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## **Assessment of Interpretive Facilities and the Delivery of Interpretive Services in Nigeria National Parks**

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**Ogunjinmi, A.A.** - Department of Forestry and Wildlife Management,  
Faculty of Agriculture, University of Port Harcourt, Rivers State, Nigeria.

[seak1402@gmail.com](mailto:seak1402@gmail.com); [seak1402@yahoo.com](mailto:seak1402@yahoo.com)

**Onadeko, S.A.** - Department of Forestry and Wildlife Management,  
University of Agriculture, Abeokuta, Nigeria

**Jayeola, O.A.** - Department of Forestry and Wildlife Management,  
University of Agriculture, Abeokuta, Nigeria

### **Abstract**

*Assessment of interpretive facilities and the delivery of interpretive services in Chad Basin National Park (CBNP), Kainji Lake National Park (KLNP), Okomu National Park (OKNP), and Yankari National Park (YNP) were conducted. The parks were selected to represent the major ecological zones where National Parks are located in Nigeria. The methods of data collection were utilized in this study. The first was the use of interview guide adapted from the Department of Natural Resources and Environment (1999) to obtain information from the management of the four national parks; the second was on-site assessment of interpretive facilities and services available in the parks. Finally, data were obtained through questionnaire from the visitors to the parks on the interpretive facilities and services provided to them. One hundred and eight (108) visitors were sampled in the four parks.*

*Data obtained were subjected to descriptive statistics. The results indicated the presence of interpretive brochures and leaflets, interpretive signs, park publications, museum/interpretive exhibits, interpretive talks, school group activities, children activities, guided tours, video, visitor centre and audio/video viewing at visitor centre in these parks. None of these Parks provided internet site, night walks, self-guided activities and trailside exhibits. The study also showed that between 2.7% and 6.3% of the total number of full-time staff in these parks were available for the delivery of interpretive services. Also, between ₦100,000 and ₦1,000,000 were budgeted annually for interpretive services out of between ₦5,000,000 and ₦100,000,000 annual operating budget for the parks.*

**Key Words:** Interpretive facilities, interpretive services, delivery, visitors, Nigeria National Park.

### **Introduction**

The earth is presently experiencing changes to its natural environments that are unprecedented in historic times (Bennet, 2003). By any objective measure, the world is undergoing a massive and increasing rate of species loss. Many ecosystems are in rapid decline or are being fragmented and degraded. Biologists estimate that the current global extinction rate of species is 100-1000 times what it would be without human-induced change (Miller, 2002). The IUCN Red List of Threatened Species (i.e. of globally threatened species) includes 148 animals and 146 plants that are found in Nigeria. Of these, 26 animals and 18 plants are classified as endangered and another three animals and 15 plants are critically endangered worldwide (Federal Ministry of Environment, 2001). Also, thirty mammals, ten birds, four reptiles, 13 amphibians and 172 plants are listed as critically endangered, endangered or vulnerable on the IUCN red list of threatened species; of these, 17 mammals, six birds, twelve amphibians and 69 plants are found in forests (IUCN, 2004). *Gossweilerodendron balsamiferum*, a tree species that is endemic to the region and harvested in Nigeria, is listed as endangered on the IUCN red list due to over-harvesting and habitat loss (IUCN, 2004). Two plant species are listed in CITES Appendix I and 44 in Appendix II (CITES 2005). Recognition of this loss has prompted increased efforts to conserve remaining natural areas and to ensure their sustainability (Young, 2000).

National parks worldwide undertake an important role in preserving and sustaining global ecosystems and ensuring that biodiversity is protected for

future generations (Inglis *et al.*, 2005). Management of natural areas is also important in ensuring the conservation of their values (Littlefair, 2003). Conserving natural and cultural resources and providing for visitor recreation are often the largest and most conspicuous management tasks (Department of Natural Resources and Environment, 1999). There are several management tools available for national parks' managers; however, a dynamic and imaginative public relations effort such as interpretation and environmental education remains tool that must not be neglected (Onadeko and Meduna, 1984). According to Ceballos-Lascurin (1996), there is increasing evidence to indicate that on-site interpretive programs in developing countries have an important strategic environmental education function.

Department of Natural Resources and Environment (1999) defines interpretation as information which has the objective of facilitating an understanding and appreciation of park assets and values. Environmental interpretation can assist in optimizing the use and valorization of local resources by creating attractive quality and experience-based tourism products. Its particular strength- and what sets it apart from other approaches is its ability to combine regional sustainable development with informal environmental education and visitor management (Wolfgang, 2002). Environmental interpretation is a complex instrument of communication, tourism planning and management with close links to a range of other fields. One strand is linked to issues such as landscape perception and experiences of landscape, another to communication (environmental didactics) and another to strategic planning and countryside management, such as valorization of the cultural and natural potential of countryside resources and visitor management. Central to the concept are the ideas of increasing appreciation of the countryside resource whilst implementing sustainable tourism development in rural areas through optimizing the use of indigenous resources (Wolfgang, 2002).

The purposes of interpretation according to Littlefair (2003) generally fall within the categories of recreation, for example, enriching visitor experiences and improving visitor safety; promotion, for example, enhancing the image of the management agency and promoting park activities; economic, for example, increasing local economic value; and management, for altering visitor behaviour and creating support for conservation (Beckmann, 1991; Bramwell and Lane, 1993; Wearing and Neil, 1999b). While these uses are valuable for their own purposes, the use of interpretation to achieve management objectives is of critical importance (Littlefair, 2003).

Within the category of management objectives, there are two main goals: creating support for conservation, by generating a long term environmental ethic; and changing behaviour of visitors on-site (Littlefair, 2003). In changing the behaviour of visitors on-site, interpretation can be used to modify visitor behaviour by: dispersing visitor use in time or space; or teaching minimal impact practices (Brown *et al.*, 1987; Roggenbuck, 1987). Other studies have looked at the use of interpretation to achieve long term conservation outcomes (Beaumont, 1991), and effectiveness of interpretation in redistributing visitor use (Roggenbuck and Berrier, 1982; Huffman and Williams, 1986; Brown *et al.*, 1992), the use of interpretation to address on-site impacts through encouraging minimal impact practices, that is considered a critical management issue (Littlefair, 2003). The provision of interpretive facilities and delivery are important elements to the fulfilling of interpretive objectives and thus form the focus of this paper.

### **Materials and Methods**

The study was carried out in Chad Basin National Park (CBNP), Kainji Lake National Park (KLNP), Okomu National Park (OKNP) and Yankari National Park (YNP). These were selected to represent the major ecological zones where National Parks are located in Nigeria: Okomu National Park (Rainforest), Chad Basin National Park (Sudan/Sahel savanna), Yankari National Park (Sudan savanna) and Kainji Lake National Park (Northern Guinea savanna) (Table 1).

There methods of data collection were utilized in this study. The first was the use of interview guide adapted from the Department of Natural Resources and Environment (1999) to obtain information from the management of the four national parks; the second was on-site assessment of interpretive facilities and services available in the parks. Finally, data were obtained through questionnaire from the visitors to the parks on the interpretive facilities and services provided to them. One hundred and eight (108) visitors were sampled in the four parks. Data obtained were subjected to descriptive statistics.

### **Results and Discussion**

The study shows the arrays of interpretive facilities and services reported by the parks (Table 2). All the national parks studied (Chad Basin National Park, CBNP; Kainji Lake National Park, KLNP; Okomu National Park, ONP and Yankari National Park, YNP) reported to have interpretive/interpretation brochures/leaflets, video and park publications as interpretive facilities for

pre-visit and post-visit; and talks by interpretation personnel, guided tours, interpretive/interpretation signs, school group activities and children activities for on-site and off-site. However, website (for pre-visit and post-visit), broadcast media (for pre-visit), night walks, self-guided tours and trailside exhibits (on-site and off-site activities) were reported not to be available in the parks.

Visitors' survey indicated the presence of interpretive talks, guided tours, interpretive brochures and leaflets, visitor centre, audio-viewing centre as the interpretive facilities and services being provided by some of the parks. Self-guided walks, trailside exhibits, theatre performances and night walks were not provided to the visitors in all the selected parks (Table 3). On-site assessment confirmed the availability of interpretive brochures and leaflets, interpretative signs, park publications, museum/interpretive exhibits, talks by interpretive personnel, school group activities and guided tours in the four parks. Only KLNP possessed audio-viewing visitor centre and theatre performing centre (Table 4). However, guided tours, interpretive exhibits (museum exhibits), interpretive talks and interpretive signs were the major interpretive services being provided by the parks. The Department of Natural Resources and Environment (1999) also reported that interpretive signs and guide walks/drives are the most common products and services offered on-site by agencies surveyed in Australia and New Zealand. Also, off-site services are mainly offered using brochures and the internet.

In the delivery of interpretive services, between 2.7% and 6.3% of the total number of full time staff in the selected parks were available for interpretive services (Table 5). ONP with 70 full time staff allocated 3 staff (4.3%) to interpretation while YNP with 284 full time staff and CBNP with 160 full time staff allocated 10 staff (3.5% and 6.3%) respectively. KLNP with full 337 full time staff allocated 9 staff (2.7%) for interpretation. This agrees with the allocation of staff to interpretation and education by New Zealand Department of Conservation with 80 full time interpretation/education staff out of 1350 staff (5.9%), New South Wales National Parks and Wildlife with five (5) full time interpretation/education staff out of 1400 staff in the organizations (0.4%) (Department of Natural Resources and Environment and Parks, 1999). In numerous Australian and international agencies, volunteers and pools of trained seasonal interpreters are considered ethical to the delivery of interpretation (Gadd, 1992; Graystone, 1995; Hill, 1992; Howard, 1992 and 1997, and Nephin Consulting Partners, 1997). The ratio of interpretive staff to the visitors in CBNP, KLNP, ONP and YNP was 1:20;

1:222; 1:233 and 1:1980 (Table 5). These ratios are improvements over what obtains in similar organizations such as New Zealand Department of Conservation, New Zealand with ratio of full time staff to visitors as 1:250,000 and Australian Capital Territory Department of Urban Services, Australia with ratio 1:1,630,000; although these organisations use part time staff, casual/ seasonal staff as well as contractors for interpretation and education (Department of Natural Resources and Environment, 1999) which Nigeria National Parks did not use.

Furthermore, out of the annual operating budget for CBNP (₦5-₦10 million), KLNP and OKNP respectively (>₦100) and YNP (₦10.5-₦100 million), between ₦100,000 and ₦1,000,000 were budgeted annually for operation of interpretive services. Also, from ₦5-₦10 million budgeted for staff salaries by the parks, between ₦100,000 and ₦1,000,000 is budgeted for interpretive staff salaries (Table 6). These results show that the level of funding committed to interpretation relative to annual operating budget for the parks studied was low. Similar observation was made by the Department of Natural Resources and Environment (1999). There is general agreement internationally that government funding has become extremely limited (Christensen, 1990; Dutton, 1992; Nephin Consulting Partners, 1997, Stetski, 1994; Tatnell, 1989; and Vander Stoep, 1988). The implication of the low budget for interpretive operation by the parks is that interpretive services are not being given adequate priority by the parks' management.

### **Conclusion**

The selected National Parks (Chad Basin National Park (CBNP), Kainji Lake National Park (KLNP), Okomu National Park (OKNP) and Yankari National Park (YNP)) possess to varying degrees interpretive facilities and products such as interpretive brochures and leaflets, interpretive exhibits, interpretive signs, visitor centre, audio tapes, park publications, video tapes, talks by interpretive personnel, school group activities and guided tours. The main interpretive activities and products in the parks are guided tours, interpretive exhibits (museum exhibits), interpretive talks and interpretive signs. Allocation of financial resources for interpretation is grossly inadequate relative to the core status the various parks placed on interpretation. Interpretive facilities in the various parks should be upgraded and brought to modern standard. Interpretation activities to non-visitors such as internet site (website) should be designed to expose the ecotourism potentials of Nigeria National Parks. Attention should also be focused on the display of interpretive materials, automation and lighting should be done to improve the

beauty of the displayed exhibits for visitors' enjoyment. Resources allocated to interpretation should be improved. There should be increase in funding for interpretive facilities and programs and should be comparable to funding of all major activities of the parks.

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Table 1: Location, Land area and the Ecotypes of the selected study areas

Name	Location (State)	Land Area (Km <sup>2</sup> )	Latitude/ Longitude	Ecological Zone
CBNP	Borno and Yobe	2245	12 <sup>o</sup> 25 <sup>1</sup> N/14 <sup>o</sup> 15 <sup>1</sup> E	Sudan/Sahel Savanna
KLNP	Niger and Kwara	5,380	10 <sup>o</sup> 05 <sup>1</sup> N/4 <sup>o</sup> 06 <sup>1</sup> E	Northern Guinea Savanna
*YNP	Bauchi	2244	9 <sup>o</sup> 50 <sup>1</sup> N/10 <sup>o</sup> 28 <sup>1</sup> E	Sudan Savanna
ONP	Edo	181	6 <sup>o</sup> 10 <sup>1</sup> N/5 <sup>o</sup> 30 <sup>1</sup> E	Rainforest

\*The Management of Yankari National Park has been transferred to Bauchi State Government since 2006, it is now Game Reserve.

Table 2: Interpretive facilities and services reported by Chad Basin, Kainji Lake, Okomu and Yankari National Parks

Interpretive facilities and services	CBNP	KLN P	ON P	YN P
<b>Pre-visit</b>				
Interpretive brochures/leaflets	A	A	A	A
Internet site	NA	NA	NA	NA
Broadcast media	NA	NA	NA	NA
Video	A	A	NA	A
Park publications	A	A	A	A
<b>On-site and off-site activities</b>				
Visitor centre	NA	A	A	NA
Guided tours/walks	A	A	A	A
Audio tapes	A	A	NA	NA
Night walks	NA	NA	NA	NA
Theatre performances	NA	A	NA	NA
Interpretive talks	A	A	A	A
Self-guided activities	NA	NA	NA	NA
Interpretive signs	A	A	A	A
School group activities	A	A	A	A
Children activities	A	A	A	A
Audio/video viewing in visitor center	NA	A	A	NA
Trailside exhibits	NA	NA	NA	NA
<b>Post-visit</b>				
Internet site	NA	NA	NA	NA
Interpretive brochures/leaflets	A	A	A	A
Video	A	A	NA	A

A: Available; NA: Not available

**Table 3: Interpretive facilities in Chad Basin, Kainji Lake, Okomu and Yankari National Parks reported by visitors**

Interpretive facilities/products	CBN P	KLN P	ON P	YN P
Interpretive brochures/leaflets	P	P	P	P
Audio tapes	NP	NP	NP	NP
Interpretive signs	P	P	P	P
Park publications	NP	NP	NP	NP
Video tapes	NP	P	NP	P
Interpretive/museum exhibits	P	P	NP	P
Interpretive talks	P	P	P	P
School group activities	NP	NP	NP	NP
Guided tours	P	P	P	P
Broadcast media	NP	NP	NP	NP
Visitor centre	NP	P	P	P
Educational publications	NP	NP	NP	NP
Audio/video viewing visitor centre	NP	P	NP	NP
Theatre performing centre	NP	NP	NP	NP
Internet site	NP	NP	NP	NP
Self-guided activities	NP	NP	NP	NP
Trailside exhibits	NP	NP	NP	NP

P: Provided; NP: Not Provided

**Table 4: On-site assessment of interpretive facilities in Chad Basin, Kainji Lake, Okomu and Yankari National Parks**

Interpretive facilities/products	CBN P	KLN P	ON P	YN P
Interpretive brochures/leaflets	A	A	A	A
Audio tapes	A	A	NA	NA
Interpretive signs	A	A	A	A
Park publications	A	A	A	A
Video tapes	A	A	NA	A
Interpretive/museum exhibits	A	A	A	A
Interpretive talks	A	A	A	A
School group activities	A	A	A	A
Guided tours	A	A	A	A
Broadcast media	NA	NA	NA	NA
Visitor centre	NA	A	A	A
Educational publications	NA	A	A	A
Audio/video viewing visitor centre	NA	A	NA	NA
Theatre performing centre	NA	A	NA	NA
Internet site	NA	NA	NA	NA
Self-guided activities	NA	NA	NA	NA
Trailside exhibits	NA	NA	NA	NA

A: Available; NA: Not Available

**Table 5: The staffing of Chad Basin, Kainji Lake, Okomu and Yankari National Parks**

Parks	Total number of staff	Full time interpretation staff	Percentage of full time interpretation staff	Annual number of visitors	Ratio of full time Interpretations to visitors
CBNP	160	10	6.3	200	1:20
KLNP	337	9	2.7	2000	1:222
ONP	70	3	4.3	700	1:233
YNP	284	10	3.5	19803	1:1980

**Table 6: Interpretation budgets in Chad Basin, Kainji Lake, Okomu and Yankari National Parks.**

Budget	CBNP	KLNP	ONP	YNP
Annual operating budget for the park	<del>₦5-₦10m</del>	> <del>₦100m</del>	> <del>₦100m</del>	₦10.5-100m
Annual operating budget for interpretation	₦100th- ₦500th	₦ 100th-500th	₦100- ₦500th	>₦1m
Annual total budget for park staff salaries	<del>₦5- ₦10m</del>	<del>₦5- ₦10m</del>	<del>₦ 5- ₦10m</del>	<del>₦ 5- ₦10m</del>
Annual budget for interpretation staff salaries	₦100th- ₦500th	₦100th- ₦500th	₦100th- ₦500th	> ₦ 1m