become a place for all season tourism and animals are sited at ease in the natural and near natural environments. The park is opened from 10.00am to 6p.m. everyday since it was commissioned. If a visitor could not site the monkey that roams about, he may likely site the ones in the cages and would be satisfied. If a visitor cannot site the lion in the wild under open air enclosure, he may likely be satisfied by siting the ones in the cage and some core attractions such as the pine forest. However, visitors have bitterly complained of insufficient games (table 4) and overcrowding which leads to pollution with dust during festivities.

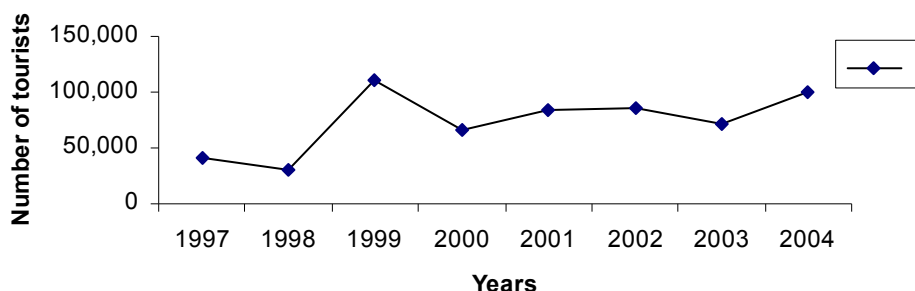
Table 4: Dead Animal species that have not been replaced

Common Names	Scientific Names
Jackal	<i>Canis aureus</i>
Zebra	<i>Equus burchelli</i>
Rhinoceros	<i>Diceros bicornis</i>
Bush buck	<i>Trionyx triunguis</i>
Turtle	<i>Tragelaphus</i>
Spotted hyaena	<i>Crocuta crocuta</i>
Leopard	<i>Panthera pardus</i>
Pionosis	<i>Platanistidae spp</i>
Black Japanese fowl	-
Checkoslovakia fowl	-
Crested porcupine	<i>Hystrix cristata</i>
Brush-tailed porcupine	<i>Atheruxus africanus</i>

Findings from the study (Table 5), reveals that, tourists visited Jos Wildlife Park from January to December between 1997 and 2004. On monthly basis, tourist influx fluctuated due to seasonal influence. The months of December, January, March and April recorded relatively high number of visitors due to festivities unlike the months of June and July that are periods of rainy seasons. On annual basis, tourist inflow fluctuated based on political and economic influences. The year 1998 recorded 30, 350 tourists and the least number of tourist in the period of study as it was the peak of military dictatorship in Nigeria (Ijeomah *et al.*, 2005b). Contrarily, 1999 had the highest tourists number of 111, 033 due to change of government from military to democracy (Ijeomah *et al.*, 2005b). Figure 1 shows the graphical presentation of tourist trend in Jos Wildlife Park

Table 5: Monthly and Annual tourists inflow in Jos Wildlife Park

S/N	MONTH	YEAR							
		1997	1998	1999	2000	2001	2002	2003	2004
1	January	8675	1165	10,025	14,893	5209	4920	8741	12870
2	February	1123	969	346	1,916	4,230	8207	8013	8431
3	March	1385	1115	33,506	8,033	10,104	4939	3347	6351
4	April	7821	5,282	33,349	4,473	9,830	5461	4941	10524
5	May	394	585	2,355	1855	4,301	3792	3556	4842
6	June	920	1067	2351	4,110	6,847	5011	1872	5712
7	July	2471	1,379	2,736	5,922	10,985	5336	2829	3365
8	August	1622	2,221	3,123	2,881	6,093	5199	4229	6918
9	September	1007	2,921	3,074	2,256	1,355	5601	3315	5648
10	October	2963	2,961	3423	2,773	1,963	4898	3351	4411
11	November	3131	2,761	3867	4,497	3,770	5079	9347	15785
12	December	10234	7,924	12,860	12,215	19,904	26516	17694	15046
	Total	41,746	30,350	111,033	65,824	84,591	84,959	71,245	99,903



**Figure 1: Graphical Representation of tourists trend in Jos Wildlife Park**

### CONCLUSION AND RECOMMENDATIONS

Nature based tourism, regardless of how it is defined, is now being strongly promoted in every region in every conceivable form. Ecotourism provides opportunities for access to open up the rural areas. It has helped in bringing many sites under protection. Nevertheless, it is of decided benefit between conservation and revenue generation, which is even rarely well distributed. The revenues generated from ecotourism should be used to manage and protect the sites. Jos Wildlife Park adopts strategies, which guarantee all season tourism and continuous conservation education. The strategy combines different system of wildlife management including intensive, semi intensive and extensive in an ecodestination, thereby increasing visitors' chances of citing games at all times. In essence, this park gazetted in 1972 has remained open to the public since 1977 that it was commissioned till date, with games viewed at ease from 10am to 6am everyday. Thus, before ecotourism was discovered or rather named formerly by Hector Ceballes Lascurain of Mexico in 1987, JWLP had been into it and has sustained it till date.

To ensure sustainability and good tourists' experience, conservation objectives must be clearly specified, targeted and monitored. Park facilities should be multiplied and spread at different locations to reduce pollution and destructive pressures from visitors. Dead animal species should be replaced. More animals especially the endangered species should be procured to increase the stock of the park. Animal species should be provided with mates especially the gregarious ones to ease psychological stress or tension. More trucks should be provided to facilitate the provision of enough vegetation for the grazers and browsers. The only available truck is over utilized, which leads to frequent breakdown. The JWLP management

should embark on large-scale goat/cattle production for the feeding of the carnivores, to reduce cost. Standard (not pit) toilets and dustbins must be located at strategic points for cleanliness and decency. Fish species should be introduced into the "hippo pool" to make it look more natural and attractive.

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