

**PAMOL PLANTATIONS Plc: PRELUDE TO A LOOMING POPULATION PROBLEM IN EKONDO-TITI  
SUB-DIVISION, SOUTH WEST REGION OF CAMEROON**

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**ABSTRACT**

This paper underscores a looming population problem in Ekondo-Titi brought about by the establishment of Pamol Plantations – a legacy of the Germans colonial era. Using field studies and interviews, as well as literature on plantations and development, the paper attempts to examine the trend of population growth in Ekondo-Titi and the role of Pamol as a root cause to the population problem. The conclusion drawn is that Pamol has acted as a “population trap” – this questions the issue of sustainability in the provision of housing and toilet facilities. With imminent prospects of the extension of these plantations by about 3000ha in Ekondo Nene, it is obvious that the problem could worsen if possible escape routes are not sought. There is an urgent need for sustainable housing development schemes to be introduced to address the problem.

**Keywords:** Pamol, Ekondo-Titi, Population Problem, Environmental Impacts.

## **INTRODUCTION**

As plantations are introduced in every community, the spillovers are often reflected in the socio-economic and infrastructural mutations which follow. It is for this reason that plantations have been labelled in most poverty stricken societies which have witnessed little socio-economic takeoff as “agents of development”. Plantations encourage the process of urbanisation, growth and development. They encourage in-migration and the mix of cultures, which are essential ingredients for development (Kimengsi, 2008). In addition, they offer employment opportunities to the indigenous inhabitants and the in-migrants. Their wages or salaries go a long way to improve their living conditions. The introduction of plantations into a region implies the emergence of economic, social and infrastructural services, which are needed to cater for the needs of the plantation workers. Though a force of development, plantations can stand as a root cause of some social and environmental problems.

Over the past few decades, oil palm plantations have spread rapidly and they remain the root causes of a series of problems to the environment and the inhabitants. This problem stems, in part, from the massive influx of people into plantation communities – a process which triggers rapid and usually uncontrolled urbanisation. This influx results in pressure on the available space which is then reflected in persistent social conflict and human rights violations (Carrere, 2001). In spite of this, the establishment of palm plantations against the backdrop of skyrocketing demand for palm oil and her bi-products has continued unabated. This boom somewhat signals a bleak future as far as population pressure in such plantation camps is concerned.

As the areas under plantations increase, so does the problem of space to accommodate the increasing population worsen. The appropriation of large areas of land which have, hitherto, been in the hands of indigenous or peasant populations of relatively small numbers give way to plantations which eat away the land, and act as a population trap. The consequence of this dispossession as a result of the growth of this agro-industry is land use conflicts (Kimengsi, 2008). This situation, it should be noted, could degenerate into resistance from local people, a situation which most probably could be counteracted by repression by state forces (Carrere, 2001) in their bid to protect these so-called “agents of development”. The case of Ekondo-Titi is clear where the presence of Pamol Plantation stands today as a direct and indirect cause of a population problem as there is limited space for the expansion of services and infrastructures and pressure on the available land for such expansions.

The notion of sustainability remains an evolving concept as humanity strives to solve mounting problems on the planet today. The concept of sustainable development has, within the recent past, gained prominence on the academic and international scene because of the need to improve on the living conditions of humanity now and in the future (Amawa & Kimengsi, 2012).

## **THE PROBLEM**

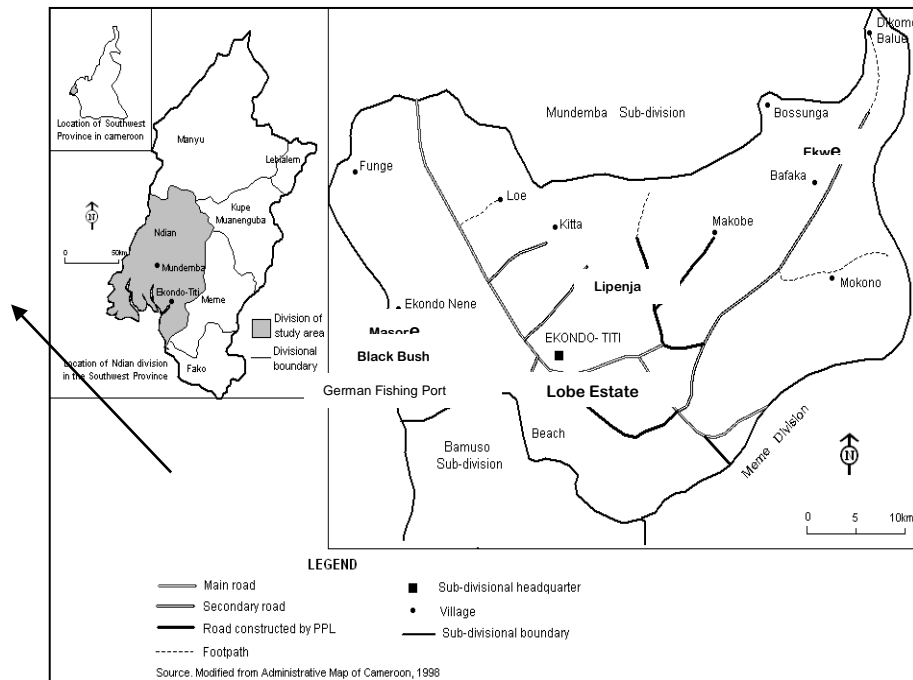
Pamol Plantations PLC which have, over the years, acted as a development partner within Ekondo-Titi, today has proven previous observations that plantations are a ‘mixed blessing’ in their areas of establishment to be true. This company

which has ushered in economic, social and infrastructural benefits into Ekondo-Titi Sub-Division ever since its creation, now stands as a limiting factor to sustainable development through its role precipitating a looming population problem. The presence of this company attracted migrants mainly from the West and North West Regions of Cameroon and from neighbouring Nigeria. Most of these migrants came in to take advantage of the opportunities of Pamol. Some, however, stopped working for this company and engaged themselves in other income generating activities. With the occupation of much land by this plantation and small holder schemes, the problem of expansion has therefore surfaced. This has brought undue pressure on the available space/land resources left for housing and the development of other functions. The population pressure is even more acute in the two Pamol neighbourhoods in Ekondo Titi (Lobe Estate and Lipenja) where congestion in housing as measured by room densities is high. Also, the level of sanitation which was measured based on the number of toilets available in some sampled camps in Lobe Estate and Lipenja bears eloquent testimony to the fact that there is already enormous pressure which will continue to worsen if the problem is not addressed. Not only have conflicts arisen because of the limited space for expansion, but also the level of disease prevalence has increased and this is largely blamed especially on the deteriorating sanitary levels in these camps. Recently, there have been conflicts related to land issues against oil palm plantation development in Ekondo-Titi. This is partly because the population did not foresee the burgeoning population and did not make allowances for such future population increases. These unresolved conflicts, will probably get worse as Pamol and the small holder schemes continue to expand their plantations which will further deprive the local communities and the indigenous peoples of their lands and livelihoods.

Previous studies have investigated issues of sustainability within urban environments (Amawa & Kimengsi, 2009; Tchawa, 2009), but very little is known about the population problem and sustainable development within plantation environments. In the light of addressing issues of sustainable development, the focus of this paper is to examine Pamol's role in creating the population problem and to suggest measures of sustainability in the light of housing, water, food and sanitation.

## **STUDY AREA**

Ekondo-Titi Sub-Division is found within Ndian Division of the South West Region of Cameroon (Fig.1). It is located some 50km west of Kumba Town in Meme Division. Within Ndian Division, Ekondo-Titi is bounded to the north by Mundemba, the headquarters of Ndian Division, to the west and south by the Coastal District of Kumbo Itindi and Bamusso respectively and to the east, by Meme Division. The Sub-Division consists of 35 villages (Etongo, 2007) with an estimated population of over 56503 (BUCREP, 2010). Pamol is the third largest agro-industrial company operating within the oil palm sector in Cameroon.



**Fig. 1 Map of Ekondo-Titi showing main Villages**

## Literature Review

Developing countries are essentially dependent on agriculture and they are the major hosts to the world's capitalist plantations. A popular line of thought among researchers focuses on the numerous undesirable effects of agriculture related policies, which were introduced in in developing countries. These policies which were export oriented have negative effects on sustainable development as they contribute to environmental degradation misery to communities (Kimengsi, 2008; MacInnes, 2008; Nasreen, Hossain and Kundu, 2006). Plantation systems are characterized by an extreme concentration of the share of total wealth and income in the hands of a relatively small upper stratum and the emergence of a rural wage labour force. The plantations have caused a majority of the adjacent populations to become impoverished, increasingly property less, and largely denied the benefits of rising incomes and expanding housing, health and educational opportunities. They therefore live in abject poverty (Cited in Karush, 1978). The paradox of plantation agriculture is that as it leads to the concentration of people in an area and consequent urbanisation, it also robs the adjacent natives of their land. The long term effect is land and housing scarcity.

Although the notion of sustainable development owes it roots on the need to reconcile development with environmental conservation (Lambi, 2008; Blackwell et al, 1991), it has in the recent past been seen as the ability of development to keep going (Amawa & Kimengsi, 2012).

Cameroon's agricultural policy is enshrined in Vision 2035 which stresses on the need to increase unemployment and increase economic growth. Furthermore, the Vision has as challenge the need to improve on urban development including housing, health care and water supply, among others (Cameroon Vision 2035). As a result, urbanization plans no longer operate, thereby provoking uncontrolled urbanization. Plantation towns are faced with serious problems of health, housing, water supply and sanitation, unemployment and insecurity. The current Vision takes into consideration

the need to ensure harmony among the diverse environmental spheres which may be affected by land use changes in urban centres (Cameroon Vision 2035).

Sustainable development is viewed as a long term process involving a series of actions to sustain development efforts. Development stakeholders should think in terms of programmes not projects. That is to think beyond the immediate context of a project since factors may be external to the project itself but be related nevertheless to the wider development programme, and consider the less obvious side effects of development which frequently escape attention because they are difficult to quantify or predict (Blackwell, Goodwill and Webb 1991). Research has revealed that that economic growth, human wellbeing and a clean environment go hand in hand. Increased wealth is associated with improvements in nearly every aspect of human well-being including housing, water supply, education, health and sanitation, among others (Kimengsi, 2011). Development is not just about fulfilling poor people's basic needs, but allowing them to choose how they develop and to choose which technologies they use. However, capitalist plantations generally do not consider issues of sustainability with respect to space for settlement expansion, housing and sanitation quality, among others (Forba & Kimengsi, 2015; Kimengsi, 2008).

## **METHODOLOGY**

This paper makes use of field studies and interviews, as well as literature on plantations and development to show the trend of population growth in Ekondo-Titi and assesses the role of Pamol as a root cause to the population problem. The study goes further to suggest ways of reconciling these two conflicting interests – plantation expansion and gaining space for the increasing population. Primary source material came from direct field observation and the interviewing of people from the villages affected by the presence of Pamol. Other specific authorities concerned with the study such as the Mayor of Ekondo-Titi Rural Council, the Sub-Divisional Delegation of MINADER, Ekondo-Titi and other top Pamol management officials and retired workers of Pamol were interviewed. 100 interviews were conducted randomly in eight villages which were settlements judged to be the most affected by the development of Pamol Plantations. Stakeholders were targeted in the sample and bias was directed to the two Pamol neighbourhoods in Ekondo Titi – Lobe Estate and Lipenja. Twenty interviews each were made for Lobe Estate and Lipenja which harbour the plantation living quarters (camps) and portray most of the problems associated with pressure and the increasing poor sanitary conditions. Apart from these two focal settlements where 20 stakeholders each were interviewed, the other six villages, namely, Masore, Ekondo-Titi, Lobe Town, Bekora, Bogongo I and Bogongo II, only 10 from each of these villages were interviewed.

Data from council sources, Pamol Journals and Archives, National Archives, the Personnel, Technical, Finance, Research and Health Departments of Pamol also provided invaluable information on the number of employed persons, recent innovations by the company, the assistance given to small holders and the health situation respectively. Published and unpublished dissertations and theses were invaluable to this study.

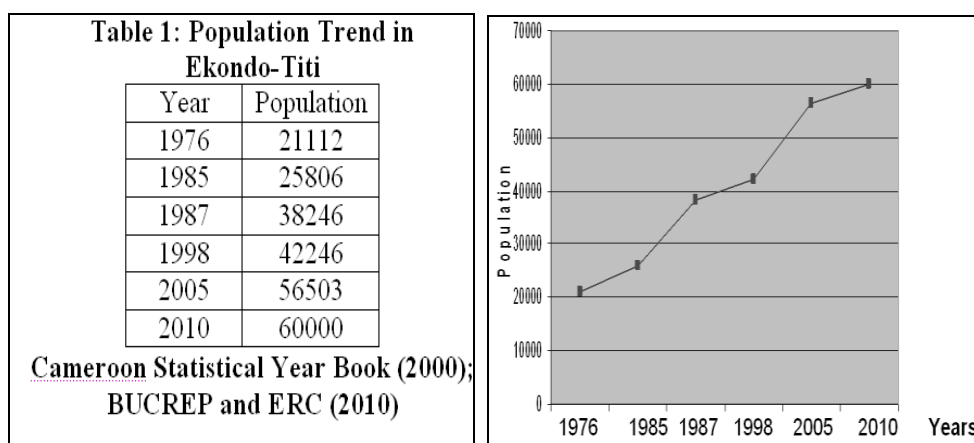
## **FINDINGS**

The population of Ekondo-Titi has been increasing tremendously. In 1976, the population stood at 21,112; in 1987, it increased to 38,246 and by 2010, it went up to 60,000 (Table 1). This growth is a result of natural increase and of

importance to this study, the continuous influx of people into the town to offer services to the plantations. A majority of the population consists of in-migrants from the North West and South West Regions and from Nigeria who seek either direct or indirect employment opportunities generated by this plantation.

Pamol has acted as a “population trap” - the teeming population (Table 1 and Fig 2), coupled with the limited ability for expansion to accommodate the increasing population, is a major cause of the population problem. This is situation is similar to what Balgah (2007) noted when he attributed the influx of migrants to work in the Cameroon Development Corporation (CDC) Plantation as one of the main reasons for population increase. With much demand for land, there was a consequent land scarcity in Buea. This tallies with the ideas of Richman (1993) who noted that “*As more and more people vie for scarce resources at any given moment — land, food, water, breathable air... — one should expect the condition of each person to worsen*”. This puts to question the issue of sustainability in the provision of housing and toilet facilities.

Today, Pamol Plantations and small holder schemes now stand as monumental barriers to the expansion of settlements and farmlands. The problem seems imminent especially as the company continues to acquire more land to expand the plantations. A close study of the trends in forest loss reveals that land degradation is a problem in the future. For instance, in 1968, the total surface area occupied by Pamol and small holder schemes in oil palm production was 6km<sup>2</sup>. By 2007, however, the total surface area of small holder schemes was over 23km<sup>2</sup>. The increase in population especially at the camps is not matched by the provision of housing infrastructure to the population. Congestion at the camps is due to the influx of people into the plantations in search for job opportunities. This worsening situation can be exemplified by the nature of room density (Table 2) for Lobe Estate and Lipenja. This problem is compounded by the fact that the existing structures are not maintained, and the number of persons per household is not restricted. As more and more people congregate in the camps to live and work with their loved ones, in already crowded households, all the ills of congestion increase. Based on field studies, it was observed that most of the camps register very high room densities which go up to 7 persons occupying single rooms which generally have small surface areas reckoning that they were constructed way back in the 1930s or thereabout under German Colonial Rule.



**Table 1 & Fig. 2 Population Trends in Ekondo-Titi Sub-Division**

**Table 2: Room Densities in Some Pamol Camps in Ekondo Titi**

<i>Camps</i>	<i>Average N<sup>o</sup>. of Room(s)</i>	<i>N<sup>o</sup>. of persons</i>	<i>Room Density</i>
<b>Lobe Estate</b>			
Camp 1	1	6	1:6
Camp 3	1	6	1:6
Camp 4	2	9	1:5
Camp 5	2	9	1:5
Camp 6	2	9	1:5
Camp 7	2	9	1:5
Staff Quarters	3	8	1:4
Jungle village	2	7	1:4
Management Quarters	5	5	1:1
<b>Lipenja</b>			
* Camp 1	2	8	1:4
* Camp 3	2	7	1:4
* Camp 2	1	7	1:7
<b>* Camp 4</b>	1	7	1:7

**Source: Field Estimates, 2013**

The present day Pamol Plantation Plc are, therefore, plantations left behind by the Germans. After the ousting of the Germans from Cameroon, these plantations were later on bought by Pamol Limited from the Custodians of Enemy property after the First World War during an open sale in London (*Place de Londres*) and later on handed to United Africa Company Limited and Lever's Nigeria Plantations Limited. Pamol was established by the Unilever, a British multinational company with head quarters in London in 1927. From the history of the plantations, it is obvious that the structures present in the camps today are truly outmoded and do not serve the contemporary needs of the plantation workers. In fact, only the Management Quarters which harbour the top cadres have acceptable levels of room density (Table 2). This has a serious effect on the sanitary conditions of the population and even on the level of moral decadence in these camps. Perhaps, it is necessary to draw inspiration at this juncture from the ideas of the renowned Cameroonian Writer, Peter Nsanda Eba in his book titled "The Good Foot" who painted a picture of the poor social and environmental conditions of plantations in the following words "life in the plantation is characterised by high moral decadence ... children learn, see and do things they were not supposed to see or do...". The problem even becomes onerous because most of these structures are fast deteriorating and are seldomly maintained (Figures 3 and 4).



**Fig.3 Dilapidated structures in Camp 1, Lipenja constructed way back in the 1930s**

**Fig. 4 Poor toilet facilities at the Lobe Estate Camp: A possible medium for the proliferation of diseases**

The poor living conditions are further exemplified by the poor toilet conditions which characterise most of these camps. Very few toilets exist in these camps to serve the high population numbers. In fact, toilet densities are generally high in most of these camps. In Camp 6 (Lobe Estate) for instance, up to 108 persons access a single toilet on a daily basis. What a high degree of filth!

**Table 3: Toilet Densities in Some Pamol Camps in Ekondo Titi**

<i>Camps</i>	<i>Estimated Population</i>	<i>No. of Toilets</i>	<i>Toilet Density</i>
<b>Lobe Estate</b>			
Camp 1	210	5	1:42
Camp 3	210	10	1:21
Camp 4	540	15	1:36
Camp 5	540	10	1:54
Camp 6	540	5	1:108
Camp 7	747	18	1:42
Staff Quarters	248	13	1:19
Jungle village	147	21	1:7
Management Quarters	80	48	1:2
<b>Lipenja</b>			
* Camp 1	747	10	1:75
* Camp 3	747	10	1:75
* Camp 2	210	8	1:26
<b>* Camp 4</b>	210	9	1:23

**Source: Field Estimates**

These toilets suffer from the tragedy of public commons since they are seldomly cleaned by the numerous families that access them. The toilets are poorly maintained and in most cases, lines of faeces are found on the roads leading to these toilets. This accounts for the prevalence of a number of diseases which are linked to poor sanitation. Added to this, are



prostitution, juvenile delinquency and other social ills which confer on these camps the awful reputation of “a population in transit”. A disease ridden environment is therefore rife. It is therefore no wonder that such hotbeds for diseases justify the anomalously high cases of reported diseases in the area (Table 4).

As a well-intentioned working rubric, Article 85 of the International Labour Organizations (ILO) of Plantations Convention of 1958 stipulates that there is need for the provision of adequate housing accommodation for plantation workers. It goes on to state that the minimum standards of such accommodation shall be laid down by the appropriate public authority and shall include specifications with regard to the construction materials to be used, the minimum size, the layout, ventilation, floor and air space, veranda space, as well as cooking, washing, storage, water supply and sanitary facilities. From the situation observed in the Pamol Camps, there is a gross neglect of the environmental and sanitary conditions within these camps. The, the expected facilities remain as mere paper work with no value at all. This is a drama and an irony that those who generate the wealth of the plantation economy overtly have nothing to show for it.

**Table 4: Some Common Diseases in Ekondo-Titi Due to Poor sanitation**

<i>Disease</i>	<i>Average Yearly Cases Reported</i>	<i>Possible Causes</i>
Malaria	250	Dirty environments which breed mosquitoes especially in plantations closer to houses
Typhoid	199	Water contamination and pollution and exposure of food to flies which are common here especially from the waste bunch stalks and from faeces.
Cholera	185	Water and food contamination, wanton disposal of faeces in exposed toilets. Flies are the possible vectors of transmission
Dysentery	199	Water and food contamination, wanton disposal of faeces in exposed toilets. Flies are the possible vectors of transmission
Worms (Ascaris)	89	Stray animals eat faeces which have not been properly disposed and they contain worms.
<b>Skin Rashes and eczema</b>	91	Exposure to harsh and dirty conditions of the oil mills and soap factory

**Source: Culled from Pamol Lobe Estate Health Centre Reports (2007)**

The introduction of Pamol Plantation in this area led to pressure on land which is available for subsistence farming especially in Ekondo-Titi Urban, Lobe Estate, Bogongo I and II, Lipenja and Lobe Town. Land is mainly available in the Balue villages which are far off and are mostly enclaved. This resulted in a reduction in food crop output (Sub-Divisional Delegation of Agriculture, Ekondo-Titi 2006 Annual Report). The increasing importance attached to cash crops over the years has led to the virtual neglect of food crop production such that it is already under threat in this area. Since plantations have been established close to homes and there is no further room for expansion, subsistence farmers need to go for long distances before they can obtain cultivable land for food cropping. This definitely means a reduction in the hours spent to farm as much time is dedicated for covering such long distances. As the years go by, so too has there been an increase in the distances covered to cultivate food crops (Table 5). With the poor road network for many of

these villages, the transportation of food from enclaved farmlands to centres of population concentration also constitute another herculean problem. Head-loading of food crops for 3-6kms is a difficult job for the spent farmer in terms of energy resources.

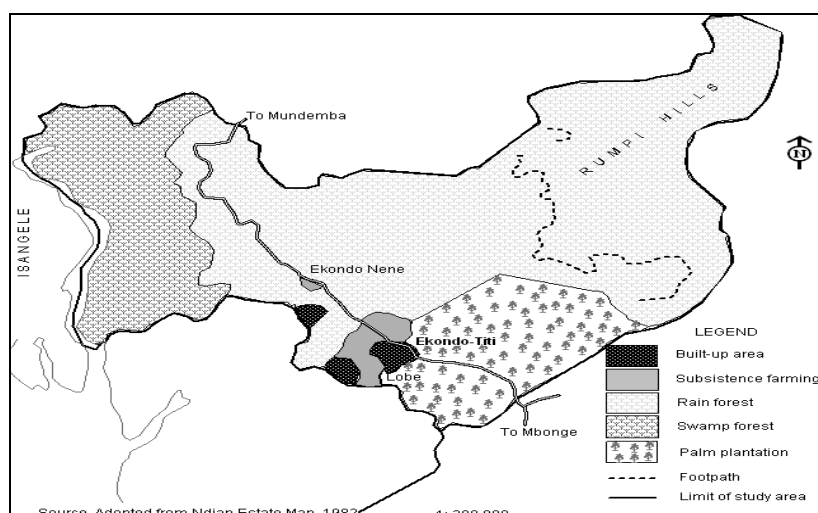
**Table 5: Trend in Average Distances Covered to Farm in Ekondo Titi (1970-2013)**

<i>Year</i>	<i>Average Distance</i>	<i>Observation</i>
1970	> 1 km	Manageable distance
1980s	1.5-2km	Moderate distance
1990s	3-4km	Far and exhausting
<b>2013</b>	6km	Too far, too difficult and tends to discourage the farming population

**Source: Field Survey, 2013**

With the opening up of the forest for plantations, the land is being farmed for the first three to four years with food crop along side the palms. As from the fifth year, the plantation dominates and phases out food crop. This gradual and systematic process has led to an increase in the prices of food stuffs at the local market, let alone the long distances over which the food is transported into the village markets. Food stuffs could be obtained from the Balue areas, but because the area is enclaved, transportation is difficult.

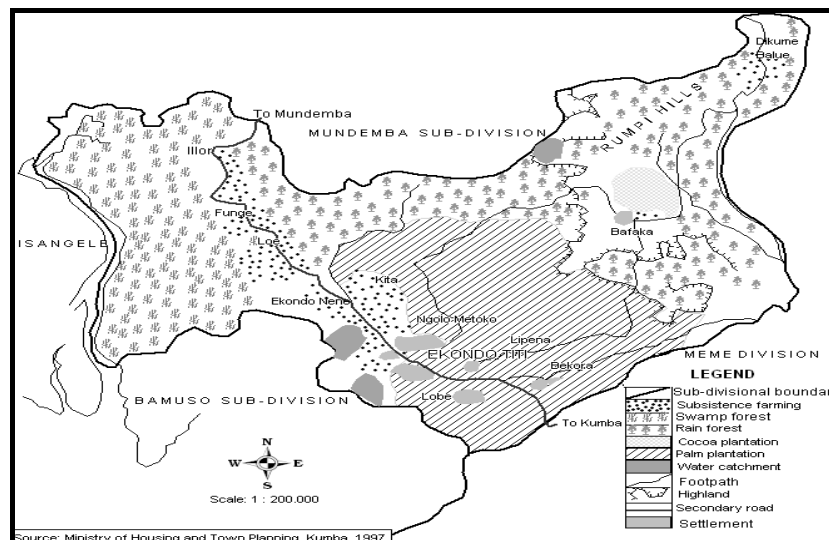
The consistent encroachment of oil palm plantations into natural forests and areas of land for subsistence cropping has not only constricted urban sprawl, but has reduced the possibilities for increments in food crop production. The shares of small holder plantations have been increasing tremendously and this too has compromised the possibilities for the growth of Ekondo-Titi. In 1968, for instance, the total surface area occupied by small holder schemes in oil palm production was 141 acres. This surface area increased to 2737 hectares by 2005, and by 2007, it had increased to over 3800 hectares. In the same vein, Pamol plantation is developing a 3000ha plantation in Ekondo Nene. The evolution of land uses within Ekondo-Titi from 1960 to 2010 (Fig. 5, 6 and 7) bears eloquent testimony to the issue of land deprivation and urban constriction due to extensive oil palm plantation development.



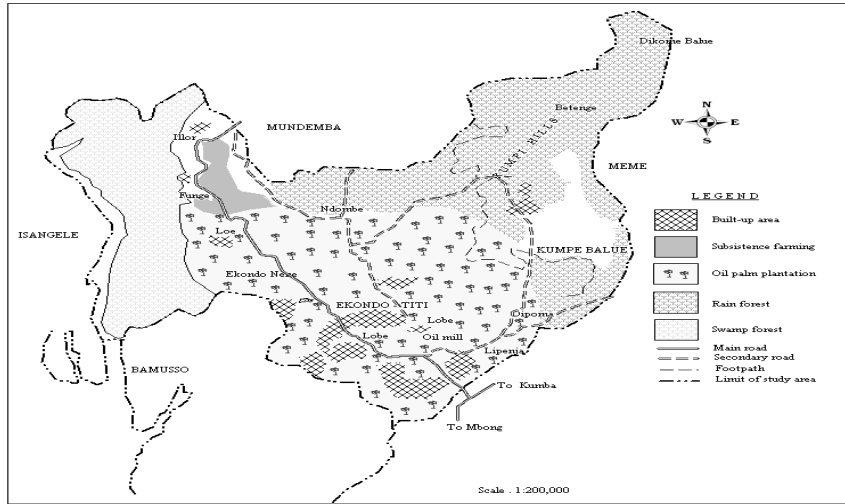
**Fig 5: Land Use Map of Ekondo-Titi as at 1960 (Kimengsi, 2008)**

The environmental impacts of this company were also identified as the study reveals that Pamol and other small holder plantations stand today as a cause of the environmental malaise witnessed within this area. This is seen in the light of deforestation which has an impact on biodiversity and stream flow characteristics, with possible implication on rainfall amounts and pollution. On a daily basis, forests are cleared for oil palm plantations. As noted by Etongo (2007), *“the water resources in Ekondo-Titi are shrinking due to the destruction of watersheds and catchments areas. This deforestation has led to a reduction in stream flow with some perennial streams becoming seasonal. This has been caused mainly by deforestation, triggered by population increase and the demand for land for mainly plantation agriculture and other land uses”*

The establishment of Pamol Plantation has also ushered in the problem of pollution in all its ramifications - air, land, water and noise. Pollution does not only come from the Pamol oil mill effluents and that of the soap factory (caustic soda and phenolphthalein) but also from the over 300 local oil mills which contribute their own quota in environmental despoliation following their haphazard disposal of their sludge in the neighbourhoods. Figure 8 shows the pollution of the River Kokorongne by the Pamol oil mill and soap factory. The pollution of this stream is noticeable even without physico-chemical and bacteriological analysis.



**Fig. 6 Land Use Map of Ekondo-Titi (1975) (Kimengsi, 2008)**



**Fig. 7 Land Use Map of Ekondo-Titi 2010 (Adapted from Kimengsi, 2008)**

Corroborating the above observation, Stoker and Spencer (1976) noted that;

*“water pollution is obvious even to the most casual observer. Drinking water tastes bad; masses of aquatic weeds are growing unchecked in many bodies of water; ocean beaches, rivers and lakes emit disgusting odour, game and commercial fish are decreasing in numbers and oil can be seen floating on the surface of some bodies of water or deposited as scum on beaches. The diversity of these signs and effects indicates the complexity of the problem.”*



**Fig.8 Effluents from the Pamol Oil Mill and Soap Factory  
Pollute River Kokorong in Lobe Estate (May, 2008)**

## **DISCUSSION AND RECOMMENDATIONS**

The presence of Pamol Plantation and other small holder schemes and peasant plantations, now act as barriers to settlement expansion especially in villages like Ekondo-Titi Urban, Lobe Estate, Bogongo I and Bogongo II thereby producing the plantation belt effect which limits the outward growth of homes and settlements as they are all helmed in by the plantations. At the same time, the population is increasing as more and more people are streaming into this Sub-Division. The implication is that more land or space will be needed for housing infrastructure and to accommodate other

functions to cater for the increasing population. The population, it should be noted, has nearly tripled between 1976 and 2010 (Table 1).

Since it is impossible to stop in-migration into the sub-division, it is necessary to recommend the introduction of other functions which demand very little space. But the profitability of such urban functions may not be possible in Ekondo-Titi where the perennial problem of poor transport network prevails. It would seem that vertical expansion as a space management technique would only be feasible with the introduction of more lucrative urban functions which could fetch the required income. Also, real estate investors could only think of venturing their investment in Ekondo-Titi with the advent of a good transport network since they will have a guaranteed market.

As a way forward to solving the congestion problem, Pamol Plantation and other Small Holder Schemes can cede their land to the inhabitants for expansion as in the case of the CDC in Fako Division of Cameroon. It will however be a bitter pill to swallow for this company which intends to make huge profits by expanding plantations. The same applies for Small Holder Schemes. Could the creation of satellite settlements resolve this problem of congestion? While they could provide the much needed solutions in the short run, they also face the problem of transportation given their obvious enclaved status. Furthermore, the space problem remains unresolved.

The presence of Pamol Plantation led to a massive deforestation and an influx of people into this Sub-Division. This has changed the landscape as its functions have increased over the years. The present rate of growth shows that functions have not been well planned by the authorities that be. People use land based on their profit oriented motives without looking at the implications on the environment and its aesthetics and the general layout of the town. Good enough, the town is still at its early stages of growth; therefore, a good plan of the town can be designed so that it grows in an orderly manner. The problem of expansion of settlements to accommodate the growing population and a looming food crisis deserves current attention. Although they are not yet alarming, the situation in the long term could worsen if proper planning measures are not implemented today.

The tarring of the Kumba-Ekondo Titi-Mundemba road which, for now, is a nightmare could provide another solution to this problem. Such roads will help to usher in other services and income generating activities which may not demand vast open lands like plantations do. A good transport network will not only disenclave the Balue villages but will also guarantee future food sufficiency. At the same time, it will divert the minds of the population which, for now, have been predominantly based on investments in the oil palm industry.

With the present rate of deforestation, forest reserves should be carved out in this area and clearly stated as protected areas. At the same time, the government and local authorities should ensure that they offer employment to the local population to make them act as protectors of the land. By making provisions for alternative sources of livelihood to the local population, possible encroachment by the population into these protected areas would be avoided.

Ekondo Titi in Ndian Division is rich in natural forest reserves which could be used in carbon negotiations. This is in connection with the global call today for conservation compensation as encouragement for protecting tropical forests which are major carbon sinks in the world and whose contribution to reducing the accumulation of green house gases

(GHGs) and mitigating climate change is enormous. If we are to go by the estimations of Adger, Brown, Cervigni & Moran (1995), the economic value of a virgin tropical rainforest in carbon sequestration is 100US Dollars/ha/year. Considering that Ndian Division has enormous natural forest potentials, it could generate some income from this negotiation which could be used in the provision of basic life sustaining services and conserve their forests. The introduction of these services which will demand little space will curb the rate of over-reliance on oil palm cultivation (space demanding) as a panacea to their poverty problems. It is therefore recommended that feasibility studies should be carried out to ascertain the sequestration potentials of these forests so as to grab this opportunity wherever this theoretical concept comes to be implemented.

Worthy of note is the fact that the plantation is increasing avenues for employment such as the Soap factory, but seems to sweep under the carpet, the need to provide quality housing for these workers. Since the Pamol Camps are the hardest hit, it would be necessary to expand the available living quarters to make provisions for the teaming population. Since the creation of living quarters some four decades ago with a relatively low population than today, little infrastructural expansion has been done to catch up with the population growth. Workers who were employed some decades ago and lived in single rooms have raised families in the same single rooms and this accounts for the poor sanitary conditions. Pamol should embark on housing expansion so as to decongest the areas with very high room densities. There is a need for standard housing development to accommodate the increasing population. Real estate investors should be encouraged to construct better houses for the population. But this can only be possible if the road network from Kumba improves. Once the main artery and periphery are disconnected, the other looming problems follow logically. In the long term, it is necessary for the company to expand her housing infrastructures.

Also, toilets that existed in the past took care of the relatively few number of persons at the camps. Today, the population has increased and the same structures are there to cater for the needs of this population. So, it is necessary for Pamol to set aside a budget for real estate expansion to accommodate the increasing population of her workers and the necessary infrastructures. Pamol should also expand the number of toilets and organise clean up campaigns as regularly as possible so as to improve on the health of her citizens. There should be a census on the housing conditions of her workers.

## **CONCLUSION**

When discussions on the population problem arise, they are mostly alluded to urban areas which have witnessed rapid and uncontrolled growth. However, the case of Ekondo-Titi, a rural milieu needs to be given some attention since the signatures of deteriorating living conditions especially in the camps are no longer obscured even to a casual observer. Facilities in most plantations appear to be in need of repairs and upgrading to improve the living standards of its workers. Some houses actually require replacement. Workers in some estates are housed in quarters with toilet facilities or pit latrines shared by several families (Fashoyin, Herbert & Pinoargote, 2003). Workers complain of poor or non-existent sanitation made worse by the congestion in the living quarters. These problems go contrary to the tenets of sustainable development which emphasizes on equity and the need for developmental benefits to be enjoyed by present and future generations. As the problems arising from this issue have been diagnosed, it is hoped that should the necessary steps be taken to effectively implement the laid down recommendations, then this impending catastrophe will be averted. Such problems draw our attention to the need for proper long term planning taking into consideration all these probable scenarios and impacts of development projects.

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