Assessment of community-based ecotourism prospects in southern Nigeria: Case study of Iko Esai Community

Cross River State is endowed with natural and cultural resources. Most of these resources are yet to be developed for tourist appreciation. The study aimed to assess the prospects of community-based ecotourism (CBE) and stakeholder's involvement in ecotourism development in Iko Esai Community, Cross River State, Nigeria. Multistage sampling method was adopted for the study. Using 5.57% sampling intensity, 150 structured questionnaires were administered to two randomly sampled wards for data collection. Data were analyzed using frequency tables and charts, while t-test and Fisher's exact analysis in STATVIEW version 5.0.1 was employed to test for significance at 5% probability level. Results from the study revealed significant ($P < 0.05$) presence of harnessed ecotourism assets developed with the assistance of some organizations. Furthermore, there was significant ($P < 0.05$) presence of unharnessed ecotourism assets in the area. The level of education and significant ($P < 0.05$) participation of both male and female indigenes in local organization further highlighted potential success of CBE development in the area. Therefore, proper documentation, development and marketing of ecotourism assets should be conducted. Stakeholders should increase their commitment towards CBE development in the area while encouraging the continued protection of these assets.

**Key words:** Community-based ecotourism, ecotourism assets, community participation, harness.

**INTRODUCTION**

Globally, the tourism industry has experience steady growth over the years thus becoming one of the world’s leading industries. The industry accounts for more than 10% of global employment and more than 11% of global GDP (The Mountain Institute, 2000). Furthermore, development policy makers view tourism as a mechanism for achieving socio-economic progress thus total trips of tourist will further increase (Mazara, 2011; Barry, 2012; Wang et al., 2014).

In a bid to mitigate the degrading impact of conventional mass tourism while sustaining demand for novel experience amongst tourist, ecotourism was developed (Honey, 1999; Onyeabor, 2016). This has proven to be a more effective strategy for encouraging the transformation and improvement of the global tourism industry with biodiversity conservation as a key focus. Ecotourism is now widely promoted as a principle component of the sustainable development approach for the utilization of natural, cultural, religious or historic resources as tourist attraction without causing harm to the environment (Manu and Kuudar, 2012; Kim et al., 2014; Ketema, 2015; Onyeabor, 2016; Jamal and Dangi 2016; Menbere and Menbere, 2017; Mensah, 2017).

Community-based ecotourism was developed in search of a more effective strategy that differentiates ecotourism that take place in natural areas and those that advance the needs and concerns of local communities (Menbere and Menbere, 2017). Therefore, conservation has progressively...
turned to community-based ecotourism to provide local economic benefits while maintaining ecosystem integrity (Stern and Deshler, 2003). But for local communities to effectively manage their ecotourism resources, they must be assured of their full participation in and encouraged from the benefits accrued from ecotourism (Sirivongs and Tsuchiya, 2012).

Cross River State is endowed with substantial portion of West Africa’s remaining tropical rainforest. These forest areas are habitats for several rare and endemic flora and fauna species making it a potential ecotourism hotspot (Ezeala, 2003; Asuk, 2016). Ecotourism holds immense prospects for Cross River State both as a viable economic alternative and a strategy for protecting its globally significant rainforest and species. The Federal and State Government have shown great support for conventional tourism. This is evident in the establishment of the Cross River State Tourism Bureau in collaboration with Cross River State Forestry Commission which has led to the development of some ecotourism site like Afri mountain reserve, Qua falls, Obudu Ranch Resort as well as tourism location like Marina Resort, Tinapa Business Resort, Ikom Monolith, and the long existing Cross River National Park in Akamkpa and Boki Local Government, CERCOPAN, Pandrillus and the Calabar carnival (Ogbonnaya, 2003). But unfortunately, development of the ecotourism sector has been very slow owing to the lack of commitment by the government and other stakeholders. Consequently, most potential ecotourism sites in Cross River State have remained untapped and unharvested (Onyeabor, 2016).

Therefore the study aimed to highlight the prospects of community-based ecotourism as well as, stakeholder’s involvement in ecotourism development in the area. The study relied on both primary and secondary data in the assessment of tapped and untapped ecotourism assets in the area. The results from the study will be utilized in the discovery, dream, design and delivery of ecotourism for tourist appreciation in Iko Esai and other tourism hotspots in the State.

MATERIALS AND METHODS

The study area

This research was carried out in Iko Esai community in Akamkpa Local Government Area, Cross River State, South Eastern Nigeria (Figure 1). Geographically, Iko Esai is located at latitude 4°37‘32”N and 5°43‘09”N and longitude 8°11‘57”E and 8°20‘12”E about 90 kilometers North of Calabar (Asuk, 2010). The community which covers an area of about 21,000 hectares, is bounded by Iko Ekerem, New Ekuri and Agoi, all in Akamkpa Local Government Area of Cross River State.

The area is characterized by undulating relief, forested ridges with steep valleys, streams which cut across roads especially in the rainy seasons with pocket of mangrove vegetation and an altitude of 120m above sea level. The community manages about 12,000 hectares of community forest with the help of CERCOPAN. Also, 400 hectares of the community forest has been carved out as core area for intensive protection, 4,000 hectares as research area and 3,000 hectares reserved for farming. Iko Esai community has high mean annual rainfall of 3,000mm, mean temperature of between 23 and 37 °C and dry season that last from December to March yearly. It is also characterized by relative humidity of about 90 to 100% in the rainy season and 70 to 80% in the dry season (United Nations Development Programme (UNDP), 2012; Ajake et al., 2013).

The area consists of a rich diversity of indigenous flora and fauna species. These include numerous genera and species of butterflies, mammals, birds, reptiles, amphibians and plants some of which are endemic (Asuk, 2010). Specifically, the primate species present in the study area range from small primates (such as Galagos and Potos) to medium size monkeys (especially of the genus Cercopithecus and Cercocebus) to large primates (which includes chimpanzees and lowland gorillas).

Methods of data collection

Data for the study was collected through personal interview of the head of Center for Education Research and Conservation of Primate and Nature (CERCOPAN) at Rhoko Camp, focus group discussions with members of the community and use of structure questionnaires. Multistage sampling method was adopted for the study. First, two wards (Eyeyeng and Okoyong) out of four wards were randomly selected from Iko Esai Community. Then, with sampling intensity of 5.57%, sample population of 150 individuals from a population of 2,693 people, were selected. Using equal allocation method, the sample size was equally divided between the selected wards. Thus, a total of 75 questionnaires were administered to each of the wards. Although, in Okoyong ward, out of the 75 questionnaires administered, only 71 were retrieved.

Method of data analysis

Data from the study were subjected to descriptive and inferential statistics. Descriptive statistics involved the use of frequency tables and charts. Inferential statistics involved the use paired t-test and Fishers exact analysis in STATVIEW Version 5.0.1.

RESULTS

Demographic characteristics of respondents

The respondents used for study comprised of 57.5% males and 42.5% females (Table 1). The result showed that 32.2%
of the sampled position were less than 25 years, 26.7% were aged between 26 and 35, 23.3% were aged between 36 and 45, 3.4% were aged between 46 and 55, while 14.4% were aged above 56 years (Figure 2).

Results obtained for educational attainment/qualification as expressed in Figure 3 indicated that 13.7% of the respondents sampled had primary education, 43.1% had secondary education, 37.7% had tertiary education, while 5.5% had no formal education.

The occupational distribution of respondents shown in Figure 4 revealed that 21.05% of the respondents were farmers, 9.36% were traders, 22.81% were civil servants, 23.98% were students, 4.68% were NTFP collectors, 1.17% were motorcycle riders, 2.92% were timber dealers while 9.94% were unemployed.

**Distribution of annual income of respondents**

The annual income of respondents was as shown in Figure 5. It was indicated that 50.7% of respondents earned less than ₦60,000 per annum, 8.9% earned between ₦60,000 and ₦120,000, 15.8% earned ₦120,000 and ₦240,000 while 24.7% earned above 240,000 per annum.

**Period of residence in the area**

The result on period of residence in Figure 6 showed that 8.9% of the respondents had resided in the area for not more than 5 years, 8.9% had resided in the area for 5 to 10 years, 21.9% resided for 11 to 20 years, 34.3% resided for 21 to 40 years and 26% resided for more than 40 years.

**Participation in local organizations**

It was observed that 80.14% of the respondents participated in local associations while 19.86% did not participate in local associations (Table 2).

**Presence of ecotourism assets in the area**

From Table 3 it was observed that 96.6% of the
Figure 2: Age distribution of the respondents

Figure 3: Educational attainment of respondents

Figure 4: Occupation of respondents
Figure 5: Distribution of annual income of respondents in Naira (₦)

Figure 6: Period of residence of respondents

Table 2. Participation of community members in local associations

<table>
<thead>
<tr>
<th>Response</th>
<th>Eyeyeng</th>
<th>Okoyong</th>
<th>Total</th>
<th>Percentage (%)</th>
<th>$t$-value</th>
<th>$P$-value</th>
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<td>Total</td>
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<td>71</td>
<td>146</td>
<td>100</td>
<td>87.00</td>
<td>0.0073***</td>
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Table 3. Presence of Ecotourism Assets

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<th>Okoyong</th>
<th>Total</th>
<th>Percentage (%)</th>
<th>$t$-value</th>
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<td>Total</td>
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<td>71</td>
<td>146</td>
<td>100</td>
<td>68.00</td>
<td>0.0094***</td>
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population agreed that ecotourism assets were present in the area while 3.4% disagreed.

Figure 7 shows the types of tourist attractions present in the area grouped into natural, cultural and religious/archeological tourist attraction.

**Organizations that assist in ecotourism development in Iko Esai community**

Figure 8 revealed that CERCOPAN contributed 98.6% of ecotourism development in the area, Forest Management Committee (FMC) and Community CERCOPAN Development Committee (CCDC) contributed 23.3% each, Cross River State Forestry Commission (CRSFC) contributed 8.2% and Cross River National Park (CRNP) contributed 0.7%.

**Contributions of CERCOPAN to ecotourism development in Iko Esai Community**

Figure 9 to 11 show the contributions of CERCOPAN towards ecotourism development in the area. Figure 9 shows an education center established by CERCOPAN as a contribution to ecotourism development in Iko Esai.
As shown in Figure 10, CERCOPAN contributed to ecotourism development by constructing accommodation facilities for tourists in the study area. One hectare Mangabey enclosure was constructed in the heart of the rainforest by CERCOPAN for tourist appreciation as shown in Figure 11.

**Ecotourism assets yet to be harnessed**

Table 4 showed that 77.4% of the population agreed that there were ecotourism assets not yet showcased while 22.6% disagreed.

It was observed in Figure 12 that the ecotourism assets yet to be harnessed included Bagamokum, Ikpibitoi and Agorum Ekpun and likely waterfalls along the forests of Iko Esai community.

**Economic potential of ecotourism in the area**

Result on the potential of ecotourism in providing real and subsistent income to the people of Iko Esai was as shown in Table 5. Majority of the respondents (77.4%) revealed that ecotourism provided real and subsistent income while
Figure 11: One hectare in-situ Mangabey enclosure in the rainforest of Iko Esai Community

![Figure 11: One hectare in-situ Mangabey enclosure in the rainforest of Iko Esai Community](image)

Figure 12: Potential ecotourism assets yet to be harnessed

![Figure 12: Potential ecotourism assets yet to be harnessed](image)

Table 4. Undiscovered Ecotourism Potentials

<table>
<thead>
<tr>
<th>Response</th>
<th>Eyeyeng</th>
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<th>Total</th>
<th>Percentage (%)</th>
<th>t-value</th>
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<td>71</td>
<td>146</td>
<td>100</td>
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<td>0.0159**</td>
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Table 5. Provision of real and subsistence income

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<tr>
<td>Total</td>
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<td>71</td>
<td>146</td>
<td>100</td>
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</table>
DISCUSSION

The results from the study showed that majority of the inhabitants of Iko Esai community were of a productive age that were either students, civil servants, traders, NTFP collectors or hunters, and had attained a minimum of secondary school education. It was also observed that members of the community significantly \( P < 0.05 \) participated in local organizations, and the gender distribution of the respondents, which was not significantly different \( P > 0.05 \), indicated that the participation/involvement in local organization was not gender bias. In addition, since the respondents were resident in the area for more than 20 years, they were able to provide valid information regarding the study.

It was revealed that there was significant \( P < 0.05 \) presence of ecotourism assets in the area. These assets were categorized into natural tourist attractions (including wildlife species, community forest, rivers/creeks, mountains and swamps), cultural tourist attraction (including agriculture, traditions/customs, folk play, fishing, and handcraft) and religious/archeological tourist attraction (Church, playground, village temples and shrines). In addition, the study also revealed that there was significant \( P < 0.05 \) presence of other ecotourism assets not yet harnessed or developed for tourist. This was attributed to the low income status of indigenes of the community and lack of commitment by government and other stakeholders towards ecotourism development in the State. Despite these challenges, members of the community had occasionally made effort such as financial contributions and enactment of laws towards the conservation of their forest for ecotourism development as was also reported by Asuk (2010). Some of these undeveloped assets included Bagamokum Mount, Ikpibitoi Mount, Ageoom Ekpun Spring and Waterfalls along the forest. These mounts were very high and if developed could be utilized for mountain expedition, leisure and other tourism activities. These result reflected the findings reported by Ezeala (2003), Ogbonnaya (2003) and Onyeabor (2016) indicating that Cross River State possesses several potential ecotourism sites but most of the sites have remained untapped or unharnessed. The presence of both developed and undeveloped ecotourism asset in the study area indicates that there is opportunity for promotion of resources conservation, improvement of tourism facilities and successful development of community-based ecotourism in the area as pointed out by Menbere and Menbere (2017), Onyeabor (2016), Rajani and Vasanthakumari (2014) and Ogato et al. (2014).

The results revealed that CERCOPAN, FMC, CCDC, CRSFC and CRNP were the organizations who have assisted in the development of ecotourism development in the area thus far. It was observed that of all the organizations present in the area, CERCOPAN contributed to ecotourism development the most by building an education center, accommodation facilities for tourist, constructing a Mangabey enclosure for tourism appreciation and encouraging the conservation of 400 hectares of community forest. The presence of some ecotourism assets yet to be harnessed in the area was indicative of the fact that there is need for more work to be done in the area. This will require the application of “the 4-D model” (discover, dream, design and deliver) proposed by The Mountain Institute (2000) towards the discovery and development of community-based ecotourism in the area. This concept is used in appreciative, participatory, planning and action (APPA) where participants identify characteristics of a community with potential for tourist appreciation, and recognize strengths and skills of the community that contribute to community-based ecotourism. The success of the industry in boosting the socio-economic status of communities while protecting the social and environmental resources of the communities will solely depend on the complete involvement of the community and all as well as other stakeholders in the process (Lushaj et al., 2012; Kiss, 2004).

There was significant level of community involvement \( P < 0.05 \) in local associations. This made information dissemination easy and promoted unity. Also, ecotourism in the area was seen to contribute significantly \( P < 0.05 \) to the real and subsistent income of indigenes of the community. This was through the sales of their goods and services to tourist, payment for transportation on motorcycles (which was the major means of transportation), participation in benefit sharing between CERCOPAN and the community and provision of employment. Asuk (2010) had reported that although indigenes of Iko Esai Community were of low income status, they were very organized and actively involved in the protection/conservation of their forest as well as sharing of benefits. This they had achieved by enacting laws to guard against illegal lugging and hunting in their community forest. He further added that the economic status of indigenes of Iko Esai Community had greatly hindered the development of ecotourism in the area. The high level of education, involvement of both males and females in activities that concern the community and financial rewards to the community, was indicative of high prospect for acceptance and participation in ecotourism development if only stakeholders will be committed to its development.

Conclusion and recommendations

The study proved that there were some ecotourism assets in the area which had been developed with the assistance of a few organizations like CERCOPAN, FMC and CCDC. However, there also existed some assets yet to be
harnessed or developed. The exceptional natural environment and cultural heritage of the area coupled with the high level of education and the involvement of both male and female members of the community in local organizations are key strengths for successful community-based ecotourism development in the area. In addition, community-based ecotourism proves to contribute significantly to the economic development of rural communities when properly developed and marketed. Therefore;

- Ecotourism assets in the area should be properly documented for development and marketing which will improve the socio-economic wellbeing of indigenes in the area.
- The government and other stakeholders should increase their commitment towards development of community-based ecotourism in the area.
- Also the community should be encouraged to continue the protection of their natural and cultural heritage to ensure sustainability of the ecotourism sector in the area.

ACKNOWLEDGMENTS

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Conflict of interests

The authors declare that they have no conflicting interests.

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