

Perceived Wildlife Management and Capacity Development in Cross River National Park, Oban Division, Akamkpa Local Government Area of Cross River State, Nigeria

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Abstract

This research study was designed to look into perceived wildlife management at the Cross River National Park, Oban Division, Akamkpa Local Government Area, Cross River State, Nigeria. In order to effectively carry out the study, three research hypotheses were formulated to guide the study. These hypotheses state that: there is no significant relationship between perception of professional qualification and management input; there is no significant relationship between legislative effectiveness and management capacity input, and there is no significant relationship between the qualities of equipment and management capacity input. To test the hypotheses and direct the study focally, questionnaire was designed to solicit information from respondents in the study area. The data obtained were subjected to statistical computations using the Pearson product moment correlation coefficient (r) and the independent t-test statistical techniques. The results revealed that there is a significant relationship between professional qualification level and management capacity input, there is a significant relationship between legislative effectiveness and the management capacity input and there is a significant relationship between qualities of equipment and management capacity input. It was recommended among others that government should buy and supply good quality equipment to enhance performance, more funds should be allocated to the National Park and staff should be properly motivated.

Keywords: Wildlife, Wildlife Management, Cross River National Park, Management Capacity input, Managerial Effectiveness

Introduction

Wildlife management is often thought of in terms of protecting, enhancing and nurturing wildlife population and the habitat needed for their well-being. Sometimes, many species at a point or another need management actions to reduce conflicts with people or with other wildlife species. Examples include a biologist trapping an abundant predator or completing species to enhance, ensure or encourage survival of an endangered species, a farmer excluding cow from an agronomic field that provides a livelihood. Wildlife includes all species of animal life: mammals, birds, reptiles, amphibians and insects and others that are wild and live in a natural environment.

The concept or idea of National Parks began in the United States of America with the designation of Yellowstone National Park in 1872, it became part and parcel in the vocabulary of environmentalism, and was introduced in Africa in the decades of the 1920s and 1930s mainly for the protection of wild animals. The activism and research of the World Conservation Union formerly "International Union for the Conservation of Nature and Natural Resources", (IUCN) and Environmental Civil Society Organizations popularized the National Park concept in the 1980s and 1990s as one of the leading conservation strategies in most countries. Inspired by the work of the IUCN and the emerging inter-generational obligation to preserve the environment for sustainable growth and development (unreported, suite No. W/89/71 High Court of 12). The federal government of Nigeria established six national parks by legislation in 1991. National Parks Decree 36 1991 brought under federal jurisdiction and control "23,000 sq km of conservation estate to be managed and developed for public interest". (Vandana, 2004)

In 1991, the national parks service decree came into force. It repealed the 1991 legislation and established a national park service whose functions include the preservation, enhancement, protection, and management of vegetation and wild animals in the parks and protected areas. Other functions of the service include advising the federal government of Nigeria on the declaration of areas which, for the purpose of protecting wildlife species, biotic communities, sites of special interest or of aesthetic value, may be declared as national park. The national parks service, under the 1999 legislation, manages eight national parks across Nigeria; The Chad Basin, Cross River, Gashaka-Gumti, Kainji Lake, Old Oyo, Yankiri, Kamuku and Okomu National Parks. These are defined areas of land set aside, managed and controlled by the Federal Government of Nigeria for the protection, preservation and conservation of flora, fauna and their habitats, outstanding aesthetic, geomorphological, cultural and historical features for conservation of biodiversity, recreational, educational and scientific purpose (from 32 National Parks Decree 36 1991. L. B. Marguba 34 National Parks Service Decree 46 1999. 35 section 53 National Park Service Decree No. 46 1999. 13).

Nigeria's National Parks legislation, in a lot of ways, is inspired by the Convention of Biological Diversity 1992. 36. The legislation in section 6 part II provides that the objectives of the National Parks Services shall, inter alia the implementation of relevant international treaties, agreements, and arrangements regarding, relating to, or connected with protected areas and wildlife management to which Nigeria is a party, in so far as the power to implement those international treaties, agreements, or arrangements is conferred on the National Parks Service by the Federal Government of Nigeria;

- the conservation of biological diversity in Nigeria;
- the protection of endangered species of wild plants and animals and their habitats;
- the establishment of an ecologically and geographically balanced network of protected areas in Nigeria; and
- the conservation of wildlife throughout Nigeria so that the abundance and diversity of their species are maintained at the optimum levels commensurate with the other forms of land use, in order to ensure the continued existence of wildlife for the purpose of their sustainable use for the benefit of humanity (Agimu, 2005)

Amar, Cobb & Brown (2006) noted that wildlife consumption is an integral part of the livelihood and trade pattern of many people in the developing world, and highly valued by them, Nigeria being one of the countries. Up till now the dominant models or pattern of wildlife management in areas of high and allegedly or so called unsustainable consumptive use have favoured the exclusion of the users from the resource and denial of its local values. The use of wildlife can have important social development aspects, more often than not it is mostly valued by the poorest sections of the population. Wildlife products are often major items of consumption or display in many human cultures and have a high medicinal and spiritual values. Humans depend on millions of animal and plant species for their survival, development and recreation. The forests are a home for a great number and variety of wildlife that are sources of economic, recreational and aesthetic value to man. The forest is also a home for the flora and fauna of the earth that balance the biodiversity in the ecosystem.

According to Decker, Brown & Siemer (2001), different plant communities favour different wildlife communities. Climate, soil type, history of land use and other factors govern wildlife communities. Vandana (2004) observed that more diverse a plant community, the more wildlife thus 80 acres of land containing iroko wood, brushy openings, grassy, a cattail-choked farm pond can support more wildlife species than an 80 acres stand of a single species. Wildlife needs are basic and complex. All species require food, water and cover, but each species has its own specific requirements. Moreso, these requirements can change with season.

An adequate understanding of a species' basic ecology is important for its proper management. Seasonal habits or daily wanderings may make it impossible or difficult to keep certain animals on a particular geographical location like many migrating songbirds. Abundant wildlife can cause problems. At high population levels, many species become pests that compete with other land uses. Bush buck (local name) can cause considerable damage when over populated. Abundant wildlife can also attract potential users of that wildlife, mostly hunters causing or creating safety and trespass problems. Wildlife belongs to everybody, but there is a system of private land ownership, but the public as a whole owns wildlife.

According to Bassey (2006), wildlife supplies 20% of the animal consumption of protein in the rural areas of the forest belt. Amar, Cobb & Brown, (2006) observed that in Equatorial Africa, bush meat offers a number of benefits to forest-dwelling population and particularly in areas with poor infrastructure and communication, has few rivals as a store of tradable value. Highly transportable, offering a high value/weight ratio, easily preserved at low cost and with good storage

qualities when smoked, bush meat is often both the primary source of animal protein and the main export commodity for the inhabitants of the humid forest regions of the tropics. Amar, Cobb & Brown (2006) further noted that bush meat production is a major component of the economies of much of Equatorial Africa, and a primary item of the diet. The men are the hunters and the women dominate the commerce or trade. Another important value of wildlife is recreation. Today many enjoy visiting wildlife habitat for leisure and relaxation (tourism) as they watch and enjoy the animals. National parks are tourist attractions. This has an economic value as it brings foreign exchange into the country. Arufor (2000) observed that wildlife adds aesthetics and beauty to the forest. The scientific value is also important in that students and scientists make use of wildlife for research.

The ecological approach, according to Peal (2004), demands that we examine the total environment and its interrelationships. Each natural area may be a watershed, a plant community, wildlife community or an ecosystem. It is a physical and biological system with certain potentials and certain limits. The objectives of the management should be to develop that area or to protect it in order to provide the greatest yield in improved quality of living for mankind.

Conover (2002) is of the view that the Central Park in New York could yield many returns in dollars if it were subdivided and used for the construction of skyscrapers. Many today agree that the greatest value is keeping it as a park open to all for recreation. The most important part or aspect of conservation would be the maintenance or development on earth of the widest possible diversity. This includes protecting the full natural diversity of living species and the communities on earth, and the development of the greatest man-made diversity in the cities and towns in all the urban and rural space that man lives.

Sound wildlife management principles involve maintenance of animal numbers in relation to available habitat. Every habitat for wildlife as well as for domestic livestock has its carrying capacity which sets firm limits on population increase. No wild animal population can be maintained permanently at a level above the carrying capacity which is determined by the available food, cover, water and other essentials for life. Each year, a population of carrying capacity will produce young animals which would represent an excess above what the environment can support. Either the young must perish or the older animals must die to make place for them. If the environment is generally good to support the great variety of animal species, then there will be predators, parasites, diseases and competitors present in numbers adequate to remove the excess produced annually by any one species population.

Man's alteration of natural environment is the removal of segments of wildlife habitat, as a result, placing greater pressure on the remaining portions. Such activities lead to localized animal densities, over utilization, ultimate degradation and lowered carrying capacities of the reduced habitats. Consideration of wildlife densities and potential habitat impacts is essential if accurate impact evaluations are to be obtained in case of environmental disturbance. Knowledge of natural plant succession is useful in helping to determine the future value of the impacted area. Tourism is now a worldwide industry. According to Wells (2003), in many countries in the developing world, it is at various stages of development. It is today counted as one of the top three constituents of world trade. First is petroleum, second motor

vehicles and third tourism. Tourism is a fast growing industry that is largely a business of human relations. The importance of Cross River National Park cannot be overemphasized as it is one of the twenty five (25) United Nations acclaimed biodiversity hotspots in the world (CR National Park manual). The Cross River National Park along with Korup National Cameroon is an important biotic reserve which contains one of the oldest rainforests in Africa. The Cross River National Park is one of the tourist centres in Nigeria and in the world at large. The National Park like any other tourist centres in Nigeria and in the world at large has its own distinctive features that are fascinating. The National Park, like every other tourist attraction centres generates income for investors and the community.

The importance of education cannot be overemphasized in all fields of life especially in the management of wildlife. Wildlife managers are professionals who implement techniques which help to ensure that the objectives of wildlife management are met. While some of the wildlife managers focus strictly on wildlife, the challenges are complex and often require that the wildlife managers have expertise in a variety of areas.

According to Peal (2004), there are a number of potential wildlife management careers available, including those in management, research, administration, public relations, land acquisition, education, law enforcement, and land-use planning. While many of those options are specialized, all require a broad background as well. In Nigeria, most universities, polytechnics and colleges of Agriculture offer courses on forestry, fisheries, zoology, wildlife, oceanography and biological sciences. Education is an integral part of a smooth running of an organization like the Cross River National Park so the importance of the personnel level of education cannot be underestimated. In Cross River National Park, there are some professionals who are assigned to do specific jobs.

Study area

The study area is located in Cross River State of Nigeria. This study particularly covers the Cross River National Park (especially Akamkpa Division). Geographically, the park is located between latitudes 5o.05-6o.29'N and longitudes 8o.15'-9o.30'E. The park is situated in the southeastern part of Nigeria in Cross River State. The park covers a total area of 4000km² and segmented into non-contiguous divisions, Oban Hills division in the southern part of the park covers an area of about 3000km². This division is ecologically contiguous with Takamanda Forest Reserve in Cameroon. The northern portion of the park is the Okwanguo division which covers an area of 1000km² and is ecologically contiguous with Korup National Park in Cameroon (Cross River National Park Flyer). The park as a whole, according to the National Park (flyer) contains the largest intact closed-canopy forest in Nigeria, representing 40% of Nigeria's remaining forest.

The people in the study area speak (dialect) mainly Ejagham, though many understand and speak Efik as a second language. English language is spoken as the official language. Their culture is expressed in their language, dances, festivals, their style or method of building houses and the way they live. They are mainly farmers, a few are into trading (especially bush meat). There is a lot of limestone in Akamkpa, but very few people benefit from it. A few areas around the park do not

actually have access to other sources of animal protein and so depend heavily on bush meat. The constant poaching, illegal farming and the extraction of non-timber forest products for commercial and medicinal uses affect the management of the park. There is a special fondness for bush meat based on belief and taste.

Methodology

The design used in this study is Ex-post facto. It is a design that investigates possible cause and effect relationship by identifying some problems and then looking back by analyzing data to establish possible causal factors. This design takes a general look at the variables, through the use of questionnaires that are administered in order to elicit the required data from the respondents in the sampled organization and period under study. This design is also appropriate for the study in that it identifies the possible cause and effect relationships that affect the smooth running of the park. These include perception of professional qualification of staff, legislation, equipment and capacity input.

The population of the study is the staff of CRNP. They are five hundred 500 (both staff and casual workers). The sample was made up of both senior and junior staff of the Cross River National Park (CRNP). The entire number of staff was utilized for the study representing 100% of the population. The surrounding villages include Netim, Obun, Nsan, Akamkpa, Aking, Oban and Osomba.

The sampling procedure used for the study was cluster sampling for effective representation. The entire population was used as sample. Male and female respondents, junior staff of CRNP, park rangers, senior staff of CRNP and forest guards were sampled. Denga & Ali (1989) explain that where the population is small, it can be studied entirely as the sample. Cluster sampling is a method of composing a sample by sampling one naturally occurring event or phenomena from a cluster of similar events or phenomena.

The research instruments used for the study was questionnaire. The questionnaire is divided into four sections. Section "A" contains the background information and data. Section "B" sought information on professional qualification of the staff of the park; section "C" sought information on the effectiveness of national law(s) or decree(s) for the establishment and governing of the national park and section "D" questions were on the qualities of equipment(s). Section B – D were based on the likert-type rating of strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD). The structured questionnaire was subjected to face and content validity. The instrument was given to some research experts for scrutiny and modification before they were used. To test for reliability of the instruments, the approved questionnaire were administered twice to the same sample within an interval of one week. Forty (40) copies of the questionnaire were twice pilot-tested on 40 respondents on an interval of one week. Scores/data from the test was subjected to statistical computation using the Pearson product moment correlation co-efficient (r) in order to establish the consistency of the items. The coefficient ranged from 0.88 to 0.99, which shows that the instrument was reliable. The questionnaire were administered personally to respondents in the sampled National Park. To collect the data for the study, several visits were made to the National Park. The importance of giving correct information was stressed. At the end of the exercise, five hundred (500) copies of the questionnaire given out were collected and analyzed.

Results

Hypothesis One

The null hypothesis states that there is no significant difference in the perception of professional qualification level and the management capacity input of CRNP. This hypothesis was tested using independent t-test analysis.

Table 1

Independent t-test analysis of the difference in the perception of professional qualification level N = 500

Variables	N	\bar{X}	SD	t
Non professional	200	20.40	3.81	6.8127
Professional	300	17.60	5.37	

Significant at 0.05 level, df = 498, calculated value of t = 6.8127 while the critical t value = 1.960.

Table 1 depicted that there is a significant difference in the perception of professional qualification level and the management capacity input. Since the obtained value of t = 6.8127 is greater than the critical value of t = 1.960 therefore the null hypothesis stands rejected.

Hypothesis Two

The null hypothesis posits that there is no significant relationship between legislative effectiveness and the management capacity input of Cross River National Park. The hypothesis two was tested using Pearson Product Moment Correlation Analysis.

Table 2

Pearson product moment correlation analysis of relationship between legislative effectiveness and the management capacity input of Cross River National Park N = 500

Variables		Σx^2	Σxy	r_{xy}
Legislative effectiveness	x	14725	574398	0.2682
Management capacity input	y	13750	505264	

Significant at .05 alpha level, df = 498, calculated r value = 0.2682, critical r value = 0.1946

The result in Table 2 shows a significant relationship between legislative effectiveness and management capacity input, since the calculated r value of 0.2682 is greater than the critical r value of 0.1946, therefore the null hypothesis is rejected.

Hypothesis Three

The null hypothesis postulates that there is no significant relationship between qualities of equipment and the management capacity input of CRNP. This

hypothesis was tested using Pearson Product Moment Correlation analysis.

Table 3

Pearson product moment correlation analysis of the relationship between qualities of equipment and management capacity input N = 500

Variables		Σx	Σx^2	Σxy	r_{xy}
		Σy	Σy^2		
Qualities of equipment	x	18170	627685		
				36857	0.9756
Management capacity input	y	13750	505264		

Significant at .05 alpha level, df = 498, calculated r value = 0.9756, Critical r value = 0.1949

Table 3 reveals a significant relationship between qualities of equipment and management capacity input of CRNP, since the critical r value of 0.1949 is less than the obtained r value of 0.9756 therefore, the null hypothesis is rejected on that premise.

Discussions

The analysis in hypothesis one observed that Cross River National Park project lack enough technical staff such as wildlife research officers, wildlife public relations, wildlife biological workers to mention but a few. Therefore the importance of professional qualification level cannot be underestimated in view of the role professionals play in the overall success of Cross River National Park project with regards to the study findings, adequate personnel problems contributed significantly to the management capacity in-effectiveness. In assessing the capacity impact of Cross River National Park management strength, it is needful for one to cross examine the professional strength in the park, which would serve as fulcrum or as a criteria for a precise assessment of the management capacity input and effectiveness.

The statistical analysis of the second null hypothesis revealed a significant relationship between legislative effectiveness and the management capacity input in the Cross River National Park project. There are well established National Park service decrees, since 1991. From the researcher's observation this enabling decree was well thought but to some extent, the implementation strategies became problematic since the decree aimed at depriving the rural communities of their natural means of livelihood in terms of games-hunting and fishing as well as logging and other domestic farming activities in the forest regions.

According to Aginans (2000) the objectives of the National Park project sound lofty and human whose target is to the benefit of humanity but the relationship between the park management and the host communities should be properly addressed or attended to in these areas. There has been a sustained agitation for hunting, fishing and farming rights by these host communities. Therefore it is observed that the law protecting the park project was found to an extent to be

inconsistent with the desires of the hosting community.

It was discovered that at Oban, some people still secretly hunt and cut down woods for various economic purposes. In other words, the laws are not adequately implemented, in some cases, the trespassers are often prosecuted if caught. In a nutshell the inability of the enabling laws to achieve its purpose posed a significant setback on the effective capacity assessment of wildlife management at Cross River National Park project.

The data analysis of the third hypothesis depicts a significant relationship between the qualities of equipment available at the national park and the management capacity input assessment. That the type of equipment available facilitates the project work. It was discovered that the park lack most of these important heavy duty equipment such as bulldozers, tractors, mowers, water tanks, truck, Amber wood 20, camcorders, microphones, NAGRA 4.2, truck pans, and crane and other very useful machineries. Richards (2004) noted that the availability of these essential machines makes work easier but in the case of the National Park they are grossly inadequate.

Information from the Cross River National Park office and from the researcher's questionnaire reveals that right from the inception of the park, the management lacks most of this latest equipment. Therefore, the capacity assessment of wildlife management would help in high lighting some of this misconception about the true position of the CRNP with a particular reference to Oban division. In essence the non-availability of the current state of art equipment (modern technological machines) in the park is a bad omen and would need the public attention. Hence for an effective performance in the park, current and adequate equipment must be purchase to facilitate the work.

Recommendations

Based on the findings of the study, the following recommendations are made:

- (1) Finance is the life wire of any organization and without money it is difficult to run an organization. Government should allocate more funds to the Cross River National Park.
- (2) Good quality equipment is needed for good quality jobs and high performance. Good quality equipment should be provided by the government in order to enhance the effective performance of the Cross River National Park workers.
- (3) Management should assign people to work in their area of specialization.
- (4) Staff should be properly motivated by the management.
- (5) Legislation regulations governing the Cross River National Park should be enforced by relevant agencies in order to ensure compliance and prosecution of defaulters.

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