# Assessment of Infrastructural Development in the Host Communities of Kainji Lake National Park Toward Enhancing Ecotourism in Nigeria

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## Abstract

This paper assessed the infrastructural development in the host communities of Kainji Lake National Park toward enhancing ecotourism in Nigeria. Cluster sampling was used to group all communities within ten (10) kilometres of the park into ten (10) units. Based on closeness to the Park one community was randomly selected from each of the ten (10) units for data collected. Focus group discussions and oral interviews were conducted to collect primary data from each selected community. Secondary data on the benefits of the projects to the communities were also obtained from the Park's official records. The results obtained from the analysis show several infrastructural development projects were implemented through the Kainji Lake National Park (KLNP) and Global Environmental Facility (GEF) in the host communities. Findings revealed that about 60% of water-related projects in the host communities were from the KLNP/GEF intervention program, and impacted the thirteen (13) communities studied. Other projects in the host communities include; education, health and road/transportation and water projects. The study further indicates that the Park has done much to enhance the standard of living of the host communities. The paper concluded with recommendations that the host communities should be allowed to choose further the Park engagement activities that best address their local needs and priorities.

***Keywords:*** *Benefits, Ecotourism, Host communities, Infrastructural development, Kainji Lake National Park*

## Introduction

In developing nations, ecotourism is a significant tool for promoting socio-economic development and improvement in nature value. Indeed, a sustainable way to preserve and protect the natural environment, and create socio-economic, ecological and cultural benefits for the host communities. Despite this, ecotourism when badly planned and implemented can turn gains into social and environmental disasters (Buchsbaun, 2004), but if properly planned as well receives the government's development priority, the inherent potentials on the host communities are enormous.

Ecotourism development and its activities are an important source of infrastructural development and human capital development for economic empowerment (Touching, 2004). (Mathieson & Wall, 1982) argue that the importance of tourism in the national economy can be appreciated for its contributions to infrastructure development.

Canning & Petroni (2004) noted that infrastructural development stimulates and facilitates long-run growth. Ecotourism has both direct and indirect impacts on growth and development by providing basic social amenities which enhance the quality of life. In addition, (Akinlabi *et.al.,* 2011) asserted that infrastructural development tends to raise the productivity of other factors while serving as an intermediate input to production which translates into an increase in aggregate output.

Furthermore, National Park contributes to the well-being of residents who live around them and depend on the Park's resources. Kainji Lake National Park (KLNP) is a protected area. Protected areas are seen as instruments for maintaining ecosystem resilience, achieving conservation of nature, ecosystem services; public health, water supply, food production, good roads and reducing the impacts of natural disasters.

Given this, there has been evidence of interventions by both the KLNP and Global Environmental Facility (GEF) aimed at conserving and promoting the park resources by providing the host communities with benefits like basic infrastructures and social amenities. Thus, the benefits are expected incentives for villages to perceive resource and environmental conservation positively.

Hence, this study aims to assess the infrastructural development in the host

communities of the Park with the objectives; of identifying and describing the nature, and benefits of the various developmental projects, and the importance of these projects amongst others in the host communities. It is based on the background that, the paper assessed the infrastructural development in the host communities of KLNP, and identified several recommendations to drive improvement in the quality of life of the host communities.

## Literature Review

The contributions of National Parks to community development cannot be over-emphasized. Parks are considered a formidable base for sustaining community development and rural livelihoods. Adebayo (2015) defines National Park as a piece of land or water set aside purposely for recreational activities.

According to (Knobel, 1962) a national Park area is set aside mainly for the protection, propagation and preservation of wildlife, plants, and objects of geologic, aesthetic, historical, archaeological or other scientific or leisure interest for the benefit and enjoyment of mankind. They are sacred places of spiritual significance and inspiration. They are places with great restorative powers of enormous benefit in a 'stressful' modern world (Ayodele, 1988). From a historical point of view, national parks have been the theatre of education for science and humanities. For example, millions of Americans have expanded their knowledge of natural history through experiences that have served to foster better citizenship. Appreciation of the scenic beauty of the National Parks has nurtured a greater understanding of the ecological complexity and biodiversity of the world (Sylvia et al., 2004).

### Infrastructural Developments

According to (Charlie & Grazia, 1994), and (Rutten, 2002) have shown that national Parks account for the progress recorded in biodiversity conservation and tourism development activities. For successful cases, income generated from tourism activities in the National Parks is used to finance and enhance the community's infrastructure development. Such as schools and dispensaries; grants to individuals for health care; and payment of tuition fees and other benefits in local communities.

In addition, a study by (Ismail *et al.,* 2011) found that hosts recognized that tourism generates welfare (e.g., more variety in recreational facilities and improved public infrastructure) for their host communities.

Furthermore, (Murray, 2009), also brought together a range of positive benefits related to the social well-being of the host communities, such as infrastructure development (roads, communications, health care, education, public transport, access to drinking water), increasing safety and security, and the promotion of civic pride.

Nowadays protected areas are a unique field that brings different subjective and objective-oriented sectors like social development, generating income and job opportunities, research and monitoring, conservation education, and tourism and recreation. In Nigeria, since 1992, the National Park Service has invested in rural infrastructural development of its support zone communities from its resources and sometimes from the financial support of institutions like the Global Environment Fund (GEF), Nigerian Conservation Foundation (NCF) and the World Wildlife Fund (WWF).

The activities carried out under this program include; rehabilitation and upgrading of rural roads for the evacuation of agricultural produce, renovations and constructions of classrooms and health centres, building or rehabilitation of bridges, culverts, etc. These efforts are designed to win the confidence and support of the local communities for the National Parks. Projects developed at Kainji National Park (KLNP) are the Rehabilitation of rural roads from Ibbi to Mule to Kizhi to Mazakkuluka and Kuluto, grading of roads at New Bussa, renovations and constructions of classrooms and health centres, rehabilitation of bridges, and culverts.

## Socio-economic Features of the Host Communities

Studies have indicated that Parks are important to countries in achieving their socio-economic growth by providing opportunities for ecotourism destinations. (Alarape, 2003; Ayodele, 1988; Ismail, 2007; and Tijani, 2007). The existence of Kainji Lake National Park (KLNP) in the communities has a tremendous effect on the economy of the host community (Oladeye, 2000). These observations are very much in agreement with those of (Afolayan, 1980) and (Ayodele,1988).

In KLNP most of the participants interviewed stated that apart from the infrastructural development provided, the job opportunity and empowerment programme, particularly in areas of entrepreneur training. These include Soap

production, Piggery farming, Animal fattening, Beekeeping, Seedling, Agro-processing, etc have afforded them a better life compared to what their situation was before the Park. The existence of the Parks has a highly significant socio-economic influence on the host communities. Further study (Leameed & Adedoyin, 2016) indicated that higher socio-economic development is achieved in the area of employment opportunities, local income generation, and basic social infrastructure improvement, as well as the awareness creation on the education of residents on biodiversity conservation, which is attributed to the presence of the KLNP.

## Research Methodology

### Study Area

The study area (KLNP) is geographically located at Latitude 9º 50' 19" N, Longitude 4º 34' 24" E. The park has savannah vegetation with a total area of 5,340.82 sq km and is located in the North West central part of Nigeria between Niger and Kwara States. The area has two distinctive sectors known as the Borgu and Zurguma sectors. (see figure 1).

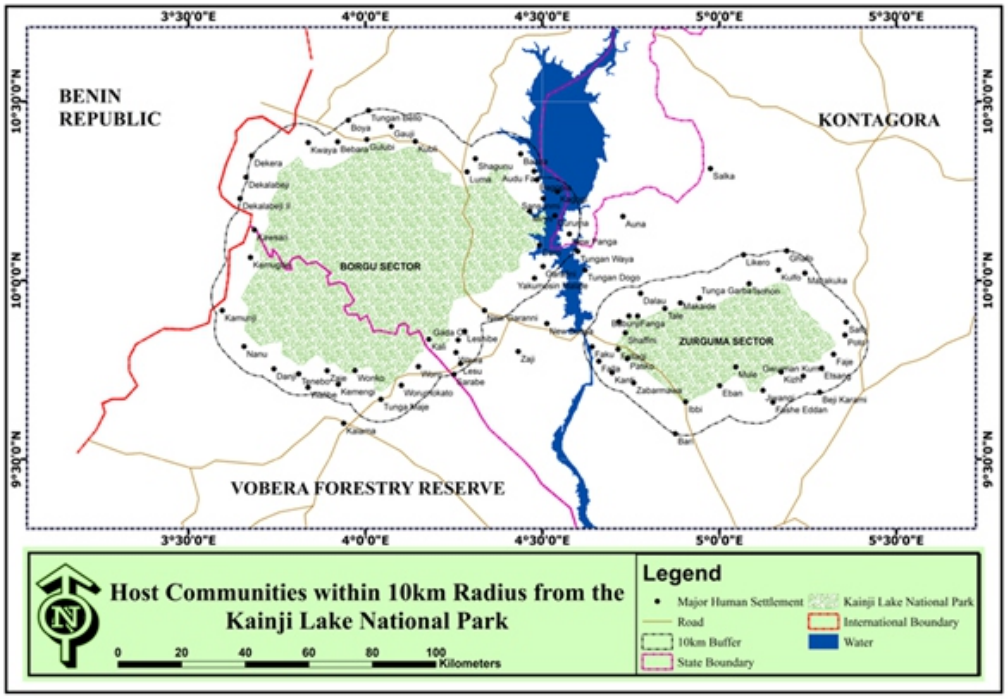


**Figure 1:** Host Communities within a 10km radius of the Kainji Lake National Park
**Source:** Field Survey,2022

### Sampling Procedure

Cluster sampling was first used to group all the communities that fall within 10km distance from the Park into 10 cluster units. The 10km distance was recommended by the (World Tourism Organization [WTO], 1996) for good coverage of host communities of National Parks and game reserves.

From each of the units, one community was selected randomly based on closeness to the Park, which makes the ten (10) communities used for this study. These include; Mazakukuk, Mulea, Ibbi, Kuble, Felegi, Doro, Wawa Worunmakto, Kizhi and Malale. These methods are useful because each identified community is assumed to be a true representation of the whole territory. Generally, the sampling was appropriate given their strength in identifying informative and unique cases in the study.

### Data Collection

Focused group discussions were held with local leaders in the selected communities at the village head palace. In each meeting, six (6) to ten (10) persons were identified from the various cabinet members including some individuals among the residents to gather information on the nature and type of infrastructural development in the communities. The oral interview was also administered to Park officials, local government representatives, NGOs, and community leaders in the selected communities. In each interview, two (2) persons were considered as representatives for the interview. This provides information on the source of funds, benefits and phases of the development projects.

The sampling method adopted was a purposive sampling technique. Only those who know about the Park management activities and local involvement are selected to participate, to gather reliable information. Secondary data were obtained from the Kainji Lake National Park.

### Data Analysis

Data obtained were translated into writing, interpreted and analysed. The results from the focus group and interviews were also integrated and compared with those from the Park records, thereby verifying and strengthening the results

### Results and Discussions

The Results of the analysis show the immediate benefits community residents accessed through the GEF/KLNP direct intervention program. To build win-win partnerships, they often support community

development initiatives to contribute to their standard of living. From the Park records, this includes; the construction of boreholes, culverts, blocks of classrooms, rehabilitation projects, upgrades of village roads, health centres etc. Similarly (Haiku *et.al.,* 2017) identified Global Environmental Facility (GEF) developmental projects among beneficiary communities of the Kainji Lake National Park.

Table 1 shows that the provision of portable water through borehole drilling is one major activity local communities benefited from to boost the rate of water supply in the study area. For instance, villages such as Felegi, Wurumakoto, Woro, New Kali, Kizhi, and Ibbi, enjoy such projects from the Park. The findings also revealed that all water projects allocated to these host communities are 100% completed with a total cost of 12,582,895.00 disbursed by the Park/GEF for the project. Examples cited from the focus group discussions (FGDs) as references to explain the improvements made, noted that about 60% of the water projects in the host communities were provided through the Global Environmental Facility (GEF)/Park intervention program. The fact is that before the Kainji Lake National Park, most sources of drinking water and for domestic use in the villages were streams and rivers and in some places depended on dug wells. Plates 1-2 further show evidence of villages (Felegi & Woro) where water boreholes are drilled and commissioned by the Park/GEF.

This study aligned with the findings of (Adejuwon & Oyesola, 2018) asserted in their studies on the benefits derived from the Millennium development goals, supported boreholes in rural communities of Ondo state, Nigeria.

**Table 1: Community's Water Projects**

| Category of project | Community affected | Level of implementation | | Total cost | Percentage % |
|---|---|---|---|---|---|
| | | Ongoing/not started | Completed | | |
| Water project | Felegi | - | ✓ | 1,146,960.00 | 7.69 |
| | Wurumakoto | - | ✓ | 1,501,000.00 | 7.69 |
| | Woro | - | ✓ | 1,716,000.00 | 7.69 |
| | New Kali | - | ✓ | 1,237,000.00 | 7.69 |
| | Ibbi | - | ✓ | 2,655,285.00 | 7.69 |
| | Duruma | - | ✓ | 850,000.00 | 7.69 |
| | Kemeji | - | ✓ | 800,000.00 | 7.69 |
| | Kizhi | - | ✓ | 938,610,00 | 7.69 |
| | Patiko | - | ✓ | 1,739,000.00 | 7.69 |
| | Sansani | - | ✓ | 697,500.00 | 7.69 |
| | Sansani | - | ✓ | 763,000.00 | 7.69 |
| | Luma | - | ✓ | 945,000.00 | 7.69 |
| | Malale | - | ✓ | 750,000.00 | 7.69 |
| | Tunga Maje | - | ✓ | 1,185,000.00 | 7.69 |
| Total | 13 | 0 | 13 | 16,924,355.00 | 100% |

**Source:** Park records,2022

**Plate 1:** Water projects at Felegi
**Source:** Park records,2022

**Plate 2:** Water projects at Woro
**Source:** Park records,2022

The result from Table 2 indicates that dispensaries were built, rehabilitated and equipped with furniture by the Park/GEF to improve the primary healthcare system for the residents. It also shows that Luma, Faji, Sansani, New Kali, Babugi and Shafini are all part of the local communities that benefited from the projects. Results show that about, 1,655,000.00 was the amount of money approved and disbursed to New Kali by the Park/GEF for the project, while the least was the sum of 50,000.00 approved and disbursed to Wawa.

The interviewees in the studied area reiterate that:
*"The intervention program extended to the construction of new clinic (health centre) in Luma and renovation of old ones in some surrounding villages"*

The study indicates that 78% of the projects approved for these communities are completed and functional. While, at the time of the data collection, about 22% of the projects are ongoing and yet to be completed as indicated in communities, such as Wawa and Kulho.

Further evidence presented in Plate (3) confirmed that the Luma community benefited from the health project. This result corroborates with the reports of (Tijani, 2007) and (Chikezie *et.al.,* 2008), their studies assert that stakeholders under the Park Support Zone Community Programme (SZCP) executed projects for the local communities, such as general health care delivery, physical development, etc.

**Table 2: Community Health projects**

| Category of project | Community affected | Level of implementation | | Total cost | Percentage % | |
|---|---|---|---|---|---|---|
| | | Ongoing/Not started | Completed | | ongoing | Cmpt |
| Health | Luma | - | ✓ | 1,035,000.00 | | 11.11 |
| | New kali | - | ✓ | 1,655,000.00 | | 11.11 |
| | Faje | - | ✓ | 1,361,804.00 | | 11.11 |
| | Kulho | ✓ | | 303,536.70 | 11.11 | |
| | Mulea | - | ✓ | 1,011,789.00 | | 11.11 |
| | Wawa | ✓ | | 50,000.00 | 11.11 | |
| | Shafini | - | ✓ | 612,000.00 | | 11.11 |
| | Babugi | - | ✓ | 1,011,789.00 | | 11.11 |
| | Sansani | - | ✓ | 1,035,000.00 | | 11.11 |
| Total | 9 | 2 | 7 | 8,075,918.00 | 22.22 | 77.77 |

**Source:** Park records,2022

**Plate 3:** Clinic at Luma
***Source:*** *Park records,2022*

Furthermore, analysis in Table 3 indicated local benefits derived as a result of the Park, and this includes; road upgrading/rehabilitation and construction projects meant to improve access roads in the host communities. Projects such as, culvert, bridge and drainages were executed through the GEF/Park intervention program as part of the developmental projects to boost the local transport system. The table revealed that an amount of 734,040.00, 3,348,000.00 and 635,000.00 was approved and disbursed by the Park/GEF to communities, such as Woro, Mazakkuka and Mulea respectively. Which makes about, 75% of the total projects approved, completed and functional in the communities. In the Kulho community, it's

indicated that the Project is yet to start which represents about 25% of the total projects allocated at the time of the data collection.

A village head added that:
*"The Park was also involved in road upgrading and rehabilitation project, and construction of culverts to ease transportation problem in some of the villages".*
Another added that:

*"Before now some communities are not connected to motorable roads, as they are almost cut off from other neighbouring communities and markets during the wet season"*

This corroborates with the findings of (Ibrahim *et.al.,* 2021) who opined that this might have been done for easy accessibility to their farms and linkages to the nearby villages and urban centres.

**Table 3: Community's Road/Transport Projects**

| Category of project | Community affected | Level of implementation | | Total cost | Percentage % | |
|---|---|---|---|---|---|---|
| | | Ongoing/not started | Completed | | Ongoing | Cmpt |
| Road/Transport | Woro | - | ✓ | 734,040.00 | | 25 |
| | Kulho | ✓ | - | - | 25 | |
| | Mazakkuka | - | ✓ | 3,348,000.00 | | 25 |
| | Mulea | - | ✓ | 635,000.00 | | 25 |
| Total | 4 | 1 | 3 | 4,717,040.00 | 25 | 75 |

**Source:** Park records, 2022

Analysis from Table 4, presents similar construction/renovation projects related to education identified as efforts made by the Park/GEF to enhance local education. Host communities who benefited include; New Kali with 2,700,000.00 as the total cost disbursed from the Park for the project, followed by Shafini with 2,052,000.00 and Luma with 1,653,100.00.

Others are Sansani with about, 991,129.50, Felegi with about 250,000.00, and Wawa with double of this project awarded on two different occasions, with the sum of 630,000.00 and 1,625,000.00 as disbursement funds from the Park/GEF.

Another explained that:
*"The KLNP/GEF has contributed to the renovation of the LEA primary school in the area. Others are the construction of blocks of classrooms to reduce congestion."*

Participants from the FGDs further

confirmed that construction/renovations of blocks of classrooms including school laboratories and toilets were also some of the projects provided to improve the standard of education within the local area. This study is similar to the findings of (Ibrahim et.al., 2021) who asserts that new school buildings were constructed and school buildings were also renovated in rural areas for educational advancement. From the table, it indicates that all projects allocated to these communities are 100% completed. Generally, the total sum of 9,901,229.50 was approved and disbursed for the projects.

**Table 4: Community education projects**

| Category of projects | Community affected | Level of implementation | | Total cost | Percentage % |
|---|---|---|---|---|---|
| | | Ongoing/not started | Completed | | |
| Education | Felegi | - | ✓ | 250,000.00 | 16.6 |
| | Luma | - | ✓ | 1,653,100.00 | 16.6 |
| | New kali | - | ✓ | 2,700,000.00 | 16.6 |
| | Wawa | - | ✓ | 630,000.00 | 16.6 |
| | Wawa | - | ✓ | 1,625,000.00 | 16.6 |
| | Shafini | - | ✓ | 2,052,000.00 | 16.6 |
| | Sansani | - | ✓ | 991,129.50 | 16.6 |
| Total | 6 | 0 | 6 | 9,901,229.50 | 100% |

**Source:** Park records, 2022

## Recommendations and Conclusion

The following recommendations were made based on the findings of the study:

Development of road infrastructure leading to communities especially those used within the host communities for easy access, could be expanded and regularly maintained to allow more communities to gain easy access to other services available in other communities. This will add to the stock of benefits for the communities

The study revealed that 60% of the water projects in the area are the ones provided through the KLNP/GEF intervention program, with only 13 communities benefiting. This, therefore, calls on the management, stakeholders and governments to put more effort into water provision and make it a priority since it is a basic need.

A needs assessment is equally recommended periodically to ascertain the benefits expected by the host communities and conscious efforts should be made by the Park to provide what these host communities ask for.

In conclusion, the study made a significant contribution to the understanding of tourism, particularly in the aspect of infrastructure development in the host communities of Kainji Lake National Park. The findings of this paper revealed that the local people have benefited from the establishment of the Park, through community development initiatives, particularly in the area of infrastructure and social amenities such as the provision of boreholes, road upgrades/rehabilitation, health services, etc. However, the findings of this research are expected to be useful to tourism experts for further improvement and local community development.

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