



Green Economy, Safe Environment and Emerging Technology as the Hub of Sustainable Economy in Nigeria in an Emerging Globalized Economy

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Abstract

Food security and clean environment are prime needs of human beings in any given society. This perhaps informed the inclusion of eradication of hunger and poverty as one of the 17 cardinal goals of the Sustainable Development Goals (SDGs) of the United Nations to promote an atmosphere where human beings can live in sound health, and environment devoid of pollutions. Agriculture, which is the major source of food, is the main stay of the world economy, Nigeria inclusive. The sector in Nigeria's economy has suffered setback and relegated to the background by stakeholders since the 1970's era of Oil boom. Youths, in their prime age who occupies enviable sector of the nation's population structure have neglected farming for white collar jobs, entrepreneurship activities that could have made them job creators, entrepreneurs and self-reliant has not been given adequate attention by successive governments. This is in spite of the fact that craves for white-collar jobs are not available; talk less of being adequate. It is against this background that this study examined Agricultural prowess with reference to the planting of cash crops, especially, the planting of palm trees for the production of abundant palm oil which is becoming a vital global resources for the aviation industry as portrayed by the recent Indonesia invention of commercial flight utilizing palm-oil blended jet fuel. This is capable of lowering the greenhouse effects on the environment, a Climate Change policy of the United Nation's SDGs working towards cutting the carbon footprint of the aviation industry by using alternative fuels. Findings from the study revealed among others that there are available land for mechanized cultivation of palm trees in the study area; inadequate facilities to encourage farmers are lacking; self-will on the part of the youths is at lower ebb; government's commitment to necessary supports to youths and farmers remains rhetoric; other stakeholders and non-governmental agencies' contributions to agricultural development programmes are still minimal. It was therefore recommended that recourse be found to the identified issues capable of affecting agricultural productivity and its largess in Nigeria.

Keywords: Emerging Technology; Globalized Economy; Green Economy; Safe Environment; Sustainable Economy

Introduction

Every human beings deserves to live in a clean and safe environment that contain certain natural elements upon which man survive, such elements are; the air we breathe in and out, the water we drink and use for both domestic and industrial purposes, varieties of foods which we obtain from farm through Agricultural practices, and bulk of natural resources which are refined to produce finished goods of different kinds that leads to human comfort and good living. Consequent upon the foregoing, human beings are expected to champion the protection and preservation of their immediate

and remote environments in order to attain a sustainable cities and towns across the globe which is one of the seventeen cardinal Sustainable Development Goals (SDGs). However, human actions and inactions directly and indirectly do contribute to the construction and destruction of the global environment.

Reiterating the above submission [1], affirmed that human beings, in their quest to satisfy one need or the other tend to tamper with the natural setting of the environment which culminates in human environmental negative impact. Thus, human beings are

classified as both constructive and destructive elements. For instance, the interaction of human beings with the world around has a great impact on the ecosystem, looking at the world population which is between 7 to 8 billion [2,3]. Human action had polluted the land, water and air with unwanted refuse. Water being one of the vital facilities that support life is not fully accessible to human beings. Today, almost 2.4 billion people do not have access to clean and drinkable water [4]. The Co-Director of women's Earth Alliance also posit that 30% of humanity does not have access to safe drinking water, buttressing this fact [5]. [6] acknowledged that women and girls spend 200 million searching for water leading to waste of their significant time. America alone was said to have produced 147 metric tons of air pollution which is identified to be deadly with the strength that block out the sun in a dense haze. Also the increase of CO₂ emission which is a product of burning fossil fuel through industrialization and aviation process is another threat to the ecosystem. The increase of CO₂ in the atmosphere traps heat then escaped into space and increases the earth's overall temperature. In a nutshell, global warming has led to increase temperatures, sea levels and ocean acidity that have adverse effects on ecosystem's national balance [5]. It is crystal clear that human efforts to modernize and urbanize the ecosystem leads to destruction of many life supports environmental elements which is contrary to the aims and objective of Sustainable Development Goals (SDG). Population explosion around the world is another factor that has influence human beings to developed more cards as a result of which many ecosystems were decimated in the bid to create modern housing scheme, industrial estate, road networks, modern agricultural practices and raising of livestock for a better standard of living.

It needs to be mentioned that, the quest to satisfy the growing population culminate in the opening up of larger farm field which has reduces the existence of forest with its avalanche of resources. The removal of trees for forest to support the building of houses had led to removal of nothing less than 18 million of acres of trees every year, which in turn is detrimental to wildlife for their natural homes and accommodation as been tampered with [4,7]. Also the burning of fossil fuels, the emission of chemicals into the atmosphere, reduction in the forest cover and rapid exploitation and expansion of farming activities poses serious dangers to the life of human beings. Although nearly every countries of the world are

striving to develop their economy, but the negative effects of such developmental practices especially that of G.20 countries whose emission of industrial waste account for a staggering 80% of global emissions is nothing but a big threat to human and other animals life. The oil boom era in Nigeria in the 70s also has its negative effects on agricultural practices, the exploitation and exploration of petroleum products cum refinery work had prevented farmers to enjoy the use of their fertile lands for production of foods, which in turn has reduce the job opportunities that Agricultural practices encourages. Nigeria with a vast arable and fertile land is still battling with the problem of unemployment which promotes many social vices all in the name to satisfy demand for energy to run both mechanize and industrial needs. In Europe and America, natural resources are used widely as alternative energy sources in forestry. The over utilization of forest resources and over dependence on them had triggered deforestation which has resulted in CO₂ emissions and reduction of biodiversity with global impacts in the form of climate change as a result of green house effects.

This paper is interested in making world environment a clean and safe place that will promote good standard of living with low carbon emission. However, human beings realize the preservation of the environments with all its elements, this no doubt form part of the reasons for the establishment of Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs). The paper, therefore, focused on Goal 1, 7 and 11 of the Sustainable Development Goals that champion the bid to put an end to poverty by ensuring healthy lives and promotion of well being for all ages, the Goal 7 which is out to ensure access to affordable, reliable, sustainable modern renewable energy for all, with the aim to protect the atmosphere with its positive reverberating efforts on life and other elements on earth. Goal 11 focuses on making cities and human settlement a safe place to live with resilient and sustainable development (United Nation, 2030 Agenda for Sustainable Development). The foregoing depict the core values of the green economy, i.e. a consistent approach with non-declining human welfare and sustainable use of natural resources [8].

A critical examination of Jänicke, [9] view on green economy posit that, it is a radical transition from unfriendly use of the environmental to a more efficient, environmentally friendly and resource-saving through technologies to lower emissions and attenu-

ate the effects of climate change, by addressing resource depletion and serious environmental degradation for man to enjoy. The United Nation Environmental protection (UNEP), The Organization for Economic Co-operation and Development (OECD) and the World Bank defined the green economy as the one that provides the tools required to transform economic activity for healthier environments and more inclusive economies [10]. Consequent upon the above, one can, therefore, conceptualized Green economy as an approach where environmental components and elements, that is (natural capital) are taken into special consideration while transforming production processes, and consumption patterns to contribute to reduction of waste, pollution, and the efficient use of resources, materials, and energy, which in the end revitalize and diversify economies which create decent employment opportunities, and promote sustainable trade for all to enjoy, not only now but in future.

To actually realize the positive impact of green economy, the recent Indonesia invention of palm oil blended fuel in the aviation sectors is another medium through which agricultural practices could be improve upon, due to the large demands of the palm oil the aviation sectors would require. Indonesia produces roughly half of all palm oil and palm kernel oil globally. Palm oil has a variety of uses in food, animal feed, oleochemicals, and other industrial purposes. One significant use of palm oil is in biodiesel and renewable diesel production, which can substitute for diesel fuel in transport and other uses. Global demand for palm oil has been growing rapidly, with worldwide imports almost tripling since year 2000. Indonesia as a country produces 51% of international palm oil and palm kernel oil imports. Although exports of palm biodiesel from Indonesia are less than one-tenth of palm oil, some countries process imported palm oil into biodiesel and renewable diesel domestically [11]. The Indonesia invention of bio fuel will encourage massive plantation of palm tree which will in turn promote the production of palm oil to be used for commercial flight utilization and at the same time create job opportunities for farmers and youth who will become self-reliance and self-sufficient. It was justified and predicted by BPPT that the increase energy demands on fossil fuel by Indonesia will not decrease even if Indonesia fully meets existing bio-fuel targets [12]. It is no gain saying that the fore going will also help in creating a clean environment in terms of reduction in the emission of carbon into the atmosphere [13]. However, the efforts of the United Nations programmes of Millennium Development Goals and sustainable Development Goals have gone far in addressing these challenges, though with little impacts.

However, the global environment is still facing one challenges or the other in the recent time, the threat to a sustainable and clean environment due to industrial pollution, deforestation, scarcity of clean and drinkable water among others are in the increase. Also, the degradation of land due to exploration of petroleum and industrial activities, the terrorist/bandit attack on farmers and inability of governments to create jobs for not only Nigerians youths has culminated into unemployment, hunger and poverty and many social vices that continue to be threatening the global peace and security. The revamping of agricultural sector through the cultivation of cash crop such as palm tree which has gained global acceptance to run commercial aviation with modern technology of blending it to renewable energy biodiesel fuel which promote lower emission of carbon and reduction of greenhouse effects and promotion of entrepreneurship education are part of the efforts to solve some of these challenges. Consequent upon the forgoing, one has the responsibility to ask, if there is enabling environment for farmers to embark on cultivation of palm trees, vis a vis, availability of lands to cultivate, availability of modern farm implements, provision of capital and other facilities for farmer to embark on cash crop such as palm tree, especially at this very time, it has become a golden product that will be needed in large scale for a blended bio fuel to run flight. This paper, therefore, look into the current trend of cultivation of palm trees in Nigeria, how it could be improved to create job for Nigeria youth/farmers, how it will improve the exporting power of the Nigeria economy which will in turn assist in creating a clean atmospheric condition where the reduction of CO₂ emission will be achieved through the use of the biodiesel fuel that will be produce through palm three in our agricultural sector.

Oil palm in Nigeria

Palm tree is one of the major crops that grow well in Nigeria and other part of the world, one of its products is red Oil which the Yoruba people called Epo pupa. Oil palm is a perennial crop which produces or yielding oil crops in large quantity across the world. it grows well in the southern part of Nigeria because of the favourable climatic condition in the region. The oil palm tree or crop is blessed with many bye products, i.e. it produces a lot of useful consumable items, such as; palm oil from the palm fruit bunches, Palm Kernel Oil (PKO) from the palm kernels. The nuts in the palm kernels is edible that serve as a food to human and animals, it is also good for power generation when its kernel shell is used for the purpose. It was proof that the oil palm tree belongs to the family of Arecaceae and the genus of *Elaeis*.

Oil palm is grown in about 28 states in Nigeria. However, it is most widely grown in the southern states of Abia, Akwa Ibom, Anambra, Bayelsa, Cross Rivers, Delta, Ebonyi, Ekiti, Edo, Imo, Lagos, Ondo, Osun, Oyo, and Rivers. A humid climatic conditions area promotes the growing of palm tree with good quality and much quantity. In terms of temperature, the crop needs up to 21 Celsius to 33 Celsius to grow well, which means it needs an abundance of sunlight. Oil palm needs about 6 hours of sunlight every day for it to thrive well. The annual rainfall needed for oil palm crop is 2,000mm to 4,500mm distributed evenly throughout the year. Oil palm is a water guzzling crop. It needs a lot of water for maximum yield. This perhaps is one of the reasons it thrives well in the southern part of Nigeria. For areas with sparse rainfall, irrigation must be used. Oil palm needs a humidity level of 70% - 100% for it to grow well. It is a humidity loving crop.

Oil Palm varieties in Nigeria

This variety is the local open pollinated variety that has been planted by Nigerian oil palm farmers for several decades. It has a lesser oil yield than the hybrid variety and takes a longer time of 6-8 years to fruit. However, it has resistances to some oil palm pests and diseases prevalent in Nigeria. There seems to be three major types of tree crop in Nigeria; the Dura, the Pisifera and Tenera. Dura is a type that does not have shells but it produces oil, this type of variety is not common in Nigeria. Pisifera is the one with a thick shell and has a lesser oil yield than Tenera. Tenera is one of the most popular hybrid oil palm varieties in Nigeria. Tenera oil palm was derived from the cross of Pisifera and Dura varieties it is similar to supergene variety. It has a thin shell and yields a lot of oil when harvested and processed.

Green economy

Stakeholders in the world are seriously striving to design way on how to grow green – i.e., how to embark on economic activities that will preserve and enhance environmental quality while exploring the natural resources more efficiently, this leads to the green economy. It is an operational policy agenda to achieve measurable progress at the environment– economy nexus [14], as a ‘pillar’ of sustainable development implementation to lead the transition to low carbon, green economies. The green economy is the clean energy economy, which involves four basic sectors: renewable energy (e.g. solar, wind, geothermal); green building and energy efficiency technology; energy-efficient infrastructure and transportation; and recycling and waste-to-energy [15]. The green economy is not just to achieve a clean energy, but technologies

that allow cleaner production processes, as well as the growing market for products which consume less energy, from fluorescent light bulbs to organic and locally produced food. However, it might include products, processes, and services that reduce environmental impact or improve natural resource use [16] the foregoing perhaps inform the submission of Cato, [17]. Our failure to treat the environment with respect has created a lot of environmental problems. Green economists suggest that we change our attitudes towards the planet and treat it with respect. While discussing on how persistent poverty could be reduced through sustainable forestry and ecologically friendly farming methods in its 2011 report, [18] illustrates that The Green economy seeks to provide an array of opportunities for alleviation of poverty and economic development without phasing out a country’s natural assets, especially in low-income countries where ecosystem goods and services constitute a large part of the livelihoods of the poor rural communities and ecosystems and their services provide a haven against natural disasters and economic shocks. To collect relevant data on the level at which palm tree are cultivated in Nigeria, its economic implications and its contributions to a safe and clean environment, the following research questions were raised: To what extent is Palm Tree cultivation prevalent in Nigeria? Of what importance will the cultivation of palm tree be to Youths employment opportunities? In what ways is the renewed efforts on palm tree contribute to safe and clean environment in Nigeria?

Methodology

The study area was limited to Southwestern Nigeria covering Ogun, Osun and Oyo states. In each of the state, officials of Ministry of Agriculture and Ministry of Environment, Farmers Association and Lecturers from Faculty of Agriculture in Federal University of each of the state were engaged in the study. Ten (10) Staff from each of the state were randomly selected to give us $(10 \times 3) \times 3 = 60$, while 20 farmers were randomly selected among members of Farmers Association in each of the three states $(20 \times 3) = 60$. Also, 5 lecturers from each of the Faculty of Environmental Science and Agriculture, in each of the selected institutions in the selected states were randomly selected $(5 \times 2) \times 3 = 30$, giving a total of one hundred and fifty respondents (150).

Three research questions were raised. Data were collected with the aids of a structured type questionnaire the statistical tools used were simple percentage and mean score. Statement relating to level of cultivation of palm tree, job opportunities as a result of plantation of palm trees and the likely contribution of the used of

S/N	Institutions in each state	Ogun state	State of Osun	Oyo state	Total
1	Ministry of agriculture	10	10	10	30
2	Ministry of environment	10	10	10	30
3	Farmers association	20	20	20	60
4	Faculty of agriculture	05	05	05	15
5	Faculty of environment	05	05	05	15
	total	50	50	50	150

Table 1: Demographical Distribution of Respondents.

renewed energy to promote safe and clean environment in Nigeria were designed. The perception was measured on a four points Likert rating scale with assigned values that ranged from 1 Strongly Agreed to 4 Strongly Disagreed.

Results and Discussion

Research Question 1: To what extent is palm tree cultivation prevalent in Southwestern Nigeria?

Association and lecturers from faculty of agriculture in federal university in the study area

Table 2 showed that 87 (58%) respondents agreed that a very large number of Southwest lands are good for the cultivation of palm trees while 63 (42%) respondents disagreed with the assertion. Item two showed that 88 (58.7%) respondents disagreed with the idea that Farmers in southwestern Nigeria are more interested

S/N	Items	SA	A	D	SD	Mean
1	A very large number of Southwest lands are good for the cultivation of palm trees by farmers	35 23.3%	52 34.7	40 26.7	23 15.3%	99.75
2	Farmers in southwestern Nigeria are more interested in palm trees than any other cash crops	53 35.3%	09 06%	60 40%	28 18.7%	96.75
3	Farmers have strong believed that planting of palm trees will bring them good income to live successfully	60 40%	03 02%	29 19.3%	58 38.7%	91.25
4	Southwestern Nigeria is not a good area for the cultivation of large and quality palm trees	08 5.3%	30 20%	30 20%	82 54.7%	121.5
5	Farmers do not see the cultivation of Palm trees as a means of realizing more income in farming business	40 26.7%	84 56%	07 4.7%	19 12.7%	76.25
6	Most farmlands in southwestern Nigeria are not suitable for the cultivation of palm trees.	18 12%	20 13.3%	12 08%	100 66.7%	123.5

Table 2: Analysis of the Prevalence of Palm tree Cultivation in Southwest Nigeria.

Source: Authors’ Fieldwork 2024; Officials of Ministry of Agriculture and Ministry of Environment, Farmers

in palm trees than any other cash crops while 62 (41.3%) respondents agreed with the assertion. It was revealed that 87 (58%) respondents disagree farmers do not have strong belief that the cultivation of palm trees will bring to them handsome income while 63 (42%) respondents agreed with the statement. It was revealed again that 112 (74.7%) disagree with the idea that Southwestern Nigeria is not a good area for the cultivation of large and quality palm trees, while 38 (25.3%) agree with the statement. Also it was

revealed that 124 (82.7%) respondents agreed with the statement that farmers do not see the cultivation of Palm trees as a means of realizing more income in farming business while 26 (17.3%) respondents disagreed with the statement.

From the above analysis one can infer and conclude that the land in Southwestern Nigeria are fertile and good for the cultivation of palm tree but most of the farmer do not have strong believe that

palm tree will bring to them handsome income hence they prefer the cultivation of other cash crop than palm trees. This therefore indicates that the cultivation of palm tree is not given adequate attention like other cash crops. It is obvious that farmers do not have enough knowledge of good buyer or demands for the product, outside the country but today the product has been described as a golden global commodity with high demands from countries who have succeeded in converting the palm oil into bio fuel energy, that is been consume by aviation industry unlike when they will be begging for consumer of palm oil to buy the products. However, it is only few farmers who have the knowledge of the significance of the palm tree but goes for its cultivation.

Research Question 2: Of what importance is the cultivation of palm trees to Youths employment opportunities?

Association and lecturers from faculty of agriculture in federal university in the study area

Table 3 showed that 125 (83.3%) respondents agreed that cultivation of palm trees in a large scale will create job opportuni-

ties for both farmers and youths while 25 (16.7%) respondents disagreed with the statement. Item two showed that 132 (88%) respondents agreed that harvesting and processing of Palm kernel will create more jobs and income for youths and farmers in the Southwest, while 18 (12%) respondents disagreed with the assertion. Also, 125 (83.3%) respondents completely agreed with the assertion that exportation and processing of palm trees products will bring more money to Nigerian purse, this assertion was rejected by 25 (16.7%) respondents. In another development, 141 (94%) respondents disagreed with the assertion that availability of lands and capital to invest in the cultivation of palm trees will not do any favour to youths and farmers while 09 (6%) respondents agreed with the statement. Also 142 (94.7%) respondents disagreed with the assertion that provision of mechanized farm implements has nothing to do with youths engagement in the cultivation of Palm Trees for job and income for survival, while 08 (53.9%) respondents agreed with the assertion. 140 (93.3%) respondents agreed that lack of availability of land for the cultivation of palm trees is a disadvantage to youths employment opportunities while 10 (6.7%) disagreed with the assertion.

S/N	Items	SA	A	D	SD	Mean
1	Cultivation of palm trees in a large scale will create job opportunities for both farmers and youths	110 73.3%	15 10%	10 6.7%	15 10%	130
2	Harvesting and processing of Palm kernel will create more jobs and income for youths and farmers in the Southwest.	115 76.7%	17 11.3%	08 5.3%	10 6.7%	64.25
3	Exportation and processing of palm trees products will bring more money to Nigerian purse	120 80%	05 3.3%	07 4.7%	18 12%	131.75
4	Availability of lands and capital to invest in the cultivation of palm trees will not do any favour to youths and farmers	05 3.3%	04 2.7%	21 14%	120 80%	139
5	Provision of mechanized farm implements has nothing to do with youths engagement in the cultivation of Palm Trees for job and income for survival	03 02%	05 3.3%	23 15.3%	119 79.3%	139.5
6	Lack of availability of fertile lands for the cultivation of Palm Trees is a disadvantage to youths employment opportunities.	115 76.7%	25 16.7%	06 04%	04 2.7%	137.75

Table 3: Analysis of the Importance of Palm tree Cultivation to Youths Employment Opportunities in Nigeria.

Source: Authors’ Fieldwork 2024; Officials of Ministry of Agriculture and Ministry of Environment, Farmers

From the above analysis it is crystal clear that cultivation of palm trees in a large scale, harvesting and processing exercise with exportation of palm tree products will create job opportunities for both youths and farmers, while it will also increase income generation on the part of the government, also provision of land, capital and mechanize farm implements by the government will go a long way to engaged youths, and provide them with more income for their survival. Meaning that, government needs to encourage youths and farmers in the cultivation of palm tree by ensuring the availability of enough lands, funds, mechanized farm implements for extensive plantation of palm trees. Supporting the foregoing, [19] advanced a recent breakthrough in palm oil blended aviation fuel had opened a new visits of opportunities for indigenous agricultural sectors, but unfortunately Nigeria and African countries that are endowed in biofuel raw materials have zero policies for it; hence the need to create awareness on massive cultivation of the products.

According to the Chief Executive Officer of Garuda Indonesia. Ir-fan Setiাপutra who affirm the level at which the palm product will be needed, he explain further to Pertamina the minister in charge of the Ministry of Emerging that they should ensure palm biofuel becomes a commercially reasonable and reliable products, which means there will be more demand of the product hence, youth and farmers should heavily cultivate the product in Nigeria. Worldwide, the aviation industry demand for SAF will reach 330-445 billion litres by 2050 [19]. This is an opportunity for youths and farmers to intensify efforts in the cultivation of palm tree for its unique future demand globally, this will no doubt prevent unemployment and poverty in African Nigeria inclusive.

Research Question 3: In what ways is the renewed efforts of Palm Tree contribute to safe and clean environment in Nigeria.

S/N	Items	SA	A	D	SD	Mean
1	The more Nigerian produces palm trees the more the developed countries engaged in the conversion of palm oil as renewed energy that promote good climate condition for clean environment	114 76%	25 16.7%	04 2.7%	07 4.7%	136.5
2	Nigeria being a member of international comity will also benefit from the reduction in the emission of CO2 that threaten clean environment.	100 66.7%	29 19.3%	19 12.7%	02 1.3%	131.75
3	The renewed products of palm tree has nothing to do with safety and cleaning of environment in Nigeria and beyond	08 5.3%	04 2.7%	18 12%	120 80%	137.5
4	The use of bio-fuel for aviation movement across the world will go on long ways to promote clean and safety environment	122 81.3%	09 06%	09 06%	10 6.7%	135.75
5	Conversion and renewed energy cannot sanitize the negative effects of Climate Change in Nigeria and beyond	20 13.3%	09 06%	10 6.7%	111 74%	128
6	Massive use of the bio-fuel in industrial sectors aside aviation will effectively enhance clean and safe environment for all to enjoy	125 83.3%	06 04%	15 10%	04 2.7%	49.5

Table 4: Analysis of the Contributions of Palm tree Cultivation to Safe and Clean Environment in Nigeria.

Source: Authors' Fieldwork 2024; Officials of Ministry of Agriculture and Ministry of Environment, Farmers.

Association and lecturers from faculty of agriculture in federal university in the study area

Table 4 showed that 139 (92,7%) respondents agreed with the assertion that the more Nigeria produces palm trees, the more developed countries enjoy the supply of palm oil and its conversion to renewed energy that promote good climatic condition for clean environment while 11 (7.3%) disagreed with the assertion. Also, 129 (86%) respondents agreed that Nigeria being a member of interna-

tional comity will also benefit from the reduction in the emission of CO2 that threaten clean environment while 21 (14%) respondents disagreed with the assertion. Item revealed that 138 (92%) respondents disagreed with the idea that the renewed products of palm tree has nothing to do with safety and cleaning of environment in Nigeria and beyond, while 12 (08%) respondents agreed with the assertion. 131 (87.3%) respondents agreed with the assertion that the use of bio-fuel for aviation movement across the world will go

on long ways to promote clean and safety environment, while 19 (12.7%) disagreed with the statements. 121 (80.7%) respondents disagreed with the idea that, conversion and renewed energy cannot sanitize the negative effects of Climate Change in Nigeria and beyond, while 29 (19.3%) respondents agreed with the statement. Finally, 131 (87.3%) respondents agreed that massive use of the bio-fuel in industrial sectors aside aviation will effectively enhance clean and safe environment for all to enjoy, while 19 (12.7%) respondents disagreed with the assertion.

One can infer from the above analysis that clean and safe environment and good climatic condition are achievable when conversion of palm oil into bio-fuel is used by not only aviation industry, because it will enhance reduction in the emission of CO₂ that threaten clean environment. So the more Nigeria and other countries go into investment of palm oil production, the more the supply of the product for the use of aviation and other industries which will in turn promote a clean and safe environment for us all to live in. in conclusion conversion and renewed energy will go along was to reduce the negative effects of climate change in Nigeria and beyond. This research shows that agricultural practices has a strong relationship with climate change. This can be supported by the position of [20] who submitted that the survival of agriculture is dependent on climate and the two are interrelated because they both take place globally. This could be corroborated by the submission of Indonesia Minister of Energy who said that palm based fuel emits less atmosphere warming of greenhouse gases compare with fossil fuel, hence there is need to cut carbon footprint by using alternative fuels. In conclusion, expert says the aviation industry will need up to 450 billion liters to sustain aviation fuel i.e. palm-based fuel by 2050.

Conclusion and Recommendations

It is evident from the result of the study in addition to evidences in the literature that southern Nigeria has fertile land that can accommodate the cultivation of palm trees, only that farmers are not with adequate knowledge of demands and how it could increase their income. Also inadequate facilities to encourage farmers are lacking; self-will on the part of the youths is at lower ebb; government's commitment to necessary supports to youths and farmers remains rhetoric. With high demand of the palm trees products across the world for industrial and aviation use, it is obvious that investment into palm tree will bring more income, while demand has also created the zeal for both youths and farmers to heavily

invest and cultivate the crop, this no doubt will promote a very big employment opportunities. One can, therefore, conclude that cultivation of palm tree will not only create job opportunities, but it will help to promote reduction in the emission CO₂ which in turn will promote good climatic condition, clean and safe environment and at the same time increases Nigerian gross domestic product through agriculture especially in the area of palm tree cultivation. However, Nigeria government need to encourage farmers and youths to invest on farming with a viable supports couple with the creation of enabling environment for farmers to operate effectively. Based on the foregoing, the following recommendations are put forward.

Government should embark on a viable and vibrant policies on the cultivation of palm tree in Nigeria such that the country will be one of the supplier and exporter of palm tree products into the world market.

Government should create an enabling environment by making land available with modern farm implements that will encourage large scale cultivation of the crop.

The government should organize an awareness programme for farmers and youth on the modern way by which the tree can be planted in line with best global practices.

The government should also assist in the area of providing loans with reduced interest for farmers and youths to access in order to embark on a largely scale production.

Nigeria government needs to encourage youths in this area with different motivational policies that will enable them to stay in the farm settlements, amenities and incentives should be made available for youths.

Nigerian Universities and Colleges of Agriculture should be encourage to embark on researches by coming up with hybrid seedling and best way to cultivate the palm tree.

Other stakeholders and non-governmental agencies' in the area of economic and agriculture need to contribute to agricultural development programmes to complements government efforts.

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