



Assessment of Management Effectiveness in Four Nigeria National Parks

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ABSTRACT

Management Evaluation Track Tool (METT) analytical tool was used to measure management effectiveness and resources within the study Parks, Gashaka-Gumti National Park, Kainji Lake National Park, Old Oyo National Park and Okomu National Park. The study is to evaluate management effectiveness of the Parks and its implications on tourism within the parks, and the means were compared using simple T-Test. The overall assessment of the management effectiveness reveals that Okomu National Park is the best of all the studied Parks. It is rated as 2.23 which make it fall within the category that is classified as very good. The management of both Gashaka-Gumti and Old Oyo National Parks are good as they are rated as 1.77 and 1.73 respectively, while Kainji lake National Park falls within the range of fair as it is rated 1.43. There should be adequate provision for research in the parks' budget, in order to ensure adequate monitoring and evaluation of all the parks resources especially the flora and the fauna resources which are the key elements of the park. To maintain the value of protected areas, managers need to monitor the effectiveness of their management actions so that they can identify problems and focus their resources and efforts on addressing these problems.

Keywords: Assessment, Management, Effectiveness, National Park and Tourism

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1. INTRODUCTION

Management is the ability of the manger to coordinate human and material resources available to accomplish corporate objectives. These involve planning, organizing, selecting, rewarding, leading communicating, controlling and evaluation of activities (Kolawole, 2010). The evaluation of management effectiveness is generally achieved by the assessment of series of criteria (represented by carefully selected indicators) against agreed objectives or standards. Management effectiveness evaluation is defined as the assessment of how well protected areas are being managed – primarily the extent to which management is protecting values and achieving goals and objectives. The term management effectiveness reflects three main 'themes' in protected area management (Michael, 2012).

National Park Management includes a widespread variety of management activities such as the most essential activities like park system planning, land protection, natural resource management (biological resource management, fire management, water resource management, air resource management, geologic resource management, soundscape and lightscape management), cultural resource management (e.g. archeological resources, cultural landscape, ethnographic resources, historic structures), wilderness preservation and management, interpretation and education, tourism/visitor management, and park facilities management (Roland, 2001).



There are many reasons why people want to assess management effectiveness. Management evaluation can enable and support an adaptive approach to management, it can assist effective resource allocation, promote accountability and transparency and also help involve the community build constituency and promote protected area values, it allows information concerning the past to feedback into and improve the way management is conducted in future (Salasky *et al.*, 2001). To maintain the value of protected areas, managers need to monitor the effectiveness of their management actions so that they can identify problems and focus their resources and efforts on addressing these problems. This study is aimed to evaluate management effectiveness of the Parks and its implications on tourism within the parks.

2. MATERIALS AND METHODS

2.1 Study area

Nigeria lies between latitudes 4° and 14° N and longitudes 3° and 15° E. The country is located in Western Africa, and borders the Gulf of Guinea, between Benin on the west and Cameroon on the east, with land mass area of 923,768 square kilometers (356,376 square miles). The country's land mass extends from the Gulf of Guinea in the south to the Sahel (the shore of the Sahara Desert) in the north.

There are seven National Parks in four different geopolitical zones in Nigeria namely; Chad-Basin and Gashaka-Gumti National Parks in North-East, Kamuku and Kainji Lake National Parks in North –Central, Okomu and Cross river National Parks in South-South and Old Oyo National Park in South-West. The study covers all the four geographical Zones to make a good representation. The selected Parks are Gashaka-Gumti National Park from North-East, Kainji Lake National Park from North-Central, Okomu National Park from South-South and Old Oyo National Park from south-West

The target respondents are Park staff and the Management staff of each Park. 10% of Park staff were randomly selected from each Park as follows, GGNP (31), KLNP (39), ONP (14) and OONP (28), making a total of 112 questionnaire in all, different sets of questionnaires were administered to management staff of each Park. Secondary data was assessed through park records and literatures. Management Evaluation Track Tool (METT) analytical tool was used to measure Management effectiveness and resources within the study Parks. Thirty questions were prepared ranging from Legal status of the Parks to the condition of the important values of the protected area as compared to when it was first designated with a range of 0-3. The means were compared using simple T-Test.

3. RESULTS AND DISCUSSION

In order to ensure effective resource allocation, promote accountability and transparency as opined by Hocking (2006), was used to measure management effectiveness of the Parks. The result revealed that the legal status of the parks is fully established, thus all the Parks are able to earn the maximum number (3). The Parks were fully gazetted and covenanted with boundaries that are clearly defined, and established with permanent beacons as outlined in section 18 of decree 46, thus all the Parks have the maximum points (3) under the legal status and boundary demarcation of the park. However the boundary of Okomu National Park is known by the management authority and local residents land users and is appropriately demarcated while other parks though known by both the management authority and local residents land users but are not appropriately demarcated.

In both Kainji Lake and Old Oyo National Parks, regulations for controlling land use and activities in the protected area exist, however there are some weaknesses and gaps such as insufficient number of staff that will monitor different activities within these parks thus they are both ranked as 2. This same deficiency affected the ranking of these parks especially the kainji lake national park which had the lowest point of (1) in law enforcement. According to IUCN recommendation as stated in Nigeria National Park System Plan, the proportion of rangers to area covered should be 1ranger per 10Km².

This means that for a park like KLNP which covers an approximate area of 5.340Km² a minimum of 530 patrol men are needed, however the ecological resource management unit under which the rangers are have a total of 212 staff, which is far less than the expected number of staff. In all the parks except Okomu National Park (where the staff numbers are adequate for the management needs with the maximum point (3), the staff numbers are below optimum level for critical management activities (2). The result of the expected number of staff and actual number of staff confirm this as there are great disparity between the expected number of staff and actual number of staff as presented in Table 1.

Table 1: Rating of Four Nigeria National Parks using METT

ISSUES	GGNP	KLNP	ONP	OONP	MEAN
Legal status of the park	3	3	3	3	3
Protected area regulations	3	2	3	2	2.5
Law enforcement	2	1	3	2	2
Protected area Objectives	2	1	3	2	2
Protected area Design	3	1	3	2	2.25
Protected area	2	2	3	2	2.25
Boundary Demarcation					
Management plan	2	2	3	2	2.25
Regular work plan	2	1	2	2	1.75
Resource inventory	2	1	1	2	1.5
Protection systems	2	1	2	1	1.5
Research	2	1	2	2	1.75
Resource management	1	1	3	2	1.75
Staff numbers	2	2	3	2	2.25
Staff training	2	1	2	2	1.75
Current budget	2	1	2	2	1.75
Security of budget	2	1	2	2	1.75
Management of budget	2	1	2	2	1.75
Equipment	1	1	2	2	1.5
Maintenance of equipment	2	1	2	1	1.5
Education and awareness	2	2	2	2	2
Planning for land and water use	1	1	3	2	1.75
State and commercial neighbours	2	2	2	1	1.75
Indigenous people	1	1	1	1	1
Local communities	1	2	1	1	1.25
Economic benefit	2	1	2	1	1.5
Monitoring and evaluation	1	2	3	2	2
Visitor facilities	1	2	2	2	1.75
Commercial tourism operators	0	2	0	0	0.5
Fees	1	2	2	2	1.75
Condition of values	2	1	1	1	1.25
T-Test	1.77*	1.43*	2.23**	1.73*	1.79

* Significantly different <0.01

**significantly different <0.05

Key

0-0.5 = Very Poor;

0.51-1.0 = Poor;

1.1-1.5 = Fair

1.51-2.0 = Good

2.1- 2.5 = Very Good

2.51-3.0 = Excellent



This however confirms the ranking of Okomu national park (3), in which the park with a land mass of 202Km² have a total number of 77 staff in their ecological resource unit, this buttress the fact that parks are more effectively managed when they are adequately staffed. The ability of Okomu national park to effectively manage their park is further enhanced by the fact that the park neighbours are predominantly Michelin Rubber Plantation and Okomu Forest Reserve. This does not afford local farmers to encroach into the Park and the wild animals home range are mainly within the confines of these equally protected areas, thus reducing wildlife conflict that normally occurs within parks and local farmers.

It is a known fact that all the parks have a Management Plan that is drawn in order to achieve the aims and objectives of the Park. Nevertheless, the level of implementation differs from one Park to another. In all the Parks except Okomu National Park, the management Plan was partially implemented based on inadequate funding, insufficient staff and lack of equipment. Andrzej (2007) concur that low fund and insufficient number of staff are serious obstacle to management of National Parks, although staff strength in Okomu National Park assist in ensuring that the Management Plan is strictly implemented.

Table 2: Comparison of Management Effectiveness in four National Parks

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
GGNP	14.253	29	.000	1.76667	1.5132	2.0202
KLNP	13.814	29	.000	1.43333	1.2211	1.6455
OONP	14.994	29	.000	2.16667	1.8711	2.4622
ONP	16.276	29	.000	1.73333	1.5155	1.9511

Information available in Kainji Lake National Park on the critical habitat, species, ecological processes of the Park are not sufficient in planning and decision making, even though these are considered to be sufficient in most key areas in other parks but it is however not sufficient to support all areas of planning and decision making. This is as a result of non specific goal for research in Nigeria national Parks where no funding is allocated to research and research staff has to depend on researchers coming to the park for their personal work and fashion. This is also the reason why there are few of survey and research work that are not even directed towards the needs of the Park (1) in Kainji Lake national Park, while it is (2) in other parks.

Assessment of current budget shows that the available budget is inadequate for basic management needs and it presents a serious constraint to the capacity to manage Kainji Lake National Park (1), while the available budget is acceptable but could be further improved to fully achieve effective management (2) in other Parks. Available park records show that there is no allocation for research in the Park's budget. Budgeting is a key factor to effective management of any establishment, inadequate funding will affect the overall performance and productivity as presented in Table 1.

Table 3: Number of staff In Four Nigeria National Parks

DEPARTMENT	GGNP ENS	ANS	KLNP ENS	ANS	OONP ENS	ANS	ONP ENS	ANS
Human resources management	N/A	23	50	32	49	19	N/A	14
Finance and accounting	N/A	14		20	30	18	N/A	10
Ecological and resources management	N/A	202	400	217	300	159	N/A	78
Works and maintenance	N/A	30	70	55	80	36	N/A	12
Ecotourism	N/A	21	50	38	60	24	N/A	11
Planning resources and ICT	N/A	15		22	25	13	N/A	15
Others				9	22	11		4
Total		305		393		279		144

Keys:

ENS = Expected Number of Staff

ANS = Actual Number of Staff

N/A = Not Available

In terms of equipment the Parks are not sufficiently equipped as it corroborates the work of Meduna *et al.*, (2009), Kainji Lake and Gashaka Gumti have some equipment and facilities but these are inadequate for most management needs. For example the transport facilities available to both tourists and Park staff are grossly inadequate as some of these vehicles are not even functional most of the times, while most research equipments are not available. Inadequate research materials is having its toll on monitoring and evaluation as there are some *ad hoc* monitoring and evaluation, but no overall strategy and/or no regular collection of results in Kainji Lake, whereas, in GashakaGmnti and Old Oyo there is an agreed and implemented monitoring and evaluation system but results do not feed back into management because they are not tailored to meet the objectives of the Park rather, they were carried out based on available research materials that they could lay their hands on. Okomu National Park, here a good monitoring and evaluation system exists and well implemented, this can be attributed to the small expanse occupied by the Park and also of the human resources available to the Park as presented in Table 4.



Table 4: Facilities Identified as Need by Park Staff for Effective Service

	GGNP(31)	KLNP (39))	OONP (14)	ONP (28)
Patrol van	16	25	4	14
Patrol kits	10	8	7	3
Hovercraft	4	3	2	1
GPS	24	4	18	7
Power supply		-	1	3
Air conditioner		3	-	-
Communication gadgets	24	17	6	22
Research equipment	10	3	-	7
Preservative materials	-	2	-	-
Internet facilities	-	7	-	8
Sick bay/first aid materials	4	2	-	3
Camping tent	8	-	13	-
Camera	8	-	6	4
Training of staff	6	2	6	-
Telescope	4	-	-	-
Binoculars	8	-	2	2
Visiting doctor		3	-	-

All the Parks claim to have an education and awareness programmes, but it only partly meets needs and could be improved upon. These educational programmes are not recorded in the parks annual report where records of activities over the years are reported. Many activities such as death of loved ones, new birth to members of staff have a place in Parks annual report but most Parks could not give report of research activities carried out by the monitoring and evaluation unit. Presently, only GashakaGmnti and Okomu National Parks have comprehensive list of available fauna resources within their Parks, though, the status are not ascertained as presented in Table 4.

Indigenous and traditional peoples have some input into discussions relating to management but no direct role in management in all the study Parks. Mullins (1989) noted that an organization can only perform effectively through interactions with its external environment. For a proper adaptive management system, where every stakeholder is relevant the local indigenous people should be considered and their opinions should inform management decision in order to reduce conflict within and around the Parks.

The overall assessment of the management effectiveness reveal that management effectiveness is not at the optimum in the study park just as reported by Liloyd (2011), that management capacity is inadequate in most protected areas in the Caribbean. Okomu National Park is the best of all the studied Parks. It is rated as 2.23 which make it fall within the category that is classified as very good. The management of both Gashaka Gumti and Old Oyo National Parks are good as they are rated as 1.77 and 1.73 respectively, while Kainji lake National Park falls within the range of fair as it is rated 1.43.



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4. CONCLUSION

The parks are not sufficiently staffed, equipped and funded so as to ensure effective management of the Parks. There is no budget allocated for research in all the study Parks, so there is no definite line of action for research unit as they have to tailor their research work towards available research from any researcher that is making use of the Park. Annual reports from all the Parks did not contain report from monitoring and evaluation department in respect to the status of both flora and fauna resources, as these (flora and fauna) form the basis of visitation to the Parks.



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