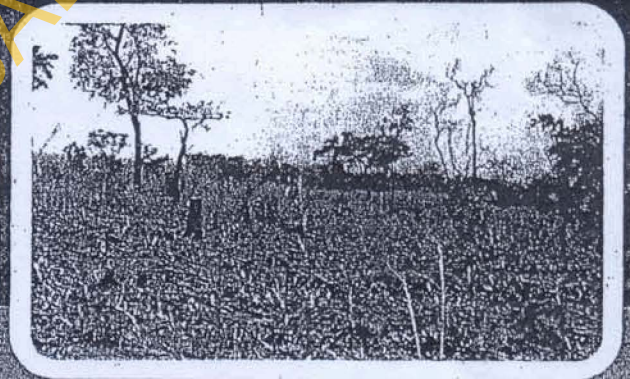




DE-RESERVATION, ENCROACHMENT AND DEFORESTATION: IMPLICATIONS FOR THE FUTURE OF NIGERIAN FOREST ESTATE AND CARBON EMISSION REDUCTION



Editors:

J.C. ONYEKWELU, B.O. AGBEJA, V.A.J. ADEKUNLE,
G.A. LAMEED, R.O. ADESOYE & A.O. OMOLE

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IN FORESTRY, FOREST PRODUCTS
AND NATURAL RESOURCES
MANAGEMENT**

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Challenges of sustaining Wood Industries and Raw Material supply in Nigerian Depressed Economy



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Abstract

Engineering drives social, economic and human development and underpins our knowledge of society and infrastructures. It is a major factor in innovation and in the rise and fall of civilization. The challenge of sustaining wood industries and the supply of wood as raw material in Nigeria at this era of economic depression is considered an engineering challenge. It is believed that engineers are specifically trained to defy challenges in order to attain a set goal. Hence, this paper is devoted to reviewing impact of economic depression on wood supply to Nigerian wood sector and accompanying challenges to engineers. The way out was enumerated to include the development of alternative raw material from array of Non-Timber Forest Products (NTFPs) to complement wood supply, development of capacity for local fabrication of wood working machines and continue research on means of developing local methodologies and engineers are to also re-focused to adapt and domesticate modern technologies. If our nation can properly harness its resources and engineering, we would certainly be able to stay afloat of the present troubled economy.

Keywords: Wood industries, Raw material supply, Engineering challenges, Economic Depression, Nigeria

Introduction

Engineering, as a human endeavour plays critical roles in addressing the large-scale pressing challenges facing the societies worldwide. Such large-scale challenges, according to UNESCO (2010) report include access to affordable health care; tackling the coupled issues of energy, transportation and climate change; providing more equitable access to information for our populations; clean drinking water; natural and man-made disaster mitigation, environmental protection and natural resource management, among numerous others. Hence, the practice of engineering naturally goes with challenges and engineers are particularly trained to handle these challenges no matter the nature, magnitude or source to ensure that the set goal for a targeted development is achieved. The importance of engineering as a profession is thus immeasurable in making life meaningful and comfortable to mankind regardless of time and conditions. As such, the continue effort of Nigerian Society of Engineering (NSE) to mobilize the engineering community to become more effective in delivering real products and services of benefit to the society in a developing country like Nigeria and at this time of economic depression is a vitally important responsibility.

Nigeria's economy is still underdeveloped and depended on the existence of abundant resources. Nigeria has one of the greatest development potentials in Africa given the vastness of her resources (Adewole and Onilude, 2011). Despite these potentials, Nigeria is still among the poorest countries of the world with her economy mired by multiple difficulties. The undisputable fact about Nigeria's economy is that the post-colonial governments were bedeviled with corruption and mismanagement thereby preventing the channeling of the country's abundant returns from crude oil, into lasting improvement in infrastructure and the construction of a sound base for self-sustaining economic development. The resultant effect is that Nigeria is as at now poorer than it was at her independence in 1960 (Anon, 2012).

Forests in Nigeria are being depleted at an alarming rate and only a mere 5% is reported to be left as at 2002 due to uncontrolled logging and conversion to round pole and lumber (Popoola, 2006). The engineers in the wood sector are currently facing problems occasioned by shortage of supply of wood raw material and the effect of economic depression. The big challenge now is how to sustain the wood industrial sector and consistent main raw material supply. The aim of this paper is to review and suggest solution to the challenges facing engineering practices and engineers in the Nigerian wood sector.

Economic Crisis from Global and Nigerian Perspectives

The impact of the global meltdown on the economy of the developing nations is more pronounced. Aniekan (2011) reported that the global meltdown was a product of combination of specifically Western problems and wider weaknesses in the world economy. Its effects thus have Western twists, international and national repercussions. Though few economies were buffered from the depression, it worsened an already bleak economic picture for the rest of the world. Western markets could absorb fewer commodity imports as production fell and incomes dwindled. And this forced the prices and earnings of the nations producing foods and raw materials to drop.

Nigeria's economy is not also spared from the depression, though the country's economic depression was not pronounced until late 1970's. The depression has been characterized by rapid investment recession accompanied with quick fall in industrial production, starting from the industries that produced capital goods and extending quickly to consumer products fields. The depression appears to be more of course than mere economic event in that it reaches into countless lives, creating hardship, tension and loss of earnings. The economy depended largely on imported capital and manufacture goods and Nigerian market was dominated by foreign firms such as the UAC, John Holt among others with its underdeveloped infrastructures bears the heavy legacy of its colonial past (Olukotun, 1992; Aniekan, 2011).

The need has arisen to develop indigenous capacity to explore the blessing of natures in our environment in combination with abundant human resources in various disciplines, particularly engineering fields, to mitigate the fall out of the this country's economic crisis. For any nation to stay afloat of the present troubled economy, it has to properly harness its resources and Engineering.

Overview of Nigerian Forest Resources and Wood Supply

Nigeria's forest is divided into two main categories namely the high forest in the south and the savanna woodlands in the north. The savannah, which is about four-fifths of the country's forest area supplies mainly fuel wood and poles while the high forest (i.e. the rainforest) supplies almost all domestic timber and lumber. Colonial government in Nigeria at the late end of the 1800s was reported to have begun establishment of forest reserves (Aruofor, 2000; C.B.N., 2001). The reserves had grown to 93,420 square kilometers as at 1970. Forest regeneration in the late 1950s was largely by natural reseeding and the government established some plantations in locations like Olokemeji, shasha etc.. The campaign by government in 1960 for development of forest plantations yielded result with planting of fast-growing exotic species such as Teak and Gmelina by the State governments to supply timber, pulp, poles, and fuel wood. Despite this development, forestry's share of Nigeria's expanding GDP declined from 6% in the late 1950s to 2% in the late 1970s and 1980s (C.B.N., 2001). The earnings from the export of timber and wood products declined from 6% (of export income) in 1960 to 1% in 1970 and reduced nothing in the late 1970s and 1980s due to increase in domestic needs (C.B.N., 2001).

Nigerian forest has since been experiencing increasing pressure on wood supply due to the progressive increase in the domestic need occasioned by growing population. The growing population would not have been of concern if there are enough wood to go around. Depletion of important resources like wood often brings along with it poverty, disease, malnutrition and often death (Aruofor, 2000). Indeed, the importance of tree was captured by Lucas (2000) that treeless era will result into a lifeless era. Impoverished people are usually forced to destroy their environment in order to survive. Sustainability is the practice of conservation that will allow people to have enough resources through their life and the lives of future generations. Sustainability of wood supply would therefore be possible by conserving tree using all means possible including our engineering prowess so that there is enough to go around.

Characteristics of Nigerian Wood Industries

Available evidence from Federal Department of Forestry (FDF) indicated that the number of wood based industries in Nigeria is generally on the increase except that the number of sawmill industry has declined. As at 1993, the General Wood and Veneer Consultant Ltd, Canada who was employed by the Federal Department of Forestry to carry out some studies on the wood based industries revealed that there were altogether 1715 wood industries in Nigeria consisting of 1700 sawmills, 8 plymills, 4 particle board mills and 3 paper mills. But a report of the survey by Beak Constants Ltd in collaboration with Geomatics International Canada also employed by the FDF in 1997 revealed that the number of wood based industry had declined from the level of 1715 in 1993 to 1373. These comprised of 1349 sawmills, 10 Plymills, 4 Particleboard mills, 3 Paper mills and 7 Match and splints factories (FDF, 2000).

Although Nigerian wood industry is characterized with formal and informal sectors, the report captured all sawmills be it small, medium and large scale. The formal wood sector actually comprised of few integrated mills like African Timber and Plywood, Sapele, Piedmont at Ologbo, Premier Timber Industry Akure, Seromwood Industry, Calabar, Iyayi Brothers, Benin City, Omo woods, Ogun State, KP Joinery and Furniture Company, Ibadan, WOODCO, Ikeja, EPESOK, Ikeja and others. The major wood processing industries in Nigeria are typically large capacity facilities such as large sawmills, plywood mill,

pulp and paper plants, waste paper recycling plants and others. Most of these companies have depreciated and are suffering from obsolescence with major problem being lack of spare parts for the equipment that are averagely 50 years of age. While some of these companies are no more in existence those in existence are running below real capacity. The informal sector include the chainsaw operators, roadside carpenter, sole enterprise sawmills, saw doctors, wood machinery repair outlets other service producer.

Though the number of sawmills decreased, production has not decreased commensurately. This is because even though wood industries are finding it increasingly difficult to obtain desirable sizes of popular tree species, like *Mansonia*, *Iroko* and *Mahogany* from Nigerian forests, they have been forced to expand the range of exploited species to species which hitherto were regarded as uneconomic. Also the chainsaw had found relevance in lumbering activities with its attendant material wastage and risks. It is common in emerging areas in Ibadan, for instance to, find chainsaw operator converting trees on land to be developed in hitherto villages into lumber for in situ use. All these are activities that results from wood supply shortage and escalating cost of the mostly immature wood available in our plank market.

Effects of Depressed Economy and Wood Supply Shortage on Wood Industries

The oil boom of the 1970s slowed down exports because most of the wood from our forests was diverted to domestic construction industries. The uncontrolled commercial exploitation to satisfy local demand for wood further shrunk wood supply. Although privately owned forests emerged in the late nineteenth century; the local demand for commercial wood products (excluding pulp and paper) threatened to exhaust reserves before the year 2000. In 1980, the Structural Adjustment Programme (SAP) prescribed by the World Bank to address economic recession in developing countries impact negatively on wood sector in that the cost of major forest operation equipment rises to about 2000% (World Bank, 1992; Aniekan, 2011).

The impact becomes serious to the extent that many wood industries have to be closed down or left with unserviceable or depreciating production plants and equipment. This no doubt affects the technical, financial efficiency and cost recovery of the existing wood industries. The industries operations were significantly affected in such a way that the capacity utilization was reportedly dropped to 30% (Popoola, 2010). The familiar economic wood species like *Apa*, *Omo*, *Opepe*, *Iroko* among others have become scarce while large girth log is almost unavailable. The stock is largely dominated by small girth and immature logs that will almost certainly poses problem to the end users (engineers) if new means of containing the inherent limitations are not fashioned out.

Existing sawmills for instance, are designed to handle large diameter logs, the small girth logs will certainly be converted with low recovery except better method is developed. The informal sector of wood industry is growing despite these but most of their activities are inimical to economic growth. For instance, despite the ban on chainsaw milling because the operation is out rightly banned in many States in Nigeria because of several reasons part of which are high levels of waste associated with it due to inappropriate working practices and the type machinery. The low capital investment and availability of abundant rural labour has made it become the most common method of lumber production for the local market. All these has made formal sector of the wood industry un-attractive to investor and this could lead to the joblessness of engineers if nothing is done.

WAY OUT OF THE CHALLENGES IN WOOD SECTOR

Some of the suggested ways out of these problems will include:

- (i) The development of alternate non-wood forest products like bamboo, rattan among others to compliment wood as main raw material in our wood industries. This will entails the involvement of Nigerian engineers in retraining that is targeted at adapting and domesticating modern technologies as currently used in nations like India and China to mitigate the shortage of wood raw material supply to Nigerian wood sector.
- (ii) The development of capacity for designing and fabricating efficient wood working machineries and parts locally to serve new and existing wood industries.
- (iii) The development of local methods to optimize the use of the available wood and waste generated from it.
- (iv) Develop more products locally from wood and NTFPs and their wastes that can be produced even at cottage level via research to expand the number of wood based industry in the country.
- (v) The State government should be encouraged to revisit their forest policies to accommodate informal sector so as to contribute their quota to the economic development

Conclusion

In conclusion, this paper is optimistic that if the suggested way out can be considered as mandate by the relevant stakeholders in the wood sector, their collaboration will bring the more desired end to the current problems facing the sector.

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