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CHALLENGES OF CONSERVING WILDLIFE IN THE TROPICS (A CASE STUDY OF DAGIDA GAME RESERVE, NIGER STATE)

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Abstract
The paper examined the present state of Dagida Game Reserve with the aim of identifying the challenges and effects of human activities on the management and conservation of the reserve. Multiple data collection techniques were used for the research in order to increase the chances of collecting valid and accurate data. Reconnaissance survey and frequent visit to the study area was carried out in order to collect reliable data. 213 structured questionnaires was formulated and distributed to farmers and other vital stakeholders and only 208 were returned. Personal interview and group interviewees were conducted to pave way for objective comparison. Government document and previous work carried out on the study area were consulted. Data analysis was carried out using frequency- percentage technique and computation table. The result of the research shows that a lot of human activities such as farming, hunting, lumbering, land excavation and bush burning have distorted Dagida Game Reserve to a significant level. Funding and staffing are serious challenges facing the game reserve. Inappropriate and inconsistent government policies have also affected the viability of the game reserve. A serious challenge facing the game reserve is the encroachment by other Local Government Area like Mashegu. Recommendations were advanced to serve as veritable tool for addressing the challenges.

Keywords: Conservation, Dagida Game Reserve, Wildlife, Challenges and Government support.

Introduction
Conservation and the utilization of wildlife resources are certainly not novel amongst our indigenous communities throughout Nigeria. Modern technology, population explosion of man and urbanization, have brought devastation of several local plant and animal species. The destination of the largest economy and population of humans in Africa, Nigeria in addition has maintained productive wild life resources. The wetlands, forests as well as savannah parks in Nigeria are ranked the most significant in Africa when compared with those of several other nations within the continent. The rural populations in Nigeria rely on agriculture with regards to their livelihoods and sustenance, located on naturally small farm lands, which are increasingly encroaching into initially isolated, forest regions. This distinct extension involving farmlands throughout Nigeria is usually

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resulting in the fragmentation of environment as well as unavoidable conflict between humans and wildlife (Usman, 2012).

Nigeria's tropical forests are particularly hard, (Food and Agricultural Organization, 2005). It stipulated that Nigeria possess the highest rate of deforestation universally between the years 2000 and 2005, Nigeria lost 55.7% of the prime forests it possess as a result of felling of tree for logging, agricultural expansion, and fuel-wood gathering. Unsustainable use of different species of flora and additionally timber is likewise a challenge in Nigeria. One major problem in Nigeria is the poaching of animals, indigenous and commercial hunters together who either sell the meat to customers for economic purposes or consume the meat personally. Hunting of big animals remains a challenge in Nigeria, coupled with ineffective enforcement efforts in majority of the prohibited or reserved regions could have insignificant effect to halt, over-lapping responsibilities of the Federal, State and Local Councils on forests resources (USAID, 2008). There exist likewise numerous Non-Governmental Organisations (NGOs) which support the amplification of the broad landuse plans and the sustainable administration of resources of the forests. The prominent ones are NRCC, NEST, Nigerian Conservation Foundation (NCF), and so on. Therefore this research is intended to identify the challenges confronting wildlife conservation Dagida Game Reserve with the view to provide measures to address the issue to be identified.

The study is aimed at the assessment of the challenges of wildlife conservation in Dagida Game Reserve in Niger State. Specific objectives are:

i. Identify the major challenges faced in wildlife conservation in the study area.
ii. Examine the effects of wildlife exploitation in the study area.
iii. Assess the impacts of the relationship between human activities and conservation in the study area.
iv. Assess the physical changes in Dagida Game Reserve over a period of 10 years.

Justification

The need to reduce or check wildlife exploitation and destruction in Dagida Game Reserve is very cardinal and essential. Conservation of wildlife is an important step to preserve and maintain the environment. Wildlife exploitation or destruction is posing a serious threat in the study area and this is evidenced in the wanton destruction of the vegetation. Reliance on fuel-wood as a source of energy at home is a serious issue that needs urgent attention. The research will provide an enabling environment that will provide all the vital and cogent information needed to reduce wildlife destruction in Dagida Game Reserve.

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Location

The latitude of Dagida game reserve lies between 9°-40'N and Longitude 5°-23' 7"E. Dagida Game Reserve covers a total land area of 310km^2 and bounded in the west by Mokwa-Kontagora road, between Robizhi and Kpizhi in the north by the Kpizhi-Dagida road, between Robizhi and Kpizhi, in the north by Kpizhi road, in the east by the Dagida-Lagun bisa road and to the south by lagun Bisa-Robizhi road (Figure 1).

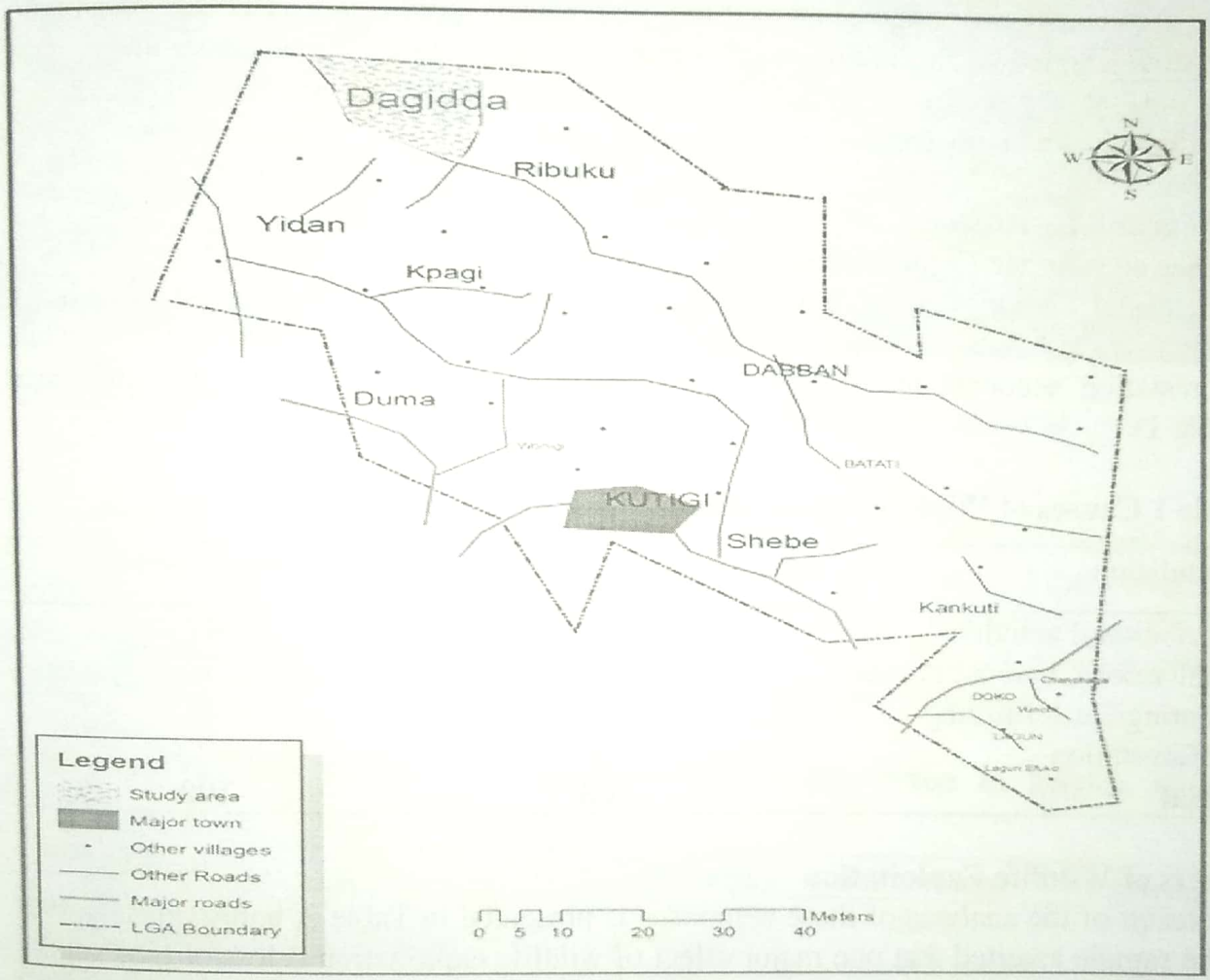

Figure 1: Location of Dagida Game Reserve in Lavun LGA

Materials and Methods

Data and information associated to wildlife exploitation and its susceptibility as to how it is related to farming and the environment were collected. The farmers and timber business people provide majority of the information through their responses from the questionnaires. Data and information were obtained from the agricultural extension agents in the area.

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Broadly, both primary and secondary sources of data collection were used to achieve the stated objectives. Primary sources include reconnaissance survey, questionnaire and personal interview. Secondary data were derived from publications, journals and certain other associated researches which have express focus on the study. Government documents were also used as table desk base line data.

All data and information gathered through the utilization of questionnaire were analyzed using frequency percentage to analyst the data. Comparative analysis of the topographic map and goggled earth digital image was done. The research encompasses many data, thus data was represented in tables, text and pictures. An aggregate figure of 250 questionnaires were distributed only 208 were retrieved.

Results and Discussion

Causes of Wildlife Exploitation

Agricultural activities account for 47% of the causes, illegal fire wood and charcoal production accounts for 38%, hunting and bush burning accounts for 8% while deforestation accounts for 7%. Examples of this were sighted within the study area (Table 1).

Table 1 Causes of Wildlife Exploitation

Condition	Frequency	Percentage (%)
Agricultural activities	97	47
Fuel-wood/Charcoal Product	79	38
Hunting/Bush Burning	17	8
Deforestation	15	7
Total	**208**	**100**

Effects of Wildlife Exploitation

The result of the analysis of these responses is presented in Table 2, approximately 49% of the sample asserted that one major effect of wildlife exploitation is loss of biodiversity followed by loss of economic trees (36.5%). Climate change and increase in erosion were also identified by 8.7% and 5.8% respectively.

Table 2 Effects of Wildlife Exploitation

Options	Frequency	Percentage (%)
Loss of Biodiversity	102	49
Climate change	18	8.7
Increase in erosion	12	5.8
Loss of economic trees	76	36.5
Total	**208**	**100**

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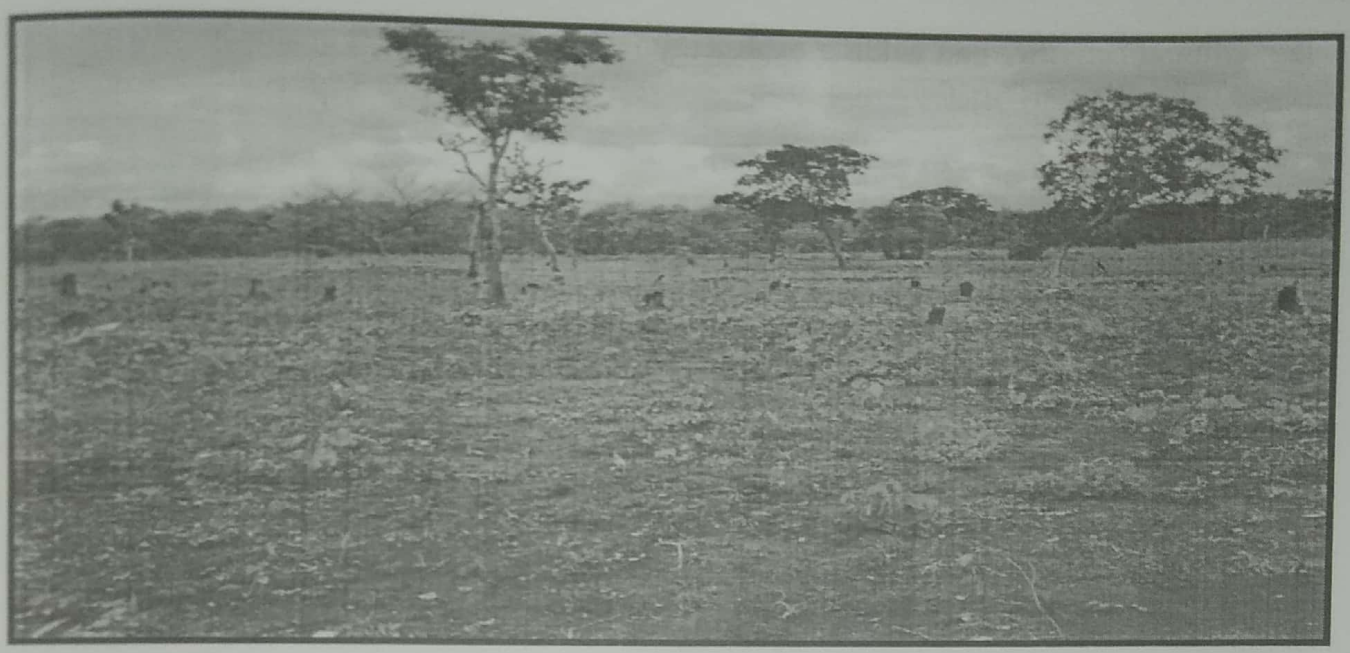

Plate 1: Large Deforested and encroached area in Dagida Game Reserve

Major challenges confronting wildlife conservation and management were identified by respondents. In Table 3, approximately 87.5% of the respondents claimed that poverty is the major constraints. Non enforcement of rules and regulations was second which had 6.3%, 3.4% claimed unemployment is also a challenge while 2.9% of the respondents asserted that lack of alternative source of energy is also a major challenge.

Table 3: Major Challenges confronting wildlife conservation in Dagida Game Reserve

Challenges	Frequency	Percentage	Ranking
Poverty	180	86.5	1
Non Enforcement of Rules and Regulation	11	5.5	2
Lack of Alternate source of energy	10	4.6	4
Unemployment	7	3.4	3
Total	**208**	**100**	

Relationship between Human Activities and Wildlife Exploitation

The responses from the respondents illustrated the sharp relationship between human activities and wildlife exploitation in Dagida Game Reserve. As high as 98% of the respondents claimed that there is a relationship between human activities especially

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agricultural activities and wildlife exploitation. Only 2% of the respondents asserted that there is no relationship, the result of the analysis of these responses is presented in Figure 2.

49% of the respondents were of the view that loss of biodiversity ranked first. The negative implication of this statistics is that many flora and fauna coupled with other living things are at risk of going into extinction and the rate is about 12 percent of the entire Dagida Game Reserve. Big species of wildlife within the game reserve has been destroyed over a long period of time, while some have disappeared or migrated to other places.

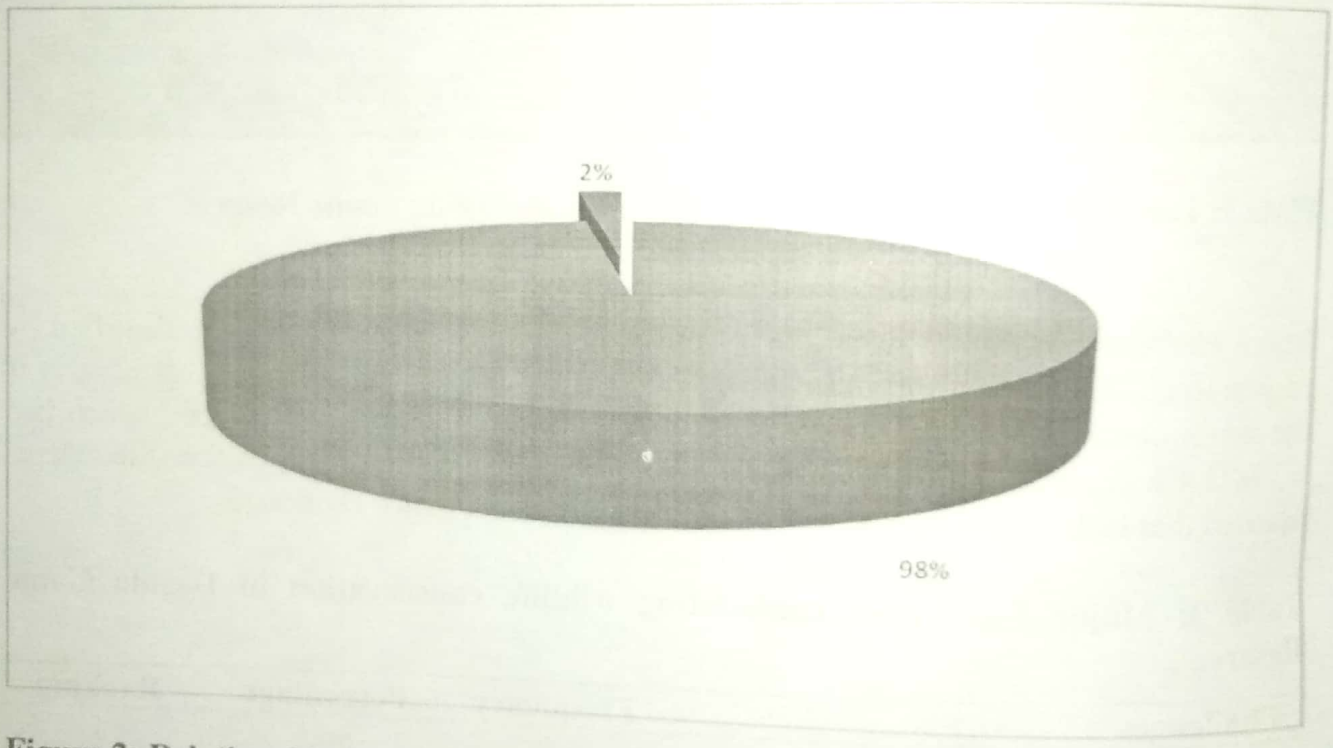

Figure 2: Relationship between Human Activities and Wildlife Exploitation

Physical Changes in Dagida Game Reserve

The comparative analyses of Satellite-image of Dagida Game Reserve of Year 2000 and the Satellite image (2010), of the reserve showed sharp contrast in terms of size and shape of the carved area and the encroachment by the community living around the game reserve, vegetal depletion, encroachment of natural forest in to arable land and high rate of deforestation. This has shown that rapid changes have taken place over the period under review. The changes that are visible through the analyses could have occurred through human interference and illegal exploitations.

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Table 4: Physical Changes in Dagida Game Reserve

Features	Satellite-Map 2000 (km^2)	Satellite-Map 2010 (km^2)	Difference(km^2)	Remark
Natural forest	310	285	25	Decrease
Carved Area	0	25	25	Increase
Encroached Areas	0	32.5	32.5	Increase
Roads	4	12	8	Increase
Buildings structures	0	40	–	Increase

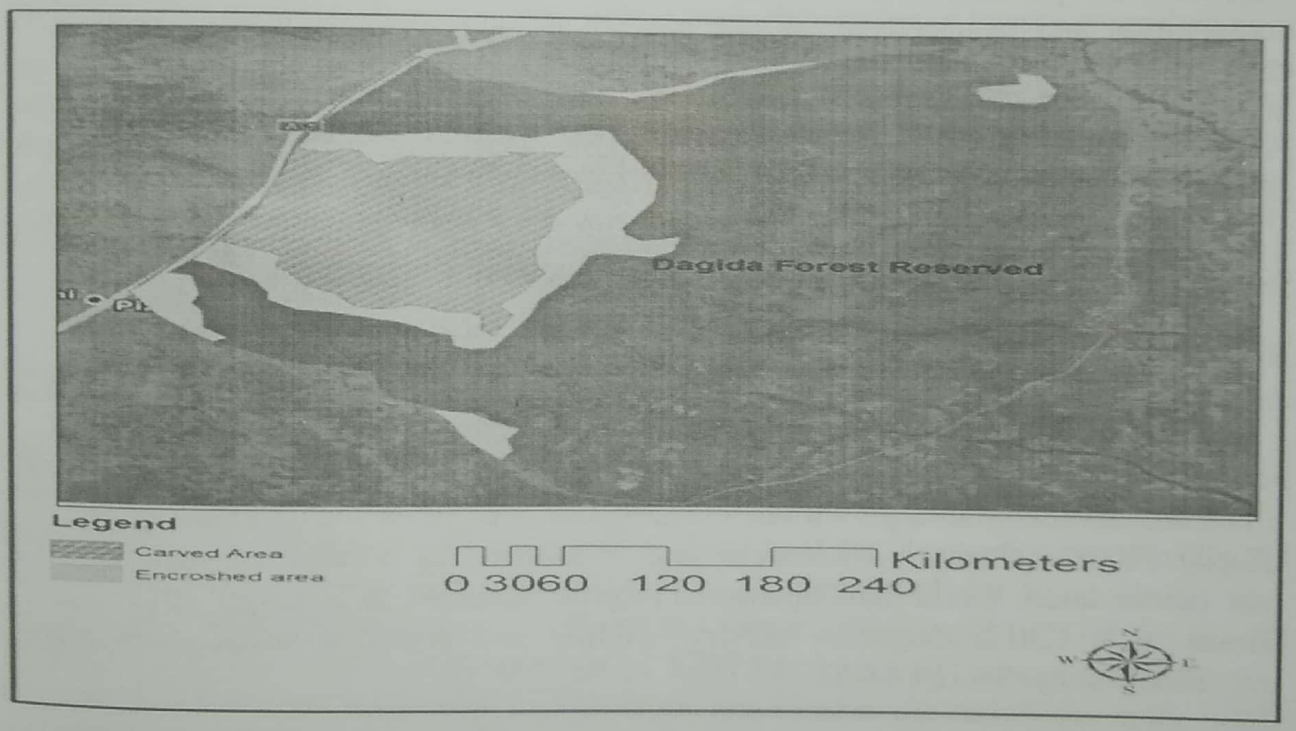

Figure 3: Satellite Image of Dagida Game Reserve as at Year 2010

Source: Niger State Geographic Information System, NIGIS (Ministry of Lands and Survey, Minna).

Conclusion

Financial advancement dependably brings danger of environmental destruction, as it exerts expanded strain on ecological resources (Adebona, 2006). Human activities are a prime challenge to conservation of wildlife in the reserve. The impact, effects and

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consequences of wildlife exploitation in Dagida Game Reserve is enormous and have far reaching consequences on both man and the environment. One of the effects of wildlife exploitation as evidenced from this research is loss of biodiversity. Be that as it may, decision makers must channeled the idea of sustainable development which would essentially help to guarantee that developing economies stay solidly connected to their biological roots and that these natural resources are secured and sustained so as to ensure that they might help development over the long period of time. Protection of the environment is subsequently inevitable in the idea of sustainable development.

Wildlife conservation and management is very crucial to national development. The natural environment is at the verge of collapse and something should be done to halt this ugly trend of natural exploitation. The need to conserve and manage wildlife is imperative and paramount. It is a collective responsibility to address the issue of wildlife conservation and management, as our general attitudes towards wildlife need to be changed. The concept of sustainable development need to be applied in the way and manner we interfere with our wildlife. Based on this conclusion, it is recommended that Forestry staffs should initiate and promote public awareness on the benefits of Dagida community based management approach strategies that will enhance synergy and involve all stakeholders in conservation and management of the reserve for the surrounding communities and must be a proactive and bottom-up approach system.

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