

ILLEGAL RESOURCES EXTRACTION AND PREPONDERANCE DISTANCE OF VILLAGES: A CASE STUDY OF FOUR NIGERIAN NATIONAL PARKS

Israel Oluyinka Oloyede OSUNSINA *

Department of Forestry and Wildlife Management, College of Environmental Resources Management,
Federal University of Agriculture, P.M.B. 2240, Abeokuta, Nigeria

Abstract

This study was conducted in four Nigerian National Parks namely: Cross River (CRNP), Gashaka Gumti (GGNP), Kainji Lake (KLNP) and Old Oyo (OONP) National Parks to assess the distance of Support Zone Villages and their farmland to the Parks boundaries and evaluate the problems of illegal resources extraction. Primary data were collected from 109 local communities in support zone of four Nigerian National Park. The study areas' selection was through multi-stage random sampling. Data obtained were analyzed using frequency, percentage, mean and Spearman's rho correlation. The study showed that 34.86% of the respondents have their Villages and farmlands far from the Parkland, 30.02% shares boundary with the park and 22.94% of the villages were located inside the Parkland, while 12.18% indicated that their villages and farmlands were not far from the Park. The result of the Spearman's rho correlation indicated that there was significant relationship between illegal activities and distance of the village from the Park boundary ($r = 0.047, p < 0.01$). The study showed that the villagers around the parks do not observe the buffer zone limit and there is illegal resources extraction. There is need to properly delineate the Parks boundary and ensure that buffer zones are rightly observed.

Keywords: Preponderance distances; Illegal activities; National Park; Resources Extraction

Introduction

Many of the world's protected areas are important not only for their biodiversity, but also for their natural resources that many local people rely on for their livelihoods [1]. People also argue that the conservation of biodiversity in PAs will be more challenging if local communities are heavily dependent on these areas for energy, nutrition, medicine, and other subsistence needs [2]. Rural people in developing countries depend heavily on natural resources and derive a significant portion of their income and livelihoods from them [3].

National parks can provide various goods and services to local communities around it, and therefore contribute to improvement of livelihood, this is true for all protected areas [4]. It is estimated that 90% of the world's poor depend on forests for at least a portion of their income [5-7]. In Africa, 600 million people have been estimated to rely on forests and woodlands for their livelihoods [8], and in India, 50 million people are estimated to directly depend on forests for subsistence alone. The importance of forest resources to local communities has been

* Corresponding author: osunsinaisrael@yahoo.com; osunsinaioo@funaab.edu.ng

reviewed [9]. Resource extraction from protected areas, including timber and non-timber forest products (NTFPs), has been cited by local communities as one of the greatest available benefits [10-14].

The users of forest products include forest dwellers, nearby farmers, commercial users (including small traders, producers and employees) and the urban poor. Timber, non-timber forest products (NTFPs) and animal protein are all used by the rural poor for subsistence, and also as a source of income and employment [15]. NTFPs are a key resource for many poor communities [16]. Almost by definition protected areas will result in resource restriction to local communities, with the level of restriction varying with the individual characteristics and management of each area.

Numerous recent case studies have found that protected area designation results in restricted access to forest resources, including firewood, bushmeat, building materials, forest leaves fruits and vegetables. Examples include Barombi Mbo Forest Reserve, Cameroon [17], Buxa Tiger reserve, India [18], Sarstoon-Temash National Park, Belize [19], Ranomafana National Park, Madagascar [20], Kainji Lake National Park, Nigeria [21], Old Oyo and Cross River National Parks, Nigeria [22] and Annapurna Conservation Area, Nepal [13]. Firewood restrictions have been reported as being particularly problematic [13, 23, 24] as wood provides up to 70% of the energy consumed in Africa [25]. This has led to tension between the community and the Service and disregard of the National Park's regulations.

Where disempowered communities remain within or around the protected area and forest laws are weakly enforced, compliance with restrictions on resource use is less likely [6, 26-28]. Accelerated extraction of resources have even been reported, where communities fear impending loss of forest use [29], have lost local laws governing forest use due to changes in land tenure or are protesting against the protected area by undermining its conservation goals [30]. Human-wildlife conflict is increasingly emerging as an issue where there are increasing human populations, decreasing habitat for wild fauna and/or successful conservation practices leading to increased wildlife numbers [31].

Increased conflicts may also result from increasing human populations along protected area boundaries, as a result of migration in search of new resources and opportunities [32]. This study seeks to find the implications of park proximity on local livelihoods in terms of natural resource dependency, livelihood and illegal activities in the four national parks

Methodology

The study area

The Nigeria National Parks are ecologically and culturally important areas where human habitation is largely disallowed and tourism is encouraged. Presently in Nigeria, there are currently seven (7) National Parks in different bio-geographic zones of the country. These are Chad Basin, Cross River, Gashaka Gumti, Kainji Lake, Kamuku, Old Oyo and Okomu National Parks. Together the national parks cover about 22,592km², which is about 2.5% of the country's land area of 923,768.64km² [33]. The study was conducted in Cross River (CRNP), Gashaka-Gumti (GGNP), Kainji Lake (KLNP) and Old Oyo National Parks (OONP) [22].

Sampling Technique

Primary data were collected from 109 local communities in support zone of four Nigeria National Park. The study areas' selection was through multi-stage random sampling. The Parks are divided into Sector based on the Protection and administrative units of the Park. Sectors are further divided into ranges which are small units for Protection and conservation activities. Within the villages are the support zone villages of the Parks that were selected for the study [34]. Four parks were selected and sectors and ranges in the parks were sampled. Data were obtained through structured questionnaires administered to the Support Zone villages. Twenty

percent of the communities in all the ranges of the Parks amounting to 109 villages were randomly selected from the list of communities lying between 0 – 10km from the Park boundaries. Questionnaires were administered to elicit information from the villages around the parks viz: Cross river: 20 villages (985 respondents); Gashaka: 22 villages (1079 respondents); Kainji: 26 villages (1134 respondents) and Oyo: 32 villages (1013 respondents). The data gathered were presented and analyzed using descriptive statistics such as tables, percentages and inferential statistics such as Spear rho.

Results

Demographic characteristics of the respondents

In-depth analyses of the respondent’s socio-cultural and economic activities revealed that there were more male respondents interviewed than the females in the park. In CRNP 75.43% of the respondents were male, 71.08 in GGNP, 65.96% in KLNP and 76.01% in OONP (Table 1). Most of the respondents were in the age group 15 – 25 in all the parks and it is slightly higher in KLNP (35.45%) and GGNP (34.20%) while it is lower in OONP (30.0%) and CRNP (28.48%) (Table 1).The age distribution revealed a pattern of decrease in the number of population as the age increases in CRNP and OONP, while there is a slight variation in GGNP and KLNP.

Table 1. Demographic characteristics of respondents around the parks

Park		CRNP	GGNP	KLNP	OONP
n		985 (%)	1079 (%)	1134 (%)	1013 (%)
Sex	Male	743 (75.43)	767(71.08)	748(65.96)	770(76.01)
	Female	242 (24.57)	312(28.92)	386(34.04)	243(23.99)
Age	15-25	282(28.48)	369(34.20)	402(35.45)	303(30.0)
	26-35	178(17.98)	170(15.76)	245(21.61)	146(14.46)
	36-45	169(17.07)	174(16.13)	150(13.23)	158(15.64)
	46-55	129(13.03)	167(15.48)	175(14.43)	152(15.05)
	56-65	109(11.01)	111(10.29)	97(8.55)	90(8.91)
	66 Above	118(11.92)	88(8.16)	65(5.7)	164 (16.2)
Religion	Christianity	984(99.98)	126(11.68)	19(1.68)	548 (54.10)
	Muslim	0 (0)	889 (82.39)	1115 (98.33)	450 (44.42)
	Traditional	1(0.10)	6 (5.93)	0 (0)	15 (1.48)
Marital status	Single	170(17.26)	338(31.33)	295(26.02)	312 (30.80)
	Married	779(79.09)	725(67.19)	837 (73.82)	682 (67.33)
	Divorce	2(0.20)	6 (0.56)	0 (0)	6 (0.59)
	Widow	34 (3.45)	10 (0.93)	2 (0.18)	13 (1.28)
Numbers of wives	(1)	474 (70.32)	338 (56.71)	362 (54.35)	420 (71.80)
	(2-5)	179 (29.68)	258 (43.29)	304 (45.65)	165 (28.20)
Education	Non formal	397 (40.30)	523 (48.48)	599 (52.83)	549(54.19)
	Islamic	2 (0.20)	115 (10.66)	174 (15.35)	59 (5.82)
	Primary	263 (26.70)	255 (23.64)	152 (13.41)	185 (18.26)
	Secondary	252 (25.58)	168 (15.57)	169 (14.91)	183 (18.06)
	Tertiary	62 (6.29)	18 (1.67)	34 (3.00)	37 (3.65)
	Others	9 (0.91)	0 (0)	6 (0.53)	0 (0)
Occupation	Farmer	935(94.92)	991(91.84)	927(81.74)	721 (71.18)
	Trader	1 (0.10)	5 (0.46)	131(11.55)	37 (3.65)
	Fishermen	3 (0.31)	16 (1.48)	31(2.73)	28 (2.76)
	Civil servant	41 (4.16)	23(2.13)	30(2.65)	23 (2.27)
	Hunter	1 (0.10)	24 (2.22)	15(1.32)	63 (6.22)
	Others	5 (0.51)	20 (1.85)	130 (12.83)	11 (1.09)

Almost all the respondents in CRNP were Christians (99.98%) and traditional worshippers (0.10%). In GGNP and KLNP majority of the respondents were Muslims (82.38% and 98.33% respectively) but with fewer number of Christians (11.68% and 1.68% respectively). In OONP 54.10% were Christians, Muslims (44.42%) and traditional worshippers (1.48%) (Table 1). The respondents were mostly married in CRNP (79.09%), GGNP (67.19%), KLNP (73.82%) and OONP (67.33%). High incidence of polygamy was recorded in GGNP (43.29%) and KLNP (45.65%) and CRNP (29.68%) and OONP (28.20%) recorded low incidence of polygamy (Table 1)

Some of the households had between 1 – 4 children in all the parks; CRNP (30.60), GGNP (50.74%), KLNP (41.02) and OONP (51.61%). However, CRNP recorded higher incidences of 5 – 8 children per household (43.75%) (Table 1). In all the parks, there were fewer household with higher number of children per household. CRNP and KLNP also recorded incidences of 21 children per household (Table 1). Primary occupation of the villagers living around the national parks is farming. Almost all the respondents were farmers in CRNP (94.92%) and GGNP (91.84%), while 81.74% and 71.18% were farmers in KLNP and OONP. There were traders (11.55%) and fishermen (2.73%) in KLNP than in other parks. There were higher percentages of respondents who are Civil Servant in CRNP (4.16%) and KLNP (2.65%) than in other parks. Also there were higher numbers of respondents in GGNP and OONP (2.22% and 6.22%) respectively who declared that they were involved in hunting. Some of the parks also recorded some occupations which were peculiar to them for example Grazers (1.85%) in GGNP and Loggers (0.41%) in CRNP (Table 1).

In terms of educational qualification all the parks have higher percentages of respondents without formal education. CRNP recorded 40.3% of respondent without formal education, 26.7% had primary education, 25.6% had secondary education 6.3% had tertiary education, while respondents with Islamic education accounted for the lowest percent of the total respondents (Table 1). In GGNP 48.5% of respondents had no formal education, 23.6% had primary education, 15.6% secondary education, 10.7% Islamic education while respondents with tertiary education accounted for 1.7%. In KLNP, 52.8% of respondents had no formal education, 15.3% had Islamic education, 13.4% had primary education, 14.9% had secondary education and 3.0% had tertiary education. While in OONP 54.2% had no formal education, 18.3% had primary education, 18.1% had secondary education 5.8% had Islamic education while 3.7% had tertiary education.

Farm location in relation to park boundary

Result of farm locations in relation to park boundary were presented in Figure 1. Four hundred and eighty four 484 respondents indicated that their farms were located in the park, this include residents from Okwa 1, Okwa 2, Mpot and Okwango in which all of the enclaves are within the parks. Two hundred and eighty three 283 respondents indicated that their farms were very far from the park. One hundred and fifteen 115 respondents indicated that their farms shares boundary with the park, while 103 indicated that their farms were not too far from the park. It was also observed that in GGNP, 402 respondents' farms were located in the park. This was followed by respondents whose farms were far from the park 318. Those whose farms shared boundary with the park were 299.

The result was quite different in KLNP, where the highest responses were those whose farms were far from the park (498). This was followed by those whose farms were located not far from the park 285. Those whose farmland shared boundary with the Parks were 271. It was also observed that in KLNP some of the respondents' farmland was located inside the Park (80).

OONP is the only park where none of the respondents' farms were located inside the park. However, the park recorded the highest number of respondents whose farms shared boundary with the park 579 (Figure 1). Also 369 respondents indicated that their farms were

located far from the park, while 65 respondents indicated that their farms were not too far from the park.

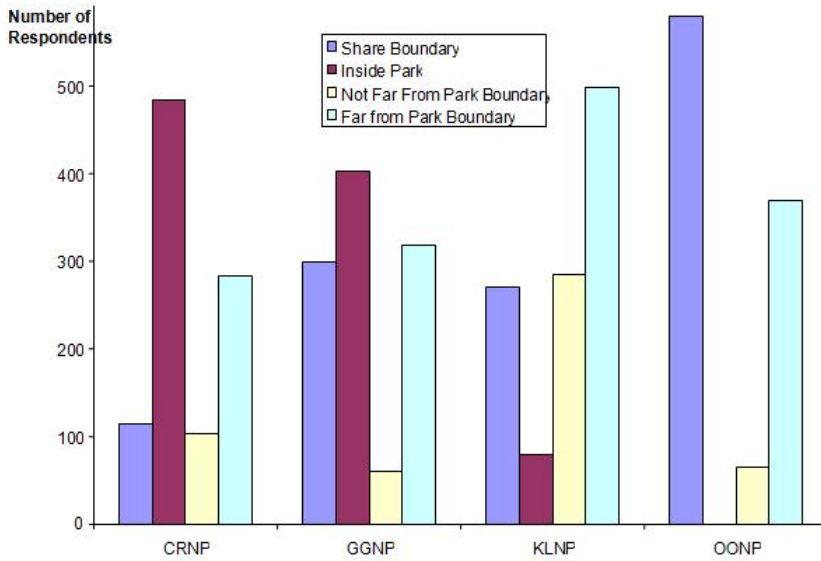


Fig. 1. Farm location in relation to park boundary

Spearman rho results indicated that there was significant relationship ($p < 0.01$) between the farm location and the illegal activities. This implies that the closer the farms the more the illegal activities done in the Park. The result of the Spearman’s rho correlation indicated that there was significant relationship between illegal activities and distance of the village from the Park boundary ($r = 0.047, p < 0.01$).

Preponderance of Villages and Farms to the Park Boundary

Buffer zone limits were generally not well delineated and not administered as a significant management zone in all the parks. In Cross River National Park (CRNP), nine (9) of the villages (Okwa 1, Okwa 2, Okwango, Mpot, Mpot, Nyaje, Ikpai, Owon and Iku) were located inside the park as enclaves with all their paraphernalia of socio-economic within the park, while other villages shares boundaries with the park. Distances from the villages to park boundaries range from 1km to 8km (Table 2). Some of the villages were not close to the park but their farms are daily encroaching into the park. Mean population size of villages within and around the park is 2009.09 ± 252.94 (ranges from 500 to 5,000), while the mean distance of villages to the park and distance of farms to the park were 2.57 ± 0.58 and 0.82 ± 0.20 respectively (Table 2).

In Gashaka-Gumti National Park (GGNP), there were eight (8) villages (Filinga, Chappal Nyumti, Chappal Selgu, Chappal Hendu, Chappal Tale, Gashaka, Lagasso and Bodel) which were enclaves within the park. Other villages were found at the periphery of the park and shared boundaries with the Park. Linear distances of other villages to the park range from 1km to 6km. Most of the farming activities of these villages were at very close proximity to the park with distances as short as 10m (Table 5). Mean population size of villages within and around the park is 625.77 ± 187.07 (ranges from 100 to 5,000), while the mean distance of villages to the park and distance of farms to the park were 1.21 ± 0.44 and 0.54 ± 0.22 respectively (Table 3).

Table 2. Villages in CRNP and their proximal distance to Park boundary

S/No	Name of Village	Estimated Population	Distance of Village to Park	Distance of Farm to Park
1.	Orem	2,000	8km	2.5km
2.	Okwa 1	1,800	Inside Park	Inside Park
3.	Okwa 2	1,800	Inside Park	Inside Park
4.	Ifumkpa	3,500	300m (0.3km)	300m (0.3km)
5.	Butantong	5,000	5km	100m (0.1km)
6.	Okpazanga	1,500	2km	1km
7.	Owai 1	2,500	6km	1km
8.	Ojoor	4,000	9km	3km
9.	Abu Mpang	3,500	1km	20m (0.02km)
10.	Bashu	500	10m (0.01km)	Share Boundary
11.	Okwango	1,000	Inside Park	Inside Park
12.	Abo Obisu	1,500	2km	50m (0.05km)
13.	Anape	1,000	3km	1km
14.	Nsan	3,000	1km	1km
15.	Owai 2	2,500	6km	1km
16.	Aking	1,800	800m (0.8km)	2m (0.002km)
17.	Osomba	800	500m (0.5km)	1m (0.001km)
18.	Obung	1,000	4km	2km
19.	Obum	500	2km	1km
20.	Mkpot	2,000	Inside Park	Inside Park
21.	Kejiuku	1,000	4km	2km
22.	Mba	2,000	2km	2km
Mean		2009.09± 252.94	2.57 ± 0.58	0.82 ±0.20
Range		500 – 5,000	10m – 9km	1m – 3km

Table 3. Villages in GGNP and their proximal distance to Park boundary

S/No	Name of Village	Estimated Population	Distance of Village to Park	Distance of Farm to Park
1.	Addagoro	3,000	4km	Share Boundary
2.	Filinga	2,000	Inside Park	Inside Park
3.	Chappal Nyumti	1,500	Inside Park	Inside Park
4.	Chappal Selgu	2,000	Inside Park	Inside Park
5.	Chappal Hendu	1,500	Inside Park	Inside Park
6.	Chappal Tale	1,500	Inside Park	Inside Park
7.	Gashaka	5,000	Inside Park	Inside Park
8.	Mayo Selbe	3,500	6km	1km
9.	Goje	2,500	5km	2km
10.	Tipsan	300	50m (0.05km)	10m (0.01km)
11.	Mayo Butali	100	Share boundary	100m (0.1km)
12.	Mayo Sangnare	300	Share boundary	1.5km
13.	Mayo Birin	200	2km	100m (0.1km)
14.	Lagasso	500	Inside Park	Inside Park
15.	Maiidanu	1,000	6km	4km
16.	Dalaso/Daga	500	500m (0.5km)	200m (0.2km)
17.	Nasamu	200	Share boundary	500m (0.5km)
18.	Mayo Gbagbag	350	Share boundary	Share boundary
19.	Bam	2,000	1km	500m (0.5km)
20.	Mayo Bakari	500	Share boundary	Share boundary
21.	Bodel	800	Inside Park	Inside Park
22.	Sirip	1,500	2km	2km
Mean		625.77±187.07	1.21±0.44	0.54± 0.22
Range		100 – 5,000	50m – 6km	10m – 4km

In Kainji lake National Park (KLNP), two of the villages visited were enclaves in the (Table 4). Taunga Yakubu and Taunga Nailo but there were over 32 more villages which were illegal settlements on the Kainji Lake shore which is also parts of the Parks' land. Other villages

share boundary with the Park with linear distance ranging from 10m to 100m. Most of the farming activities of these villages are at very close proximity to the park with distances as short as 500m (Kemanji) (Table 4). Mean population size of villages within and around the park is 1857.78 ± 435.31 (ranges from 100 – 10,000), while the mean distance of villages to the park and distance of farms to the park were 1.54 ± 0.30 and 1.69 ± 0.12 respectively.

In Old Oyo National Park (OONP), there were no enclaves or illegal settlement in the park, although some of the villages were very close as close as 10m such as Gida Olalere (10m). Most of the farming activities of these villages are at very close proximity to the park while some farms share boundary with the park (Table 5). Mean population size of villages within and around the park is 635.2 ± 291.77 (ranges from 10 – 10,000), while the mean distance of villages to the park and distance of farms to the park were 1.98 ± 0.27 and 0.53 ± 0.11 respectively (Table 5).

Table 4. Villages in KLNPN and their proximal distance to Park boundary

S/No	Name of Village	Estimated Population	Distance of Village to Park	Distance of Farm to Park
1	Wuromakoto	300	2km	1km
2	Woro	3000	3km	1km
3	Tunga Maje	1500	200m	1km
4	Kemanji	2000	2km	500m
5	Tenebo	200	3km	2km
6	Kuble	260	4km	2km
7.	Luma Baare	4,450	2km	2km
8	Audu fari	1,000	2km	2km
9	Kali mai riga	200	6km	2km
10	Ibbi	5500	50m	2km
11	Mulea	300	50m	2km
12	Safini Libata	500	1m	2km
13	Safini kamberi	4,000	1km	2km
14	Kpellegi	2,000	100m	2km
15	Patiko	100	100m	2km
16	Patiko II	1,000	2km	2km
17	Kizhi	100	1km	2km
18	Faje	1,500	3km	2km
19	Kulho	1000	1km	2km
20	Babugi	10,000	1km	2km
21	Fanga	5,000	1km	2km
22	Mazakuka	1,500	2km	2km
23	Doro	1,000	1km	2km
24	Malale	500	4km	2km
25	Tunga Yakubu	500	Inside Park	Inside Park
26	Tunga Nailo	2,500	Inside Park	Inside Park
27	Tunga Wakili	250	10m	2km
Mean		1857.78 ± 435.31	1.54 ± 0.3	1.69 ± 0.12
Range		100 – 10,000	1m – 6km	500m – 2km

Discussion

The result of the study showed that the villages around the parks and their preponderance distances varied. Some of the villages were extremely close to the park, while some having a distance of 10m to the park and their farms share the same boundary with the park. In GGNP, over 4 villages shared boundaries or farms with the park, and the same is the case in OONP where 13 villages share farm boundary with the park, buffer zone in these areas are not enforced. In all, more than half (52.96%) of the respondents either lives inside the park or shares boundary with the Parks [21, 22]. Several authors' have observed that there had been tremendous increase in human population and housing while there are significant reductions in the area expected to be buffer zone [21, 22]. The increase in the human population with the

attendant demand for land for housing and farming activities is causing villagers to encroach into park lands. It might be difficult to convince local people that restricted buffer zone areas constitute a valuable benefit and importance if they had unrestricted use of the area prior to establishment of the protected area [35]

Table 5. Villages in OONP and their proximal distance to Park boundary

S/No	Name of Village	Estimated Population	Distance of Village to Park	Distance of Farm to Park
1.	Ibudo Baruba	40	20m	5m
2.	Aloba	50	3km	1km
3.	Yerima	50	3km	2km
4.	Olodo	50	2km	2km
5.	Gida Olalere	100	10m	5m
6.	Lasi	200	500m	1m
7.	Tede	10,000	2km	1km
8.	Budo Sango	500	500m	5m
9.	Tesi Apata	500	700m	400m
10.	Lube	50	500m	400m
11.	Alakuko	300	5km	1km
12.	Oke owu	250	4km	1km
13.	Bamgbose	80	6km	2km
14.	Alarode	50	500m	600m
15.	Ibubo Ighoho	30	2km	1km
16.	Budo Ayinla	100	100m	5m
17.	Yawota	2,000	3km	Share Boundary
18.	Kosigi	30	50m	Share boundary
19.	Orisumbare	10	2km	1km
20.	Ilowa Ilora	2,000	4km	Share boundary
21.	Akinpeju	1,000	3km	Share boundary
22.	Onilearo	25	1km	Share boundary
23.	Alahusa	90	2km	Share boundary
24.	Igboburo	1,000	200m	Share boundary
25.	Oloka	2,000	2km	Share boundary
26.	Sooro	500	2km	1km
27.	Ogundiran	400	2km	Share boundary
28.	Alada	30	3km	Share boundary
29.	Opa	100	100m	Share boundary
30.	Aba Nla	100	1km	500m
31.	Imodi	500	3km	500m
32.	Aba Ijesh	10	4km	1km
33.	Alapata	32	4km	2km
34.	Abule Markurdi	15	1km	Share boundary
35.	Elerin	40	1km	Share boundary
Mean		635.2 ± 291.77	1.98 ± 0.27	0.53 ± 0.11
Range		10 – 2,000	10m – 6km	1m – 2km

All the parks studied had enclaves or illegal settlements within them except OONP which did not record any. There were over 6 enclaves in CRNP, over 8 enclaves in GGNP and over 24 enclave villages in KLNP. A study conducted by KLNP in 2005 gave a total of 24 villages and a population of over 5,198 squatters recorded in KLNP [36]. The Spearman’s rho result indicated that there was significant relationship ($p < 0.01$) between illegal activities and distance of the village ($r = 0.047$) from the park boundary. We can therefore accept the hypothesis that the occurrence of illegal activities in National Parks is related to the distance of the village from the park. The closer the village to the park, the higher the illegal activities. The village enclaves depended solely on the park resources and are involved in unrestricted resource exploitation. The estimated current population of the communities, when compared with previous work [37] showed tremendous increase in the population of communities around

KLNP, for example Ibbi (a community in KLNP) with highest population of 900 in 1978 has increased to over 5,500 in 2009. There are indicators of new settlements springing up around the parks [22]. This observation is in line with the previous study [21].

The increase in human population has brought about an increased pressure on the natural resources in the park. Many scholars and some multinational organizations such as the World Bank, which have long linked high population growth with poverty and underdevelopment, have now turned their attention to uncovering a linkage between population and environmental degradation [21]. Rapidly growing populations have led to overgrazing, deforestation, depletion of water resources and loss of natural wildlife habitats [21, 22]. Unsustainable high rates of human growth and natural resources consumption has been identified as the first of the six fundamental causes of biodiversity loss [38, 39]. When income earning opportunities are limited in the farm and non-farm manufacturing and service sectors, pressure on natural resources for subsistence use and cash income will increase [40]. Poverty is also associated with higher human fertility rates that indirectly increase food demand and pressure on ecosystems [41].

Conclusion

The study has shown that the villagers around the parks do not observe the buffer zone limit and as a result there is serious incursion into the parks. There were too many enclaves in the parks, some of the enclaves in parks are also seriously expanding in population and so is the increasing demand on the resources of the park. Population increase in the villages adjacent to the park / sharing boundary with the park is mainly due to migration and high fertility. People from different parts of the country and some nationals outside the country migrated into the villages leading into large scale deforestation since most of the migrants moved into the area in search of new farmlands. It is recommended that the parks be properly demarcated and seasonal fire terracing be done to protect and preserve the park resources. Regular patrol of the Parks to prevent illegal resources extraction and infiltration must also be intensified.

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