

# Perception and Attitudes of Residents towards Effective Management of the Kyabobo National Park, Ghana

Kwasi Ali Magya

*Department of Social Science, E.P. College of Education, Bimbilla – Ghana W/A*

**Abstract:** Protected Areas are increasingly becoming significant due to their double potential as tourism and biodiversity conservation areas. This has led to an increasing desire by governments to convert a lot of forests into Protected Areas. However, these conversions are sometimes met with strict opposition from members of fringe communities. This is sometimes attributed to the destruction of livelihood sources of community members and thus affects the smooth management of the protected areas. The objective of this study therefore was to examine the perception and attitudes of residents towards the effective management of Kyabobo National Park in the Nkwanta North District of Ghana. The data was using questionnaire and interview and analyzed quantitatively and qualitatively using Chi-square, 200 questionnaires were administered to respondents in five fringe communities. Focus Group Discussions and interviews were also used to collect field data and information. The study revealed that majority of community members do not receive any form of social, economic or cultural benefits from the KNP but they were however supportive of the establishment of conservation area where biodiversity can be preserved. The study also revealed that the perception and attitude of respondents are not influenced by their demographic variables such as age, level of education and occupation. Respondents however had negative attitudes towards the park because promises made by park authorities before the conversion of the place to a park had not been kept. The negative attitudes therefore affect the effective management of the park. It is recommended that government and management of the park fulfill their promises to residents. Also, alternative livelihood options should be provided for residents to avoid illegal entry into the park. The planning of sensitization programs should involve all residents and not target only certain demographic categories as there is no relationship between demographic characteristics of respondents and their perception and attitude towards protected areas.

**Keywords:** Perception, Altitudes, National Park and Management

## I. BACKGROUND TO THE STUDY

Protected Areas (PAs) are generally regarded as warehouses of biodiversity globally (Dudley, 2008). Their role as the protection of the extinction of natural flora, ecosystem, and fauna of the earth for the benefits of man cannot be overestimated (Dudley, 2008). According to The World Conservation Union (WCU), PA is defined as, “clearly defined geographical space that is recognized, dedicated and managed through the legal and other effective means to achieve the long-term conservation of nature with associated

ecosystem services and cultural values (Dudley, 2008).” In recent times, the world has experienced increase in the numbers of nationally designated Pas due to advocacy by conservation organizations such as African Wildlife Foundation, Conservation International, IUCN, The Nature Conservancy, and World Wide Fund for Nature (WWF), among others (Videld et al., 2012).

They comprise of 157,897 PAs which cover over 24 million square kilometers of land and sea (WDPA, 2012). The level of protections among nations also varies (WDPA, 2012), for instance according to WDPA (2012), in a study conducted in 236 countries, 45% of the countries had more than 10% of their terrestrial area protected, and with only 14% of the countries had more than 10% of their marine area protected. In Ghana, according to UICN/PACO (2010), twenty-one (21) Wildlife Protected Areas (WPAs) occupy a total of 1,347,600 hectares of the country's land. Among these, PAs network constitutes seven (7) National Parks, six (6) Resource Reserves, two (2) Wildlife Sanctuaries, one (1) Strict Nature Reserve and five (5) Coastal Wetlands (UICN/PACO, 2010).

This sharp increase in the number of protected areas occasioned interactions between humans and wildlife and its attendant positive and negative perception and attitudes toward conversational objectives (Røskaft, 2012; Røskaft et al., 2007, Røskaft et al., 2014). Whereas the positive perception and attitudes are associated with benefits derived from wildlife, the negative perception and attitudes are created by wildlife-related costs (Gereta and Røskaft, 2010; Røskaft, 2012; Røskaft et al., 2007; Røskaft et al., 2014). According to Chevalier and Milburn (2015), PAs are able to function as profitable establishments which provide both monetarist and non-monetarist benefits to boost development if managed effectively. Managements of PAs also provide alternative livelihood and income generation projects for fringe communities (Dudley, 2008; Getzner et al., 2012). In spite of the benefits offered by PAs, its adverse effects on the fringe communities cannot be disputed. According to Weladji and Tchamba (2003), a greater proportion of these PAs in Ghana were created by colonial masters without taking care of the needs of local communities.

The colonial authorities never considered the views and the needs of the local people. Moreover, some locals were

displaced and deprived of their resources of livelihood. These made some locals lose their livelihood and became vulnerable to poverty. According to Oxford dictionary, perception is defined as the ability to see, hear or understand things. Understanding community perceptions and attitudes towards protected areas is of great importance because these attitudes are one way or the other, inherently linked to the long-term existence and effectiveness of protected areas (Dewu & Røskoft, 2017). Additionally, a greater understanding of these can help avoid tension and improve successful management (Maya & Metzger, 2017). Maya and Metzger (2017) further noted that understanding attitudes of fringe communities in newly created parks provide valuable information for the design of education and engagement programmes, while creating a benchmark to compare changes over time. Furthermore, understanding local resident's perception and attitude of PAs makes it possible to create strategic place-based management strategies that build on people's positive perceptions and attitudes and mitigate the negative ones (Allendorf et al, 2006).

Several studies have been done on perception and attitude of locals toward PAs in Ghana. A study by Amuquandoh (2010) on perception on the environmental impact of tourism in the Lake Bosomtwe Basin revealed that residents expected both positive and negative effects of protected area development, but were more inclined to the positive side. Akyeampong (2011) also examined the expectation, experience and perception of residents on pro-poor tourism and established that while some expectations were too much, others had been met. The Kyabobo Range National Park (KNP) which was formerly established in 1993 is one of the many and newest national Parks in Ghana (Sluis et al., 2007). The Park is unique and is situated right on the boundary between the savannah and forest zones in Ghana, where a mosaic of woodland and various forest types (mainly semi-evergreen) intermingle at the western edge of the Dahomey Gap which made it very significant for biological preservation and nature-based tourism (IUCN, 2014).

Kyabobo National Park similar to any other park in Ghana faces challenges such as poaching, conflicts, loss of flora and fauna among others as a result of negative perception and attitude from locals. These negative attitudes militate against the sustainability of the park. Notwithstanding this, most of the studies on KNP have rather skewed toward other issues to the neglect of the perceptions and attitudes of the local residents toward KNP. Bowes-Lyon, (1998) for instance noted that the decision making regarding the KNP is quite complicated with many different people trying to influence outcomes. Sluis et al., (2007) and Bouma (2007) also explored into the potential of tourism in KNP and established that the park offers a high prospect for tourism

development. Larsen (2006a) further delved into butterfly population and composition of the KNP and found that it contains almost 80% of the entire butterfly population in the Volta Region of Ghana. Leache (2005) conducted a herpetological survey of the KNP and found a high amphibian population around the Shiare area of the park while Bruku (2016) looked at the economic effects of the park, perceived risk in the area and needed alternative livelihood interventions for the park resident population.

With the above background, it is vividly clear that much of the research on KNP (Amuquandoh, 2010; Akyeampong, 2011) and (Sluis et al., 2007; Bouma, 2007; Larsen, 2006; Leache, 2005 Bowes-Lyon, 1998; Bruku, 2016) did not look at perceptions and attitudes of locals towards KNP and this poses a serious challenge to economic and social-cultural activities in the fringe communities. The focus has been on perceived risk in the area (Bruku, 2016). It can be justified from the above that much has not been done on perceptions and attitudes of fringe communities toward the KNP. But as pointed out earlier on, the KNP faces a wide array of challenges that need a more comprehensive examination. This study therefore sought to understand the perceptions and attitudes of fringe communities towards KNP, specifically focusing on factors that influence local people's perceptions and attitudes. It also looked at the impacts of these perceptions and attitudes towards KNP and its sustainable development.

## II. MATERIALS AND METHODS

### *Sampling technique for Questionnaire Survey*

The multi-staged sampling technique was used in selecting respondents considering the heterogeneous nature of the people with respect to culture and ethnic backgrounds. Multi-stage sampling technique helped the researcher to break down the target population into groups and sub-groups that aids in getting fair perspectives from each group (Verial, 2014). Also, it is distinguished as most appropriate technique for selecting sample sizes from heterogeneous populations with respect to culture, location and ethnic backgrounds (Verial, 2014). The first stage involved the division of each community into four main clusters based on the major roads in each community. Equal proportion of the questionnaires was administered in each cluster. However, in each cluster the systematic sampling method was used where the first household was selected and then afterwards every second house targeted for the questionnaire administration. In each household, household heads were targeted but in cases where the household heads were not available their qualified representatives in terms of age (20 years and above) and duration (10 years and above) of stay in the community were considered for selection. Also, purposive sampling was used to select committee members in each community.

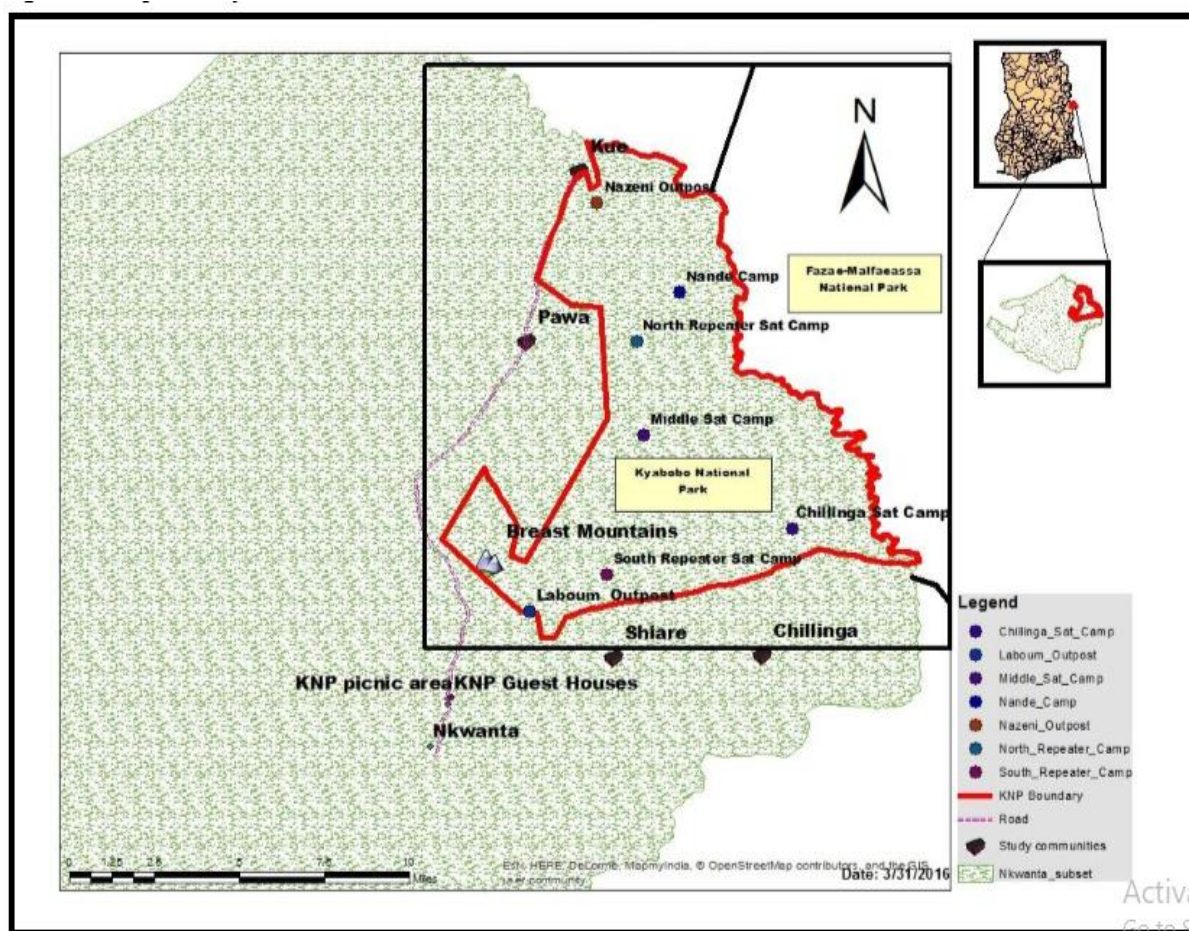


Figure 1. Study Area Map Source: Bruku, 2021.

#### Data source

This study collected data from two main sources. These were the primary and secondary data sources. The questionnaire was used to solicit data from households in the fringe communities. The questionnaires were organised around four main areas by taking the objectives of the study into consideration. The thematic areas were the demographic and socio-economic profile of respondents, local people's perceptions towards KNP, factors affecting local's perceptions and attitudes and the impacts of their perceptions and attitudes on KNP. In-depth interviews, participant observation and Focus Group Discussions (FGDs) probed further into the perceptions of residents of fringe communities towards KNP, factors affecting the local people's perceptions and attitudes towards Kyabobo National Park and the impacts of locals' perceptions and attitudes on the Park. Secondary data on the other hand was obtained from websites, reports, books, journals and articles, newspapers, brochures, magazines and any other relevant sources. A district shape file of Nkwanta South was obtained from the GIS unit at the Department of Geography and Resource Development, Legon.

#### Data analysis

The quantitative data was coded and entered into the Statistical Package for Social Sciences (SPSS) version 21 software. Tables and graphs were generated to aid in data analysis. This helped to identify quantitatively the perceptions of respondents concerning KNP as the study hoped to find out in objective 1. Also, statistical analysis such as Chi-Square was ran to identify the factors that have relationship with respondents' perception towards the Park as the study sought to find out in the second objective. Geographic Information System (GIS) software, ArcMap 10.4.1 was used to create a map to show the relationship between proximity to the KNP and level of benefits (economic, social and cultural) respondents derive from KNP. A buffer analysis was performed using ArcMap 10.4.1 to assess the proximity between fringe communities and Kyabobo National Park (KNP). The rationale behind this spatial analysis was to examine how distance between respondents' place of residence affects their perception and attitude toward the KNP.

The qualitative data from the interviews and FGDs were recorded and transcribed into word documents and then later uploaded into the Envivo software to generate themes. The themes together with thorough readings of the transcripts supplement the quantitative data in terms of identifying the

reasons why people make certain choices and perception with regards to the park. The third objective was largely explored with the help of information from interviews with stakeholders in the management of the park. The hypothesis was tested using the Chi-Square in the SPSS.

### III. RESULTS AND DISCUSSIONS

#### *Perceptions and attitudes of respondents toward KNP*

To enable the researcher, identify the perceptions and attitudes of fringe communities towards national parks, series of questions were posed to respondents in the questionnaire that was administered and interviews and focus group discussions conducted with selected respondents. Respondents were first asked whether they receive any direct or indirect benefits from KNP in terms of economic, social and cultural benefits. In terms of economic benefits (see Figure 1), Nyambong respondents recorded 5.7% while Kue respondents

recorded 10%. Respondents in Keri recorded 2%. Odomi respondents recorded the highest (30%) result for obtaining economic benefit from Kyabobo National Park.

No respondent in Shiare indicated that they receive any kind of economic benefits from the national park. This result is a potential recipe to create negative attitude and perception for residents in Shiare towards the national park. Among those who said they gain economic benefits from the park during the focus group discussions mentioned benefits such as them being employed as committee members to manage the park. Others also said they were trained in bee keeping thus they have been keeping bees for some time as a form of alternative employment. However, those who were employed to be part of the committee complained they were later laid off. The remaining respondents in the study communities claimed they receive no economic benefits from the natural park

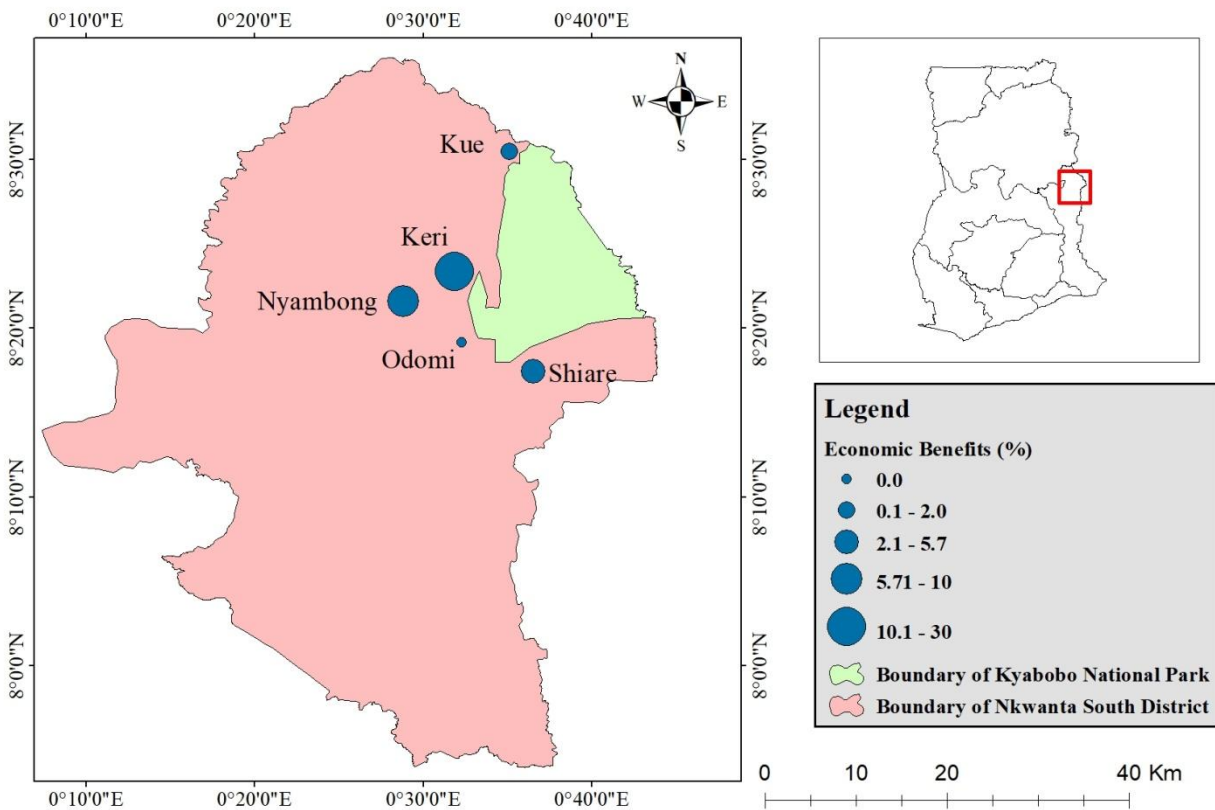


Figure 1. Level of economic benefits derived from the study communities

Source: RS/GIS LAB, 2021

With respect to social benefits a majority (5%) of the respondents in Odomi community said that they receive social benefits from the KNP whilst only 2% of respondents in Keri said they receive social benefits from the park. Figure 2 shows the level of social benefits received from each community. Respondents in Nyambong recorded 2.9% for social benefit they receive as the result of establishment of the park.

Interestingly, respondents in Shiare and Kue indicated that they receive no social benefit from the park. Result from qualitative data supported that among the social benefits they receive include boreholes drilled for them by the park management. Others also said that the mere presence of the KNP has opened the community up to the world since tourists visit the community frequently.

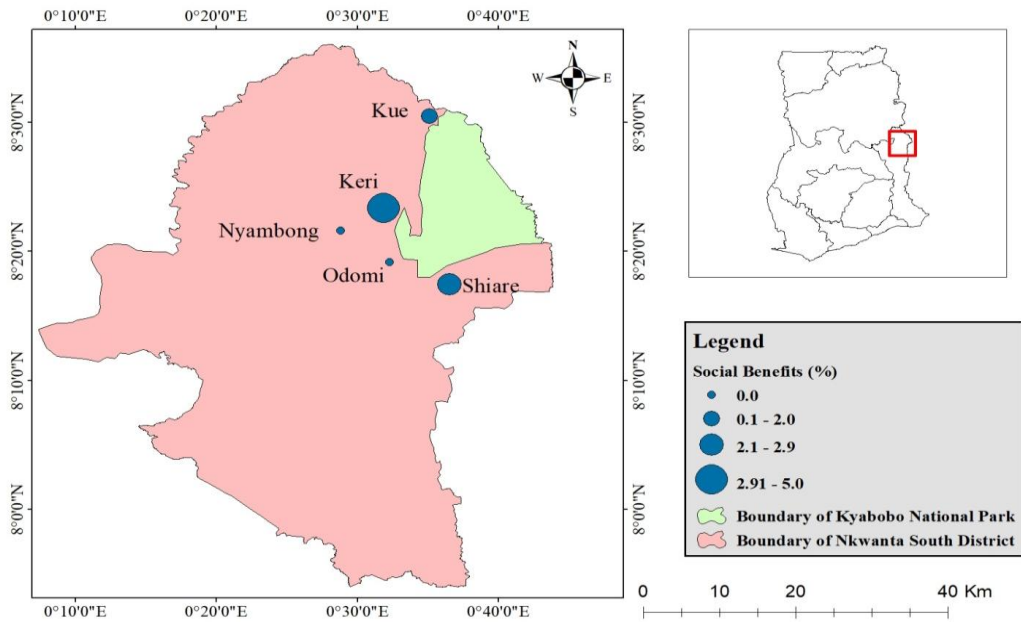


Figure 2. Level of social benefits derived from the study communities

Source: RS/GIS LAB, 2022

The researcher probed further to know whether residents derive cultural benefits from the park. Majority (5%) of respondents who claimed they receive cultural benefit from the park were in Odomi (see Figure 3). Respondents in Keri recorded 4% for cultural benefit while respondents in Nyambong recorded 2.9%. The remaining communities (Shiare and Kue) indicated that they receive no cultural benefits from the national park. However, those who agreed to receiving benefits mentioned the presence of some animals of cultural value in the park and the support of festivities by the park management as some of the cultural benefits they benefit from being close to the KNP.

Generally, it could be deduced from this section that, residents living around KNP do not really enjoy any significant benefit from the park since its establishment in 1993 either direct or indirect. A careful observation in the communities shows that the expectation of residents living near KNP to have an improved standard of living is yet to be met. It could be deduced that, the farther a community is from the national park, the less benefit (economic, social and cultural) a community derives from the park. Thus, there is an association between proximity to the national park and level of benefit available for a community.

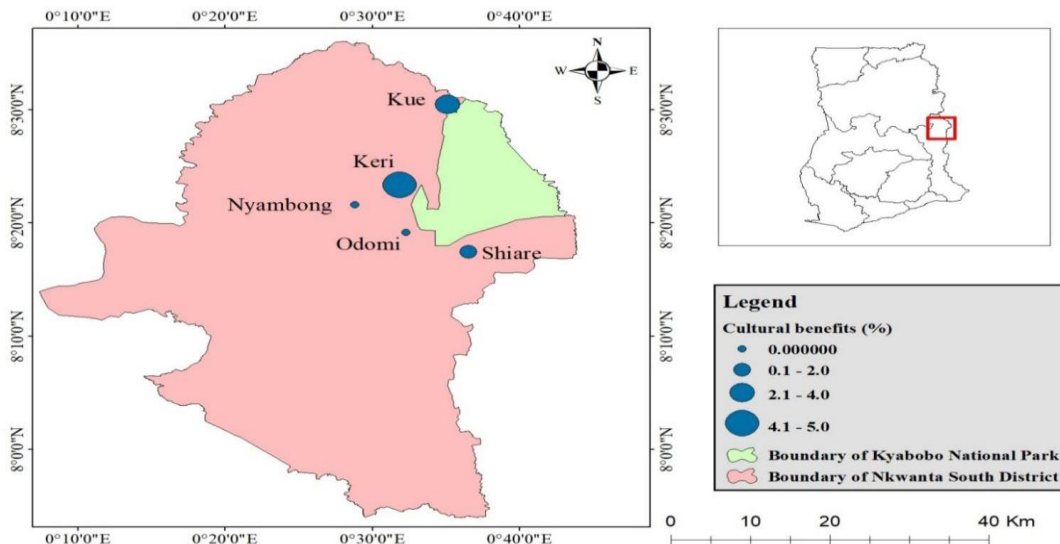


Figure 3. Level of cultural benefits derived in the study communities

Source: RS/GIS LAB, 2022

Further towards understanding the perception of respondents on whether the presence of the KNP contributes negatively or positively to life in fringe communities with respect to the social, economic and cultural aspects of the people, respondents were asked to state their level of agreement with some statements. This is displayed in Table 1. It can be observed from the table that 71.3% of the respondents agreed that the social benefits they derive from KNP is negative followed by 24% who were neutral. This runs through the economic and cultural benefits with respondents giving similar responses. For instance, 69.3% said the economic benefits derived from the KNP are negative. This means that if the forest was not a national park, there would have been a lot of economic benefits derived from the park by the people. Among some of the economic benefits the people talked of include burning of charcoal, hunting, fetching firewood and other leaves of medicinal and commercial importance. Similarly, 70.5% of the respondents agreed that there have been negative returns in terms of the cultural aspects of life in the community. The study therefore sought to find out why respondents had this view. It was therefore revealed through interviews and focus group discussion that certain cultural practices of the people prior to the use of the park as a conservation area for tourism purposes no longer exist.

According to the management of the park, the perception and attitudes of the locals vary from community to community. The locals from Shiare indicated more negative perceptions and attitude towards the park than the other fringe communities. These bad perceptions and attitudes include poaching, hunting for the forest resources, tying red-band on route signifying warning to forest guards and park managers who try to stop residents, conflict and killing of the guards. This is attributed to the fact that, the Shiare are the custodians of the lands in all the Akyode communities and it is their duty to fight for traditional lands seized from them. Additionally, they own much of the land lost to establishment of the park. Moreover, ninety-nine percent (99%) of the people in Shiare are Akyodes unlike in other communities like Kue and others who are made up of a mixture of different tribes who do not own much of the land lost to the establishment of the park. Due to that, the perceptions and attitudes toward the park's establishment by locals from these communities were somehow better.

A middle age man, who was one of the participants in the FGD in Shiare, expressed his sentiment that: “. We were thinking we were going to get employment from the park. To our dismay however, our land was rather seized without any compensation. Our livelihood has been taken away from us. This made some people to illegally hunt in the park for livelihood. For fear of being arrested, those hunters who had problems with the guards have migrated to Togo to hide there. The communities are doing their best to support conservation but the management of the park are not up and doing in terms of helping the locals.” (Response from a 45-year-old community activist in Shiare on the 27/09/2017).

Although the respondents seem to express their resentment on how the KNP is affecting their lives negatively they seemed to back any plan that supports the conservation of the park and were repulsive towards life threatening activities done within it. For instance, 81.1% of the respondents agreed that setting aside the KNP for conservation purposes is positive whilst 9.3% said it is negative. Similarly, a large majority of 85.3%, 84.0% and 76.7% respectively positively agreed to statements such as the need for setting aside a place for plants and animals to live without interference; conserving forests so that future generations may know and make use of; and reserving the forest for tourism purposes. This goes to suggest that majority of respondents have a positive perception towards the use of the park for conservation and tourism purposes.

This point is underscored by majority of the respondents who agreed that it is negative to use the KNP for livelihood activities in Table 1.

Table 1. Perceptions of respondents toward KNP

|                                                                                 | Very negative | negative | Neutral | Positive | Very positive |
|---------------------------------------------------------------------------------|---------------|----------|---------|----------|---------------|
| The social benefits derived from the KNP is...                                  | 1.3           | 71.3     | 24      | 1.3      | 2.0           |
| The economic benefits derived from the KNP is...                                | 1.3           | 69.3     | 22.7    | 6.7      | 1.3           |
| The cultural benefits derived from the KNP is...                                | 1.3           | 70.5     | 24.8    | 2.0      | 1.3           |
| Setting aside the KNP for conservation is...                                    | 0.7           | 9.3      | 1.3     | 81.1     | 7.3           |
| Setting aside a place for plants and animals to live without interference is... | 0.7           | 8.0      | 0       | 85.3     | 6.0           |
| Conserving forests so that future generations may know and use is...            | 0             | 0.7      | 1.3     | 84.0     | 8.0           |
| Allocating KNP land for farming and other personal use is...                    | 3.3           | 72       | 1.3     | 22.7     | 0.7           |
| Hunting in the KNP is...                                                        | 7.3           | 81.3     | 0.7     | 10.7     | 0             |
| Allowing for the cutting of timber in the KNP is...                             | 5.3           | 88.0     | 1.3     | 5.3      | 0             |
| Burning the KNP is...                                                           | 7.3           | 91.3     | 0.7     | 0.7      | 0             |
| Reserving the forest for tourism purposes is...                                 | 0             | 2.7      | 0       | 76.7     | 20.7          |

Source: Author's Construct, 2022

This is evident in the responses given by respondents when asked about their perception on the use of the park for livelihood purposes. The analysis revealed 72% of the respondents agreeing that allocating KNP land for farming and other personal use is negative. Also, 81.3% of the respondents agreed that hunting in the KNP is negative. Similarly, 88% and 91.3% agreed that allowing for the cutting of timber in the KNP and burning the KNP is negative respectively.

*Factors affecting perception and attitude of fringe communities towards parks*

Results from the interviews and FGD’s revealed that respondents in communities such as Shiare, Kue and Odomi were not in good terms with operators of the national park. The main reason behind this state of affairs was that, government officials failed to compensate them when a large section of their land was converted into the national park. However, residents in the other fringe communities like Keri and Nyambong expressed good remarks about the national park. Based on the foregoing, the researcher performed a spatial analysis on the communities to find their proximity to the national park and how that may affect their perception and attitudes. This was mainly done on the assumption that those closer to the park may be comparatively more affected than those that are a far away. A buffer (see Figure 4.) was created around the communities to assess the areas that were closer to the park. Results from the buffer indicated that, the shortest distance between Shiare and the park was 3km, Odomi was 2km, Keri was 3km, Kue was 1km and Nyambong was 7km. Out of the five (5) fringe communities, Kue and Odomi were the closest because they covered 1 km and 2km distance between them and the national park respectively. Shiare and Keri both recorded 3km distance between them and the national park. Nyambong was the farthest of the communities from the national park as it is located 7km away from it.

The buffer results validate the comments from the respondents because the communities which were closest to the park had their lands taken away from them. Thus, the closer a community is to the national park, the likelihood that

a portion of their land has been converted into the forest reserve, and since they were not compensated, such residents will develop an indifferent attitude and perception towards the park. On the other hand, distant communities who were less affected in terms of land reclamation will develop a positive perception and attitude towards the Kyabobo National Park.

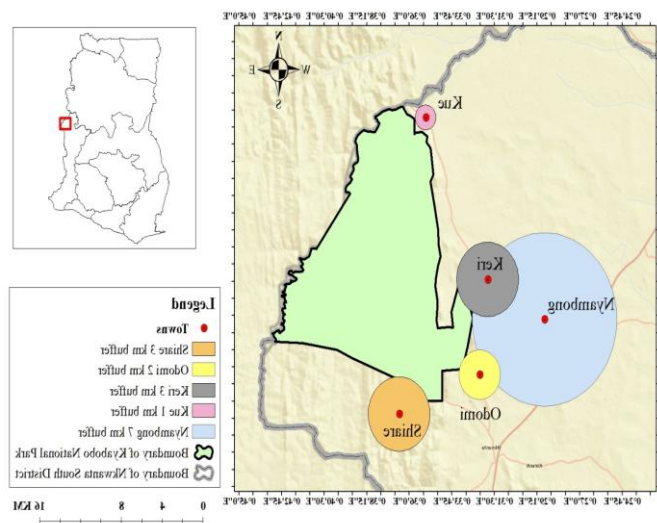


Figure 4. A map showing proximity of communities to the KNP

Source: RS/GIS LAB, 2022

In order to prove this assertion statistically the communities were categorized into short distance (0-0.25km), medium distance (2.5-5km) and far distance (5-7.5km). A crosstab was then run between distance away from the park and the economic, social and cultural benefits derived from the KNP. The results showed that there is a significant relationship between distance and economic benefits derived from the park whilst no significant relationship was established between distance and social and cultural benefits (Table 2)

Table 2. Crosstabulation between distance and benefits derived from the KNP

| Age categories                           | Economic benefits |             | Social benefits |             | Cultural benefits |             |
|------------------------------------------|-------------------|-------------|-----------------|-------------|-------------------|-------------|
|                                          | Yes (%)           | No (%)      | Yes (%)         | No (%)      | Yes (%)           | No (%)      |
| <b>Short [0-2.5km](Odomi and Kue)</b>    | 8 (20%)           | 32 (80%)    | 1 (2.5)         | 39 (97.5%)  | 1 (2.5)           | 39 (97.5%)  |
| <b>Medium[2.5-5km] (Shiare and Keri)</b> | 1 (1.3%)          | 74 (98.7%)  | 1 (1.3)         | 74 (98.7%)  | 2 (2.7)           | 73 (97.3%)  |
| <b>Far [5.7-7.5km](Nyambong)</b>         | 2 (5.7%)          | 33 (94.3%)  | 1 (2.9)         | 34 (97.1%)  | 1 (2.9)           | 34 (97.1%)  |
| <b>Total</b>                             | 11 (7.3%)         | 139 (92.7%) | 3 (2.05)        | 147 (98.0%) | 4 (2.7)           | 146 (97.3%) |
| <b>Pearson chi-square test value</b>     | 0.001*            |             | 0.838           |             | 0.995             |             |

Source: Author’s Construct, 2022

The study further sought to find out why respondents hold those perceptions and attitudes towards the park. In this respect the study first of all run some cross-tabulations to find

out if there is any relationship between some demographic characteristic of respondents and their perception or attitudes towards the KNP. The data revealed that none of the

respondents within the ages of 20-29 said they gain any economic benefits from the KNP whilst 21 of them said no. With those in the 30-39 age category 7(15.2%) of them said yes whilst 39(84.8%) said no. Two (2) of the respondents in the 40-49 age category on the other hand claimed that they receive economic benefits whilst 16 of them said no. One person each in the 50-59 and 60 and above age categories said they receive economic benefits from the KNP whilst 28 and 35 respectively answered no to whether or not they receive economic benefits from the KNP. This is displayed in Table 3.

In trying to find out whether there is any relationship between the age categories and benefits derived from the KNP, a chi-square test of independence was run between age, level of education and occupational 95% level of significance. With respect to the relationship between age and the various benefits – economic, social and cultural – the Pearson chi-square test value obtained (0.92) is greater than the significant value of 0.05 which indicates that there is no significant correlation between age and economic benefits (Table 3). This goes to suggest that the null hypothesis which states that there is no significant relationship between age and whether respondents receive benefits from KNP is accepted.

Also, the study also tried to find out if age has any relationship with social benefits derived from the KNP. In this regard a cross tabulation was run between age and whether respondents received any social benefits. The data revealed

that none of the respondents in the 20-29; 50-59 and 60 and above age categories responded yes to gaining any social benefits from the KNP. However, majority of the respondents in the various age categories said that they do not receive any social benefits from the KNP. Following this trend, the study tried to find out if there is any relationship between a particular age category and the receipt of social benefits. A Pearson's chi-square test of independence was therefore run between age and whether respondents receive social benefits. The Pearson chi-square test value obtained (0.378) is higher than significant value (0.05) which means that there is no significant relationship between age and whether respondents receive social benefits or not from the KNP (Table 3.). This means that the null hypothesis which states that there is no significant relationship between age and whether respondents receive benefits is accepted.

The study further looked if there is any relationship between age and cultural benefits derived from the KNP. As shown in Table 3, the outcome of the Pearson's chi-square test showed that there is no relationship between age and whether respondents received cultural benefits. The chi-square test value obtained is 0.653 which is greater than the significant value of 0.05. Looking at the statistics it shows clearly that majority of the respondents responded no to receiving any cultural benefits from the KNP. Based on these findings it can be concluded that age has no relationship with whether people receive benefits from the KNP or not.

Table 3. Cross Tabulation between ages and whether KNP provides benefits

| Age categories                       | Economic benefits |             | Social benefits |            | Cultural benefits |             |
|--------------------------------------|-------------------|-------------|-----------------|------------|-------------------|-------------|
|                                      | Yes (%)           | No (%)      | Yes (%)         | No (%)     | Yes (%)           | No (%)      |
| <b>20-29</b>                         | 0 (0.0%)          | 21 (100%)   | 0 (0%)          | 21 (100%)  | 0 (0%)            | 21 (100%)   |
| <b>30-39</b>                         | 7 (15.2%)         | 39 (84.8%)  | 2 (4.3)         | 44 (95.7%) | 2 (4.3)           | 44 (95.7%)  |
| <b>40-49</b>                         | 2 (11.1%)         | 16 (88.9%)  | 1 (5.6)         | 17 (94.4%) | 1 (5.6)           | 17 (94.4%)  |
| <b>50-59</b>                         | 1 (3.4%)          | 28 (96.6%)  | 0 (0%)          | 29 (100%)  | 0 (0%)            | 29 (100%)   |
| <b>60 and above</b>                  | 1 (2.8%)          | 35 (97.2%)  | 0 (0%)          | 36 (100%)  | 1 (2.8)           | 35 (97.2%)  |
| <b>Total</b>                         | 11 (7.3%)         | 139 (92.7%) | 3 (2%)          | 147 (98%)  | 4 (2.7)           | 146 (97.3%) |
| <b>Pearson chi-square test value</b> | 0.92              |             | 0.378           |            | 0.653             |             |

Source: Author's Construct, 2022

Another demographic characteristic that was considered in this regard is the level of education of respondents. A cross-tabulation was run between level of education and whether respondents obtained benefits from KNP. The results revealed that there is a significant relationship between level of education and whether respondents get any benefits from KNP. As shown in Table 4, the Pearson chi-square test obtained between level of education and economic benefits is 0.045 which is lower than the significant value of 0.05. This means that there is a relationship between level of education and whether respondents receive any economic benefits from

the KNP. Similarly, the test results showed that there is a relationship between level of education and whether respondents received social benefits (Table 4). However, the test proved no relationship between level of education and cultural benefits derived from the KNP. From Table 4, the Pearson chi-square value between level of education and whether respondents obtain social benefits is 0.081 which is greater than the significant value of 0.05. It can be concluded therefore that there is no relationship between level of education and whether respondents obtain cultural benefits from KNP.



Table 4. Cross tabulation between level of education and benefits obtained from KNP.

| Level of education            | Economic benefits |             | Social benefits |            | Cultural benefits |             |
|-------------------------------|-------------------|-------------|-----------------|------------|-------------------|-------------|
|                               | Yes (%)           | No (%)      | Yes (%)         | No (%)     | Yes (%)           | No (%)      |
| No formal education           | 3 (4.9%)          | 58 (95.1%)  | 0 (0%)          | 61 (100%)  | 1 (1.6%)          | 60 (98.4%)  |
| Primary                       | 0 (0%)            | 18 (100%)   | 0 (0%)          | 18 (100%)  | 0 (0%)            | 18 (100%)   |
| JHS/Middle School             | 2 (4.9%)          | 39 (95.1%)  | 0 (0%)          | 41 (100%)  | 0 (0%)            | 41 (100%)   |
| SSS/SHS/Technical/vocational  | 2 (16.7%)         | 10 (83.3%)  | 1 (8.3%)        | 11 (91.7%) | 1 (8.3%)          | 11 (91.7%)  |
| Post-Secondary/Tertiary       | 4 (22.2%)         | 14 (77.8%)  | 2 (11.1)        | 16 (88.9%) | 2 (11.1)          | 16 (88.9%)  |
| Total                         | 11 (7.3%)         | 139 (92.7%) | 3 (2%)          | 147 (98%)  | 4 (2.7%)          | 146 (97.3%) |
| Pearson chi-square test value | 0.045*            |             | 0.014*          |            | 0.081             |             |

Source: Author's Construct, 2022

The last demographic characteristic that was considered is the occupation of the respondents. In trying to find out if there is any relationship between occupation and the benefits generated from the KNP, a Pearson chi-square test of independence was run between the type of occupation and whether respondents obtained benefits. When it comes to the relationship between the type of occupation and economic benefits the Pearson chi-square test obtained is 0.239 which is greater than the significant value of 0.05. This means that there is no relationship between occupation and whether respondents enjoy economic benefits or not. Taking the

relationship between occupation and whether respondents receive social benefits or not into consideration, the Pearson chi-square test value obtained is 0.044 which is less than the significant value of 0.05 meaning there is a relationship between them. Similarly, with respect to significant relationship between the type of occupation and cultural benefits obtained from the KNP, the Pearson chi-square test obtained is 0.251 which is greater than the significant value of 0.05. This means that there is no significant relationship between the type of occupations and cultural benefits from the KNP (Table 5)

Table 5. Cross tabulation between occupation and benefits obtained from KNP

| Occupation                        | Economic benefits |             | Social benefits |             | Cultural benefits |             |
|-----------------------------------|-------------------|-------------|-----------------|-------------|-------------------|-------------|
|                                   | Yes(%)            | No (%)      | Yes (%)         | No (%)      | Yes (%)           | No (%)      |
| Farmer                            | 6 (6.2%)          | 91(93.8)    | 0 (0%)          | 97 (100%)   | 1 (1%)            | 96 (99%)    |
| Professional/technical/managerial | 3(12.5%)          | 21 (87.5%)  | 2 (8.3%)        | 22(91.7%)   | 2 (8.3%)          | 22 (91.7%)  |
| Artisan                           | 0 (0%)            | 15 (100%)   | 0 (0%)          | 15 (100%)   | 0 (0%)            | 15 (100%)   |
| Pensioner                         | 0 (0%)            | 1 (100%)    | 0 (0%)          | 1 (100%)    | 0 (0%)            | 1 (100%)    |
| Unemployed                        | 1(33.3%)          | 2 (66.7%)   | 0 (0%)          | 3 (100%)    | 0 (0%)            | 3 (100%)    |
| Total                             | 10 (7.1%)         | 130 (92.9%) | 2 (1.4%)        | 138 (98.6%) | 3 (2.1%)          | 137 (97.9%) |
| Pearson chi-square test value     | 0.239             |             | 0.044           |             | 0.251             |             |

Source: Author's Construct, 2022

More elaboration from FGD shows that there is spatial variation among the fringe communities in terms of their perceptions and attitudes towards KNP. The observed variation is attributed to location and distance of the fringe communities from the park. According to information gathered, communities located closer to the park such as Kue, Shiare and Odomi had much of resources lost to the establishment of the park. Locals from these communities are much affected negatively by the establishment of the park, these compelled residents from these communities to have negative perceptions and attitudes towards the park. On the other hand, a community like Nyambong which is located far

from the park than the rest of the fringe communities is not much negatively affected by the establishment of the park. According to the unit community leader in this community, none of their resources especially land is taken away from them. The people did not express much negative perceptions and attitudes toward the park because of their distance away from the park. A member from the FGD at Nyambong said that: "Because we are located far away from the park than the other communities, none of our resources have been affected as a result of the establishment of the park and because of that we don't have much negative perceptions and attitudes toward

the park.” (Response from a male respondent on the 29/09/2017 at 5:13 pm)

In another instance, another old man from Kue also expresses his sentiment that: “Our farmlands have been confiscated and we don’t have land to farm on again. This led to land fragmentation. Our livelihoods have been taken from us making life unbearable for us. That made most of our people in our communities harbor negative perception about the park leading to negative attitudes.” (Response from an opinion leader in Kue on the 9/10/2017 at 1:53 pm). It can now be established that the location and distance of the fringe communities also

determine the perceptions and attitudes of the locals towards the park

*Impacts of local peoples’ perceptions and attitudes on park*

The previous section has largely shown that there is a negative perception that the presence of KNP affects livelihoods of the local people negatively. Notwithstanding this, majority of the respondents support the conservation of the KNP as a conservation site. This is quite surprising as one would have thought that once KNP affects their livelihood they would be against it being used as a conservation site. Given this revelation, the study was also interested in finding out the impact of these perceptions and attitudes on the park. In this regard respondents were first asked whether they thought they themselves or any of their relatives are engaged in any activity that is detrimental to the management of the KNP. The data revealed that all the respondents answered no suggesting that none of the respondents or any of their relatives is engaged in any activity that is detrimental to the park. This is shown in Figure 5. From Figure 5, it can be observed that 100% of the respondents said they or members of their household do not engage in any activity that is detrimental to effective management of the park.

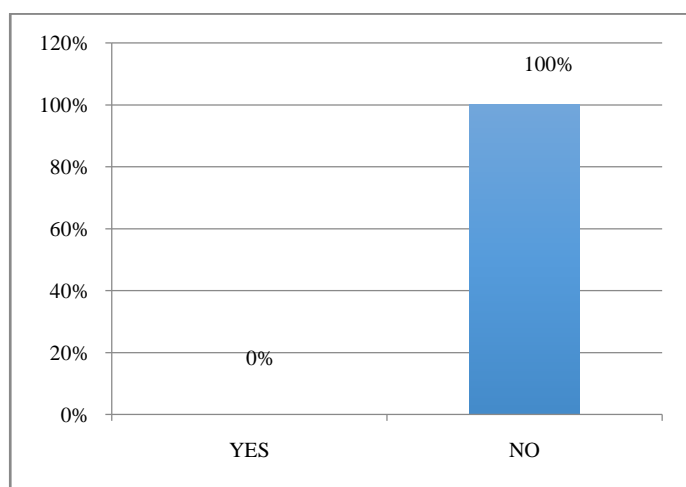


Figure 5. Activities engaged by respondents that are detrimental to KNP.

Source: Fieldwork, 2022

This is surprising given that during the FGDs and interviews with the park management it was revealed that some people enter the forest illegally to engage in practices such as poaching, cutting of trees among others that affect biodiversity conservation in the park. According the park manager, the locals were told that the main objective of establishing the park was to conserve biodiversity for future generation and also to develop the area as a tourism destination so that the locals could benefit from it. But the negatives attitudes of the locals such as poaching, cutting of trees, conflicts have really affected the usefulness of the park. Normal patrol by the guards was affected; some of the satellite camps that served as abodes for the guards were destroyed, not forgetting the resignation of some of the workers as a result of conflicts between the locals and the guards. As a result of these, the area has not been developed as a tourism destination. But he went further to admit that of late they have seen some improvements in the perception and attitude of the locals for the better.

Another question that was asked during the questionnaire survey was whether respondents thought some members still enter the park to engage in illegal activities. It was revealed however that this time around it was no longer 100% of the respondents who responded No but a majority of 62.3% agreed that members of the community outside their households enter the forest illegally to engage in unapproved activities. This is shown in Figure 6 below.

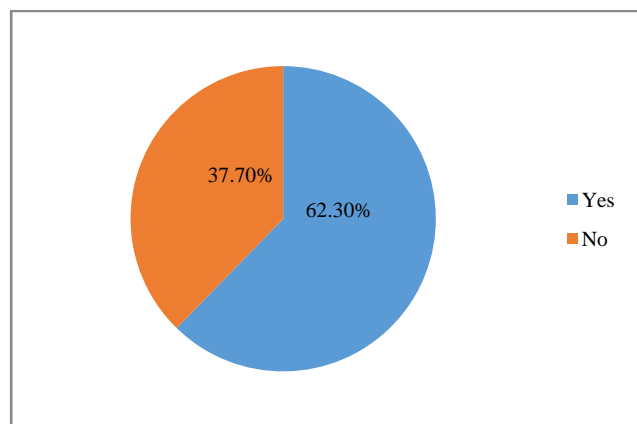


Figure 6. Activities engaged by respondents’ relatives that are detrimental to KNP

Source: Author’s Construct, 2022

According to the respondents, before the establishment of the KNP, individuals or residents were made aware that the government was going to give them alternative livelihoods since they could no longer engage in livelihood activities that are related to the park. They were promised jobs such as labors at the park, management committee members, and also the giving of loans to residents to establish small businesses. However, all these things have not happened after the establishment of the park and the people are left with no jobs. People therefore flout the laws on preventing them from visiting the park. For instance, in FGD held at Nyambong, a

middle-aged man had this to say. "...We did not know they were coming to protect the forest so that nobody goes there again. Our thinking was that they are coming to protect the land so that a lot of animals will come into the forest so that even when you are in your farm the animal will come to you. But when that did not happen the hunters had reacted negatively towards the KNP.

They have not stopped going there. And people are also cutting trees in the forest. If not for the intervention of the immigration service and the national security, by now you would not see a single tree when you get there ... people have the opinion that it is their land and if that has been taken then they should be compensated... since they did not get any compensation then they will also go there and take their property" (Response by a youth activist in Nyambong community on 29/09/2017 at 4:33 pm) The study further found out from the respondents that the level of impact of these activities on management of the park. Respondents were therefore asked to choose from a likert scale between very negative and very positive. It was revealed (see Figure 7) however that majority of the respondents (52.3%) agreed that the impact of the activities engaged in by community members on the park is negative whilst 26.7% agreed that the impact is very negative. Whilst 1% of the respondents said the activities have positive impacts on the management of the park, none of the respondents agreed that the impacts are very positive with 20% remaining indifferent. This means that the park is under threat from these illegal and negative attitudes from the respondents. The 1% who indicated that their activities have positive impact on the park said that they no longer go into the park to draw resources to support their livelihoods. This they say can ensure the conservation of certain plant and animal species.

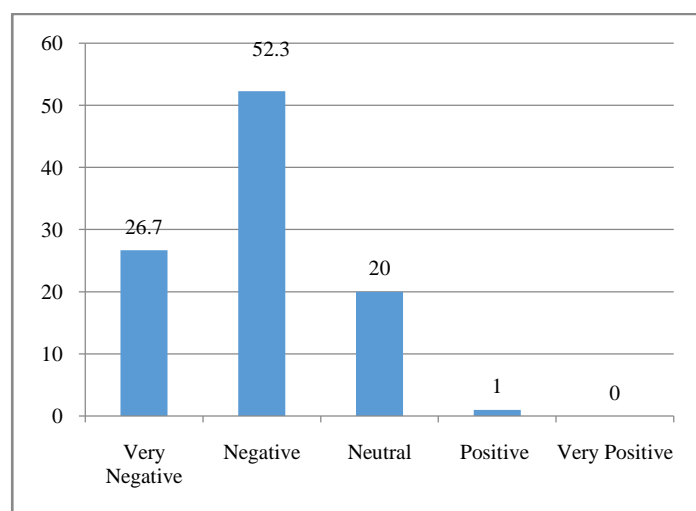


Figure 7. The level of impacts of respondents' activities on the park.

Source: Author's Construct, 2022

It can be said that people are afraid of prosecution or any punishment when they admit that they use the forest for their livelihood activities although it is not allowed. This may be

the reason why they said their households do not engage in any activity that could be detrimental to the effective management of the park.

#### IV. CONCLUSIONS

Based on the results of the study, the following conclusions can be made. First of all, it can be concluded that fringe communities perceive national parks to be of more harm than good and that the presence of parks in communities deprive the community of the social, economic and cultural benefits they use to get from the parks. Also, it can be concluded that communities welcome the idea of reserving the forest for future use and protection of some plant and animal species. Furthermore, the study concludes that peoples' perception and attitudes about conservation of the park have no relationship with their demographic characteristics such as age, level of education or occupation. People's perceptions are rather influenced by the losses suffered and unfulfilled promises associated with the creation of the park. Moreover, it can be concluded that the loss of livelihood of the local people is the main cause of the negative perception and attitudes among the locals towards the park.

Also, the study concludes that the attitudes and perception of community members has negative consequences on the smooth management of national parks. Community members tend to flout rules protecting conservation sites and conflicts sometimes erupt between community members and park managers. Lastly, there is much to be done on educating the locals on the future benefits of the park to gain their support for effective conservation.

#### V. RECOMMENDATIONS

The study has helped to reveal that the conversion of forests into reserves or national parks pose negative challenges to members in fringe communities and community members tend to react by infringing on the provisions made to protect these forests. It is therefore recommended that when the government and management of the park promise to provide alternate livelihood sources for residents they should fulfill those promises and also help to sustain projects. This will help curb the negative perceptions and attitudes held by members of fringe communities that affect the efficient and effective management of parks.

Also, this study has revealed that demographic characteristics such as age, occupation and level of education to some extent have little bearing on people's perception and attitudes when it comes to conservation sites. It is therefore recommended that efforts by governments and other agencies to curb negative perceptions should not be planned towards demographic variables. This can lead to waste of resources and misdirection. Instead, more studies are recommended to help isolate other variables that may assist to develop measures towards positively influencing people's attitudes and perception to future park development initiatives either in the locality or elsewhere.

The study also found that peoples' livelihoods which are actually depended on the forest are lost as a result of the conversion of the forest into a conservation site. This is actually the cause of the negative perceptions and attitudes among the locals towards the park. It is therefore recommended that portions of forest reserves are given to community members so that they can continue to enjoy their livelihoods. Also, sustainable alternative livelihood activities should be provided. These will help in fulfilling some of the outstanding promises that remain unfulfilled. People go back to break the laws that protected these areas because of the violation of these promises by the state.

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