



**ECONOMIC IMPACT OF YANKARI GAME RESERVE ON THE HOST COMMUNITIES.**

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**KeyWords**

Community, Economic, Game Reserve, Impact, Spring, Yankari

**ABSTRACT**

This research work is on residents' perception on Yankari Game Reserve; implication for tourism development. The explanatory data employed to analyze tourism is all about and its implication on the host communities. The research hypotheses are tested using Chi-square where the relationship between Yankari game reserve and its host communities, economic impacts of Yankari game reserve on its host communities and implication of tourism towards development. The first hypothesis was to examine if there is economic impact of Yankari game reserve on the host communities or not. Result shows that, out of the total occupation, the proportion of farmers is higher because they have participated more than any occupation which account for 94 or 32.7%, followed by artisans which have the proportion of 83 or 28.9%. The next are the Students which accounts for 75 or 26%, and lastly the civil servants with the proportion of 34 or 11.7%. This explains the typical nature of the rural environment. The occupational distribution indicates that respondents invest their income in the provision of social services which attract more tourist to the area, the provision of this social service create additional income to the game reserve and the residents. This shows that there is economic impact of the game reserve on the host community. Therefore, the hypothesis that there is economic impact of Yankari game reserve on the host communities in Bauchi state has been proved. The second hypothesis was to examine against the background of the relationship between the host communities and Yankari game reserve. The following are some of the environmental impacts of developed tourism sites: Hunting and fishing have obvious impacts on wildlife environment, Sand dunes were damaged and eroded by over - use. Improper disposal or litters from these sites also detract the aesthetic quality of the environment and harm wildlife, workers destroys vegetation, pollution from environmental waste and vehicles emissions. The third hypothesis tries to show if there is any implication of tourism towards development or not. We found that the demand by tourists to the Yankari National Park implies spending some money with the local community; airport workers, farmers, fishermen, hoteliers, caterers, taxi drivers, horticulturist, etc, who in turn spend on their healthcare, housing, child education, food security and more. This has reduced the locals' dependence on indiscriminate harvesting of the ecosystem and wildlife for livelihood.

## INTRODUCTION

The Yankari game reserve is in Bauchi state in the North-Eastern part of Nigeria and remains one of the best tourist destinations with a warm and hospitable weather. It has over fifteen different destinations that rightly earned it the slogan as 'The Pearl of Africa's Tourism'. Its natural endowments raw, yet strikingly beautiful with spectacular sights and awesome-inspiring beauty that offer a wealth of destinations for tourism and leisurely activities. Yankari game reserve is one the most popular destination for tourists in Nigeria and as such, plays crucial role in the development and promotion of Eco-tourism in the country (www.academia.edu, 2014).

The State government also issued license to a private water packaging company to tap the Wikki warm spring. The commercialization of the Wikki warm spring generated a lot of concern to conservation experts. The company while using a machine to set pipes that would run to the warm spring generated noise that disturbed both wild animals and tourists. This generation of noise in a conservation area negates the principle of conservation and ecotourism as it makes the environment unnatural and frightens many wildlife species. Fear could psychologically reduce the life span of these species. Human beings have seriously encroached into many wildlife habitats and permanently occupied lands formally inhabited by wild animals (Ijeomah and Aiyeloja, 2010). The noise makes animals restless and may induce miscarriage in pregnant animals. It was repeatedly experienced noise in the Kainji Lake National Park that led to the mass emigration of the African elephant (*Loxodonta africana*) to Niger Republic (Ijeomah and Emelue, 2009). Noise could also affect the behavior of animals as it gradually makes them become habituated. This has led to wanton destruction and emigration of wildlife species (part of our national heritage) to more stable ecosystems. Through creation of wildlife refuges in form of game reserves and national parks rural inhabitants were forced to vacate part of their 'acquired life – dependent' land and other part of environment for wildlife species, in many cases without compensation (Adetoro et al., 2011).

However, Yankari is one of the Africa's biggest and premiere game reserve, and is strategically placed Bauchi State at the centre of Nigeria's ambition to build a national tourism industry. Yankari has become one of the most developed wildlife park in Nigeria with a lots of wide variety of fauna and flora. The fauna and flora are attractive to visitors and thus provide a natural abode for the animals. The animals help in attracting visitors from within and outside the country. Yankari game reserve is situated within Duguri, Pali and Gwana District of Alkaleri local Government Area of Bauchi State. The aim of this research is to examine the economic impact of Yankari game resort on the host communities of Bauchi state with these objectives: to examine the economic impact of Yankari game reserve on host communities of Bauchi state, to examine the implication of tourism towards development and to ascertain whether there is any significant correlation between Yankari game resort and the host communities in Bauchi state. (Bauchi State Official Diary, 2014).

## Material and Method

### Study Area

**Location and Size:** The area of study is in Bauchi State. Its southern and northern limits are demarcated by latitudes 9°30'N and 12°30'N, respectively, its western and eastern limits are bounded by longitudes 8°45'E and 11°0'E, respectively. Within these co-ordinates, however, the state's total land area covers about 49,259 sq. km. This is about 4.9m ha out of Nigeria's 92.4m ha (Nig, FOS, 1987). The state now has an eight-like shape, with a blotted lower region,

with about two-thirds of the land area being south of latitude 11°15'N.

The neighbouring states by location, clockwise, are Yobe, Gombe, Taraba, Plateau, Kaduna, Kano and Jigawa States. Thus, Bauchi State could potentially co-operate in mutual development programmes and projects with up to seven other states which share borders with her. Indeed, the state occupies a central location spatially among the north-east group of states in Nigeria. Another locational advantage which Bauchi State has, is its proximity to Jos Plateau, which is less than 100km south of the state, by which it has access to a commercial airport and to a large market for its agricultural produce, particularly fruits.

#### **GEOLOGY AND RELIEF:**

Bauchi State lies generally at an altitude of about 600m above sea level, being part of the central Nigeria highlands and Jos Plateau complex. However, two broad relief zones can be identified, as follows:

A western high land area of hill ranges, including the northern edges of the Jos Plateau complex. This is part of the crystalline rock area in central northern Nigeria. The hill ranges are developed on basement complex rocks, in an area which is also characterised by extensive plateau surfaces and volcanic extrusions. The base of the hill ranges is generally at the 600m level, while peaks rise to 700.6m on the hills, and 729.3m on the Bunsil hills.

A central high plain (of the Hausa land) area, belonging to the Kerri Kerri and Gombe sandstone and shale, of Tertiary Age. Isolated hills punctuate the high plain in several places, and reach heights of 798.5m on the Lamurde hill, and 816.4m on the Ligri hill. Indeed, most of the isolated hills in this zone are over 760m. Bauchi town lies within the undifferentiated basement complex with older granites (out-crops) and younger granite out-crops.

#### **CLIMATE AND VEGETATION:**

Temperatures are generally high in the state. Mean daily maximum temperatures range from 29.2°C in July and August to 37.6°C in March and April. The mean daily minimum ranges from about 11.7°C in December and January to about 24.7°C in April and May. The sunshine hours range from about 5.1 hours in July to about 8.9 hours in November. October to February usually record the longest sunshine hours in the state. Humidity ranges from about twelve per cent in February to about 68 per cent in August. The rainy season months are May to September, when humidity ranges from about 37 per cent to 68 per cent. Monthly rainfall ranges from 0.0mm in December and January, though only traces of less than 0.1mm in February and November, to about 343mm in July. Onset of the rains is often in March while they end virtually by October.

Radiation is fairly even throughout the year, ranging from about 11.3mm in July to about 18.7mm in April. However, it is relatively highest in March, April and May, when it is generally between 16.1mm and 18.7mm. Similarly, evaporation in the state ranges from 2.4mm in July and August to about 15.7mm in March, the months of January April being the period of greatest evaporation. Bauchi State spans two distinct vegetation zones, namely, the Sudan Savannah in the southern parts and the Sahel Savannah in the northern parts. It is generally characterised by undifferentiated (mixed) woodlands, particularly mixed acacia.

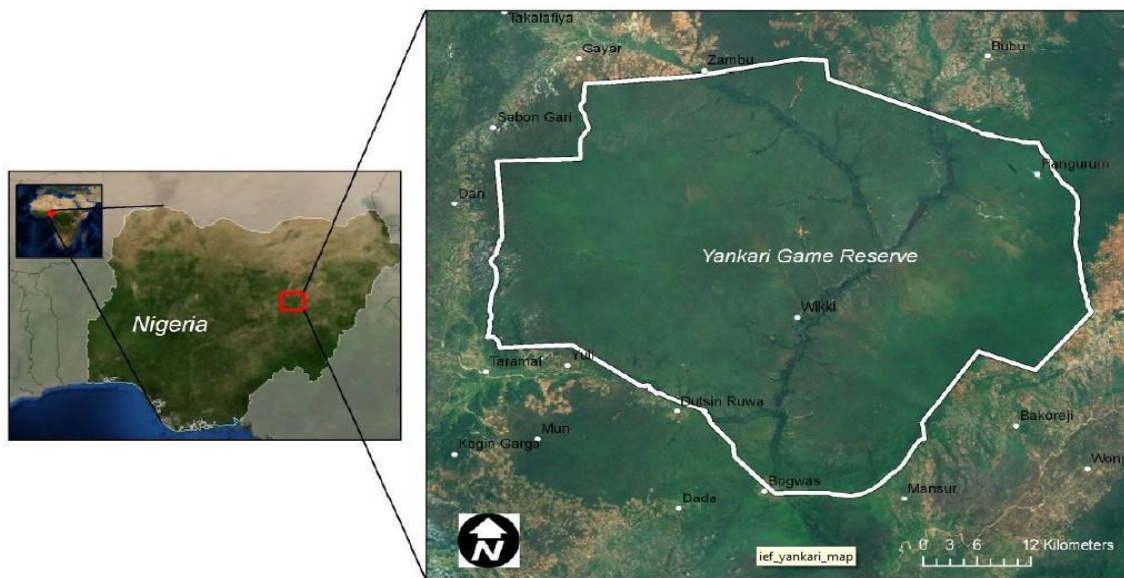


Fig. 1 A map of Yankari game reserve and its environs.

#### **SAMPLING PROCEDURE AND INSTRUMENTATION**

Primary data was obtained through interview and questionnaire distribution while secondary data was obtained from source documentary sources and from the internet. The researcher used mostly the primary data for the study. The primary data are collected by the researcher through the use of questionnaire.

A pilot study was carried out on 10 respondents from Bauchi state Ministry of Tourism to carry out pretest, to access the efficiency of the questionnaire. The feedback received from the pilot survey was used in the final draft which enhances its reliability.

The researcher collected data from the respondents through the help of the human resource manager. After the distribution of the questionnaire, respondents were given forty minutes to fill-out the questionnaire before retrieving back the questionnaires.

#### **METHOD OF DATA ANALYSIS**

Tables were used to ascertain the level of relationship between Yankari game reserve and the host communities in Bauchi state. And percentage was used to draw the final conclusion of the study.

#### **DATA ANALYSIS**

#### **TESTING OF HYPOTHESIS ONE**

The first hypothesis was to examine if there is economic impact of Yankari gamereserve on the host communities in

Bauchi state or not. Result shows that, out of the total occupation, the proportion of farmers is higher because they have participated more than any occupation which account for 94 or 32.7%, followed by artisans which have the proportion of 83 or 28.9%. The next are the Students which accounts for 75 or 26%, and lastly the civil servants with the proportion of 34 or 11.7%. This explains the typical nature of the rural environment.

The responses of the residents as shown in the occupational distribution as shown in table 4.3 indicates that respondents invest their income in the provision of social services which attract more tourist to the area, the provision of this social service create additional income to the game reserve and the residents. This shows that there is economic impact of the game reserve on the host community. Therefore, the hypothesis that there is economic impact of Yankari game reserve on the host communities in Bauchi state has been proved.

Tourism could not be said to have achieved the expected socio-economic development goal or objective desired of it. The extent to which tourism has impacted positively or not on the socio-economic development of the Nigerian nation could be seen from its contributions towards the following areas:

1. Tourism and Employment Opportunities:

A look into the different tourism centers and potentials in Nigeria as shown earlier and these important sectors of the tourism industry – sports and leisure, entertainment, travel, transport, catering and accommodation among others, will show that in actuality, tourism has created opportunities for job or employment opportunities in Nigeria. This is because all these tourist sectors are handled by human beings – both skilled/specialists and unskilled labor in Nigeria and Nigerians. That tourism creates jobs directly or indirectly through linkages is not a Nigerian case as it has been observed also that in Rwanda, employment opportunities are offered through national parks; guides, trackers, and anti poaching agents.

2. Tourism and Poverty Reduction:

Poverty is an economic condition of lack of both money and such basic necessities of successful life as food, water, education, shelter and other basic life needs. Tourism could serve source of poverty reduction in Nigeria if the people (the poor) trapped in the vicious cycle of poverty are brought into the desirable cycle of riches. This could happen through the employment opportunities tourism could provide for them, offering of social infrastructure like good motorable roads to the communities hosting the tourist attraction centers, school and health facilities, electricity and other social means that could add life to the people in question. In all, with the increase in tourist centers and supported by tourists visiting/patronizing the areas, market women could sell their goods, taxi drivers will be in business and other social activities in the areas concerned will improve, thus, reducing drastically the poverty rate in the places involved.

3. Tourism and Nigeria's Gross Domestic Product (GDP):

Tourism is one of the major sources of increase in the nation's GDP and economic growth, GDP being the total final output of goods and services produced by the country's economy, within the country's territory, by residents and nonresidents, regardless of its allocation between domestic and foreign claims, and economic growth being the steady

process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income. The contributions of tourism to Nigeria's GDP for a period of ten years only (1993-2003), according to the Central Bank of Nigeria Annual Statement Account Report.

## TESTING OF HYPOTHESIS TWO

The second hypothesis is trying to examine against the background of the relationship between the host communities and Yankari game reserve.

Stanford (2007) ascertained that developed tourism projects have influenced the physical state of both natural and built environment. The following are some of the environmental impacts of developed tourism sites:

1. Hunting and fishing have obvious impacts on wildlife environment. Apart from depleting these resources, these activities alter the ecological riches of the organisms and consequently result in low breeding.
2. Sand dunes were damaged and eroded by over - use. Improper disposal or litters from these sites also detract the aesthetic quality of the environment and harm wildlife.
3. The construction of a tourism super structure utilizes real estate that detracts from the aesthetics.
4. Workers destroyed vegetation.
5. Campfire destroyed forests that were under preservation and this led to people wasting up to one hour in a journey that could have been less than ten minutes due to the influx of car into the areas.
6. Noise pollution from music, chats and gathering of people within the community, more especially old friends who have not met for a long time. Other noise pollution came from tourists transport.
7. Air pollutions were also observed from vehicle emissions and decayed wastes from tourists/tourist sites. However, these made them to relocate their residential areas to other places.
8. Irresponsible behaviour by Tourists: Damage and destruction of crops and farm building and harassment of livestock were always reported. Fire, excessive noise, illegal hunting, fishing and litter also lead to conflicts between farmers and tourists.
10. Increased Competition for Land: Urban dwellers rent or buy land for weekend residences and hobby farmers. Its intensification of existing land holdings is not viable, and then expansion of farm size is the remaining alternative for increasing production.
11. Pollution: (Michael 2004) proved that development of tourism sites in Kenya brought in pollution of different types like:
  - a. Water pollution through the discharges of services and spillages of oil/petrol/wastes.
  - b. Environmental pollution from wastes.
  - c. Air pollution from vehicle emission and decayed wastes.
  - d. Noise pollution from tourists' transport and activities.
12. Damage to riverbanks due to large influx of people: Developed tourism sites have led to architectural pollution, overloading of infrastructure, segregation of local residents, traffic congestions (more especially in the mutual obstruction of different modes of traffic particularly the conflict between pedestrian and motor cars). Other problems include traffic overload and congestion at key points within the state especially at access points and main

streets of the tarred areas and the discrepancy between the demands for the available parking space.

The community try to embark on environmental mitigation by collaborating with the game reserve through the environmental sanitation, this collaborative effort helps to make the community and game reserve attractive and help to prevent communicable diseases which could tourist that would like visit the game reserve

### TESTING OF HYPOTHESIS THREE

The third hypothesis tries to show if there is any implication of tourism towards development or not.

The impact of tourism on sustainable development is felt via the income multiplier effect, the employment, infrastructure and environmental development and friendliness with the ecosystem. We found that the demand by tourists to the Yankari National Park implies spending some money with the local community; airport workers, farmers, fishermen, hoteliers, caterers, taxi drivers, horticulturists, etc., who in turn spend on their healthcare, housing, child education, food security and more. This has reduced the locals' dependence on indiscriminate harvesting of the ecosystem and wildlife for livelihood. This finding is in line with Awoseyin's (2007) concept of the Tourism Income Multiplier (TIM). France, being the number one tourist nation is a beneficiary of Tourism Income Multiplier; this is why it has a tourism development plan to attract 100 million tourists annually till 2020. The plan wants to also address the paradox why France receives 10% fewer revenue than Spain despite having 30% number of tourists. The United Arab Emirates also has a similar plan to double the number of international tourists to 20 million from the present 10 million by the year 2020. To this end, Dubai alone is adding to its impressive record of construction of 160,000 hotel rooms while Emirates Airline, the national carrier is increasing its fleet with corresponding expansion of the Dubai Airport.

Nigeria could generate \$10 billion annually (Eneji et al 2016). "Diversification of Nigeria's Economy; Impact of Tourism on Sustainable Development in Nigeria" projected growth from tourism industry. This is realistic considering the present size of the industry and the current GDP. For instance, if we assume that 10% out of 175 million Nigerians travel locally for business, leisure, culture, etc., spend only 10% of the per capita income of N3,400 (\$340), we will probably be having a tourism market that is worth more than \$9 billion. This alone will account for roughly 20% of Africa's current tourism industry. This clearly showcases the multiplier effect of tourism and the possibilities in the industry, and the more reason why it is in the interest of government to get the industry organized in order to increase non-oil income. Already a good number of economies in Africa are aware of the tourism income multiplier; they derive substantial revenue from tourism. In Gambia, tourism accounts for as much as 22% GDP. 12.1% of Kenya's total GDP comes from the sector while employing more than 10% of the total labour. In Ghana it accounts for 7.2% GDP and 5.8% employment respectively. Following the rebasing of the economy in April 2015, Nigeria emerged not just Africa's biggest economy, ahead of South Africa with GDP of \$384.3 billion but also the 26th largest economy in the world. The nominal GDP also places Nigeria ahead of countries like Austria with \$394.7 billion, Venezuela with \$381.26 billion, Colombia \$369.6 billion, Thailand \$365.96 billion, Denmark \$314.88 billion, Malaysia \$274.7 billion and Singapore \$269.87 billion. In other words Nigeria's growing middle class with an increasing international exposure will induce a domestic-driven tourism market, just the way Nollywood created an entertainment industry that now accounts for 1.2% of GDP. Tourism increases foreign exchange to provide the investment necessary to finance the development of other sectors and macroeconomic growth.

The socioeconomic impact of tourism subsector is seen in promoting sports, arts and cultural exchanges, as well as intermarriages. Individuals from diverse cultural backgrounds meet, promoting unity, peaceful coexistence at continental and global levels, beyond racial, ethnic and religious divides.

## Conclusion

Based on the above study, the researcher concludes that there is significant relationship between tourism and economic development because according to the hypotheses tested majority of the respondents maintained that Yankari game reserve plays vital role in invigorating the economic status of the host communities.

To achieve adequate and sustainable tourism development, government and private individuals have to strive to regulate the efficiency required through maintaining of existing tourism sites and implementing policies that will strengthen and expand tourism industries. With investing in tourism and taking proactive measures rather than reactive, full potentials of these tourism sites will be attained.

Tourism is known to be the major source of gross of most countries like, in other for Nigeria to be less dependent on the oil economy apart diversifying their economy into agriculture we can expand our tourism base by providing good social infrastructure which will make the life of the tourist more accommodating.

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## References

- Adetoro, A. O., Oyeleye, D. O. and Ijeomah, H. M. 2011. Causes and impacts of conflicts on biodiversity management at the Buffer zone of Old Oyo National Park, Oyo State, African Research Review 5 (1):485 – 491
- Awoseyin, L. (2007), "Professional ethics in hospitality and tourism", African Hospitality and Tourism, Vol. 11 No. 3, pp. 18-22.
- BSGOD (2014). Bauchi State Government Official Diary
- Eneji, M., Odey, F. A. & Bullus, M. L. (2016). Diversification of Nigeria's Economy; Impact of Tourism on sustainable Development in Nigeria. International Journal of Research in Humanities and Social Studies. Vol. 3, Issue 5, Pp. 36-44.
- Eniang, E. A., Ijeomah, H. M., Okeyoyin, G. and Uwatt, A. E. 2011. Assessment of Human – Wildlife conflicts in Filinga Range of Gashaka Gumti National Park, Nigeria. Production Agriculture and Technology, 7(2): 15 – 35. Nigeria
- Ijeomah, H. M. and Emelue, G. U. 2009. Ecotourism management and sustainable utilization of biodiversity in Pandam wildlife park, Nigeria, Journal of Sustainable Development in Africa, 11: 206-22
- Ijeomah, H. M. and Aiyeloja, A. A. 2010. Ecotourism: An instrument for combating renewable natural resources degradation pp.441 – 470
- Wimberly, M.C., 2004. Fire and forest landscapes in the Georgia Piedmont: an assessment of spatial modeling assumptions. Ecol. Model. 180,41-56.
- www.academia.edu 2014
- www.wikipedia.com