

Local Inhabitants' Opinion of Timber Logging on Livelihoods: The Case of Yabassi Sub-Division in Nkam Division of Cameroon

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Abstract:- The local community of Yabassi Sub-Division around the forest. The forest of Yabassi Sub-Division is vast and rich with biodiversity of varied species. The local inhabitants adjoin the forest and depend on it for livelihoods. The main objective of this study is to assess the opinion of local inhabitants of timber logging on their livelihoods in Yabassi Sub-Division in Nkam Division of Cameroon. The primary data for this study was obtained through the administration of 300 questionnaires in 4 villages in Yabassi Sub-Division such as Sollé, Dimbong, Ndjanga and Nkokom. A simple random sampling technique was used to select the respondents. The quantitative technique of analysis was used in this study with the descriptive statistics that included frequency tables and percentage. The findings reveal that the forest of Yabassi Sub-Division has encountered timber logging activities that determine livelihoods. The findings also reveal that the forest is relevant to livelihoods especially the non-timber forest products that is important to the livelihoods of the local inhabitants. The study recommends that the timber logging companies and other stakeholders should implement and follow-up corporate social responsibility. Timber logging companies should ensure the well-being of the local inhabitants by promoting sustainable forest management during timber logging and reforestation after timber logging.

Keywords:- Local Inhabitants, Forest, Timber Logging, Livelihoods, Yabassi Sub-Division.

I. INTRODUCTION

The non-equitable distribution of natural resources coupled with the increase in resource consumption to foster economic growth and improve the standards of living has severe economic, social and environmental consequences on the inhabitants of the local community. The recognition of our deteriorating environment amidst the dramatic population growth in a world of limited and rapidly dwindling resources and the intensified search for profit maximization at all cost even at the expense of global commons, are all compelling signatures which should oblige us to look beyond the politics of economic oriented interests (Lambi, 2010).

Most often, the forest that has timber resources are naturally found in rural communities inhabited by local inhabitants. These timber resources are often exploited by foreign forest exploitation companies. Many western nations like the United States, Canada, France and the United Kingdom as well as emerging economic power houses like China often exploit Africa's natural resources today, causing most of the value and money from the natural resources to go to the West and East Asia rather than Africa, further causing the poverty in Africa (Buncombe, 2006).

The forest of Yabassi Sub-Division has timber forest products, animal species as well as non-timber forest products. The local inhabitants of Yabassi Sub-Division live nearer to the forest. The local inhabitants that are poor and deplorable, rely on the forest via the timber forest products and non-timber forest products. Non-timber forest products are essential for rural poor people's livelihoods because they provide their needs for food, fiber, fodder, medicine, building supplies and income (Masoodi and Sundriyal, 2020).

Timber exploitation companies are harvesting timber resources from the forest of Yabassi Sub-Division. The local inhabitants of this community depend on this forest for livelihoods. Non-timber forest products contribute significantly to the local population's means of subsistence financially (Binega and Asmamaw, 2023). And simultaneously, the local inhabitants of Yabassi community are living in poverty with insufficient basic social amenities. The forest of Yabassi Sub-Division has become a treasure for concern from both the timber exploitation companies and the local inhabitants that often disagree. This study seeks to assess the opinion of local inhabitants of timber logging on their livelihoods, to examine the relevance of the forest and to look at how timber logging determine livelihoods in Yabassi Sub-Division in Nkam Division of Cameroon.

II. CONCEPTUAL FRAMEWORK

In this study, four concepts were reviewed to assess the opinion of local inhabitants of timber logging on livelihoods. The concepts include local inhabitants, timber logging, relevance of forest and livelihoods.

➤ *Local Inhabitants*

Usman *et al.*, (2016) expressed their views that forest resources are a key component of the natural resource base of any community, region or country, and they play a fundamental role in the socio-economic well-being of the people of those communities and this is particularly so in Sub-Saharan Africa, where most of the countries have large local inhabitants that depend on natural resource exploitation for their livelihoods and importantly, the tropical forests are of great economic significance to both the rural and urban poor. Anthropogenic activities as well as naturally occurring phenomena have exerted enormous pressure on the forest. However, forest resources are important to local inhabitants that depend on it for livelihoods. The local inhabitants of the rural milieu in Yabassi Sub-Division are inclusive as they adjoin the forest and relied on it for their livelihoods.

➤ *Timber Logging*

Cerutti *et al.*, (2011) echoed out their views by assessing the different impacts on timber harvesting of the forest by logging companies on the ten Forest management Units. They remarked the reduction in the annual allowable cut of concerned Forest management Units by 11% when legal and sustainable harvesting rules are adopted by logging companies. Their findings confirmed that legal and sustainable timber logging sustained the forest (Cerutti *et al.*, 2011). This study falls in line with the findings of Cerutti *et al.*, (2011), to enhance sustainable timber logging to sustain the forest of the local community in Yabassi Sub-Division.

Billon (2010) opined that “logging in Muddy Waters” analyses the boom in timber exploitation that characterized the 1990s in Cambodia, focusing on the instrumentalities of disorder and violence as a mode of control of forest access and timber-trading channels. He examined tensions existing between the aspirations of Cambodians for a better life, the power politics of elites and the hope of some international community for a green and democratic peace and these tensions have produced both an interlocking pattern of “illegal logging” from the highest levels of the state to self-demobilized soldiers, peasants and sustained criticism that was only temporarily resolved through a legalization of the forest sector that benefited large-scale timber operation companies to the prejudice of the poor.

According to Billon (2010) the forest legislation benefitted the timber logging companies at the detriment of the poor. Similarly, timber logging has often benefitted logging companies at the detriment of the local inhabitants of the adjoining local community that harbour the forest. The case of timber exploitation by logging companies in Yabassi Sub-Division with insufficient infrastructural projects is not an exception.

➤ *Relevance of Forest*

Fongnzossie and Nkongmeneck (2016) assessed the sustainability of major species of non-timber forest products in the Gribé forest located at the northern periphery of the Boumba-Bek National Park. According to Fongnzossie and Nkongmeneck (2016), non-timber forest products were vital for subsistence, cash income and they are of greater economic significance in Gribé forests. Their assessment identified great potential for market development for some non-timber forest products and they argued that the following priority interventions areas should be considered for sustainable non-timber forest product exploitation such as optimizing the production of non-timber forest products through domestication (for both important and threatened species), creating a collector’s network, developing processing technology, supporting the establishment of a conducive policy environment that removes all regulatory bottlenecks to facilitate market integration by primary producers (Fongnzossie and Nkongmeneck, 2016). Forest exploitation also includes the exploitation of non-timber forest products from the forest where many local communities relied on it for subsistence and livelihood, with the inclusion of the study area.

➤ *Livelihoods*

Tariq and Aziz (2015) pointed out the main causes and impacts of deforestation and forest degradation in Khyber Puthunkhwa, Pakistan. According to their findings the people are dependent on these forests for subsistence and livelihood and contribute to deforestation in one of different ways. Their study showed that the extensive deforestation in Khyber Pukhtunkhwa occurred for household needs such as cooking, furniture, heating, earning etc. (Tariq and Aziz, 2015). Their study is limited to the exploitation of forest by humans for livelihood. In the case of this study, forest exploitation goes beyond the local inhabitants for livelihoods. Forest exploitation also involves to a greater extent logging companies extracting timber from the forest of the local community in Yabassi Sub-Division.

III. AREA OF STUDY

Yabassi Sub-Division is located between latitude 4° and 4°45' North of the Equator and longitude 9°40' and 10°30' East of the Greenwich Meridian. Found in Nkam Division of the Littoral Region, Yabassi Sub-Division was created in 1985. It covers an area of 3080 km². Yabassi Sub-Division is limited to the south by Dibamba and Douala III Sub-Division, to the east by Nkondjock and Yingui Sub-Division, to the north by Njombé/Penja and Loum Sub-Division, to the West by Dibombari and Douala V Sub-Division as illustrated in Figure 1.

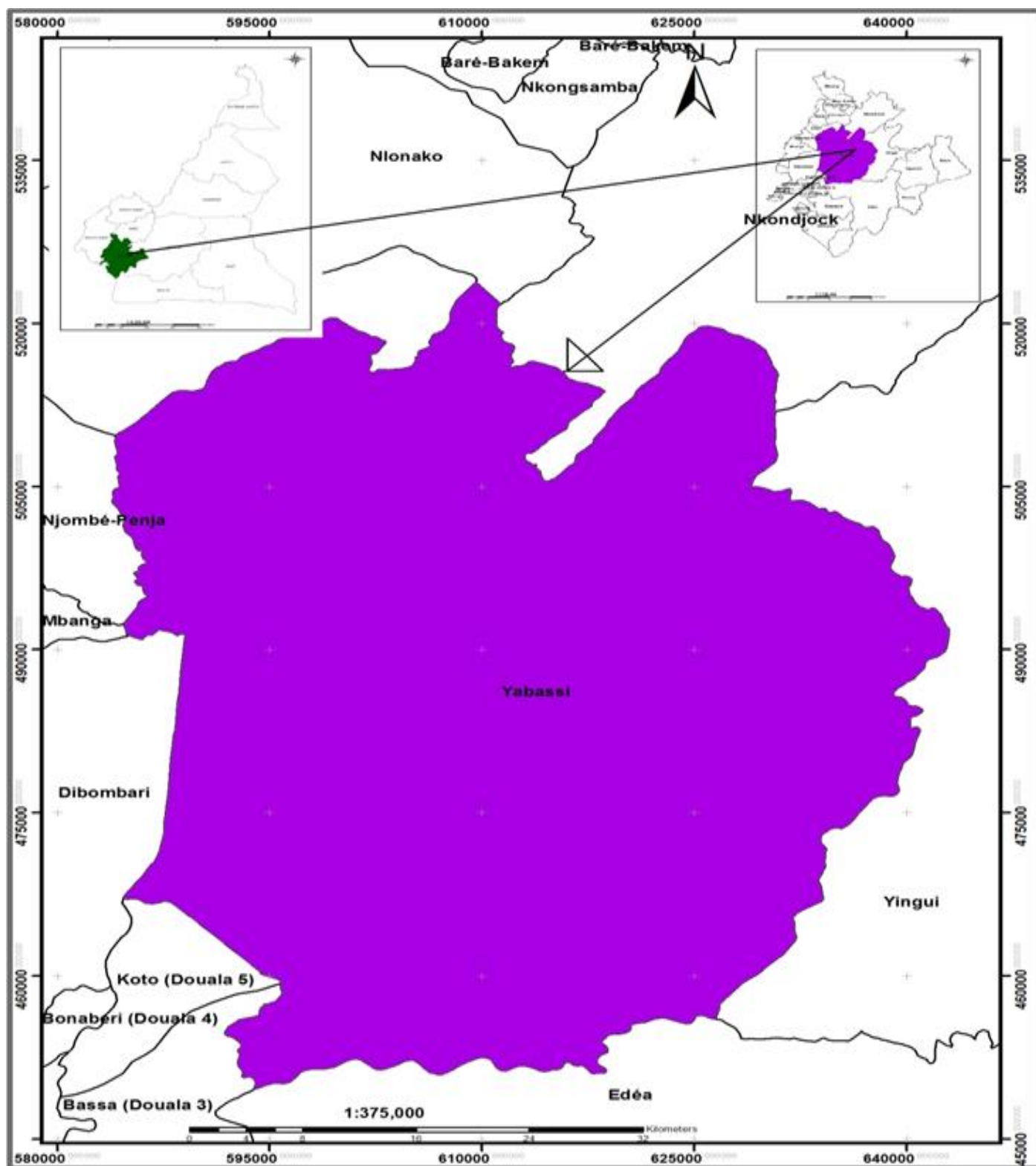


Fig 1 Yabassi Sub-Division in the Nkam Division of Cameroon
Source: Adapted from Buea-Douala Topographic Map NB-32-iv.

Primarily a forest area, the vegetation of Yabassi Sub-Division is a dense rain forest (Figure 2). It is dominated by timber species of high market value that include Azobe (*Lophira alata*), Ilomba (*Pycnanthus angolensis*), Frake (*Terminalia superba*). Likewise, Bubinga, Padouk, Iroko, Dobenatalmi and Morvingui are found here. This vegetation

is home to a great diversity of wildlife, subject to intense poaching. In fact, unlike some areas, substitute meat such as beef is almost absent. The species present in the forest are elephants, chimpanzees, bush pigs, pangolin and porcupine. These are essentially animals that are fully protected by law.

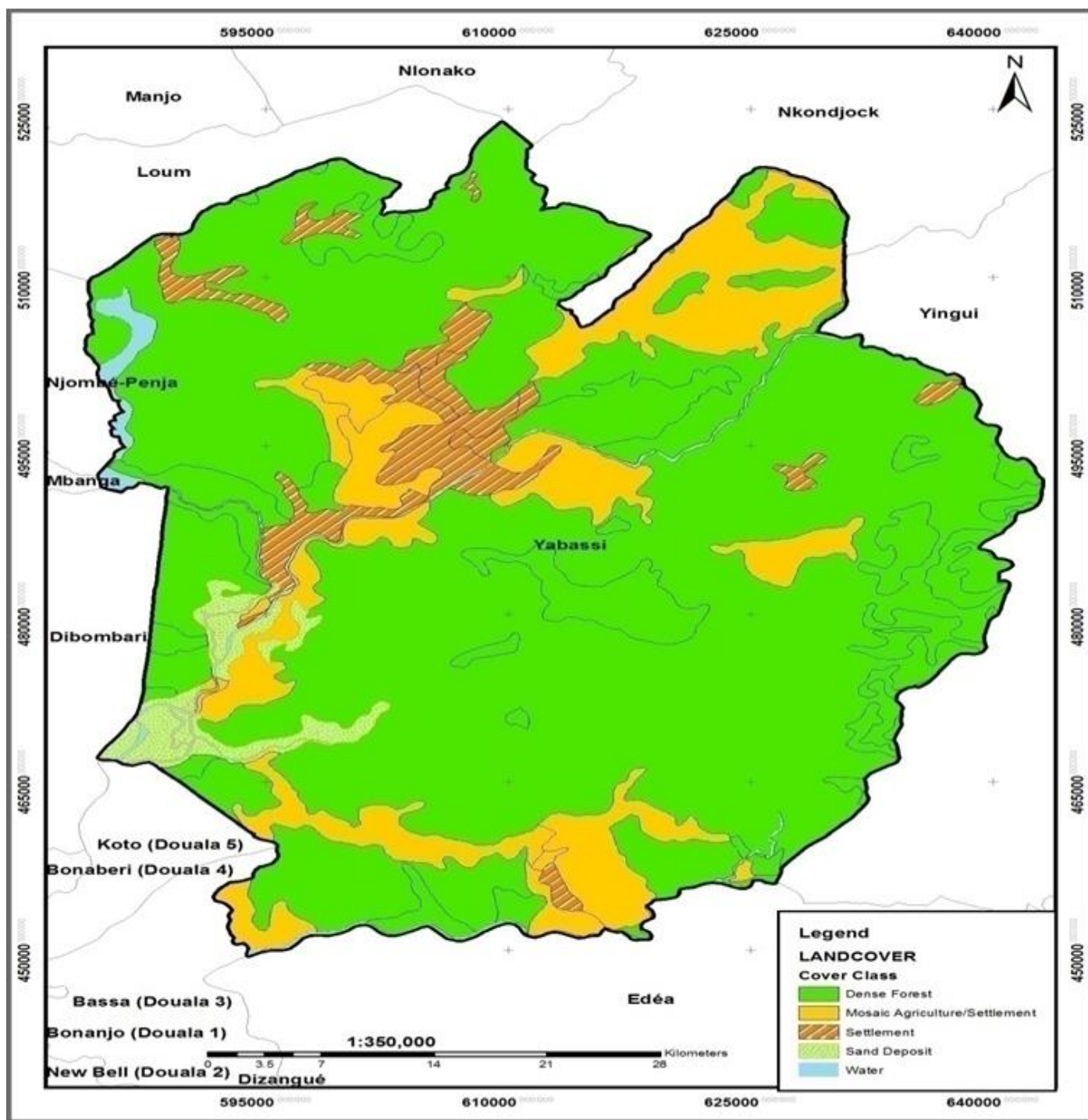


Fig 2 Vegetation of Yabassi Sub-Division
 Source: Adapted from Satellite Image (www.earthexplorer.usgs.gov).

Yabassi Sub-Division has 48 villages with an estimated population of 14,685 inhabitants (Yabassi Council Development Plan, 2012). With an annual growth rate of 2.6, Yabassi Sub-Division has 48 villages with an estimated population of 17,127 inhabitants in the year 2018 (Yabassi Council Development Plan, 2012 and Projections to 2018). This population is unevenly distributed throughout the territory. The Municipality of Yabassi has some areas of concentration such as Banya I, Sollè, Ndogbélé, Tondè village and to a lesser extent Bonépoupa II.

IV. RESEARCH METHODS

The descriptive survey was the research design method used in this study to capture the opinion of local inhabitants via questionnaires administration. The descriptive research design was used in this study as it presents the state of affairs on the ground because, it collects the perceptions of local inhabitants to assess timber logging on their livelihoods in Yabassi Sub-Division. The design was quantitative and analytical as it involves data collection via questionnaires, analysis and generalizing to the population

of the study area. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon (Muijs, 2010). Quantitative research design was used because the results are based on sample sizes that are representative of the population of Yabassi Sub-Division.

The data collection entailed the acquisition of primary and secondary sources of information. For the collection of primary data, it was acquired via questionnaires administration. While for the collection of secondary data, it was obtained through existing literature. The duration of 2 months was used for primary data collection in Yabassi Sub-Division. The questionnaires were administered in 4 villages in Yabassi Sub-Division that adjoin the forest with the administration of 300 questionnaires. The 2 months in Yabassi Sub-Division were carried out on 4 separate field studies. A random sampling was used to select the 4 villages in Yabassi Sub-Division that included Sollé, Dimbong, Ndjanga and Nkokom. The respondents were randomly obtained from the 4 villages of Forest Management Unit 07-003 in Yabassi Sub-Division. These villages were chosen because interaction between the community and the timber logging companies were to be more evident than villages that are far away.

The data collected from the questionnaires was coded and analyzed with the help of the Statistical Package for Social Sciences (SPSS) analytical software. The data was used for description and inference to appraise the relevance of the forest and assess timber logging on livelihoods. The techniques of analysis were the descriptive statistics such as frequency tables and percentages to test the variables. Descriptive analysis was used to summarize and describe

the data to assess local inhabitant’s perception of timber logging on livelihoods. Another technique of analysis was the Delphi technique that was used with a panel of forestry officials in the Divisional Delegation of the Ministry of Forestry and Wildlife in Yabassi, Nkam Division. These officials are experts in the forestry domain that expressed their views since forest and timber logging is their domain of competence and expertise. Thus, content analysis was used to describe the opinion of respondents such as that of the forestry officials to capture their views on the relevance of the forest on livelihoods.

V. FINDINGS AND DISCUSSIONS

Result reveals that all the respondents in Yabassi Sub-Divisions indicated that the forest is important to them (Table 1). This means that the forest is a very important treasure to the local community of the study area. The local community of Yabassi Sub-Division are blessed with vast expanse of forests.

➤ The Relevance of Forest

The importance of the forest for livelihoods as revealed by the respondents in Yabassi Sub-Division was mainly the provision of timber forest products like trees, thatch and wood. It is dominated by timber and non-timber forest products like “eru” (*Gnetum africanum*) and “okongobong” (*Telfairia occidentalis*); bush plum (*Dacryodes edulis*), shea nuts (*Poga oleosa*) “bitter kola” (*Garcinia kola*) and “njasanga” (*Ricinodendron heudelotti*). The forest of Yabassi Sub-Division also provides foodstuffs like cassava, bananas and cocoyam; and bush meat from species present in the forest such as elephants, chimpanzees, bush pigs, pangolin and porcupine.

Table 1 Relevance of Forest on Livelihoods

Category	Yabassi Sub-Division	
	N	%
The relevance of forest to local livelihood		
Yes	284	100
No	0	0
Indicators of importance of the forest	N	%
Timber Forest Products	63	22.3
Non-Timber Forest Products	168	59.4
Forest Food	46	16.3
Bush Meat	6	2.1
Total	283	100

Source: Field work (December 2023-February 2024).

With regards to Table 1, 22.3% of the respondents accepted that timber forest products are relevant for livelihoods. Moreover, 59.4% of respondents in Yabassi Sub-Division confirmed that non-timber forest products from the forest are relevant to livelihoods. In the recent decades, there has been growing interest in the relevance of non-timber forest products to livelihoods, development and poverty alleviation among the rural populace (Suleiman *et al.*, 2017). The respondents in Yabassi Sub-Division with 16.3% affirmed that forest food is important for livelihoods. The respondents attested with 2.1% that bush meat from animal species such as chimpanzees, bush pigs, pangolin

and porcupine in the forest are relevant to livelihoods. The indigenous people still depend on hunting as their main source of protein (Robin *et al.*, 2021).

The forestry officials of the Divisional Delegation of the Ministry of Forestry and Wildlife in Yabassi, Nkam Division disclosed that the forest is beneficial to livelihoods as it provides oxygen, firewood, medicinal plants and non-timber forest products such as bush mangoes. The officials however highlighted not only the provisioning forest ecosystem services identified by the local inhabitants but also the regulating services of the forest.

➤ *Timber Logging on Livelihoods*

The forest of Yabassi Sub-Division has encountered timber logging activities that determine livelihoods. Some of

these activities include identification of species, felling and cross cutting, loading of logs, transportation of the logs and others.

Table 2 Activities of Timber Logging on Livelihoods

Category	Yabassi Sub-Division	
	N	%
Timber logging determines livelihoods		
Yes	278	97.9
No	6	2.1
Activities of timber logging that determines livelihoods	N	%
Identification of Species	0	0
Felling and Cross Cutting	145	52.2
Loading of Logs	7	2.5
Transportation of Logs	125	45
Others	1	0.4
Total	278	100

Source: Field work (December 2023-February 2024).

In Yabassi Sub-Division, 97.9% of the respondents indicated that timber logging determines livelihood while an insignificant 2.1% said that timber logging does not determine livelihoods (Table 2). None of the respondent in Yabassi Sub-Division attested identification of species as an activity that determine livelihoods. Thus, Table 2 reveals 0% for identification of species while 52.2% accepted that felling and cross cutting determine livelihoods. Felling and cross cutting is an important activity of timber logging in Yabassi Sub-Division as accepted by over half of the respondents. Due to the high demand for timber, logging companies in Cameroon often engage in practices such as clearcutting, which involves the complete removal of all trees in an area (Ngaba *et al.*, 2023).

Division confirmed that non-timber forest products are important to livelihoods. More than half of the respondents agreed that felling and cross cutting is an activity of timber logging that determine livelihoods.

Timber logging occurs in forest communities inhabited by local inhabitants. Although the local community of Yabassi Sub-Division abound with timber resources, the study area has insufficient basic social amenities like portable pipe born water, farm to market roads, electricity and healthcare centers. The local inhabitants reside under deplorable living conditions. Therefore, the following suggestions will help to ameliorate the livelihoods of the local inhabitants and concomitantly ensuring timber logging in Yabassi Sub-Division.

Furthermore, the respondents accepted with 2.5% that the loading of logs is an activity of timber logging that determine livelihoods while almost half of the sampled inhabitants agreed that the transportation of logs is an activity of timber logging that determine livelihoods. Timber logging companies operating in the forest of the local community in Yabassi Sub-Division, evacuate the logs from the forest to the mills that are mostly found in the city of Douala. The logs are transported via heavy vehicles known as trucks. Once timber is harvested, it is usually loaded on to log trucks that deliver the timber to a mill where it is transformed into common paper products, lumber and more (Noulis, 2021). An insignificant respondent of 0.4% indicated that others activity of timber logging determines livelihoods.

- There should be a synergy between the timber logging companies, the Divisional Delegation of the Ministry of Forestry and Wildlife in Yabassi, Nkam Division and the local community for the design, implementation and follow-up of corporate social responsibility. This is possible with the collaboration of these stakeholders to design a corporate social responsibility that suit the specificities and peculiarities of the local inhabitants and the Yabassi community.
- Timber logging companies should consider the welfare of the local inhabitants in the study area and they should reform their egocentric attitude of profit maximization. Timber logging companies should ensure the well-being of the local inhabitants and promote sustainable forest management during timber logging because the local inhabitants also depend on the forest for livelihoods.
- The timber logging companies exploiting timber in Yabassi Sub-Division together with the Divisional Delegation of the Ministry of Forestry and Wildlife in Yabassi, Nkam Division should initiate, elaborate and implement a reforestation plan. These act of planting trees in the forest areas that has become empty due to timber logging will help to regenerate the forest and its timber resources in the future.

VI. CONCLUSION AND RECOMMENDATIONS

The local inhabitants in Yabassi Sub-Division that adjoin the vast expanse of forest rely on it for livelihoods. Thus, Yabassi Sub-Division abound with timber resources. These resources should be managed and sustained to provide livelihoods especially to local community dwellers. Efficient management of natural resources base is perceived to be an important condition for sustaining development efforts of local communities in the third world (Shivakoti *et al.*, 2017). The majority of the respondents in Yabassi Sub-

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