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CHALLENGES OF FUNDING PROTECTED AREAS: THE CASE OF CROSS RIVER NATIONAL PARK, NIGERIA

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ABSTRACT

The National Park Service of Nigeria presently has seven (7) National Parks established for the purpose of the protection of the country's biodiversity. These include Kainji Lake National Park, Cross River National Park, Chad Basin National Park, Kamuku National Park, Gashaka-Gumti National Park, Old Oyo National Park and Okomu National Park. In spite of the enormous resources in terms of flora and fauna, unique cultural attributes as well as spectacular landscapes, these parks have not been adequately funded. This paper therefore assesses the status of funding in Cross River National Park to meet the enormous challenges of protected area management. Data for the study was obtained through questionnaires as well as park records and past studies and analyzed using descriptive statistics as well as tables and graphs. Inadequate funding was considered as a major management problem in the park during the study. Underfunding of the park also led to the park's inability to conduct critical management activities. Inappropriate staff numbers was also attributed to lack of funds leading directly to the eruption of other management problems, including inadequate field equipments and basic facilities to support park protection programmes. A variety of potential financing mechanisms for protected areas have been identified as measures to address these challenges.

KEYWORDS: National Park, Biodiversity, Funding, Challenges, Protected Area, Critical Management Activities, Financing Mechanisms

INTRODUCTION

Biodiversity is the basis of life on earth. Thus, conservation of biological diversity is one of the main elements of sustainable developments (Roques, 2002; IUCN, 1994, 1997, 2000: 2008; Hockings et al., 2006; Convention on Biological Diversity, 2008; Slaney et al., 2009). In recent times, protected areas have played a very significant role in biodiversity conservation. Apart from this role, protected areas also provide goods and services that include direct benefits, indirect benefits and use services such as tourism, recreation and ecosystem services (Dlamini and Geldenhuys, 2009). There is therefore a global increase in the trend of conserving natural resources through the designation of areas where various types of resources are put under protection. However, the earth's biodiversity is disappearing at alarming rate and this can lead to the extinction of very many wildlife species (Chipeta and Kowero, 2004; Dlamini, 2007).

More than 100,000 designated protected areas have been listed in the world database on Protected Areas. These cover over 11.4% of the Earth's land surface along with marine protected areas (Dudley N. et al., 2005). The realization of the role of protected areas in biodiversity conservation has resulted in several regional and international policies and

legislation emphasizing the need for financing of protected areas. These policies and legislations are expressed in various conventions including the Convention on Biodiversity, Convention on International Trade in Endangered Species of Wild Fauna and Flora, CITES, World Heritage Convention and the RAMSAR Convention on Wetlands. Many countries including Nigeria have ratified these conventions and national policies and formulated legislations to back biodiversity conservation. In spite of these developments, protected areas are not adequately funded to meet their significant role of protecting biodiversity. There is therefore an urgent and serious need for the development of innovative, diverse and sustainable financing mechanisms to ensure that protected areas are managed to meet their goals and objectives.

In Nigeria, the creation of Kainji Lake National Park in 1976 marked the first major attempt to manage protected areas for recreational purposes. The National Park Service was later established in 1991 creating six (6) National Parks. Presently, the Service has a total of seven (7) parks including Kainji Lake National Park, Cross River National Park, Chad Basin National Park, Kamuku National Park, Gashaka-Gumti National Park, Old Oyo National Park and Okomu National Park. In spite of the enormous resources in terms of flora and fauna, unique cultural attributes as well as spectacular landscapes, these parks have not been adequately funded. This paper is therefore assessing the challenges of funding in Cross River National Park, Southeastern Nigeria.

MATERIALS AND METHODS

Cross River National Park was established under Decree No. 36 of 1991 with a total land area of 4000km². It has one hundred and two (102) communities living around the park known as Support Zone Communities (SZC). For administrative convenience, the park is divided into two non contiguous divisions, Oban and Okwangwo Divisions. Oban Division lies within longitude 8⁰02¹E and 8⁰55¹E and latitudes 5⁰00¹N and 6⁰00¹N. The division is further subdivided into two axis – Oban West and Oban East. The park is composed of the most extensive areas of relatively undisturbed tropical moist forest located at the Western limit of the Biafran Forest Type (Letouzey, 1968). The park is the centre of endemism which comprises about eight thousand (8000) to twelve thousand (12000) species of which more than 80% are endemic. Cross River National Park has been designated as a centre of plant diversity by WWF and IUCN (1994) and also considered as a biodiversity “hotspot”.

METHOD OF DATA COLLECTION

Both primary and secondary data were collected.

Primary Data

The primary data collection tool for the study was a standard questionnaire based on the Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) methodology. The questionnaire covers some aspects of international evaluation framework developed by the World Commission on Protected Areas (WCPA) (Hockings 2003).

The questionnaires consisted of a list of questions that were administered to respondents to obtain information on the status of funds in Oban Division of Cross River National Park for the past five (5) years (2010 – 2015). The questionnaire was structured around a Likert scale (Ko and Steward, 2002) which allow respondents to make personal decisions based on individual degree of rating and intensity of items contained in the questions, which varied from Strongly Agree (SA), Agree (A), not sure (NS), Disagree (D) and Strongly Disagree (SD).

Secondary Data

Secondary data included documentary materials consisting substantially Annual Reports of the park between 2010 – 2014 as well as past research studies in the park. These were reviewed critically with a view to making inferences that will enable the study make meaningful recommendations.

SAMPLING TECHNIQUES

Sample Size

The sample size of the respondents was a 100% of rangers in the 8 patrol stations that were randomly selected from the two axes. Consequently, one hundred and four (104) park rangers were targeted as respondents for the administration of questionnaires. This included two (2) senior officers in each of the selected stations while the remaining were park rangers working under them.

Sampling Analysis

Data collected were subjected to descriptive statistical analysis including tables and bar charts.

RESULTS

Park Budgets

Allocation of funds to the park for five (5) years (2010 – 2014) is shown in table 1 below.

Table 1: Cross River National Park Allocation (2010 – 2014)

Year	Personnel ₦m	Overhead ₦m	Capital ₦m	Total ₦m
2010	190,331,937.67	102,056,874.05	-	292,388,811.72
2011	243,137,160.94	116,314,116.18	-	359,451,277.12
2012	82,216,311.92	107,310,165.91	11,740,940.00	201,267,417.83
2013	-	83,299,588.00	255,871,994.00	339,171,582.00
2014	-	56,441,846.00	88,311,806.11	144,753,652.11
Total	515,685,410.53	465,422,590.14	355,924,740.11	1,337,032,740.78

Source: Field Survey, 2015

A review of the allocation shows that the sum of ₦1.34billion was received by the park as both capital and recurrent allocation during the period. When considered on year to year basis, the overall allocation dropped from ₦359.45million in 2011 to ₦339.17million in 2013 and a further drastic drop to ₦144.75million in 2014. There was no appropriation in 2010 and 2011 to carry out capital projects.

Funding in the past five (5) years

Table 2 below is the outcome of respondent's views on funding of the park to conduct critical management activities in the past five (5) years (2010 – 2014).

Table 2: Funding to Conduct Critical Management Activities in the past five years

Response	Ranger Stations								Total
	Erocut	Nkunaya	Ifumkpa	Nsofang	Okoroba	Aking	Ekang	Orem	
Strongly agree	1	2	2	2	1	2	1	1	12
Agree	1	1	1	1	1	1	1	1	08
Not sure	-	-	-	-	-	-	-	-	-
Disagree	6	4	3	3	3	5	3	3	30
Strongly disagree	12	7	6	6	5	11	2	5	54
Total	20	14	12	12	10	19	7	10	104

Source: Field Survey, 2015

Funding in the next five years

The table below is respondent's opinion on the possibility of funding the park adequately in future.

Table 3: Funding to Conduct Critical Management Activities in the next five years

Response	Ranger Stations								Total
	Erocut	Nkunaya	Ifumkpa	Nsofang	Okoroba	Aking	Ekang	Orem	
Strongly agree	2	1	2	2	1	4	2	1	15
Agree	2	2	1	1	1	2	-	1	10
Not sure	1	1	-	1	-	-	1	-	04
Disagree	3	2	2	2	2	2	-	2	15
Strongly disagree	12	8	7	6	6	11	4	6	60
Total	20	14	12	12	10	19	7	10	104

Source: Field Survey, 2015

The opinions of respondent's on this issue shows that twenty-five (25) representing 24% had expectations that the challenge of funding in the park will improve in future. However, seventy-five (75) of the respondents representing 72% disagreed with that position insisting that the park's prospects for adequate funding in the near future were bleak.

Financial Management Practices

Table 4 gives an assessment of the level of financial management practices that support efficient and effective protected area management in the park. The result shows that twenty-one (21) respondents representing 20% were of the opinion that the park had good financial management strategies. However, the general opinion of respondents (76%) was that the finances of the park were not adequately managed.

Table 4: Financial Management Practices in the park

Response	Ranger Stations								Total
	Erocut	Nkunaya	Ifumkpa	Nsofang	Okoroba	Aking	Ekang	Orem	
Strongly agree	3	2	2	2	1	3	1	2	16
Agree	1	1	-	-	-	1	1	1	5
Not sure	1	-	-	-	-	2	-	1	4
Disagree	5	3	2	2	3	5	3	2	25
Strongly disagree	10	8	8	8	6	8	2	4	54
Total	20	14	12	12	10	19	7	10	104

Source: Field Survey, 2015

Expenditure Profile

The expenditure profile of the park is shown in table 5 below.

Table 5: Cross River National Park Expenditure (2010 – 2014)

Year	Expenditure Type (millions)							Total ₦M
	Staff costs ₦M	Administrative expenses ₦M	Park Activities ₦M	Support Zone Dev	Park conservation ₦M	Sub-total ₦M	Capital ₦M	
2010	181,752,987.11	33,423,985.62	24,636,322	7,662,950.00	45,738,467.00	293,214,711	-	293,214,711
2011	242,650,410.50	18,175,320.10	26,648,565.85	6,759,450.00	65,185,300.92	359,419,047.37	-	359,419,047.37
2012	104,642,805.87	31,838,122.47	11,881,622.67	2,533,000.00	36,265,528.19	187,161,079.20	11.74	198,901,079.20
2013		19,508,695.89	23,349,607.49	3,251,850.00	40,027,993.48	86,138,146.86	255.87	342,008,146.86
2014		23,962,134	27,296,175	98,000.00	4,972,595	56,328,904	88.32	144,648,904
Total	529,046,203.48	126,908,258.08	113,812,293	20,305,250.00	192,189,884.59	982,261,889.15	355.92	₦1,338,181,888

Source: Field Survey, 2015

Over the five (5) year period (2010 – 2014), capital expenditure amounted to ₦355.92m representing 26.62% of the total expenditure. The recurrent expenditure however stood at ₦981.11m representing about 74.38% of the total expenditure by the park during the same period. It was therefore noted that a greater part of the park's financial resources were devoted to servicing recurrent obligations including staff salaries, administrative expensive, park activities, community development projects as well as park conservation matters.

REVENUE GENERATION

Table 6: Internally Generated Revenue

S/N	Source	2010	2011	2012	2013	2014	Total N
1	Park fees	156,960.00	324,080.00	173,240.00	259,292.50	328,195.00	1,241,767.50
2	Penalties	473,000.00	809,000.00	774,425.00	-	-	2,056,425.00
3	Income from Guest House	96,400.00	315,645.00	378,780.00	676,492.50	194,990.00	1,662,307.50
4	Catering and bar services	25,205.00	176,160.00	160,085.00	193,293.00	147,470.00	702,213.00
5	Hire of Park assets	561,700.00	40,350.00	356,975.00	232,750.00	500.00	1,192,275.00
6	Sundry Income (Registration of contractors) and sales of bush mango	-	101,500.00	100,220.00	-	-	201,720.00
7	Sales of confiscated items	14,550.00	4,800.00	9,800.00	85,550.00	64,000.00	178,700.00
8	Sales of boarded store assets	10,000.00	81,490.00	147,650.00	-	-	239,140.00
9	Compounding of Park offences	56,000.00	-	-	1,101,000.00	889,000.00	2,046,000.00
10	Other Income	5,500.00	-	-	12,000.00	8,000.00	25,500.00
	Total	1,399,315.00	1,853,025.00	2,101,175.00	2,560,378.00	1,632,155.00	9,546,048.00

Source: Field survey, 2015

DISCUSSIONS

Inadequate funding was identified as a serious weakness in the park during the study. Funding was not adequate to conduct critical management activities. Lack of funds also generated other management problems including inadequate field equipment, transportation, and facilities. Underfunding of protected areas appears to be a general problem globally.

In the midst of poor funding of the park was the critical issue of poor financial management strategies as reported by the respondents in Table 4? It was the general opinion of staff that the meager financial resources of the park were not

adequately managed. Protected areas across Africa and Latin America are managed on less than US\$110 per square kilometer (km²), far less than the generally accepted US\$210 per km² for effective management of Tropical Parks (James *et. al.*, 2001).

The overall result is that the proportion of public funding going into investment in protected areas is declining in many countries (Eagles *et. al.*, 2002). In order to ensure that these challenges are overcome, protected area managers are encouraged to put in place stable platforms to generate revenue internally. There is also the need to seek external funding to successfully meet with the objectives of establishing them (Hockings *et. al.*, 2000; IUCN, 2008). Potential financing mechanisms for protected areas have also been identified by Spergel, 2002. These include annual government allocations, park visitor fee, fines from illegal activities, conservation trust funds, donor contributions as well as debt for nature's swaps.

Such strategies are likely to become more important in view of the general position that the park's funding is not likely to improve in the future (figure 1).

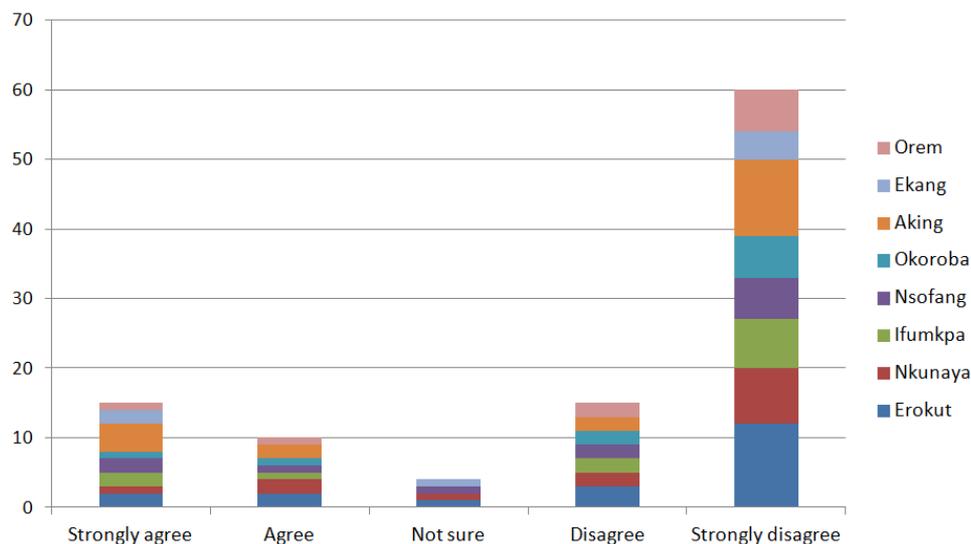


Figure 1: Funding to Conduct Critical Management Activities for the next five years

This development is expected to encourage the management of the park to put strategies in place that will sustain park management activities or in the alternative go into privatization.

Inadequate funding also gave rise to other serious management problems including shortfalls in staff strength, inadequacies of research activities including ecological and threat-related research as well as inadequate facilities to carry overall protected area management in the park. However, this is not limited to Cross River National Park alone. In Myanmar, 1% of its parks were operated without staff while 40% had some staff but not enough to adequately meet up with critical management activities (Rao and colleagues, 2002). 10% of India's National Park as well as 13% of its wildlife sanctuaries were operating with little or no staff (Singh, 1999). Brandon *et al.* (1998), Terborch *et al.* (2002) as well as other similar studies all have similar findings, an indication that inadequate staffing is a global phenomenon.

CONCLUSIONS

A major management challenge in Cross River National Park is insufficient inputs particularly inadequate funding of the park by government. A number of management problems were attributed to this situation, including the inability of the park to effectively address the various pressures and threats common across the park. Other issues included problems of, low staff level, inadequate skills as well as insufficient facilities and infrastructure. Inadequate funding prevented the park from recruiting high quality staff as well as mitigating and restoring damage sites from pressures and threats. This assessment confirms the general position of similar studies that protected areas are indeed vulnerable to an array of threats and management weaknesses due to poor funding.

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