

# Fuel Wood Consumption and Environmental Degradation in Nigeria

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## Abstract

*The incidence of environmental degradation in Nigeria is becoming alarming due to increasing level of environmental abuse or unwise and careless exploitation of environmental resource such as fuel wood. Greater proportion of both urban and rural dwellers in Nigeria now depends on the fuel wood as a source for energy for their domestic and other commercial uses. This action is progressively degrading the environment weakening its capacity for self renewal and eroding its ability to play effectively its ecological roles. This paper therefore, highlights the degrading effects of fuel wood consumption on the environment, examining the major economic issues that sustain over dependence on fuel wood consumption. Practicable measures capable of reversing the ugly trends are suggested. Very importantly, the paper recognized poverty and unemployment a major factor that continue to fire – up the massive utilization of fuel wood in the country and calls for an urgent measure to reduce poverty and raise the purchasing power of the people.*

**Keywords:** *Fuel wood, Environmental Degradation, Poverty, Affordable and Sustainable Alternatives Energy*

## Introduction

The alarming rate of fuel wood consumption in Nigeria is becoming a serious threat to the sustainability of the

environment. The multiplier effects of population explosion in Nigeria are being felt in every aspect of human endeavour. As stated by Audu (2013), an ever increasing population growth in Nigeria is attributed among other things to a major breakthrough in medicine which has eradicated nearly all the child killer diseases. Consequent on this, world population has been growing alarmingly especially in developing countries like Nigeria. Nigeria, with an estimated population of about 170 million people that have half of this number residing in the rural areas make over dependence on fuel wood consumption inevitable, Moghali,( 2013). This assertion was corroborated by Edmund and John (2014) when he declared that population increase is usually associated with increasing demand for resources most importantly fuel wood otherwise known as fire wood. The rampant and indiscriminate cutting down of trees to provide fuel wood according to Akpan, Wakili and Akosim (2007) appears to be posing a serious threat to the very survival of mankind.

This ugly trend is culminating into the alarming rate of environmental degradation which is threatening the survival of the entire ecosystem. Nigerian today, presents a grim litany of environmental woes across the length and breadth of the country. This ugly scenario according to him is attributed to unwise and careless exploitation of environmental resource most importantly the incessant cutting down of trees for fuel wood. Fuel wood consumption in recent past, used to be a rural habit which they used for day to day domestic activities with very little threat to the environment. However, as rightly pointed out by Edmund and John (2014) today urban dwellers use fuel wood more than the rural dwellers. Its usage has gone beyond domestic to a large industrial or commercial engagement. The availability of large and ever increasing demand for fuel wood in the cities has become a strong motivation, wood is now being harvested in large quantities from rural areas and transported massively to urban areas for economic gains. Nigerian environment from the North to South is being degraded at a threatening rate, and the capacity of the environment and vegetal resource to continue playing its

role in ensuring the ecological balance and harmony is continuously being eroded.

Developing countries such as Nigeria is experiencing untold environmental degradation and ecological deterioration with little or no real solution to alleviate them. For instance, an obvious look at Nigerian environment manifests different types and proportion of environmental degradation as exemplified by persistent problems of land and soil degradation, deforestation, desert encroachment and desertification and reduced bio diversity (NERDC, 1992). As stressed by Sambo, (2005), the annual deforestation of wood land in northern Nigeria runs in to 92,000 hectares while the country consumes about 80 millions cubic metres (4.3 x 10.9 ) kg. of wood annually. This is alarming and its devastating effects on the ecosystem can best be imagined.

The most disheartening concern is that while exploitation and extraction of trees, (wood) for fuel is alarmingly growing there is little or no serious sustainable measure to motivate and inculcating the culture of tree planting as well as other environmental friendly ethics among the people. Sadly to state that, past tree planting campaigns by various

governments have not yielded any remarkable results due to lack of political will and seriousness to make it work and sustainable. The reality is that, most of the trees planting with fanfare dried up within weeks and the few that struggled to survive has being cut down for firewood. Sambo (2005) emphasised that Nigeria has an estimated forest and woodland resources of 11 million hectares and produces about 110,000 tonnes of fuel wood per day. while Nigeria's forest areas according to him, are less than 10 percent, the fuel wood utilization in the country (12,000) tonnes / day ) surpasses its production making it the only energy source in the country where utilisation surpasses production. Today, increasing demand for fuel wood is putting pressure on the environment, the era of looking for dead and dried woods is gone, fresh and living trees are deliberately cut down indiscriminately left to dry for onward transportation to urban centres.

The obvious consequences of this are loss of vegetation, destruction of arable farmlands, declining soil fertility, increasing rate of soil and wind erosion as well as rising occurrences of other environmental tragedies. It becomes imperative to state that, for the Nigerian

economy to sustainably comes out of the 'wood' all hands must work together to come up with a synergized approach that will keep as many Nigerians as possible away from fire wood consumption as a preferred source of domestic energy for cooking and other commercial activities. Developing and promoting an alternative source of domestic energy readily available and affordable to greater proportion of Nigerians must be vigorously pursued. To this end, this paper intends to highlight the degrading effects of fuel wood overdependence on the environment and also examining the major economic issues that sustain an ever increasing demand for fuel wood in Nigeria and suggests practicable measures capable of reversing this ugly trend.

### **Environment and Environmental Degradation**

The dictionary of environment is the sum total of all external conditions which may act upon an organism or community to influence its development or existence. As noted by Odufuwa (2005) from time immemorial, the overall process of development is central to the supporting system for human existence and survival; as well a provider of physical milieu and raw materials required for socio- economic

progress. National Conservation and Environmental Protection Act (1987) considered environment the physical factors of the surrounding of human beings, land, soil, water, atmosphere, climate, sound, odour, taste and the biological factors of animals and plants. Lakpini (2011) regards environment as the totality of the surrounding conditions or all the factors on an organism surrounding which encompass physical conditions of the place an organism lives in, the food it feeds on, the likely diseases it may be afflicted by and the organisms that prey on it. Essentially, environment is usually perceived to consist of the forces and conditions or circumstances that surround and influence living and non-living things (Onubi 2014). It therefore entails the natural habitat of man with social components within which various kinds of activities and processes occur.

On the other hand environmental degradation is the deterioration of the environment through depletion of resources such as air, water and soil, the deterioration of ecosystem and the extinction of wildlife. Strategy for Disasters Reduction (2004) describes environmental degradation as the reduction of the capacity of the environment to meet

social and ecological objectives and needs. It is the deterioration of the environment through human activities resulting in the depletion of resources, contamination of air, water and soil, deterioration of the ecosystem and the extinction of flora and fauna, Ishmael and Rosemary (2015). Degraded environment is attributing to the abuse or unwise use of environmental resource by man. This implies a gradual and progressive reduction in environmental quality to the extent that its capacity for self renewal is declining and its ability to meet the needs of the now is restrained and that of the future need is not assured.

With reference to Nigeria, environmental degradation as stated by Eyolade, (2010) is hinged upon human inability or refusal to use the existing vast resources of nature in a wise manner for the benefit of the present and future generation. The issue of environmental degradation as stressed by Onubi (2014) is of great concern globally and most especially in the developing nations such as Nigeria where the pursuit of environmental sustainability has been problematic due to rising level of poverty, population growth and drive for economic growth and development. Environmental

degradation has become one of the most threatening environmental issue that requires a well coordinated action that will give birth to a workable and sustainable approach that will protect our environment and enhancing its capacity to play its ecological roles. A struggling economy such as Nigeria could not afford to treat issues that weakening the potential capacity of its environment with levity. Over dependence on fuel wood has become a central factor that advances environmental degradation in most developing regions such as Nigeria. The three major damaging effects of environmental degradation due to over dependence on fuel wood could be summarised as follow; it harms human health, retards economic productivity and causes loss of life sustaining amenities. This succinctly explained why all hands must be on deck, working together to check mate this canker worm that is ravaging our environment before it is too late.

### **Economic Issues that Perpetuate Consumption of Fuel Wood in Nigeria**

Fuel wood is a renewable form of energy that has continued to be the dominant energy option for most people in the developing countries such as Nigeria (Ali and Richard 2014). Results from recent studies on Nigerian fuel wood situation suggest that the population has been moving back to the use of fuel wood in recent times. For instance, a study conducted on Bauchi by Akpan, Wakili and Akosim (2007) shows that 98 percent of the respondents depend on the traditional fuel such as fuel wood for energy product in one way or the other. Corroborating this view, Momodu (2013) underscore an increase in the level of production and utilization of fuel wood for domestic and industrial purposes. The energy data base presented by U.N.O. (2006) affirmed an ever increasing demand for fuel wood in Nigeria.

**Table 1: Fuel Wood Consumption Pattern in Nigeria (Thousand Cubic Metres)**

Year	Total Production	Household Consumption	Percentage of Total Production	Industrial Consumption
1997	152,453	110194	72.3	31069
1998	156,500	113134	72.3	31897
1999	156,516	113145	72.3	31901
2000	160,272	115861	72.3	32666
2001	163,958	118526	72.3	33418
2002	167,973	121428	72.3	34236
2003	172,096	124410	72.3	35077
2004	175,854	127147	72.3	35848
2005	179,754	129944	72.3	36667
2006	185,357	133981	72.3	37789

**Source: Energy Statistics Database: United Nation Statistical Division (2008)**

The picture painted by table 1 is that of an ever increasing pattern of fuel wood consumption in the country. By implication, fuel wood consumption has become the predominant source of domestic cooking energy for the greater percentage of the populace. Besides, several other studies such as, Audu (2013), Olugbenga, Orimogunje and Janet (2015), Ishmael and Rose Mary (2015) among others established the fact that there is an ever increasing demand for fuel wood in Nigeria and that urban demands for this product is rising daily putting much pressure on the fragile environment. The frightening scenario is that most people

that have not been using fire wood before are turning to fuel wood utilisation. The paper therefore highlights the major economic issues that sustain an ever increasing consumption of fuel wood in Nigeria;

**The rising level of poverty-** Poverty in Nigeria has become a canker worm that is ravaging every fabric of the society with serious implications on the environmental sustainability. World Bank Report (2014) declared Nigeria as one of the country with the largest poor people in the world. Central Bank of Nigeria annual report and statement for the year ended as well as the

report from the National Bureau of Statistics confirmed the rising level of poverty in the country. Various reports from agencies and Non-Governmental Organisations reveal that more than half of Nigerian population is poor and have to depend largely on fuel wood to meet their domestic energy needs. With the economic recession biting harder and the level of poverty is alarmingly on the increase, demand for fuel wood is rising to the level that supply is finding difficult to meet. Poverty is a major promoter of environmental degradation in Nigeria, Gisilanbe (1997). This assertion was supported by Ali and Richard (2014) that increasing poverty has frequently been reported in both the developed and developing countries as a driving factor in the use of fuel wood.

**High rate of Unemployment** – Simply put, unemployment describes the condition of people who are without jobs. International Labour Organisation- ILO (2007) refers unemployment as the number of the economically active population who are without work but available for seeking work, including people who have lost their jobs and those who have voluntarily left work. Adebayo (1997) asserts that unemployment exists when the labour

force who wish to work but could not get job. Nigeria is currently experiencing the worsening trend of unemployment. Rising demand for fuel wood most especially among the urban dwellers has made fuel wood gathering a major source of employment opportunity to most of the unemployed youths. Poverty and unemployment remain a major factor sustaining an ever increasing exploitation of fuel wood in Nigeria. Interestingly, the two are intertwined, the moment one of them is tackled the other will respond favourable and pressure on fuel; wood will be greatly reduced.

Other factors are high cost and irregular supply of kerosene and cooking gas. As noted by Momodu (2013), energy for domestic purposes is determined by two major factors availability and affordability. As long as kerosene, cooking gas and other sources of energy remain scarce and not affordable, consumption of fuel wood will continue with its attendants adverse effects on the environment. A situation where kerosene is costlier than petrol and gas is not economically assessable to greater proportion of the populace that are financially handicapped makes fuel wood

the most preferred source of cooking energy.

### **The Way Forward**

The rampant and indiscriminate cutting down of trees to provide fuel wood is already posing a serious threat to the very survival of mankind. The quality of life of man is a function of the quality of his environment. Almost every sector of Nigeria is bleeding as a result of environmental degradation. The magnitude of this threat as presented by Akpan, Wakili and Akosim (2007) can be gauged by the alarming rate of environmental degradation and by the frenzied response of the International Community to the need for a sustained and coordinated action to reverse the ugly trend that is fast reaching the unbearable level. The obvious is that, Nigerian environment is bleeding and expressly crying for an urgent attention. The degraded environment could no longer meet the present need adequately and with little or no evidence that the needs of the future generation can be met. It is pertinent to state that genuine and committed efforts should be made by governments at all levels to support and encourage researches to seek alternative sources of energy for domestic use that will be

economically affordable, renewable and available with little or no environmental and health risk. Practicable measures must be put in place to check allegation of corruption and irregularities from both the Government and the Marketers. Various researches have shown that most energy policies put together by the government to address overdependence on fuel wood could not make any appreciable impact due to poor policy implementation, poor level of awareness from consumers of the compelling need to use other alternatives even when they are available.

The improved supply of modern fuel must be encouraged and sincerely pursued if the ongoing degradation of the environment with its adverse socio-economic problems are to be curtailed and checkmated. The truth is that, fuel wood will continue to be the preferred cooking option until sincere effort is made to reduce the level of poverty in the land, by substantially raising the people's purchasing power. Furthermore, workable policies should be aggressively pursued towards creating enabling environment for jobs creation so as to gainfully engaged the teeming unemployed youth roaming our streets and other disengaged workers that



have taken fuel wood supplying as the only avenue for making a living.

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