



ENVIRONMENTAL IMPACTS OF DEFORESTATION: WAY FORWARD FOR SUSTAINABLE DEVELOPMENT IN EBONYI STATE, NIGERIA

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Abstract

This work is titled, 'Environmental impacts of deforestation: way forward for sustainable development in Ebonyi State, Nigeria.' Deforestation affects man and his environment in many ways like steady disappearance of forests, affects on our ecosystems, weather patterns, wildlife, and climate, all over the world. Nevertheless, some experts maintain that human-driven deforestation must surely occur for the survival of man on earth. Perhaps, the objectives of the study are to: find out the developmental impacts of planting and growing of trees in our society; find out the actors needed in the fight against rampant deforestation in the society and determine the motivational factors of adeforestation in our society. The research design is Descriptive Design while the study covers Ebonyi State. The total population of the study is 2,176,947 and the Sample Size is 400. The findings in the study are: the developmental impacts of planting and growing of trees in our society include giving life to the living beings in the society; increasing the economic status of people in the society and prevention of certain environmental hazards in the society; different actors like the academics, the Civil Society Organizations and government institutions are needed in the fight against rampant deforestation in the society and certain motivational factors like educating the populace, availability of money and making and implementing of policies encourage adeforestation in our society. Meanwhile, the researchers recommend as follows: We must begin to create and encourage the use of sustainable facilities to counter the problems that deforestation creates. For instance, we should encourage the use of soft copies instead of hard copies in documentations; We all must encourage a transition to different bioenergy resources if we want to stop future environmental hazards; We all should form the habit of planting trees as much and often as possible; Different institutions should always create awareness on the effect of climate change caused by many human activities especially deforestation and Government should always make and implement good policies that will be discouraging deforestation and encouraging forestations in Nigeria.

Keywords

Environmental, Impacts, Deforestation, and Sustainable Development

INTRODUCTION

Trees are the oldest, reliable, extremely useful and widely used raw materials that play a crucial role in oxygen supply and absorption of greenhouse gases (Wajim, 2018). Forests are endowments found primarily in tropical and subtropical regions and are located mostly at the transition between freshwater and saline water environments (Giri et al., 2011,

2015). With an estimated worldwide area of up to 16.4 million ha in 2014 (Hamilton & Casey, 2016), mangroves provide a variety of valuable ecosystem services or the benefits provided by ecosystems to humans, such as carbon sequestration, coastal barriers, shoreline protection, food, fuel, building materials, and biodiversity protection, among others (BOBLME, 2014; Salem & Mercer, 2012; Vo,

Künzer, Vo, Moder, & Oppelt, [2012](#)).

Serious environmental concerns such as pollution, desertification, erosion, drought, and flooding, etc., has been linked to deforestation and industrial activities (Olowoyeye, 2021). Deforestation is the process of clearing, removal of forest trees where the land is converted to other types of activities for non-forest use, like conversion of forest reserves areas to residential or industrial areas, removing of forest trees as a result of road or rail construction, conversion for agricultural purposes and cutting down of forest trees for domestic and industrial use like fire-woods, timbers, paper production and charcoal production (Mba, 2018). Charcoal is widely used by high percentage of the population in the country for cooking and other uses, that's what makes it a major threat to forest reserves. About 31% of the world land surface is covered by forest, while in Nigeria it falls gradually from 16.6% in 1996 to 7.7% in 2015.

Deforestation has over time, become a topic of public discuss following its impacts on sustainable environmental development all over the world. According to research, urbanization leads to deforestation which involves cutting and using of trees, land space and other forest reserves. Put differently, certain industrial and domestic activities that take place on daily basis, affect the forests. Research has it that since humans first started cutting down forests to use the natural resource for their own needs, we have lost 46% of our total trees and almost one-fifth of the Amazon rainforest has disappeared in the last 50 years – and the pace of devastation is increasing speedily.

Although forests seem to be disappearing on daily basis and at a rapid race, Bryant et al., (1997), assert that the original forest shelter was approximately six (6) billion hectares. Right now, forests still cover about 30% of the land area on our planet or about 3.9 billion hectares and trees have remained parts of the natural cycle of life on our planet, (Oladipo, 2015). Deforestation therefore, appears to have become inevitable and unavoidable to the extent that since 1990, over 502,000 square miles of forest biome, which was an area larger than the country of South Africa, has gone through this process.

So, irrespective of the fact that people frown at the steady disappearance of forests especially because it affects our ecosystems, weather patterns, wildlife, and climate all over the world, some experts

maintain that human-driven deforestation must surely occur for the survival of man on earth. Be that as it may, one may ask whether deforestation plays positive or negative roles or both of them with regard to sustaining environmental development in the world. This and many more are addressed in this study.

Statement of Problem

Over the last 40 years, the forests have been depleted due to population increase, economic imperative, charcoal production, demand for new land for agriculture and uncontrolled fires. Therefore, the rate of deforestation for decades was said to be about 300.000 hectares per annum was reported in 2008 to be 800.000 hectares per annum. Increasing activities in mining and construction is good but it appears to be contributing significantly to deforestation. The practices of slash-and-burn agriculture to feed a growing population seem to be widespread. From the look of things, it looks like logging is also increasing, the hardwood forest of the western grassland, which had been reasonably well conservation conserved, also appears to have in recent years come under pressure.

The demand for wood fuel is also seemed to be increasing exponentially while there are severe local shortage. Poorer household also appear to have a greater dependence on wild plants for medicinal purposes and food. The use of forest production for animal grazing and provision of construction material such as poles and thatching grass equally lead to deforestation. 41% of forest is said to be grouped under traditional management while 36% are recorded as not having a known management plan; and only 23% have formal management arrangement (national park and forest reserves). It also appears that there may be wrong management arrangement of the forest.

According to Siyanga & Muyoyeta (2021), the goal of government since 2006 has been to ensure environmental sustainability by reversing environmental damage, maintaining essential biological processes and ensuring the sustainable use of natural recourses. However a number of factor continue to constrain the achievement of his goal, including: coordination problems, lack of comprehensive policies on environmental issues, limited public awareness about environmental issues, an inadequate legal framework and lack of implementation of the forest Act of 1999, inadequate

budget allocations and investment, poor maintenance of biological diversity and limited local participation, inadequate mainstreaming of environmental and climate change issues into other sector policies and programme.

Objective of the Study

The main objective of this study is to determine the environmental impacts of deforestation with regards to sustainable development in Ebonyi State, Nigeria.

The specific objectives are to:

- i. Find out the developmental impacts of planting and growing of trees in our society.
- ii. Find out the actors needed in the fight against rampant deforestation in the society.
- iii. Determine the motivational factors of aorestation in our society.

Research Question

The following are the research questions in this study:

- i. What are the developmental impacts of planting and growing of trees in our society?
- ii. Who are the actors needed in the fight against rampant deforestation in the society?
- iii. What are the motivational factors of aorestation in our society?

Research Hypotheses

HA₁. There are several developmental impacts of planting and growing of trees in our society.

HA₂. Different actors are needed in the fight against rampant deforestation in the society.

HA₃. There are many motivational factors of aorestation in our society.

REVIEW OF RELATED LITERATURE

Deforestation

For Oladipo (2015), deforestation is the process of general disruption of a forest ecosystem that occurs when trees are cut on a large scale. It also refers to any process that alters an original tree covers, which includes felling of all trees on a site, thinning a forest and setting bush on fire. Forest ruin happens when the ecosystem roles of the forest are degraded but the area remains forested (Anon., 2010). Deforestation is also referred to the decrease in forest areas across the world that is lost for other uses such as agricultural croplands, urbanization, or mining activities. Greatly accelerated by human activities since 1960, deforestation has been negatively affecting natural ecosystems, biodiversity, and the climate (youmatter.world). Notably, the most

concentrated deforestation occurs in tropical rainforests (e.wikipedia.org). Deforestation involves conversion of forest land to farms, ranches, or urban use.

According to the international Institute of Tropical Agriculture (IITA) (2011), Nigeria is ranked as one of the worst countries with the highest rate of deforestation. Meanwhile, deforestation rate in Nigeria is set at 3.5% and 400,000 hectares yearly according to the Federal Ministry of Environments, which means at least 400 out of every 1,000 of forestland are deforested yearly and only 26 hectares of these lands are reforested, thus leaving about 374 hectares of land deforested (Babalola,2012).

Causes of Global Deforestation

The following are the causes of deforestation in the globe:

i. Corruption

In the words of Oladipo (2015), one of the major reasons of deforestation is corruption at the government institutions whereby wealth and power are used in harvesting of the riches of the forest. Corruption is also another serious issue in Nigeria which contributes massively to illegal logging by companies and forest officials (Global witness 2013).

ii. Illegal Logging:

Many government agencies are waging war against illegal logging to protect the forests. Never the less, any form of logging legal or illegal results in deforestation Oladipo (2015). Forests are degraded indiscriminately and randomly by logging companies, to meet the demands of the wood market. This does not give a chance to the local wildlife and trees to regenerate and sustain themselves. Poor agricultural practices such as slashing and burning also add to deforestation (Terminski 2012). Research shows that about 60% of Nigerians make use of firewood for cooking because of the high rise in the cost of kerosene (Akinbami 2003). At times sadly some persons ignorantly set fire on forests contributing primarily to deforestation. Greenberg & Magrath (2012), an area of forest about the size of a foot ball field is clear-cut by illegal loggers every two seconds. Illegal trading in timber and its products lead to great economic losses and environmental damages (Transparency international 2011).

iii. Poverty

Poverty is another cause of deforestation in all the countries of the world. According to FAO, developing countries from the tropics suffer most from deforestation between 2000 and 2005 which shows us that there's a link between poverty and deforestation. Poverty contributes its own percentage due to lack of some basic amenities that results in people looking for means of survival and lack of proper awareness and enforcement of government policies that will guide public's of the risk of deforestation for domestic activities without reforestation (Mba, 2018). We can therefore say that poverty caused by human activities is the main causes of deforestation in Nigeria. In Zambia for instance, the economy has been growing since 2000, but poverty has continued to be a pressing issue while life expectancy remains very low. Although the Government has shown some concern regarding environmental challenges, the plans put in place lack coordination and have failed to create public awareness about soil erosion, loss of biomass, climate change and deforestation. Unfortunately, the country has lost 6.3% of its forests in the last 20 years. So, high poverty levels and lack of alternative sources of livelihoods exacerbate environmental degradation resulting from the dependence of poor people on natural resources (Global witness 2013).

iv. Urban Sprawl

This is a process that leads large number of people to become permanently concentrated in a relatively small area that goes with more construction of settlement which will result in conversion of forest reserves to residential and agricultural purposes (Mba, 2018). Urban sprawl is another major reason for deforestation all over the world. Declining forest cover is mainly due to urbanisation, agricultural fires, forest conversion for plantations and other forms of agriculture (Cook, 2016). So, as urban sprawl moves into forested areas, it greatly contributes to climate change while also threatening the natural environment and biodiversity. According to a study, 'projected urban expansion could consume hundreds of thousands of hectares' worth of key biodiversity hotspots over the next twenty years, triggering the release of some 5 billion tons of carbon dioxide from direct land-use change and further endangering hundreds of species,' (Global witness 2013).

Much of this expansion is forecasted to occur in the

tropics, which contain the bulk of the world's species. The new study attempts to quantify the impact of urbanization on the world's so-called 'hotspots' — nearly three dozen areas with exceptionally high levels of species found nowhere else which means 'that by 2030, nearly three percent of hotspot areas will be urbanized, up from one percent in 2000. While the extent seems small, paving over marshes, forests, and grasslands could generate 1.38 billion tons of carbon emissions (5 billion tons of CO₂) from direct land-use change.' The main environmental effects of deforestation and forest degradation include reduced biodiversity, the release of greenhouse gas emissions, forest fires, disrupted water cycles and increased soil erosion (Cook, 2016).

Positive Impacts of Deforestation

The following are the positive roles deforestation plays in sustaining environmental development for man on earth:

i. Access to Consumable products

Farming, livestock grazing, drilling, and mining activities are responsible for over 50% of all deforestation activities today. In places like Indonesia and Malaysia, farmers are replacing the trees of the forest with groves that can produce palm oil. That means we all have access to affordable products that include saltine crackers and shampoo because of these efforts. Soy plantations in the Amazon exist because of this activity. Despite the potential changes to the environment that occur, new plantings can help to mitigate the harvests that occur, (Oladipo, 2015).

ii. Access to paper and wood products.

Although deforestation practices are not solely responsible for our paper and wood products, but the actions of timber companies give us access to these needed items. Truly, human beings will not be able to carry out basic daily tasks without the use wooden amenities for example every home contains some type of wooden fixtures be it chairs, tables, fittings in the kitchen and rooms etc. Human life depends mostly on lumber gotten from deforestation. Therefore, for everyday life wood is needed, (Oladipo, 2005). On the other hand, papers are produced from the products of trees/timber which are got from deforestation. Obviously, tropical forests are shrinking at an alarming rate of about 5% per decade as forests are cleared to provide local,

national and world marketers for wood products, bio-fuels and agricultural turnouts (Anon., 2007; 2010). Access roads that go into the remote forests make it possible to thin out some of the trees without harming the overall biome as well. Some individuals and companies may not practice that agenda, but there are times when deforestation simply leads to a new forest being planted (Oladipo, 2015).

iii. **Creation of an Economic Benefit needed by Communities for Survival**

Looking at deforestation closely, it tells us that it is one means of advancement, (Oladipo, 2005). This is because there are more than 250 million people who live in the savannahs and forest areas where the activities of deforestation are essential to their survival. Many of the families who live in those biomes are some of the poorest people in the world today. Although 80% of the plants and land animals on our planet live in the forests, the disruptions are permitted because the alternative means placing even more sacrifices on those who already have so little. Billions of dollars in the import-export market exist because of the logging activities and agricultural outcomes that are possible because of this practice (Anon., 2007; 2010).

iv. **Creation of More Usable Land for a Growing Population.**

The children of the 1980s will be in their 70s when the world's population is expected to reach 10 billion people for the first time. That number is expected to place a lot of pressure on our natural resources. Scientists have legitimate concerns about our abilities to distribute food, have access to fresh water, and provide living space to all of those people. Deforestation may not be the preferred method of expansion, but it will give us a way to make more land usable for agricultural or urban purposes (Oladipo, 2005).

v. **Availability of other Jobs order than Logging jobs from Deforestation Activities**

There are tens of thousands of jobs available today, many of them which provide a high local standard of living, because of the effects of deforestation. We can extract natural gas and oil from these rich lands to meet our energy needs. Miners have access to precious metals like gold and silver, and there are minerals which are accessible in these areas as well. The revenues from these operations help to support the local economy as well. If agencies were to plant new trees for the ones that they take out, then the

impact of many potential disadvantages would be significantly reduced, (Cook, 2016).

vi. **Creation of Opportunity to Discover New Species**

Because of the research opportunities that developed due, in part, to the actions of deforestation, we have discovered tens of thousands of new species in the rainforest biome since the 1950s. There have been thousands of new animals discovered during that time as well, along with almost countless new insects. Scientists recently explored a rainforest located in Mount Lico and found a new species of butterfly, an unclassified mouse species, and have the expectation to find much more, (Oladipo, 2005).

vii. **Social Safety Net Programs Receive Funding through Deforestation Efforts.**

When companies make a profit through their actions of deforestation, then the tax revenues that come from those earnings help to fund local government activities. Social welfare programs receive funding because of this advantage. There are roads, bridges, and other infrastructure items available thanks to these actions as well. Over \$6 billion gets generated each year because of these actions, which means the economic fallout from a complete stoppage could be devastating (Cook, 2016).

Viii Agriculture

Rain forest deforestation occurs mainly because of farming. Farmers are giving to impoverished and local farmers to provide for their families. For every land cleared of trees through deforestation, land becomes available for farming by planting crops, raising live stocks etc. Deforestation also allows farmers to practice commercial and subsistence farming as well. This means that deforestation is good for agricultural activities (Oladipo, 2005).

ix. **Planting of Other Trees**

Planting of trees plays a very important role in the absorption of excess ground water. They suck up the extra moisture up through their roots and give it back into the atmosphere. This plant life helps to regulate and control the excess water from rain when the soil becomes waterlogged. Planting of trees will play essential role in flooding of the area, as well as surrounding areas (Cook, 2016).

Negative Environmental Effects of Deforestation

and Forest Degradation

The negative effects of deforestation and forest degradation according to Cook (2016) include:

i. **Reduced biodiversity**

Environmental impacts of deforestation according to Mba (2018), result in loss of bio-diversity, endangering of plants and animals which is been caused by constant deforestation of forest reserves meant for the purpose of protecting immediate environment and serve as shield direct impact of downpour of rain, high temperature and wind that will result of erosion, flood and other environmental instability. When forest cover is removed, wildlife is deprived of habitat and becomes more vulnerable to hunting. Deforestation has resulted in habitat damage, biodiversity loss and aridity, as a developing nation a lot of development are been taking place in daily basis like roads, rails, houses, dams and oil explorations, most of all this falls into urbanization that contributes to deforestation process due to lack of proper reforestation planning that should had be going on simultaneously with all this developments (Mba, 2018).

ii. **Release of Greenhouse gas emissions**

Forests are the largest terrestrial store of carbon, but deforestation is the largest source of carbon dioxide emissions after fossil fuel burning, causing 15% of global greenhouse gas emissions. It should be noted that converting upland dipterocarp forest into palm oil plantations does not trap as much carbon for many years.

iii. **Removing Trees can Influence Global Temperatures.**

When forests disappear because of deforestation, then there are portions of the canopy which disappear in this biome. This event causes more sunlight to reach the forest floor, which means there is less heat retained during the evening hours as well. It is a disadvantage which causes more severe swings in global temperatures because there are fewer influences in place to stabilize the temperature. As Oladipo (2005) captures it, one of the key consequences of deforestation is its impact on the global atmosphere. Often and on, deforestation adds to global warming which happens from accumulated atmospheric concentration of greenhouse gases (GHG) resulting in a raise in the global mean temperature as the

forests are the main terrestrial sink of carbon. As a result, deforestation can disrupt the global carbon cycle raising the concentration of atmospheric carbon dioxide. Research shows that tropical deforestation is said to be responsible for the discharge of roughly two billion tonnes of carbon (as CO₂) to the atmosphere annually (Houghton, 2005). For Kizi (2015), deforestation and degraded forests are one of the main sources of biodiversity loss and global warming. In his words, despite the significant economic, social and cultural values of biodiversity and associated ecosystem services, biodiversity worldwide is being lost, and in some areas at an accelerating rate. Moreover, lost of biodiversity are relayed to extensive logging and forest conversion to agriculture. This means the days can get hotter, the nights get colder, and plants and animals encounter a higher risk for harm because of those extreme swings. Cutting trees creates a double disadvantage here. Not only are we limiting the amount of CO₂ that is absorbable from the atmosphere, but we are adding more to the air that we breathe. If our deforestation activities were a single country, it would rank third behind China and the United States for equivalent emissions.

iv. **Forest Fires**

Periodic fires, usually coinciding with the el Niño events, burn thousands of hectares across Malaysia, especially on the island of Borneo. The haze from these fires and the fires in Kalimantan (Indonesia) cause serious pollution and health problems in Malaysia. In the 1990s, the Malaysian government reacted to fires by ordering media blackouts to avoid frightening away tourists over the health impacts. Today this has changed as the government increasingly blames Indonesia for failing to control wildfires. Such trans-boundary pollution is especially difficult to control although ASEAN is attempting to bring the parties involved together.

v. **Disrupted Water Cycles**

Deforestation enables the earth soil to run off into sources of water supply due to the absence of tree roots to absorb water thereby causing water pollution (Wajim, 2018). Absence of tree roots further deprives the soil of important nutrients necessary for the growth of new vegetation. As a result of deforestation, trees no longer evaporate groundwater and precipitation rates are reduced which can cause the local climate to be much drier. Excessive deforestation around the Malaysian

capital of Kuala Lumpur, combined with the dry conditions created by el Niño, triggered strict water rationing in 1998, and for the first time the city had to import water.

vi. Increased Soil Erosion and unuseful land space

Deforestation increases rates of soil erosion, by increasing runoff and reducing the protection of the soil from tree litter. Only a minority of these areas have good soils, which after clearing are quickly washed away by the heavy rains. Thus crop yields decline and the people must spend income to import foreign fertilizers or clear additional forest. The problem is worsened by failure to implement erosion control measures. Very often, cleared land is left exposed for extended periods before erosion control work is carried out. In some cases, in highland areas where high-value sub-tropical crops are produced, the effects of erosion are offset by high rates of manure and fertiliser application. Although the practice of applying high rates of fertiliser and manure helps in maintaining reasonable levels of crop production, the unchecked losses of soil, nutrients and chemicals through erosion processes contribute to downstream pollution and sedimentation.

The actions of deforestation might create more usable space, but it is an adverse impact in many situations because the soil is not useful in its current state. When rainforests are cleared in tropical areas, the nutrient availability is negligible. According to Oladipo (2005), the moment the trees get logged off, the subjected land loses its arability and efficiency. This means that farmers and ranchers must apply fertilizers and artificial stimulants to make the land usable for crops, even if palm oil is the intended harvest.

There can be issues with acidity as well, which means changes to the pH level are necessary. When you consider the added cost of additives and fertilizers, the benefits of deforestation are sometimes negligible.

RESEARCH METHODOLOGY

Research Design

The research design adopted in this study is Descriptive Design as the study generally takes raw information and arranged them in a useable form.

Area of Study

For the sake of this study, the researcher pegged the area of the study on Ebonyi State which was created in 1996.

POPULATION OF THE STUDY

The total population of this study is 2,176,947

Sample Size Determination

The sample size of this study is determined using Taro Yemeni formular.

$$N = \frac{n}{1 + N(e)^2}$$

Where: n= desired sample
N= total population

$$N = \frac{2176947}{1 + 2176947(0.05)^2}$$

$$= \frac{2176947}{1 + 2176947 \times 0.0025} = \frac{2176947}{1 + 5442.3}$$

$$= \frac{2176947}{5443.3} \quad N=399.9$$

N=400

Therefore, the Sample Size is 400

TABLE PRESENTATION AND ANALYSIS

Table 1: Questionnaire Distribution.

SN	Description	No of Questionnaire Items	%	No Returned	%	No Unreturned	%
1	Agriculturists	105	26.25	64	29.76	41	22.16
2	Timber Traders	95	23.75	41	19.06	54	29.18
3	Engineers	88	22	45	20.93	43	23.24
4	Members of Civil Society Organizations	112	28	65	30.23	47	25.40
5	Total	400	100	215	100	185	100

Source: Researchers' Field Survey 2021.

Questionnaire Items

Table Two (2)

A table showing the developmental impacts of planting and growing of trees in our society.

SN	Questionnaire Item	SA	%	A	%	D	%	SD	%
1	Planting and growing of trees in our environment help to sustain the lives of living things in the society.	95	44.1	80	37.3	21	11.1	19	8.8
2	Planting and growing trees in our environment save the environment by preventing some environmental hazards like erosion and damage of ozone layers.	90	42.0	50	23	40	18.6	35	16.4
3	Planting and growing trees increase the economic value of the people.	95	44.1	80	37.3	20	9.3	20	19.1

Source: Researchers' Field Survey 2021.

Analysis:

Planting and growing of trees in our environment help to sustain the lives of living things in the society.

The respondents who strongly agreed with the assertion that planting and growing of trees in our environment help to sustain the lives of living things in the society are ninety five (95) with 44.1% while eighty (80) respondents with 37.3% agreed with the assertion. On the other hand, the respondents who strongly disagreed are eighteen (18) recording 8.3% while those who just disagreed are twelve (12) with 5.0%. However, one (1) respondents did not return any response and they recorded 0.4%.

Planting and growing trees in our environment save the environment by preventing some environmental hazards like erosion and damage of ozone layers.

Ninety (90) respondents with 42.0% strongly agreed that planting and growing trees in our environment save the environment by preventing some environmental hazards like erosion and damage of ozone layers, while fifty (50) respondents with 23.0% agreed. Forty respondents

with 18.60% strongly disagreed while thirty four (34) respondents with 16% disagreed and one (0.4) respondents with 1.4% returned no response.

Planting and growing trees in our environment save the environment by preventing some environmental hazards like erosion and damage of ozone layers.

The respondents who strongly agreed that planting and growing trees in our environment save the environment by preventing some environmental hazards like erosion and damage of ozone layers are 95 with 44.1% while those who agreed with the assertion are 80 with 37.3. Those who strongly disagreed with assertion are 20 with 9.3% while those who disagreed with the assertion are twenty (20) with 9.3%. However, those who did not give any response at all are 0 with 0%

Table Three (3)

A table showing the actors needed in the fight against rampart deforestation in the society.

SN	Questionnaire Item	SA	%	A	%	D	%	SD	%	U	%
1	The academic institutions are actors in the fight against deforestation in the society.	75	3.0	60	28.0	35	16.3	40	18.6	5	2.3
2	Civil Society Organizations play serious roles in the fight against deforestation in the society.	69	25.2	68	31.7	35	16.3	39	18.2	4	2
3	Government institutions equally play major roles in the fight against deforestation in the society.	65	30.3	67	31.3	34	15.8	41	19.1	8	4

Source: Researchers' Field Survey, 2021

Analysis:

The academic institutions are actors in the fight against deforestation in the society.

In the above, seventy five (75) respondents with 35.0% strongly agreed that the academic institutions are actors in the fight against deforestation in the society while sixty (60) respondents agreed to that. On the other hand, thirty five (35) respondents with 18.3% strongly disagreed with the assertion as forty (40) respondents disagreed. Then, just five (2.3) with 2.3% respondents returned response.

Civil Society Organizations play serious roles in the fight against deforestation in the society.

In responding to the above assertion, sixty nine (69) respondents with 25.2% strongly agreed that Civil Society Organizations play serious roles in the fight against deforestation in the society while sixty eight

(68) respondents with 31.7% agreed to that. On the other hand, thirty five (35) respondents with 16.3% strongly disagreed with the assertion as thirty nine (39) respondents with 18.2% disagreed. Then, four (4) respondents with 2% gave no response.

Government institutions equally play major roles in the fight against deforestation in the society.

Sixty (65) respondents with 30.3% strongly agreed that government institutions equally play major roles in the fight against deforestation in the society while sixty seven (67) respondents with 31.3% agreed. Thirty four (34) respondents with 15.8%, nevertheless, strongly disagreed to the assertion while forty one (41) respondents with 19.1% disagreed to the assertion and eight (8) respondents with 4% never gave any response.

Table Four (3)

A table showing the motivational factors of afforestation in our society.

SN	Questionnaire Item	SA	%	A	%	D	%	SD	%	U	%
1	Availability of fund is one of the motivational factors promoting afforestation in our society.	90	42.0	50	23	40	18.6	31	14.4	4	2
2	Educating people using different channels on the importance of trees, encourages them to plant and grow more trees order than to cut them in the society.		44.1	80	37.3	22	11.1	12	5.6	6	3
3	Making an d implementing favourable policies by government for planting and growing of trees equally promote afforestation in our society.	95	42.3	70	37.0	20	10.5	10	5.2	35	16.2

Source: Researchers' Field Survey 2021

Analysis:

Availability of fund is one of the motivational factors promoting afforestation in our society.

In the table above, Ninety (90) respondents with 42.0% strongly agreed that availability of fund is one of the motivational factors promoting afforestation in our society while fifty (50) respondents with 33.0% agreed. Fourthy (40) respondents with 18.6% strongly disagreed while thirty one (31) respondents with 14.4% disagreed and four (4) respondents with 2% gave no response.

Educating people using different channels on the importance of trees, encourages them to plant and grow more trees order than to cut

them in the society.

Ninety five (95) respondents with 44.1% strongly agreed with the assertion that educating people using different channels on the importance of trees, encourages them to plant and grow more trees order than to cut them in the society while eighty (80) respondents agreed. The respondents who strongly disagreed are twenty one (21) in number while 11.1% and twelve (12) respondents with 5.6% just disagreed while six (6) respondents with 3% gave no answer.

Child abuse can as well be curtailed in Ishielu LGA of Ebonyi State making and implementing policies against child abuse.

In the table three above, eighty (80) respondents with 42.3% strongly agreed that making and implementing favourable policies by government

for planting and growing of trees equally promote afforestation in our society while seventy (70) respondents with 37.0% disagreed with the assertion, twenty (20) respondents with 10.5% strongly disagreed while ten (10) respondents with 5.2% disagreed and thirty five (35) respondents with 16.2% did not give any response.

FINDINGS, CONCLUSION AND RECOMMENDATION

Research Findings

The following are the findings in this research:

- i. There are several developmental impacts of planting and growing of trees in our society. They include giving life to the living beings in the society; increasing the economic status of people in the society and prevention of certain environmental hazards in the society.
- ii. Different actors like the academics, the Civil Society Organizations and government institutions are needed in the fight against rampant deforestation in the society.
- iii. Certain motivational factors like educating the populace, availability of money and making and implementing of policies encourage afforestation in our society.

Conclusion

Looking at the level of climate change in the world today, it is obvious that we are already having some levels of deteriorated environment in many parts of the world, which posit a very serious threat to sustainable environmental development in the world over. Obvious also is the fact that the environment cannot be protected when economic growth does not take into account, the cost of environmental destruction. These therefore, suggest that all hands must be on deck. Both government; Non Governmental Organizations (NGOs), individuals and corporate bodies must adopt some measures for sustainable

environmental development for both man and his environs. Be that as it may, the continued degradation of the forests in both the developed and in the developing countries must be checked, following the recommendation in this study.

Recommendation

Following the findings in this study, the researchers recommend as follows:

- i. We must begin to create and encourage the use of sustainable facilities to counter the problems that deforestation creates. For instance, we should encourage the use of soft copies instead of hard copies in documentations.
- ii. We all must encourage a transition to different bioenergy resources if we want to stop future environmental hazards. Instead of continually using wood and charcoal for fuel, we can create energy with residues, wastes, and even algae.
- iii. We all should form the habit of planting trees as much and often as possible.
- iv. Government, individuals and institutions should always create awareness on the effect of climate change caused by many human activities especially deforestation.
- v. Government should always make and implement good policies that will be discouraging deforestation and encouraging forestations in Nigeria.
- vi. We all should become more active in the fight against environmental degradation by shunning acts that work against the growth and expansion of forest reserves in our areas.

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- Appendix**
- Images showing some Deforestation Activities and their Impacts on Sustainable Environmental Development**
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Image number one (1)



Image showing Deforestation Facts, Causes and Effects
Source: livescience.com

Image number Five (5)



Image showing Road Construction and Deforestation **Source:** robertharding.com

Image number two (2)



Image showing Deforestation and forest degradation
Source: eco-generation.org

Image number Four (4)



Image showing Deforestation (cutting of trees and grasses)
Source: halfearth.org.uk

Image number three (3)



Image showing Few firms tackling deforestation
Source: timesofmalta.com

Image number Six (6)



Image showing heavy tractor leveling a place as a follow up to deforestation
Source: forestpeoples.org