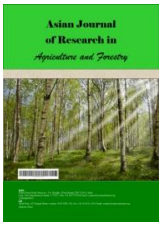

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Perception of Forest Stakeholders on Logging Ban in Cross River State, Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. Author AAO designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors ODA and ARA managed the analyses of the study. Author INM managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

The study examined the perception of forest stakeholders on the ban on logging in Cross River State, Nigeria. The research was carried out from October, 2014 to January, 2015. Data was collected through the administration of structured questionnaire to 351 respondents that were randomly selected from four forest stakeholders, including: forest communities, Forestry Commission staff, timber dealers and Non-Governmental Organizations (NGOs) on environment. One local government area was selected purposively, from each of the three senatorial districts of the state. Findings shows that majority (86.9 percent) of the respondents were males, in the age brackets of 30-50 years, while 8.5 percent were in the age brackets of 20-29 years of age. Most of the respondents (62.4 percent) had secondary education, while farming, civil service, trading and logging, constitute 81.8 percent of the respondents' occupation. Findings revealed that majority of the respondents from forestry commission (100 percent), timber dealers (100 percent), forest

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communities (98.3 percent) and NGOs (96.2 percent) were aware of the ban on logging. Most of the respondents from forestry commission (42.3 percent), timber dealers (41.4 percent), forest communities (45.0 percent) and NGOs (38.5 percent) agreed that the reason behind the ban on logging was to protect and conserve the State's remaining forests. Findings revealed that the ban on logging did not reduce timber exploitation as claimed by 65.4, 74.3, 55.5 and 61.5 percent of the respondents from forestry commission, timber dealers, forest communities and NGOs respectively. Furthermore, 65.4, 95.7, 87.8 and 53.8 percent of the respondents from the stakeholders affirmed that prices of sawn wood increased during ban. Result also indicated that there was a significant increase ($P< 0.05$) in the prices of sawn wood during the ban. Majority (96.2, 61.4, 86.9 and 61.5 percent) of the respondents attested that some people who depend on logging activities, lost their means of livelihoods and majority (92.3, 85.7, 91.3 and 96.2 percent) of the respondents agreed that taskforce members were corrupt. Again, majority of the respondents from forestry commission (69.2 percent), timber dealers (90.0 percent) and forest communities (59.0 percent) agreed that they want the ban on logging lifted.

Keywords: Stakeholders; livelihood; respondents; ban; logging.

1. INTRODUCTION

Cross River State has the largest unlogged Tropical High Forest (THF) left in Nigeria. The forest is host to more than 40 percent of Nigeria's biodiversity, with high species (flora and fauna) endemism [1,2]. Hence, the Cross River State Tropical High Forest is designated under the International Union for the Conservation of Nature and Natural Resources (IUCN) list, as the 25th biodiversity hotspot in the world [3]. As a result, Nigeria is now counted as a member of the International Organization (United Nations Climate and Forests Taskforce) that is advocating for forest conservation [4].

However, the forest area of the State has witnessed a drastic decline. For instance, in 1991, the total forest cover of Cross River State was 7,920 km^2. In 2001, this area declined to 6,406 km^2. And in 2008, the forest area in Cross River State further declined to 6,102km^2 [2]. The major drivers of forest decline in the state are commercial logging and agriculture expansion. Hence, what remains as the state's most cherished and living heritage-"the forests", is being threatened by deforestation, with illegal logging as its major contributor [5]. Illegal logging by small-scale commercial loggers in the state is so severe that the state government does not have records of the species and quantity of timber that is harvested in the state's forest. The quantity of timber consumed within the state and the one that leaves the state are also not known. This is in line with the assertion made by [6], when he pointed out that about 70 percent of the total timber extracted from tropical forests, especially in developing countries, is stolen with no records kept.

This high level of deforestation in the state, and the global quest for forest conservation, arising from the knowledge that forests mitigate the effects of climate change, necessitated the ban on logging in Cross River State, Nigeria. Other countries that have implemented ban on logging include: China, Indonesia, Kenya, Cameroon [7].

Logging ban is a policy instrument used by authorities to reduce illegal activities that threatens the forest and its resources [8]. Once ban on logging has been declared, it means total stop on logging activities and authorities can assume any logging that continues as illegal.

The Cross River State Government, having been aware of the alarming rate of deforestation (above 2 percent annually) and forest degradation, a two year logging ban, which was subsequently extended indefinitely, was instituted to address issues of deforestation and forest degradation in the state. The ban on logging was conceived after a stakeholders' summit on the environment, held in the state, on June, 2008. One of the recommendations of the summit was to tackle the high rate of deforestation, which according to [3,4], is over 2 percent annually. Thus, in 2009, the logging ban was instituted following a legislative approval by the Cross River State House of Assembly. The major objective of the policy on ban on logging was to control deforestation and forest degradation, so that government can obtain carbon credit as alternative. Following the ban, a Taskforce, termed Cross River State Anti-Deforestation Taskforce was set up with responsibility to enforce the ban and ensure strict compliance [4].

However, forest stakeholders in the state have viewed the ban on logging in different perspectives.

Usually, before ban on logging is implemented, adequate plans for alternative livelihood for those who depend on logging must be considered.

2. MATERIALS AND METHODS

Multi-stage, purposive and simple random sampling techniques was employed for the study. One local government area with forest, was selected purposively from each of the three Senatorial Districts of Cross River State. In each local government area selected, four (4) forest communities were further selected purposively. Purposive sampling is a sampling method used based on the assumption that the population of study possesses the characteristics required for the study [9,10]. Hence, the local government areas and the communities were purposively selected because of the availability of forest, thus, residents here have the required knowledge of the issues under study. In all, a total of 12 forest communities were selected across the three Senatorial Districts of the state [11]. A simple random sampling technique was however used for the selection of household heads at 15 percent sampling intensity of the total number of households in each forest community. A total of two hundred and forty-eight (248) household heads across the 12 forest communities selected were served with questionnaires (Table 1), 229 questionnaires were retrieved and used for data analysis.

Also, 20 percent sampling intensity of Forestry Commission staff in the various forestry charges in the local government areas selected, and staff in the Forestry Commission headquarters, were interviewed. Twenty-nine (29) copies of questionnaires was served to forestry charge staff in the three local government areas and staff in Forestry Commission headquarters (Table 2). Twenty-six (26) questionnaires were retrieved.

Again, four NGOs were randomly selected from the 13 environmental NGOs that were actively involved in wildlife (flora and fauna) conservation in the State, and their staff interviewed. The four NGOs selected include: Wildlife Conservation Society (WCS), Pandrillus, Centre for Education, Research and Conservation of Primate and Nature (CERCOPAN) and Conservation Association of Mbe Mountain (CAMM). Accordingly, 20 percent sampling intensity of the total NGO staff were interviewed Table 3. Twenty-seven (27) staff, were served with questionnaires, while 26 questionnaires were retrieved and used for analysis.

Table 4 shows the distribution of questionnaires to timber dealers (timber marketers, loggers/chainsaw operators and furniture makers) in the local government areas selected. Ninety (90) questionnaires were distributed equally to the timber dealers across the three local government areas selected for the study, with each local government having 30, which was further distributed equally to timber marketers, loggers/chainsaw operators and furniture makers, with each having ten (10) questionnaires. Equal distribution method was adopted here because it was not possible to access the exact population sizes of chainsaw operators, timber marketers and furniture makers in the study area, because of the ongoing ban on logging. However, out of the 90 questionnaires administered, 70 were retrieved.

In summary, out of the three hundred and ninety four (394) questionnaires served to the four forest stakeholders selected for the study, three hundred and fifty one (351), were retrieved.

Multi-stage, purposive and simple random sampling techniques was employed.

2.1 Study Area

2.1.1 Location

Cross River State is located in the South-South of Nigeria. It occupies a land area of 23,074 square kilometers, with a population estimate of 2.89 million people [12,13]. Cross River State lies between latitude $4^{0}28^{1}$ and $6°55^{1}$ North of the equator, and longitude $7°\ 50^{1}$ and $9°28^{1}$ east of the Greenwich meridian. It shares common boundaries with Benue State to the north, Abia and Ebonyi states to the west, to the east by the republic of Cameroon and to the south, by Akwa Ibom State and the Atlantic ocean [12].

2.1.2 Climate

Cross River State has two marked seasons; dry and wet seasons. The dry season last for three to four months (November to March), and is always longer in the northern part of the state than in the south. The wet season last between seven to eight months (i.e April-October). Rainfall is between 1300-3000mm per annum, with peak in July and September [12].

Table 1. Population of communities selected for the study

Senatorial district	Local Gov't area	Wards	Communities	Total pop, 1991	1996 projection (3%)	2013 projection (3%)	Number of households in the communities	Household heads selected at 15% sampling intensity
Northern	Obanliku	BEBI	BUGENE	812	934	1348	94	14
Senatorial			BEEGBONG	715	822	1187	88	13
District		BUSI	BIKAA	940	1081	1560	99	15
			IJUA	1159	1333	1924	102	15
Total				3626	4170	6019	383	57
Central	Boki	ABO	ABO OGBAGA	1179	1356	1957	96	14
Senatorial			BASHUA	2286	2639	3795	169	25
District		BUENTSEBE	BOKALUM	2017	2328	3348	167	25
			WULA	3325	3838	5520	276	41
Total				8807	10161	14620	708	105
Southern	Akamkpa	UYANGA	OJOR	2977	3436	4942	172	26
Senatorial			IFUMKPA	1184	1367	1965	98	15
District		AWI	NSAN	1678	1937	2786	139	21
			OBUNG	1910	2197	3171	159	24
Total				7749	8937	12864	568	86
Grand Total				20182	23268	33503	1659	248

Source: Adopted and modified from National Population Commission Census (1991)

Table 2. Population and sampling intensity of forestry charge officers in selected local government areas for the study

Local Govt. Area	No. of staff	20%samling intensity
Akamkpa	31	6
Boki	23	5
Obanliku	8	2
Forestry Commission Headquarter, Calabar	79	16
Total	141	29

Source: Adopted and modified from Cross River State Forestry Commission nominal roll, 2015

Table 3. Number of respondents selected from NGOs, for the study

Non-governmental organization (NGO)	Accronym	Status	No. of staff	20%sampling intensity
Wildlife Conservation Society	WCS	International	23	5
Centre for Education, Research and Conservation of Primate and Nature	CERCOPAN	Local	20	4
Pandrillus	PANDRILLUS	Local	33	7
Conservation Association of Mbe Mountain	CAMM	Community	54	11
Total			130	27

Source: Field survey, 2015

2.1.3 Vegetation

The state is located within the Tropical Rainforest belt of Nigeria. The vegetation is distinguished into four ecological zones including the guinea savanna to the northern part of the state (Ogoja, Obudu, Bekwara, Yala, and Obanliku local government areas). The derived savanna, located in the west and constitute Abi, Yakurr and parts of Biase and Obubra local government areas. Although it is dominated by recently fallowed land, patches of secondary forests are still found in parts of Biase and Obubra local government areas. The high forest zone is found in the middle-belt of the state, extending from Boki, Ikom and Etung in the central, to Akamkpa in the south. The forests are rich in biodiversity (flora and fauna). The mangrove forest zone is found in Akpabuyo, Odukpani, Calabar south and Calabar municipal local government areas. It is characterized by mangrove species [5].

2.2 Data Analysis Technique

The data collected for this study were analyzed using descriptive and inferential statistics. While some data were represented by tables, simple percentages and charts (descriptive), Paired t-test (inferential) was used to compare the means of average prices of sawn woods, before and during the ban on logging, at five percent (5%) significant level.

3. RESULTS AND DISCUSSION

3.1 Demographic and Socio-economic Characteristics of Respondents

Table 5 shows the demographic and socio-economic characteristics of the respondents. The result of the study revealed that majority (86.9 percent) of the respondents were males, in the age brackets of 31-50 years. This result confirms that the forestry profession and timber business is dominated by males, who are within their active age. Results also revealed that most of the respondents (45.9 percent) were Senior School Certificate (SSC) holders Table 5, and majority (34.5 percent) of them were farmers, followed by civil servants (19.1 percent), traders (15.7 percent), logging (12.5 percent), while the private sector (NGOs), students and furniture-makers were represented by 7.4, 6.0 and 4.8 percent respectively (Fig. 2).

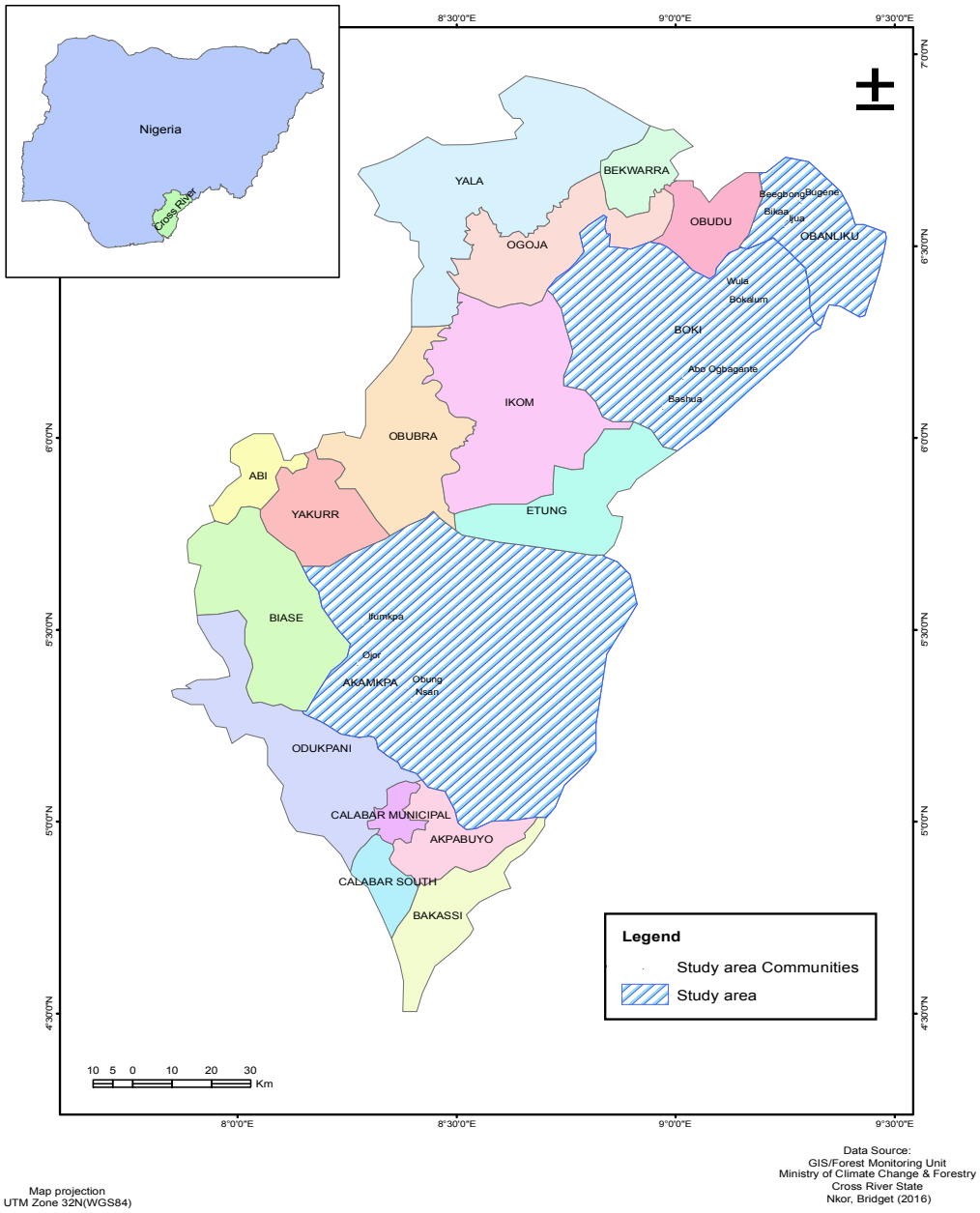

Fig. 1. Map of Cross River State showing the study area

Table 4. Number of respondents among timber dealers (chainsaw operators, timber marketers and furniture makers)

Local Govt. Area	Timber dealer/chainsaw operators	Timber marketers	Furniture makers
Akamkpa	10	10	10
Boki	10	10	10
Obanliku	10	10	10
Total	30	30	30

Source: field survey, 2015

Table 5. Demographic and socio-economic variables of respondents

Variables	Forestry Commission	Timber Dealers	Forest Communities	NGOs	Total freq.	%age of total freq
Distribution of respondents by local govt. area						
Akamkpa	5(19.2%)	22(31.4%)	79(34.5%)	4(15.4%)	110	31.3
Boki	5(19.2%)	25(35.7%)	95(41.5%)	17(65.4%)	142	40.5
Obanliku	2(7.7%)	23(32.9%)	55(24.0%)	5(19.2%)	85	24.2
Forestry Hqrs	14(53.9%)	0	0	0	14	4.0
Total	26	70	229	26	351	100.0
Gender of respondents						
Male	23(88.5%)	67(95.7%)	192(83.8%)	23(88.5%)	305	86.9
Female	3(11.5%)	3(4.3%)	37(16.2%)	3(11.5%)	46	13.1
Total	26	70	229	26	351	100.0
Age dist. of respondents						
21-30 years	2(7.7%)	2(2.9%)	20(8.7%)	6(23.1%)	30	8.5
31-40	4(15.4%)	25(35.7%)	73(31.9%)	11(42.3%)	113	32.2
41-50	11(42.3%)	34(48.6%)	68(29.7%)	9(34.6%)	122	34.8
51-60	9(34.6%)	9(12.9%)	45(19.7%)	0	63	17.9
61& above	0	0	23(10.0%)	0	23	6.6
Total	26	70	229	26	351	100.0
Qualification of respondents						
FSLC	0	13(18.6%)	44(19.2%)	1(3.8%)	58	16.5
WASC/SSC	6(23.1%)	44(62.9%)	102(44.6%)	9(34.6%)	161	45.9
OND/NCE	5(19.2%)	9(12.9%)	61(26.6%)	6(23.1%)	81	23.1
HND/B,Sc.	10(38.5%)	3(4.3%)	22(9.6%)	7(26.9%)	42	12.0
PGD/M.Sc.	5(19.2%)	1(1.4%)	0	3(11.5%)	9	2.5
Total	26	70	229	26	351	100.0

Source: Field survey (2015)

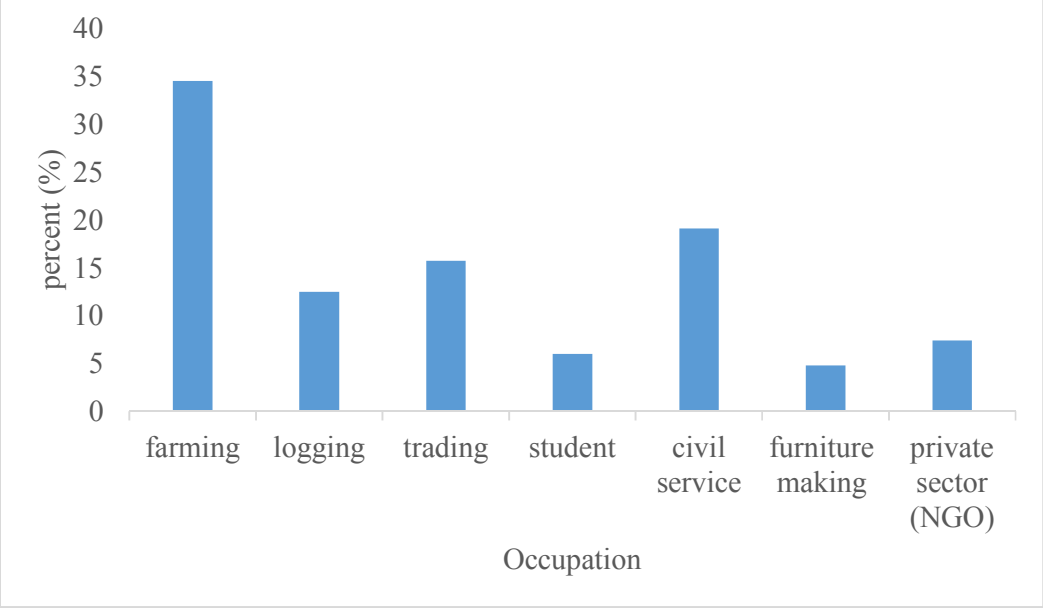

Fig. 2. Occupational status (%) of respondents

3.2 Awareness and Reasons for the Ban on Logging

Results on awareness of the ban on logging showed that majority of the respondents across the stakeholders were aware of the ban on logging (Table 6). Majority of the respondents from forest communities (51.1 percent) and timber dealers (58.6 percent) got information on the ban on logging through the media. This means that more people had access to electronic media (radio and television) and there was a wider media coverage on the ban on logging. This findings is in line with the view of [14], who stated that the media remained an important instrument for disseminating agricultural information, especially to rural areas. Most respondents (31.4, 25.7 and 11.5 percent) from forest communities, timber dealers and NGOs also got information on the ban through the actions (patrols and arrests) of the anti-deforestation taskforce, whose high handedness were often directed at poor, small-scale timber dealers, a situation which corroborate with the findings of [7], when he stated that most bans on logging are effective only on small-scale commercial loggers. The ban on logging received wide publicity, however, it was unfortunate that the policy, with its negative livelihood impacts on some forest stakeholders in Cross River State, was implemented without effective consultation with the people as opined by 78.6, 97.1 and 65.4 percent of respondents from forest communities, timber dealers and forestry commission (Table 6). This findings is in line with the report of [15], who posited that the ban on logging in Cross River State was implemented without effective consultation with major stakeholders. The reasons behind the ban on logging in the state were; to protect and conserve the remaining forests of Cross River State, obtain carbon credit concession and to tackle environmental issues [4]. This is at variance with the submissions of [16], who emphasized that forest policies should consider the people first, and not the trees, land or forest products.

3.3 Impact of Ban on Logging on Forest Stakeholders

The study indicated that the ban on logging in Cross River State, did not reduced illegal timber exploitation. Results shown in Table 7, revealed that respondents from forestry commission (65.4 percent), timber dealers (74.3 percent), forest communities (55.5 percent) and NGOs (61.5 percent) affirmed that ban on logging did not reduced illegal timber exploitation. Illegal exploitation and smuggling of sawn wood were still common. For instance, a lot of timber were smuggled un-noticed during the ban. Plate 1 shows how illegally sawn woods were being smuggled, while plate 2 shows how illegal sawn woods was stacked inside the forest by illegal loggers, awaiting evacuation. A lot of trucks conveying illegal timber were also confiscated by the anti-deforestation taskforce (Plate 3), however, this took place after harm has already been done to the forest. The study therefore revealed that illegal logging activities were still on-going in the state, in spite of the ban on logging. This results agree with the findings of [17,7] which revealed that it is difficult to control illegal logging, owing to the high demand for timber and its products, corruption, unemployment and also, areas under ban on logging face greater hardship, especially for those whose livelihoods depend on logging activities. Similarly, since there was no provisions for alternative means of livelihood as opined by majority of the respondents from the stakeholders (Table 6), it was observed that the ban resulted in loss of jobs. Hence, majority of the respondents affirmed that the ban on logging should be lifted (Table 6).

Majority of the respondents (96.2, 61.4, 86.9 and 61.5 percent) from forestry commission, timber dealers, forest communities and NGOs respectively, claimed that means of livelihoods were lost as a result of the ban on logging (Table 7). Results also revealed that royalty was not paid during the period of ban on logging, as affirmed by majority of the respondents (92.3, 85.7, 91.3 and 80.8 percent) from forestry commission, timber dealers, forest communities and NGOs. Thus, there was no incentive to encourage the communities to protect the forest.

Results showed that ban on logging was responsible for increase in price of wood (Table 7). Findings also showed that the prices of sawn wood before and during the period of ban was significantly different ($P< 0.05$), indicating that there was a significant increase in prices of sawn wood during the ban (Table 8). Besides increase in price of sawn wood products like furniture, increase in price of timber also result in increase in the cost of building and subsequent increase in house rent. This further increases the cost of living especially in urban areas of the state. Findings of [18,8,15], revealed that ban on logging increase local prices of wood, thus causing hardship to the final consumers.

Table 6. Awareness and reasons for the ban on logging

Variable	Forestry commission	Timber dealers	Forest communities	NGOs	Total	%age of total freq.
	Frequency	Frequency	Frequency	Frequency	Frequency	
Awareness of the Ban on logging						
Yes	26(100%)	70(100%)	225(98.3%)	25(96.2%)	346	98.6
No	0	0	4(1.7%)	1(3.8)	5	1.4
Total	26	70	229	26	351	100.0
Sources of information on Ban on Logging						
Briefing by forestry commission	26(100%)	10(14.3%)	15(6.6%)	14(53.8%)	65	18.5
Media	0	41(58.6%)	117(51.1%)	4(15.4%)	162	46.2
Town crier	0	0	17(7.4%)	5(19.2%)	22	6.3
Actions of task force	0	18(25.7%)	72(31.4%)	3(11.5%)	93	26.5
Through NGOs	0	1(1.4%)	8(3.5%)	0	9	2.5
Total	26	70	229	26	351	100.0
Stakeholders were consulted before the Ban						
Yes	9(34.6%)	2(2.9%)	49(21.4%)	14(53.8%)	74	21.1
No	17(65.4%)	68(97.1%)	180(78.6%)	12(46.2%)	277	78.9
Total	26	70	229	26	351	100.0
Reasons for the Ban on logging						
Carbon credit	8(30.8%)	20(28.6%)	41(17.9%)	6(23.1%)	75	21.4
Revenue generation	0	7(10.0%)	28(12.2%)	3(11.5%)	38	10.8
Protect and conserve forest	11(42.3%)	29(41.4%)	103(45.0%)	10(38.5%)	153	43.6
Tackle environmental issues	7(26.9%)	14(20.0%)	57(24.9%)	7(26.9%)	85	24.2
Total	26	70	229	26	351	100.0
Ban on logging was effective						
Yes	3(11.5%)	15(21.4%)	94(41.0%)	10(38.5%)	122	34.8
No	23(88.5%)	55(78.6%)	135(59.0%)	16(61.5%)	229	65.2
Total	**26**	**70**	**229**	**26**	**351**	**100.0**
Alternative livelihood was provided during the Ban						
Yes	3(11.5%)	17(24.3%)	19(8.3%)	12(46.2%)	53	15.1
No	23(88.5%)	53(75.7%)	210(91.7)	14(53.8%)	298	84.9
Total	26	70	229	26	351	100.0

Variable	Forestry commission	Timber dealers	Forest communities	NGOs	Total	%age of total freq.
Should ban on logging continue?						
Yes	8(30.3%)	7(10.0%)	94(41.0%)	23(88.5%)	132	37.6
NO	18(69.2%)	63(90.0%)	135(59.0%)	3(11.5%)	219	62.4
Total	26	70	229	26	351	100.0

Ban on logging in Cross River State also encouraged corruption in the State's forestry sector. Results showed that 92.3, 85.7, 91.3 and 96.2 percent of forestry commission, timber dealers, forest communities and NGOs' respondents agreed that the Anti-deforestation taskforce was highly corrupt (Table 7). The taskforce, whose responsibility was to enforce the ban, also had some of her members who became timber merchants, collaborating with illegal timber dealers hence, further encouraging illegal logging [15,19]. The head of the defunct Anti-deforestation taskforce, during field discussion, stated that "He led a taskforce where

Plate 1. Illegal timber floated along the Cross River, impounded by taskforce, during the ban on logging
Source: Mofinews, 2010

Plate 2. Illegally sawn wood stacked in the forest, ready for evacuation by illegal loggers, during the ban on logging
Source: field survey, 2015

Table 7. Impact of Ban on logging on forest stakeholders

Variable	Forestry commission	Timber dealer	Forest communities	NGOs	Total	%age of total freq.
	Frequency	Frequency	Frequency	Frequency	Frequency	
Ban reduces illegal timber exploitation						
Yes	9(34.6%)	18(25.7%)	102(44.5%)	10(38.5%)	139	39.6
No	17(65.4%)	52(74.3%)	127(55.5%)	16(61.5%)	212	60.4
Total	26	70	229	26	351	100.0
Loss of means of livelihood						
Yes	25(96.2%)	43(61.4%)	199(86.9%)	16(61.5%)	283	80.6
No	1(3.8%)	27(38.6%)	30(13.1%)	10(38.5%)	68	19.4
Total	26	70	229	26	351	100.0
Royalty still being paid during the Ban on logging						
Yes	2(7.7%)	10(14.3%)	20(8.7%)	5(19.2%)	37	10.5
No	24(92.3%)	60(85.7%)	209(91.3%)	21(80.8%)	314	89.5
Total	26	70	229	26	351	100.0
Ban increases the price of wood						
Yes	17(65.4%)	67(95.7%)	201(87.8%)	14(53.8%)	299	85.2
No	9(34.6%)	3(4.3%)	28(12.2%)	12(46.2%)	52	14.8
Total	26	70	229	26	351	100.0
Officials of taskforce were corrupt?						
Yes	24(92.3%)	60(85.7%)	209(91.3%)	25(96.2%)	318	90.6
No	2(7.7%)	10(14.3%)	20(8.7%)	1(3.8%)	33	9.4
Total	26	70	229	26	351	100

almost everybody was compromised, thus, it was difficult to trust anyone working with him". This corrupt attitude of the defunct Anti-deforestation taskforce, may have informed the current administration of Cross River State Government, to disband the taskforce immediately its inception. Although, a new taskforce has been constituted by the current administration, their activities and impacts are yet to be ascertained. Corruption associated with ban on logging is not isolated to Cross River State alone. Countries/regions under ban on logging have been characterized by increased corruption [20,7].

Plate 3. Truck of illegally sawn wood, impounded in Cross River State new secretariat, Calabar, during the ban on logging

Source: Field survey, 2015

Table 8. Average prices (₦) of some species of sawn wood, before and during the ban on logging in the study area

Common Name	Scientific Name	Dimension	Price before ban	Price during ban
Iroko	*Milicia excelsa*	1”×12”×12’	1,000	1,700
		2”×12”×12’	2,000	3,400
		3”×4”×12’	700	1,000
		4”×6”×12’	1,000	1,500
Mahogany	*Entandrophrama cylindricum*	1”×12”×12’	1,300	2,000
		2”×12”×12’	2,500	4,000
		3”×4”×12’	700	1,000
		4”×6”×12’	1,000	1,700
Black afara(idigbo)	*Terminalia ivorensis*	1”×12”×12’	900	1,600
		2”×12”×12’	1,800	3,200
		3”×4”×12’	600	900
		4”×6”×12’	1,000	1,300
Alstonia (Ukpo)	*Alstonia boonei*	1”×12”×12’	600	800
		2”×12”×12’	1,100	1,500
		3”×4”×12’	500	800
		4”×6”×12’	700	900
Cotton tree (Ukim)	*Ceiba petandra*	1”×12”×12’	600	800
		2”×12”×12’	1,000	1,500
		3”×4”×12’	600	800
		4”×6”×12’	700	900
Carraboot (akwa-miri)	*Pyncnanthus angolensis*	1”×12”×12’	600	800
		2”×12”×12’	1,000	1,500
		3”×4”×12’	500	800
		4”×6”×12’	700	1,000
		Total	**23100**	**35400**
		Mean ± SEM	**962.50±101.7662[a]**	**1475.00±180.001[b]**

Means with different superscript (a & b) were significantly different at P<0.05
T-calculated (tcal) = 2.22
Degree of freedom (df) = 46
*P-value = 0.031***

4. CONCLUSION

Perceptions of ban on logging in Cross River State, was not different from similar studies conducted in Kenya and Cameroon, by [21,7] respectively. Ban on logging in Kenya, did more harm than good, as the ban did not only caused timber scarcity, it also resulted in loss of jobs, increase in price of timber; which became an incentive for illegal logging and also encouraged timber smuggling, hence further putting Kenyan forests under severe threat [21]. Similarly, [7] stated that an attempt by Cameroon Government to enforce ban on logging in parts of the country did not yield positive results, rather, the ban increased the bribes demanded by security personnel and Forestry officials involved in the implementation and enforcement of the ban. The Chinese government represents a good example. Following the ban on logging in China's natural forest, in 1998, forest workers who lost their jobs were redeployed into new jobs through the assistance of the government. Others who could not find jobs received unemployment benefits and social welfare support to carter for their minimum living expenses, thus, reducing activities of small scale timber exploiters [22,7]. Therefore, effective implementation of logging ban can only be achieved when alternative livelihoods are provided for those who depend on logging. Equitable sharing of forest benefits with forest communities, who served as custodians of these forests and involving them in decision making on forest management and planning. The study in this direction seek the need for effective community involvement in forest protection, provision of alternative means of livelihood and capacity building for small-scale timber dealers and unemployed youths in forest communities. Investment into wood plantation establishment should be encouraged to reduce over dependence of wood from natural forest. Ban on logging should be suspended because it has not guaranteed the protection and conservation of Cross River State's forest and its resources. This recommendation becomes necessary especially as 62.4 percent of all the respondents agreed that they want the ban on logging suspended. Field staff (Forest guards) of the Forestry Commission should be empowered to carry out their duties diligently, and their activities should be monitored by relevant agencies for proper accountability. If there is any need for ban, such ban should be partial, temporal and devoid of discrimination, implemented and enforced by professional foresters in forestry commission, rather than non-professionals who do not have adequate knowledge to implement and enforce forest policies geared towards forest protection and conservation. It is only in this manner that forest stakeholders will see policy makers (government) as being sincere in efforts of protecting the remaining forests of Cross River State.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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