
ASSESSMENT OF TOURISTS FLOW AND REVENUE GENERATION IN KAINJI LAKE NATIONAL PARK, NIGERIA**Adejumo, A.A¹, Amusa, T.O^{2*}. and Adamu, H³.**¹Federal College of Forestry, Ibadan, Forestry Research Institute of Nigeria²Department of Forest Resources Management, University of Ilorin, Ilorin, Nigeria³Federal College of Wildlife Management, New Bussa, Forestry Research Institute of Nigeria*** Corresponding author: Phone: +2348051750289; E-mail. teejayui@gmail.com****ABSTRACT**

This study was carried out to assess tourists' flow and revenue generation from 1999 to 2009 in Kainji Lake National Park (KLNP), north central Nigeria. Data were collected from both primary and secondary sources. Primary data collection was carried out through the use of structured questionnaire and oral interviews. Secondary data were collected from the park records and reports. Simple random sampling technique with 50% sampling intensity was used to draw representative samples from the staff population. In all, a total of 158 respondents were sampled. Data collected were subjected to descriptive and inferential statistics. Results showed that KLNP is well visited, with a total number of 39,138 tourists and ₦40,135,223.85 revenue generated within the period under review. Fluctuation in tourists flow was discernible, with the highest number of tourists (5,593) recorded in 2005, while the lowest (1,143) was in 2003. About 97.5% of the visitors were local tourists. The highest revenue generation (₦5,445,198.96) was in the year 2009, while the lowest (₦1,705,524.00) was in 1999. There was no significant correlation between revenue generation from ecotourism and tourists flow across the years ($N = 11$; Pearson Correlation = 0.526; $P = 0.096$). Proceeds from ecotourism contribute to conservation activities and park management, especially in times of inadequate funding from the federal government. The authorities of KLNP would have to explore the full range of income generation opportunities in ecotourism. There is need to improve upon the state of facilities in the park and orient these towards meeting visitors' needs and wants for improved revenue generation.

Key words: Kainji Lake National Park, Ecotourism, Tourist flow, Revenue generation**INTRODUCTION**

In Africa, the first set of game reserves and national parks were created in remote areas that were unsuitable for agriculture, primarily for the protection of large mammals whose populations were in decline due to hunting and diseases (Lockwood *et al.*, 2006). Overtime this purpose has widened to embrace from the 1930s the provision of environmental, aesthetic and recreational benefits. From the 1970s, the purpose was further extended to include

biodiversity conservation; and most recently a focus on economic and social benefits. National parks were created as pristine wilderness reserves, and yet at the same time were designed for the use and enjoyment of visitors. The former involves isolating parks from adverse human impacts, while the latter has to do with making parks accessible to the public (Lockwood *et al.*, 2006). This is the thrust of park tourism, wildlife tourism or ecotourism.

Park tourism, wildlife tourism or ecotourism is a type of tourism that involves traveling to relatively undisturbed natural areas with the objective of admiring, studying and enjoying the scenery and its wild plants and animals as well as any cultural features found therein (Boo, 1991). The idea of wildlife tourism is closely related or associated with conservation on one hand and travel on the other hand. It is one of the fastest growing tourism sectors worldwide. Additionally, tourism based upon wildlife has become the leading foreign exchange earner in several countries (Reynolds and Braithwait, 2001). Across the world, the number of tourists seeking interactions with wildlife in their natural environment is increasing and there is a significant body of literature describing the revenues generated from wildlife tourism (Ayodele, 2002; Meduna et al, 2005; Lindsey et al, 2007).

The potential of wildlife tourism to sustainably finance conservation and economic development has been widely promoted (Meduna et al, 2005). For African national parks, ecotourism has replaced hunting as a non-consumptive and more sustainable use of wildlife. Consequently, many African national parks have been developed and managed for wildlife-based tourism, and have as their primary goal the protection and maintenance of wildlife populations. Besides, national parks create a wide range of benefits to society, ranging from the protection of environmental quality and services to various recreational

benefits and revenues realized through ecotourism. Yet, despite general recognition of the benefits of parks and wildlife, measuring these benefits is difficult because they tend to be non-marketed and hence not easily quantified. Quantifying both the benefits and costs of wildlife conservation is important, however, especially when conservation is an option that competes against alternatives including the extraction of market-valued resources (Dixon and Sherman, 1990; Lindberg, 1991).

In the light of the foregoing, a study of trend analysis of visitors to national parks is important as a vital indication of the current state of development of ecotourism activities in protected areas. It is a key factor in measuring the potentials of the national parks to generate sustainable level of revenue for biodiversity conservation. Trend analysis of visitors is also of high paramount in developing strategies for conservation awareness among local and foreign residents of an area. This study, therefore, undertake an assessment of tourists flow in Kainji Lake National Park, north central Nigeria. This is with a view to improving its utilization of ecotourism potentials and revenue generation.

METHODOLOGY

The Study Area

The study area, Kainji Lake National Park (KLNP) is situated in the north central part of Nigeria between Niger and Kwara states close to the border with the Republic of Benin. The

Park lies approximately between latitude 9° 40' N - 10° 30' N and longitude 3° 30' E - 5° 50' E covering a total area of 5,340.82km² (Amusa *et al.*, 2010; Figure 1). It was established in 1979 by the merger of two former non-contiguous game reserves, Borgu game reserve (located in Niger and Kwara States) and Zurguma game reserve (located in Niger State). These now constitute the two sectors of the Park. They had been gazetted in 1962 and 1971 respectively as game reserves by the then northern regional government and are separated by the Kainji Lake, a lake impounded on the River Niger for Hydro-electric power generation. KLNP forms a boundary between the northern fringe of the Nigerian guinea savanna and the southern edge of the sudan-guinea savanna ecosystems; although in some areas it appears more sahelian. Riparian forest also occurs along the larger water courses (Ezealor, 2002; Ayeni, 2007). The vegetation found in the Park has a

distinctive complex or savanna sub-type including; *Burkea/Detarium* woodland, *Azalia/Isobelia* woodland, *Daniela Oliveri* complex and *Acacia/Anogeissus/Detarium* woodland (Ezealor, 2002; Amusa *et al.*, 2010). The rainfall pattern for the Park is a single rainfall peak. The wet period in the area is between August and September. The annual rainfall ranges from 975-1220mm. The highest temperature is recorded in March, with a mean daily temperature maximum of 35°-40°C. The animal species in the Park include Buffalo (*Syncerus caffer*), Roan antelope (*Hippotragus equines*), Senegal Kob (*Kobus kob*), Western hartebeest (*Alcelaphus buselaphus*), Hippopotamus (*Hippopotamus amphibious*), Olive baboon (*Papio anubis*), Bushbuck (*Tragelaphus scriptus*), Red flanked duiker (*Cephalopus rufilatus*), Oribi (*Ourebia ourebia*) and Lion (*Panthera leo*) among others (Ezealor, 2002; Ayeni, 2007; Amusa *et al.*, 2010).

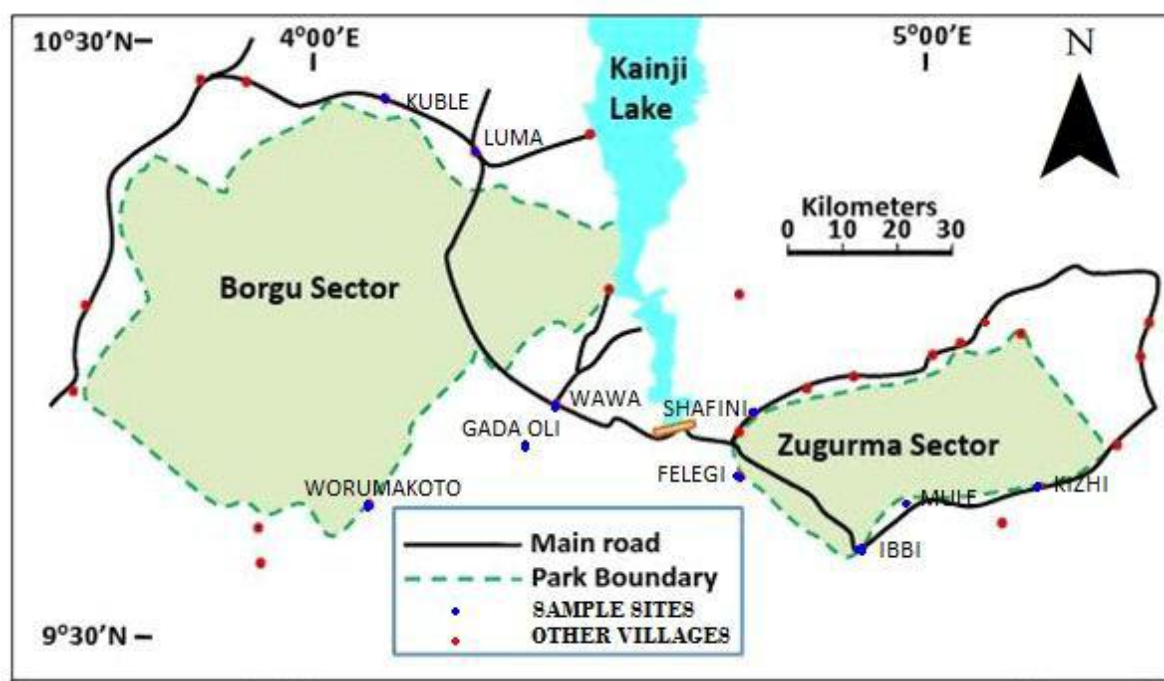


Figure 1: Map of Kainji Lake National Park showing Borgu and Zurguma Sectors

DATA COLLECTION AND ANALYSIS

Data were collected from both primary and secondary sources. Primary data collection was carried out through the use of structured questionnaire and oral interviews. Secondary data were collected from the park records and reports. The contents of the structured questionnaire comprised open and close-ended questions. The study population was made up of staff in the various departments of the park including: Ecotourism, Park Engineering, Management and Administrative as well as Park Protection and Conservation. The total staff strength of KLNP at the time of the survey was 316.

A simple random sampling technique with 50% sampling intensity was used to draw

representative samples from the staff population in each of the above-mentioned departments. In all, a total of 158 respondents were sampled. Table 1 shows the staff population in each departments and the corresponding number of respondents sampled. The sampling intensity used is in conformity with the recommendation of Diaw et al. (2002) which stated that a minimum of 10% sampling intensity could serve as a representative figure for a population less than 500 people.

Data collected were subjected to descriptive statistics which involve frequency analysis, percentages and charts.

Table 1: Staff Distribution and Respondents in the various Departments

S/N	Departments	Population	50% Random Sampling
1.	Ecotourism	35	18
2.	Park Engineering	58	29
3.	Management and Administrative	48	24
4.	Park Protection and Conservation	175	87
	Total	316	158

RESULTS AND DISCUSSION

Tourist Flow and Trend

It was gathered that KLNP is popularly visited by tourists mainly for game viewing. It was also noted that the Park receives visitors virtually on a daily basis (Figure 2). Information obtained also showed that the Park enjoys high tourist flow especially during the dry season. Table 2 shows significant

number of the respondents (90.2%) reporting that tourists who visited the Park in the past expressed satisfaction with the services rendered to them. Table 3 also shows that high tourist flow was experienced from September to December, while Table 4 indicates that the Park usually record low tourist flow from May to August of the year.

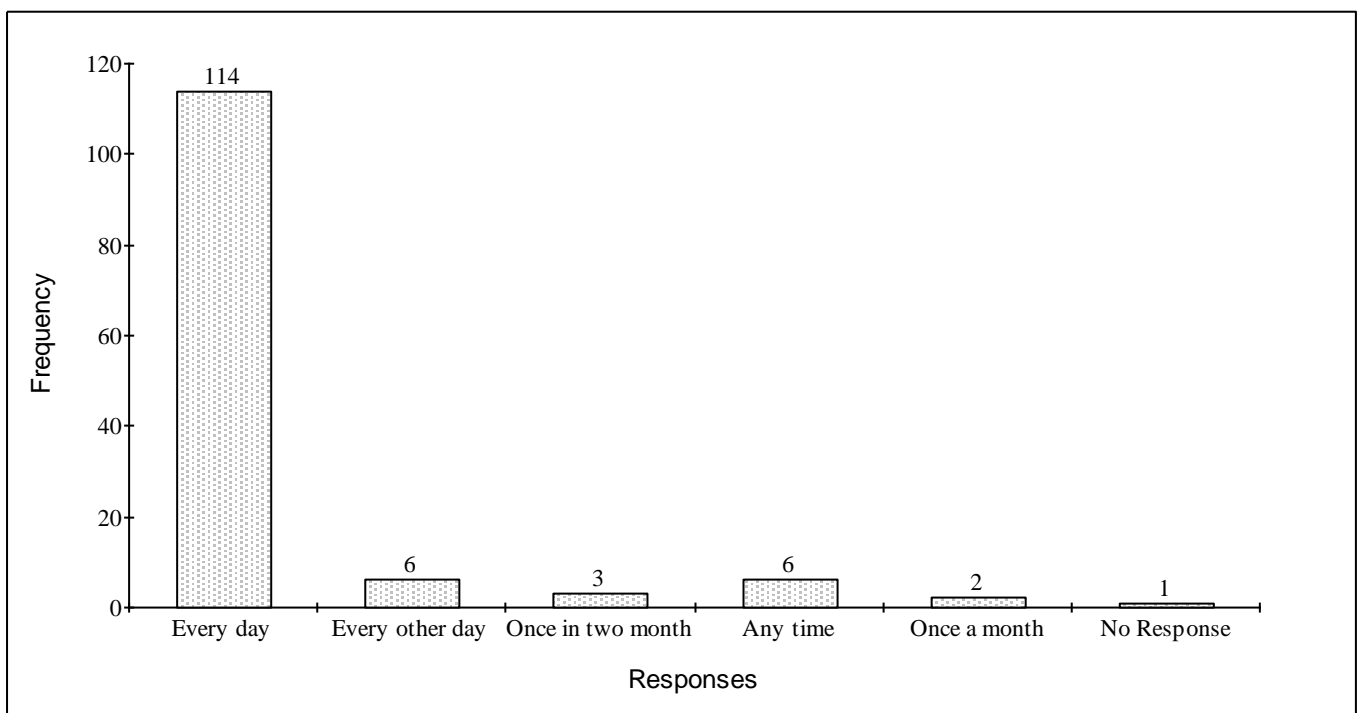


Figure 2: Rate of Tourists Patronage to KLNP

Table 2: Tourists’ Reaction Towards Services Rendered by the park

Response	Frequency	Percent
Satisfactory	119	90.2
Disappointing	2	1.5
Fair	7	5.3
Below Expectation	1	.8
Beyond Expectation	3	2.3
Total	132	100.0

Table 3: Perception of Tourist Flow Across the Months

Months	Frequency	Percent
January – April	44	33.3
May – August	12	9.1
September - December	68	51.5
No Response	8	6.1
Total	132	100.0

Table 4: Perception on Months with Low Tourist Flow

Months	Frequency	Percent
January - April	4	3.0
May - August	86	65.2
September - December	26	19.7
No Response	16	12.1
Total	132	100.0

About 87.9% of respondents opined that the trend in tourist flow in the Park is increasing, 5.3% of them were of the view that the trend is decreasing, while 6.1% claimed that it fluctuates (Table 5). Figure 3 shows the trend in tourist flow within the period 1999 to 2009. Fluctuation in trend was discernible, with the highest number of tourists (5,593) recorded in 2005, while the lowest (1,143) was in 2003. By critically observing the chart, one would

observe that the flow had been encouraging from 2004 to 2009. Therefore, comparing the flow in the recent years (2004-2009) with past years (1999-2003), it was observed that the flow in the recent years is far better than the flow in the past years. Figure 4 compares the flow of local and foreign tourists for the year period. About 97.5% of the visitors were local tourists. The flow of foreigners was highest in 2000 (18.9%).

Table 5: Trend in Tourist Flow in the Last Ten Years

Description	Frequency	Percent
Increasing	116	87.9
Decreasing	7	5.3
Fluctuating	8	6.1
No Response	1	.8
Total	132	100.0

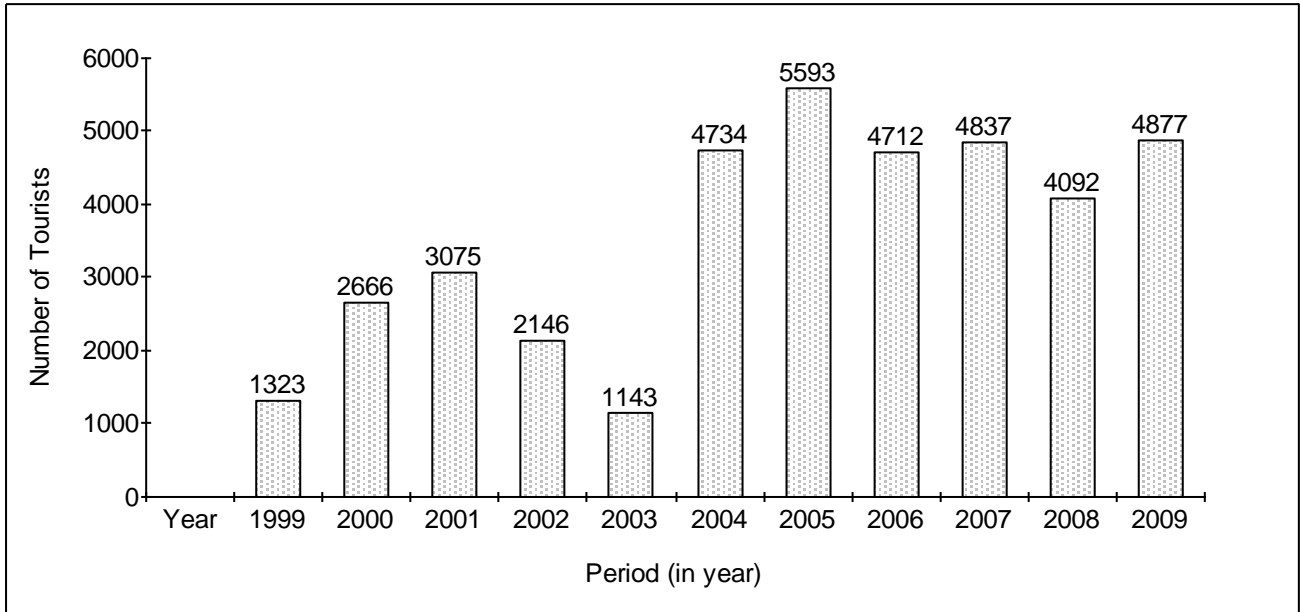


Figure 3: Tourist flow for the period 1999 – 2009

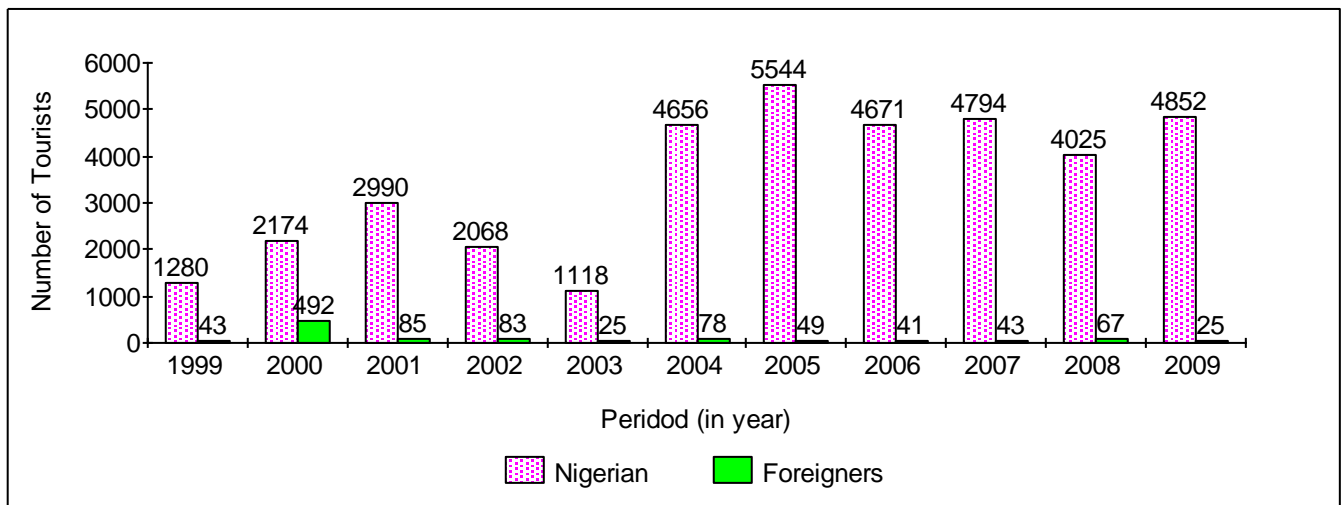


Figure 4: Comparison of Tourist Flow between Locals and Foreigners

Low patronage was recorded in the year 2003-2009. The flow of foreigners between 2005 and 2009 compared to that of 1999 and 2004 indicates that the lowest number of foreign visitors was recorded in recent years.

Tourists’ visit to national parks for game viewing has been interpreted by Reynolds and Braithwait (2001) to be the result of a general

interest in nature and nature-based experiences, as reflected in an increasing demand to experience these, and increasing value being placed on animals in the wild, as opposed to those in captive or semi-captive situations. The high influx of tourists during the dry season as reported in this study may be attributed to excellent visibility for game

viewing during the period. In contrast, the period May to August offers limited visibility for game viewing and can disappoint visitors. Nevertheless, tourists flow in the study area does not compare favourably well with what is obtained in some other African countries, especially those of the east and southern parts of the continent. For instance, tourism in the Masai Mara reserve has been extremely successful in economic terms. Masai Mara receives the highest number of visitors not only in Kenya but in East Africa. An available report shows that average annual tourist entry in the park is around 200,000 (Bhandari, 1999).

It is important to identify factors influencing tourists flow in national parks. Increasing urbanization and the rise of sedentary and indoor pastimes (such as television, the Internet, and video games) have been linked to a reduction in informal and outdoor recreation including wildlife tourism (Balmford *et al.*, 2009). Balmford *et al.*, (2009) also reported a negative link between visit growth to protected areas and wealth of a nation. It was further suggested that visitation to many formal protected areas in richer countries are becoming increasingly crowded and thus less attractive to nature enthusiasts. Overcrowding and the perception of overcrowding have been noted as a concern of visitors to many larger US national parks for over a decade. One other factor is the shift in preference away from

domestic destinations as nature focused tourists become wealthier and alternative wildlife attractions in less costly developing countries become more accessible (Fretwell and Podolsky, 2003). There is need for empirical works on the motivation of visitors to individual national parks.

Income Generation

Table 6 reveals information on the internally generated revenue (IGR) by KLNP from ecotourism in the last ten years. It was observed that there had been steady increase from 1999 to 2002. Revenue generation from ecotourism plummeted from 2003 to 2005. It again rose steadily from 2006 to 2009. The highest revenue generation (₦5,445,198.96) from ecotourism was in the year 2009, while the lowest (₦1,705,524.00) was in 1999. However, there was no correlation between revenue generation from ecotourism and tourists flow across the years ($N = 11$; Pearson Correlation = 0.526; $P = 0.096$; Table 7). The major sources of ecotourism revenue for the park include: park entry, accommodation and catering service fees as well as proceeds from sales of souvenirs. Invariably, tourist flow for a given year may not necessarily determine the level of revenue generated from ecotourism. On the contrary, tourists' expenditure and spending in the park will go a long way at influencing the scale of revenue generation from the exercise.

Table 6: Revenue Generation from Park Tourism in KLNP from 1999 – 2009

Year	Amount Generated (₦)
1999	1,705,524.00
2000	2,140,057.00
2001	3,379,300.00
2002	4,212,384.11
2003	2,745,659.93
2004	3,098,682.42
2005	2,867,357.23
2006	4,042,487.48
2007	5,076,887.36
2008	5,421,685.36
2009	5,445,198.96
Total	40,135,223.85

Table 7: Bivariate Correlation of Tourist flow and Revenue generation in KLNP from 1999 – 2009

	Statistics	Tourist flow	Revenue generation
Tourist flow	Pearson Correlation	1	0.526
	Sig. (2-tailed)		0.096
	N	11	11

Clearly, the proceeds from wildlife tourism to conservation activities has gone a long way in contributing to the management of Nigerian national parks, especially in times of inadequate funding from the federal government (Meduna *et al.*, 2005). This underscores the potential of wildlife tourism towards generating substantial resources for both conservation and economic development. This is also significant given that protected

areas are under increasing pressure to provide economic justification for their existence (Balmford *et al.*, 2009).

Although there were no data to compare budget allocation to revenue generation from ecotourism in this study, typically the income from tourism is well below the park budget, constituting a small percentage of the money used for management. But globally, there is a trend of governments requiring parks to

recover higher percentages of their budgets from tourist expenditures (Eagles, 2001). Therefore, authorities of KLNP would have to explore the full range of income generation opportunities in ecotourism.

State of Facilities in the Park

About 53.0% of the respondents were of the opinion that the state of the facilities in the Park was very good, while 36.4% viewed the state of the facilities as just good. Around 8.3% of respondents believe the state of facilities was fair, while others rated the state of the facilities as poor (Table 8). Table 9 highlights the perception of the respondents on some facilities that are long overdue for replacement. From the analysis, most of the respondents (30.0%) wished all the facilities in

the Park could be replaced as they had been installed for a very long time. About 22.0% was concerned about the state of the furniture. Around 17.4% was concerned about the repair of the tourist lodge. Views of the respondents were also sought as to why some of the old facilities have not been replaced. Table 10 reveals that majority (80.3%) of the respondents blamed the situation on inadequate funding. Table 11 describes the overall potential of various facilities in the Park regarding their utilization. About 46.2% of the respondents confirmed that the facilities were being fully utilized by tourists while others (18.2%) believed that they were being fairly utilized. The rest also claimed that they were being excellently utilized.

Table 8: State of Facilities in the park

Assessment	Frequency	Percent
Very Good	70	53.0
Good	48	36.4
Fair	11	8.3
Poor	2	1.5
Very Poor	1	0.8
Total	132	100.0

Table 9: Specific Facilities long due for Replacement

Facilities	Frequency	Percent
Chalet and Boat	6	4.5
Rangers boot and Quarters	15	11.4
Tourist Lodge	23	17.4
Furniture	29	22.0
Indoor Facilities	9	6.8
Building and Roofing	16	12.1
Canteen Facilities	3	2.3
Vehicles	18	13.6
Air condition and Fans	9	6.8
All the facilities	4	3.0
Total	132	100.0

Table 10: Reasons for non-replacement of old Facilities

Reasons	Frequency	Percent
Lack of fund	106	80.3
Lack of proper monitoring	11	8.3
Obsolete	8	6.1
Modern technologies	2	1.5
Regular maintenance	1	.8
Not necessary	4	3.0
Total	132	100.0

Table 11: Overall Potential of Facilities with regards to Utilization

Rating	Frequency	Percent
Fair	24	18.2
Very fair	5	3.8
Good	61	46.2
Average	19	14.4
Very good	10	7.6
Excellent	13	9.8
Total	132	100.0

Typically, KLNP like other parks in Nigeria is managed by a government agency- the Nigerian National Park Service, with budgets provided each year from the federal government allocation. The budgets are not closely tied to tourism levels, so park management is severely limited in its ability to respond to increases or other changes in visitation levels including the park facilities. Although there are positive responses on the state of the park facilities, it is critical that the park visitors' needs and wants be understood. The park must not function on a take- it or leave- it philosophy towards their visitors. This is because park tourism is a global phenomenon and has a global market. Those agencies and those parks that develop suitable expertise and facilities are out-competing others. The phenomenal success of national parks and game reserves in South Africa in the past decades has shown how a sophisticated tourism approach can successfully out-compete many other similar destinations in Africa that have equally good natural resources, but less effective tourism operations (Eagles, 2001).

References

Amusa, T.O., Jimoh, S.O., Aridanzi, P. and Haruna, M. 2010. Ethnobotany and Conservation of Plant Resources of Kainji Lake National Park, Nigeria. *Ethnobotany Research & Applications*. 8: 181-194.

Ayeni, J.S.O. 2007. Participatory Management Plan of Kainji Lake National Park. Environ-Consult, Lagos. 156p.

CONCLUSION

KLNP has a consistent record of tourists flow over the years. Revenue generation from park tourism is also quite substantial for biodiversity conservation. However, the flow of foreign tourists has not been encouraging and also ebbed in recent years. Furthermore, it was difficult establishing a strong correlation between revenue generation from ecotourism and tourists flow across the years. In other words, tourists flow for a given year may not necessarily determine the level of revenue generated from ecotourism. On the contrary, level of tourists' expenditure and spending in the park does. There is need to improve upon the state of facilities in the park and orient these towards meeting visitors' needs and wants for improved revenue generation. Creating awareness among local and foreign residents on the benefits of visit and recreational activities in the park is also important in this regard. On the whole, it is important to identify factors influencing tourists flow into the national park as well as motivation of individual visitor.

Ayodele, I.A. 2002. Essentials of Tourism Management. Elshaddai Global Ventures Ltd, Ibadan. 90p.

Balmford, A., Bresford, J., Green, J., Naidoo, R., Walpole, M. and Manica, A. 2009. A Global Perspective on Trends in Nature-Based Tourism. *PLoS Biology* 7 (6): 1-6.

Bhandari, M. 1999. Tourism Raised Problems in Masai Mara National Park Narok, Kenya.

- Report prepared for APEC, Nepal. 14p.
- Boo, E. 1991. Ecotourism: A tool for conservation and development. In J.A. Kusler (ed). *Ecotourism and Resource Conservation: A Collection of Papers*. Madison: Omnipress. 1:54–60.
- Diaw, K., Blay, D. and Adu- Anning, C. 2002. Socio-Economic Survey of Forest Fringe Communities: Krokosua Hills Forest Reserve. A Report Submitted to the Forestry Commission of Ghana. 86p.
- Dixon, J.A. and Sherman, P.B. 1990. Analyzing a National Park (Khao Yai). In Dixon, J.A. and Sherman, P.B. (eds.). *Economics of Protected Areas: A New Look at Benefits and Costs*. Earthscan, London. Lindberg. 1991p.
- Eagles, P.F.J. 2001. International Trends in Park Tourism. Paper prepared for EUROPARC. Edition 4: 17 September 2001. 43p.
- Ezealor, A.U. 2002. Critical Site for Biodiversity Conservation in Nigeria, NCF: (ed) Lagos. 97p.
- Fretwell, H.L and Podolsky, M.J. 2003. A strategy for restoring America's National Parks. *Duke Environmental Law and Policy Forum* 13: 143–186.
- Lindsey, P. A, Alexander, R., Mills, M. G. L., Romanãch, S. and Woodroffe, R. 2007. Wildlife viewing preferences of visitors to Protected Areas in South Africa: Implications for the role of ecotourism in conservation. *Journal of Ecotourism*, 6(1):19-33.
- Lockwood M, Worboys, G.L and A, Kothari (eds) 2006. *Managing Protected Areas: A global Guide*, Earth scan: London, 802p.
- Meduna, A.J., Amusa, T.O., Ogunjinmi, A.A. and Ibeun, J.S. 2005. Environmental Friendly Tourism in Nigeria: A Case Study of Nigerian National Park Service. *Nigerian Journal of Forestry*35 (1): 36-43.
- Reynolds, P. C. and Braithwait, D. 2001. Towards a conceptual framework for wildlife tourism. *Tourism Management*. 22:31-42.