A Legal Framework for Sustainable Agricultural Practice in Nigeria

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Abstract
Almost 1 out of every 9 people on the planet Earth go to bed without food almost on a daily basis. Nigeria ranks 20th on the Global Hunger Index, with about 65% of her population confronted with food insecurity. The country has an estimated 84 million hectares of arable land of which only 40% is cultivated. There is huge potential in forestry, animal husbandry, fisheries, food and cash crops. How to harness these potentials into prosperity and food security still remains a challenge. The paper is set out to investigate the challenges militating against sustainable agricultural practices in Nigeria and suggest ways as to how these challenges can be surmounted. The goal of this paper is how to meet the food needs of this nation without compromising the ability of future generations to meet their own needs.

The study found that despite various attempts at addressing food shortage in Nigeria, the nation still remains insecure as far as food is concerned and that Nigeria is yet to attain sustainable agricultural development despite her robust agricultural laws. The paper identified agriculture as an indispensable requirement for life sustenance and the best way to end poverty. The paper concluded that agriculture, which is a major platform for national development as well as one of the major drivers of the economy of any nation, remains a very important engine of economic development. A legal framework for sustainable agricultural practice that is carefully designed and implemented with the necessary political will was postulated.

Key words: Nigeria; Sustainable agricultural practice; Food security

INTRODUCTION
Agriculture, the first and oldest occupation on earth, is one important component of the moment (Fox, et al., 1990). It was the first assignment given to man by God in the Garden of Eden where God commanded man to till the ground and dress it. Agriculture occupies a prime place in any economic system. Without agriculture, the existence of man on earth will be near impossible (Akinola, 2015). Agriculture is therefore the source of life on earth. It serves as a source of food for every living organism, a source of employment and income to a good number of people, a source of raw materials for agro-based industries, a source of foreign exchange earnings, a source of national security, a source of shelter and clothing, etc. Agriculture is tied to the various sectors and is essential for generating broad based growth necessary for development (Ladan, 2013). It is not only fundamental to the sustenance of life, but is also the bedrock to economic development. Development and improvement in the agricultural sector is a necessary prerequisite for the development of Nigeria. Agricultural practice and development activities take place on the environment. The environment therefore represents a complex system of interconnections (Sands, 2003, p.5). The interconnections between the environment and agricultural practices cannot be treated as discrete (Goodie, 1993, pp. 367-368). This interconnection poses legal challenges as to how to develop and apply a comprehensive and effective set of legal requirements aimed at preventing environmental damage when engaged in agricultural practice. Agriculture-led development is fundamental to sustainable national development as it
helps to reduce hunger, poverty, burden of food import as well as the generation of economic growth and the opening of new way to an expansion of exports. The agricultural sector can be likened to the chicken that lays the egg for the development of any nation, the neglect of which is capable of rendering life to be meaningless.

One of the harmful activities that bring about environmental changes is intensification of agricultural practice (Ezeabasili, 2009, pp.369-380). Agriculture is an integral and essential aspect of the existence of man and his health. Agriculture is therefore indispensable to the existence of man. Yet agricultural practices can also impact negative on the environment in several ways. As observed by Saunders, modern agriculture is a leading driver of environmental problems that is already pushing the world beyond the limits of most planetary boundaries (Saunders, 2017).

The interdependence of environmental and agricultural practices poses legal challenges as to how to develop and apply a comprehensive and effective set of legal requirements aimed at preventing environmental damage while engaging in agricultural activities (Sands, 2003, p.5). The expansion of farms can lead to destruction of forests and wetlands, soil erosion, damage to fauna and flora as a result of the use of pesticides. Man-made pollutant from agricultural practices is causing increase in the air pollution equation (Onyenekenwa and Agbazue, 2011, pp.490-497). Agricultural air pollution comes from contemporary practices such as the burning of natural vegetation, the use of fertilizers, pesticides, the spraying of chemical substances1 and herbicides (Sharma, 2002), excessive use of fertilizer which can lead to contamination of fresh water resources (Sands, 2004, p.669). The recycling of industrial by-products into fertilizers results in the contamination of the soil with various metals which contaminate the soil (Eneh, 2011). Unusual release of polychlorinated dibenzo-p-dioxins and municipal landfills are the cause of the release of many chemical substances not only in the soil environment, but also in ground water (Nwafor, 2006). Uncontrolled practice on virgin land results in splash erosion with catastrophic effects on soil nutrient status and the general suitability for a number of other agricultural related uses (Jimoh, 1997). The application of chemicals2 to harvest water related resources provokes water pollution (Olawepo, 2000) results in contamination of drinking water (Lorenz, 2007), and approximately 14,000 deaths per day (Kaliman, 2008). The use of chemicals to capture fishes not only renders water resources unfit for human consumption, but is also capable of wiping the fishes out (Jomoh, 2002) and causing harm to man and other living creatures of the earth. The use of pesticides for example gives rise to serious concerns to animals and wildlife as they are poisonous to some forms of life and inimical to the environment. It is sad to note that there are no effective laws specifically to regulate the production or use of pesticides (Amokaye, 2004). As a result, the life of man and other living species is endangered.

1. WHAT IS AGRICULTURE?

Agriculture is the science or practice of farming. It is the art, science and industry of managing the growth of plants and animals for human use and enjoyment. Nashir Akinla (Akinola, 2015, p. 8) defined agriculture as both a science and an art or rather a technology for the exploitation of the primary, secondary and tertiary products of photosynthesis. Agriculture is the practice of cultivating soil, growing and harvesting of crops, breeding and raising livestock, dairy and forestry, with the purpose of improving the livelihood of crop handlers (Okunade and Williams, 2014). Akinpelu and Davies (Akinpelu and Davies, 2012) defined agriculture to mean the cultivation of field and production of livestock. To me, agriculture is the careful planning and management of plants and animals for the purpose of enhancing and improving the well-being of man.

The world is on the match towards the attainment of the sustainable development goals. Sustainable development advocates the rational, practicable and coherent use of the environment in such a way that it will be rendered live-able for generations to come. One of the ways to attain poverty focused development is to ensure responsible stewardship of natural resources (Omitogun, 2010, p. 62). The concept of sustainable development emphasizes the need to balance the use of natural resources with the need of ensuring that such resources are available for future generations to meet their own needs. According to Ecker et al (Ecker and Breisinger, 2012), the pillar of sustainability is such that ensures availability of resources, infrastructures, information on the people, good roads, good health services with qualified personnel, electricity, good water supply, mobile phones and internet services, establishment of rural development ministry, grants to producers etc., accessibility both economically and directly (Garett and Ruel, 1999), of all to sufficient resources to obtain appropriate food for a nutritious diet (Riley, et al, 1999), food utilization4 or what Tweeten (Tweeten, 1999) refers to as the metabolism of food by individuals, and lastly, food stability which refers to the ability to obtain food over time.5

With regards to agriculture, the word ‘sustainable’ gives description to farming systems that are capable of maintaining their usefulness and productivity to society indefinitely (Feenstra, 2017). According to Bamire

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1 Such as lead from paint dust contacting with the soil.
2 Such as Gamalin 20.
(Bamire, 2018), sustainable farming systems are those farming systems which are not only resources conserving, socially supportive, commercially competitive but must also be environmentally sound. Sustainable agriculture is defined6 as the production of food, fiber or other plant and animal products through the use of those farming techniques that will ensure the protection of public health and animal welfare, the environment and human communities. It is those resource-conserving, socially supportive, commercially competitive and environmentally sound farming systems that are capable of maintaining their productivity and usefulness to society indefinitely (John, 1990). Sustainable agriculture is the production of food, fiber or other plants or animal products using farming techniques that protect the environment, public health, human communities and animal welfare.7 It is the aggregated system of plant and animals production practices with a site-specific application to satisfy human food and fiber needs, enhance the quality of the environment and the natural resource base upon which agricultural economy depends, make the most efficient use of non-renewable resources and on-farm resources, integrates natural biological cycles and controls where appropriate, sustain the economic viability of farm operations and enhance the quality of life for farmers and society as a whole over a long period of time.8 Sustainable agriculture is engaged in agricultural practice in a manner that ensures long term productivity of land, the protection of the environment, human health and plant and animal welfare for the benefit of present and future generations. Sustainable agriculture is the agricultural system adapted to a particular area so that crop and animal production do not decline over time and are reasonably stable over normal fluctuations of weather (Donahue and Troeh, 2003). It is the production of food, fiber or other plants or animal products using farming techniques that protect the environment, public health, human communities and animal welfare. It is the agricultural practices that encourage the use of improved methods in the four sub sectors9 of agriculture (Akinpelu and Davies, 2012). Sustainable agriculture is based on practices that reduce environmental degradation, deteriorating range land and dwindling forest-reserve resources, provide an adequate and dependable farm income thereby reducing poverty (Titilola, 2000).

The practice of sustainable agriculture is one that does not cause harm to the environment. Rather it is expected to strive to protect the land, air, soil and water as well as bring about improvement in economic activities, and to add to the overall economic development of any nation. It is that agricultural practice which ensures the realization of the right to adequate food for every member of the society. In order to achieve this, the cultivation, production, marketing, distribution and sales in agricultural processes must adopt environmental friendly practices and options. The objectives of sustainable agriculture include the conservation and enhancement of natural resources that agriculture uses and shares, compatibility with other resources environmental resources that are affected by agriculture and pro-active-ness in protecting the agriculture/feed sector from environmental impacts caused by other sectors/factors external to agriculture.10 For one to proclaim that a country’s agricultural practices is sustainable, such agricultural practices must be one which strives to attain the three fundamental goals of sustainable development such as economic profitability, social equity and environmental protection. Sustainable agriculture integrates the three dimensions of sustainable development11 to ensure the production of agricultural products in such a way that protects and improves the natural environment as well as the social and economic conditions of people12 and safeguards the health and welfare of all. One very important ingredient for sustainable agricultural production is a positive framework of laws and policies that helps to strengthen the agricultural section (Ajala, 2015, pp.12-27). There must therefore be laws and policies that strive to promote or enhance regular, permanent and unrestricted access to food resources.13 The goal of sustainable agricultural practice is to ensure the promotion of laws and policies that will result in increased profits and financial returns, positive balance of payments14 as well as job creation so as to foster poverty alleviation, equity and improved quality of life for all. The attainment of the above requires the putting in place, legal and policy frameworks which address the environmental impacts of farming, as well as one which encourages farming practices that result in increase in economic profitability, social equity and environmental health.

Every citizen has a right to a standard of living adequate not only for his health but also for the well-being of his family.15 In the same vein every-one has the right to regular, permanent and unrestricted access to a quantitatively and qualitatively adequate and sufficient

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6 Rhuks and Olawuyi (2015) supra  
7 ibid  
9 The four sub-sectors of agriculture are crops, livestock, fisheries and forestry  
10 Food, Provincial Agriculture Committee on Environmental Sustainability: Growing Together at p. 31  
11 These include environmental sustainability, economic sustainability and social sustainability  
12 Their employees and the local communities inclusive  
14 To both subsistent and commercial farmers and stakeholders  
15 See Article 25 of the Universal Declaration of Human Rights of 1984
food corresponding to the cultural tradition of the people to which the consumer belongs, and which ensures the physical, mental, fulfilling and dignified life that is free of fear. This right to food can only be realized effectively when everyone has the physical and economic access to adequate food or means for its procurement at all times, irrespective of sex or age. It takes sustainable agriculture produce healthy food without compromising the ability of future generations to do same (Feenstra, 2014, pp.752-756), and to ensure food security. Food security includes both physical and economic access to food that meets people’s dietary needs as well as their food preferences. Lack of access to sufficient, safe, nutritious food to maintain a healthy and active life constitutes food insecurity. According to the FAO, the four pillars of food security are availability of sufficient quantity of food on a consistent basis (Gross, et al, 2000). Sustainable agriculture is also defined as the availability at all times of adequate world food supply of basic food stuffs to sustain a steady expansion of food consumption and to off-set fluctuations in product and prices. It is a situation that exists when all people at all times have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active healthy life. The vision of sustainable agriculture is the vision of a world where food is nutritious and accessible for everyone, a world in which natural resources are managed in a way that maintain ecosystem functions to support current and future human needs.

2. AGRICULTURAL PRACTICES IN NIGERIA

Once upon a time, agriculture formed the main stay of the Nigerian economy, contributing to about 64 percent of the total GDP in Nigeria, during the colonial era. With an estimated 84 million hectares of arable land, the country has huge potential in forestry, animal husbandry, fisheries, food and cash crops. Before the oil boom of 1970, Nigeria was an agrarian society (Adetunji, 2008), with agriculture accounting for about 61% GDP, and contributing to about 70% of Nigeria’s export earnings (Okunade and Williams, 2014). Agricultural production accounts for a staggering 70% global fresh water consumption. Nigeria was the fourth largest producer of cocoa in the world and the 5th major producer of fruits and vegetables in the world. Cocoa export was a significant contributor to economic growth, accounting for over 90% of non-oil exports in 1985. At a time in Nigeria’s history when emphasis was on the agricultural sector, this sector of the economy performed creditably well to the extent that regional development was linked to the agricultural sector. Agriculture remained the dominant sector in the Nigerian economy for a very long time. As a result of the discovery of oil, emphasis shifted from the agricultural sector to the oil sector, thus leading to gross neglect of the Nigerian agricultural sector by successive governments as reflected in the continuous drop in budgetary allocation. Reduction in agricultural products can lead to reduction in foreign exchange earnings as well as the supply of lesser food in the face of higher demands thereby resulting in higher cost of agricultural produce amongst other things.

Farm holdings in Nigeria can be grouped under smallholders, medium holders and large-holders. Agricultural practice in Nigeria was characterized by peasant farming (Attah, 2012) in which family needs determined the scale of production and wherein small plots of land were cultivated by individual land owners or sub owners, following age-old methods, wherein the essential factors of production were provided mainly within the family. Most of the crops were produced by small holders, who accounted for about 81% of agricultural producers. About 90% of Nigeria’s food requirements are produced by small-scale farmers, the majority of those engaged in the practice of agriculture in Nigeria are trapped in the poverty line web (Famoriyo, 1994). Nigeria’s agricultural practice includes subsistence agriculture involving human labor in small-scale farming to meet household needs majorly. Nigerians are also involved in mechanized agriculture where human labour is replaced with the use of machineries, crop rotation which involves rotation of crops on a piece of land in series of systematic intervals. There is also pastoral farming which is common with the Fulani Herdsmen, moving from one location to another in search of suitable pasture for their cattle etc. Local governments in Nigeria are required to mobilize farmers through group formation and land allocation but this has not been an easy task as a result of financial constraints (Nwagbo, 2000). To some extent, the earnings of the average farmer is not commensurate with his toil (Akinola,

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16 See the United Nations Special Rapporteur on the Right to Food Available at: http://www.ohchr.org/EN/Issues/Food/Pages/ FoodIndex.aspx>
17 See the General Comment 12 of the Committee on Economic, Social and Cultural Rights of 1999 (CESCR)
18 World Food Summit of 1996
19 Food Agricultural Organisation (FAO) 2010
20 World Food Summit 1974
21 Food Agricultural Organisation (FAO) 2001
23 United Nations Environment Programme
24 Akinpelu and Davies (2012) supra
25 Agricultural Policy for Nigeria, Lagos
26 Federal Ministry of Agriculture and Rural Development
This has made engagement in agricultural activities to be very unattractive to the average Nigerian.

Currently, some East African countries\(^27\) have made agriculture the backbone of their economies and to contribute to their GDP, whereby a good percentage\(^28\) of their workforce engage in farming or food processing through small farms in order to boost employment (World Bank 2016, 1990). About 70% of Nigeria’s land can be used for food cultivation (Okunade and Williams, 2014). Nigeria can take a cue from these countries by taking advantage of her resources to boost her economy and make life better for all and sundry by making food available for all her citizens, there measuring up to the attainment of the SDGs through Nigeria’s agricultural sector.

3. CHALLENGES CONFRONTING AGRICULTURAL PRACTICES IN NIGERIA

Nigeria has about 70% land that can be cultivated with about 230 billion cubic meters of water resources. The country’s coastal water is rich to meet the aquatic requirements of the country. It is sad to note that only 30% of agricultural land is put to cultivation and only about 10% of Nigeria’s coastal fishing potential is tapped. Nigeria is still behind in the quest for the attainment of sustainable agricultural production\(^29\) despite all efforts.

Low value placed on agriculture which makes farmers’ efforts to be less attractive and under rewarded, unfavourable land tenure system practiced in Nigeria which makes it difficult to acquire land for agricultural purposes serve as hindrance to the attainment of sustainable agricultural practice in Nigeria.

Poor performance of Nigerian agriculture has also been traced (Idachaba, 2000) to lack of workable agricultural legal/policy, implementation setback frameworks as a result of lack of sufficiently based in-depth studies and realistic pilot surveys. Food security is not clearly captured under the 1999 Constitution of the Federal Republic of Nigeria. According to Ladan,\(^30\) legislations and policies so far formulated to boost agricultural production in Nigeria are virtually fraught with problems such as short-sightedness, focusing on small scale rather than mechanized farming (Dada, 2006), absence of cost effective in their operations (Osuntogun and Olufokunbi, 1986), non-availability of land for prospective large scale farmers as a result of the Land Use Act (Gusau, 1981).

Lack of public participation in the design, implementation and evaluation of policies as well as limited implementation capacity and a poor understanding of the details of policies by implementers also contributes to the setback in the Nigerian agricultural sector.

Improvement in agricultural performance is a prerequisite for economic development. In some countries of the world, where women were given access to productive resources, such women were able to ensuring household food security and to meet women farmers’ information needs (Bhardwal, 2011). They have also made use of sale of excess to generate more income, thereby providing food security to the community. Sustainable rural livelihood programmes has been used to improve food security, nutrition and health and enhance human capital both at household and community levels in Kamuli district of eastern Uganda (Babugura, 2011). Unfortunately, funding in the agricultural sector has not been adequate (Ojo, 1986). Investment in agriculture which will enable any nation to feed her growing population, generate employment, earn foreign exchange and provide raw materials for industries (Ogumbiyi, 2016) is still not encouraging. Development Authority aimed at developing agriculture in Nigeria is faced with the challenge of poor funding/investment which fall short of stipulated recommendations (Ogunyemi and Adebokun, 2009).

Lack of post-harvest technology and poor storage facilities which makes prices to be very low at harvest periods and outrages increase at off season, greed or corruption which has led to the supply of fake and substandard agricultural inputs as well as diversion of produce to neighboring countries (Nwagbo, 2000, 51-56), etc. also constitutes critical challenge to agricultural practice in Nigeria.

One of the fundamental prerequisites for the achievement of sustainable development is broad public participation\(^32\) in decision making\(^33\) of which farmers is one.\(^34\) Integrated agricultural development which involves consciously formulated, systematic and multi-sectoral programme to attain the integration of the people in the mainstream of income groups in a country (Olubosum, 1976, pp.1-50) is lacking in Nigeria. Synergistic interactions of state and society produces better results (Evans, 1996) As asserted by Wagner (Wagner, 2007), the overall success of the MDGs depends heavily on the success of developing a global partnership for development. The ability of the state to deliver basic collective goods depends on societal collaboration with the private sector. The level of partnership between the State and the people at the planning, formulation and implementation stages in the agricultural sector is still not encouraging.

The conservation and management of resources for

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\(^{27}\) Such as Kenya, Ethiopia, Tanzania and Uganda

\(^{28}\) In Kenya for example, about 80% of their workforce engage in farming. Agriculture in Kenya accounts for 61.1 percent of employment and 52.9% of revenue from exports

\(^{29}\) Ibid at p. 492

\(^{30}\) Ladan, (2013) supra at p. 53

\(^{31}\) India is an example

\(^{32}\) See Section III 23-32 of Agenda 21

\(^{33}\) Agenda 21 Preamble, paras. 23.1-23.2

\(^{34}\) Other groups include, women, children, indigenous people, youths, workers and their trade unions, local authorities, scientific and technological communities and business and organisations,
development requires sustainable agriculture for rural development. One of the ways of reconciling economic activities with environmental protection is environmentally sensitive farming practices (Hawke, 1993). This makes it imperative to make use of farming implements that will ensure the protection of the environment. A lot still needs to be done in this area in Nigeria.

Until these challenges are effectively tackled, the attainment of sustainable agricultural practice in Nigeria will be a mirage.

4. THE LEGAL FRAMEWORK ON AGRICULTURAL PRACTICE IN NIGERIA

To this end, the Nigerian government has put laws in place to regulate the sector. Some of those laws which are considered to be most relevant to agricultural investment in Nigeria include the following:

4.1 The 1999 Constitution of the Federal Republic of Nigeria

The fundamental objectives and directive principle of state policy on food under the 1999 Constitution of the Federal Republic of Nigeria states that: The State shall direct its policy towards ensuring that suitable and adequate food is provided for all citizens subject to availability of resources. According to the Nigerian Constitution, every person has a right to life and no one shall be deprived intentionally of his right. This right to life cannot be guaranteed in the absence of a sustainable agricultural sector. It takes efforts directed at reducing the number of people living in extreme poverty, attempts aimed at putting an end to hunger and the attainment of food security, improved nutrition and the promotion of sustainable agriculture to guarantee the right to life.

4.2 National Agricultural Land Development Authority (NALDA) Act

The National Agricultural Land Development Authority Act seeks to provide strategic public support for land and development by establishing a corporate body known as the National Agricultural Land Development Authority. This Act defined “development” as the physical preparation of land for crop and livestock and includes actual stock and livestock production, storage, processing and marketing as well as the provision of social infrastructural facilities.

4.3 National Agricultural Seeds Act

The above Act seeks to regulate the development of the national seed system by establishing a council known as the National Agricultural Seed Council. This Council is given the responsibility for the overall policy guidelines and monitoring of the development of the national seed system. The Act aims at analyzing and proposing programmes, policies and actions regarding seed development as well as the seed industry. The overall objective of the Act is to harmonize the seed industry with other agricultural input industry in order to meet the increasing demand of the agricultural sector.

4.4 National Crop Varieties and Livestock Breeds (Registration, etc.) Act

The above Act seeks to provide for detailed identification of management training needs in agriculture and rural development organization, and to develop and implement training programmes to meet the needs of managers in the agricultural and rural development sector of the Nigerian economy.

4.5 The Agricultural Credit Guarantee Scheme Fund Act

The above Act seeks to establish a Fund into which a certain sum of money is to be subscribed to in order to make provision for and guarantee loans granted for agricultural purposes by any bank. According to the Act, no loan granted pursuant to the Act shall not be applied for any purpose other than that for which such loan was granted. Criminal liability is prescribed for any person (including corporations) who applies such loans in contravention of the Act.

4.6 Agricultural Research Council of Nigeria Act

The Agricultural research Council of Nigeria Act provides for the establishment of research institute by the Council. To this end, Nigeria has quite a number of agricultural institutions scattered all over the country such as the International Livestock Research Institute, the Federal University of Agriculture, Abeokuta, the National Root Crop Research Institute etc.

4.7 Agricultural (Control of Importation) Act

The above Act made provision for the regulation of importation of articles for the purpose of controlling plant diseases such as those caused by fungus, bacterium, virus or any other organism injurious to agricultural or horticultural crops and pests such as insect or other animals which are injurious to agricultural or horticultural crops. The Minister of agriculture is mandated to make regulations prohibiting, restricting or laying down conditions for the importation from any or all countries.

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35 See Chapter 14 of Agenda 21
36 Section 53(1) of the Constitution of the Federal Republic of Nigeria
38 See Section 21 of the National Agricultural Land Development Authority (NALDA) Act
39 National Agricultural Seed Act Cap. N5 Vol. 10 LFN 2004
40 National Crop Varieties and Livestock Breeds (Registration, etc.) Act Cap. N27 Laws of the Federation of Nigeria (LFN) 2004
41 The National Agricultural Credit Guarantee Scheme Fund Act Cap. A10 LFN 2004
42 Section 5 of the Agricultural Credit Guarantee Scheme Fund Act
43 Agricultural Research Council of Nigeria Act Cap. A12 LFN 2004
44 Agricultural (Control of Importation) Act Cap. A13 LFN 2004
of plants, seeds, soil, containers, straw and other packing materials, artificial fertilizers, and any other similar goods or things, which on importation, are found to be or suspected to be infected with any plant disease or pest (Okorodudu-Fubara, 1998).

### 4.8 Nigerian Agricultural Insurance Corporation (NAIC) Act

The above Act\(^{45}\) seeks to provide a scheme to protect the Nigerian farmer from the effect of natural hazards by introducing measures which ensures sufficient indemnity to keep the farmer in business and to established the Nigerian Agricultural Insurance Corporation. This Corporation is responsible for the implementation, management and administration of the Agricultural Insurance Scheme in Nigeria.

#### 4.9 Environmental Impact Assessment Act (EIA)

Environmental Impact Assessment\(^{46}\) contains explicit and detailed procedural requirements on proposed activities (agricultural activities inclusive) likely to have significant impacts on natural resources and the environment. The primary purpose of the EIA is to make EIA mandatory by ensuring that the potential environmental impact of a proposed activity are identified and evaluated before given approval to proceed with the planning and implementation of such activity. To this end, activities that are likely to have serious or significant environmental effects are neither to be approved nor undertaken by the private or public sector. As to what constitutes significant or serious effect is a mixed question of law and facts to be determined by the courts.

### 4.10 The Land Use Act

The above Act\(^{47}\) vests the ownership of all lands comprised in a State on the Governor of that State.\(^{48}\) The Governor is empowered to appropriate such land in the overall public interests. As a result of this Act, Agricultural is granted to the wealthy in the Nigerian society to the detriment of the true owners of such land (Nwosu, 1991). As a result, farmers’ rights to land is limited, thereby leading to the fragmentation of land with its negative consequences on agricultural sustainability, and often serves as hindrance to small scale farmers as well as leading to environmental injustice (Ako, 2009, p. 287) in Nigeria.

### 4.11 The Sea Fisheries Act

The sea fisheries Act\(^{49}\) provides for the regulation, control and protection of sea fisheries in the territorial waters of Nigeria. The Act places the responsibility of the registration of vessels for fishing or shrimping purposes on the Federal Ministry of Agriculture.

### 4.12 The River Basins Development Authorities Act 1987 No. 35

The purpose for the above Act is to promote effective management of Nigeria’s water resources. The Act created several authorities with the responsibility of keeping a comprehensive and up to date water resources master plan and to identify all water resources requirements and to develop lands suitable for irrigation which is to be handed over to farmers, amongst other functions.\(^{50}\)

#### 4.13 The Endangered Species (Control of International Trade and Traffic) Act

The above Act\(^{51}\) is to provide for the conservation and management of Nigeria’s wild life as we’ll as the protection of some of her endangered species in danger of extinction. The Act prohibits the hunting, capture or trade of animals which are not immediately threatened but may become threatened in the future. However, according to the law, licence can be issued by the relevant minister for the hunting or capture of such species under certain conditions.

### 4.14 Agricultural and Rural Management Training Institute Act

This Act\(^{52}\) makes provisions for detailed identification of management training needs in agriculture and rural development organisations as well as the development and implementation of training programmes to meet the needs of management teams in the agricultural and rural development sector of the Nigerian economy.

## 5. POLICY FRAMEWORK ON AGRICULTURAL PRACTICE IN NIGERIA

Policy provisions are equally imperative if sustainable growth and development is to be attained. The Nigerian government has also put in place the following laws considered to be relevant to sustainable agricultural practice in Nigeria:

#### 5.1 The National Policy on Environment

The National Policy on Environment was formulated in 1989 to integrate environmental concerns into the activities of all sectors of the Nigerian economy (the agricultural sector inclusive), with the overall aim of achieving sustainable development for Nigeria. The goal of the National Policy on Environment is to achieve sustainable development to secure a quality of environment adequate for good health and well-being, conserve and use the environment and natural resources for the benefit of present and future generations, restore, maintain and enhance the ecosystems and ecological processes essential for the functioning of the biosphere to preserve biological diversity.
diversity and the principle of optimum sustainable yield in the use of living natural resources and ecosystems etc.53

5.2 Agenda 21 for the Nigerian Environment
The above seeks to integrate environmental policy into development planning in a holistic manner at all levels of government, the private sector inclusive, and to intensify the transition to sustainable development. It is also designed to address sectoral priorities, plans, policies and strategies for the major sectors of the economy while fostering regional and global partnership simultaneously (Amokaye, 2004, p. 77).

5.3 National Economic Empowerment and Development Strategy (NEEDS)
The National Economic Empowerment and Development Strategy which was aim at promoting growth and reducing poverty through a participatory process, was designed to encourage private sector participation in the development of the Nigerian economy. This document was directed at influencing improvement in the production, processing and distribution of agricultural commodities (Olowa & Olowa, 2014, pp.487-500) among other things.

5.4 The Food and Nutrition Policy
Food and nutrition forms an integral part of the overall national objective of improving the socio economic well-being of Nigerians. The Food and Nutrition Policy was formulated with the aim of promoting a viable system for guiding and coordinating food and nutrition activities, incorporating food and nutrition considerations into development plans, promoting habits and activities that will reduce the level of malnutrition and ensuring that nutrition is used in evaluating developmental policies and promoting good indigenous food cultures and dietary habits for healthy living and development.

5.5 Nigeria’s Agricultural Policy
The above Policy which aims at attaining self-sustaining growth in all the subsectors of agriculture, is a synthesis of the framework and action plans of government designed to achieve overall agricultural growth and development in Nigeria. The policy was designed to stimulate growth and development of the agricultural sector so as to positively impact on the overall growth of the Nigerian economy. The main feature of the Policy is the evolution of strategies that will ensure self-sufficiency and improvement on the level of technical and economic efficiency in food production. The objectives of the policy includes protection and improvement of agricultural land resources and preservation of the environment for sustainable agricultural production, establishment of appropriate institutions and creation of administrative organs to facilitate the integrated development and realization of Nigeria’s agricultural potentials.

5.6 The National Plan of Action for Food and Nutrition in Nigeria
The above was launched in 200454 as flagship infrastructure for realizing the rights of Nigerians to adequate nutrition and achieving the Millennium Development Goals. The Plan, which seeks to promote a partnership approach among all stakeholders, contains various activities aimed at addressing the basic underlying and immediate causes of malnutrition.

5.7 The New Nigerian Agricultural Policy 2001-2013
The above Policy document was launched in 2001 to herald a new policy direction to achieve self-sufficiency in basic food supply and the attainment of food security, to promote increased application of modern technology to agricultural production as well as to improve the quality of life of rural dwellers among other things.55

5.8 The National Agricultural Development Fund
The National Agricultural Development Fund is to provide the necessary impetus for the sustainable development of the agricultural sector. It is aimed at supporting both the private and the public sectors in carrying out activities that will boost agricultural and rural development, with emphasis on all round agricultural research, market development, extensive delivery, long term credit, the development of rural institutions and the promotion of enterprise.56

In addition to the above, successive governments have made various efforts to boost agricultural practice in Nigeria. To this end, Nigeria once had Operation Feed the Nation of Obasanjo’s administration which lasted from 1976-1979, the Green Revolution Programme of Alhaji Shehu Aliyu Usman Shagari which lasted from 1979-1983, the Agricultural Development Project of 1972, the National Accelerated Food Production Project (NAFPP) established in 1973, the Structural Adjustment Programme of General Ibrahim Babangida of 1986 which relied mostly on the agricultural sector to significantly improve the economy and reverse the declining trend of production in agriculture, Directorate of Food, Road and Rural Infrastructures and Productivity established in 1987 also by the Babangida administration, Massive Investment in Rural infrastructures from 1985-1992, the National Agricultural Land Development Authority (NALDA) which lasted from 1992 – 2000, the Petroleum (Special) Trust Fund (PTF), the Food Supply Programme of Sani Abacha which lasted from 1993-1998), The Abacha led SAP which led to the adjustment of tariff structure to encourage local production and to protect agricultural and local industries from unfair international competition, the National Food Security Programme (NFSP) issued in 2008 which was aimed at attaining food security by ensuring that all Nigerians have access to good-quality food, while making Nigeria a major

53 Ladan (2013) supra at p. 21
54 Akinyele, I. O. (2009) supra
55 Ladan, (2013) supra at p. 14
56 Ladan (2013) supra at p. 18
exporter of foodstuffs, the Agricultural Development Programmes, Nigerian Agricultural Research Projects (NARP), the institution of new millennium agricultural policies by the then democratic administration of Obasanjo in 1999 which was aimed at self-sustaining growth in all sub-sectors of agriculture (Olowa and Olowa, 2014, pp. 487-500). There was also the Food Security Programme of Olusegun Obasanjo during his civilian era from 1999-2007, the 7 Point Agenda and the National Economic Empowerment Strategy of Umar Musa Yar’adua from 2007-2011, Agricultural Transformation Agenda of Good-Luck Jonathan from 2011 to 2015 and the … of Buhari which commenced in 2015.

Also, there are a number of institutions established to handle agricultural issues. To this end, Nigeria has 3 International Agricultural Research Institutes, focusing on major tropical agricultural products, to conduct agricultural research and development and to improve food security and reduce poverty, 3 Universities of Agriculture, 37 Agricultural Development Programmes established in all the States of the Federation to effectively disseminate various agricultural technologies at grass-root levels, and 19 Agricultural Research Institutes in Nigeria to conduct research in various areas of agriculture in Nigeria. Unfortunately, these institutions have not lived up to expectations.

6. A FRAMEWORK FOR ATTAINING SUSTAINABLE AGRICULTURAL DEVELOPMENT IN NIGERIA

In the year 2000 189 countries of the world came together to brain storm on how the future world should look like, seeing the degree of poverty and hunger the world over. Imagining a future world that is devoid of poverty and hunger, leaders from these countries created a 15 year plan called the Millennium Development Goals. To this end, goal 1 of the MDGs was aimed at cutting down hunger by half and reducing poverty. At the end of the 15 year plan, a new set of goals termed the Sustainable Development Goals (SDGs) were put in place by these countries to build on the successes made in the past 15 years, and to build a consensus about the future world desired by all, where everyone would have enough food and the basic necessities of life. The aim of these goals is to end poverty, hunger and malnutrition amongst others come the year 2030. Goal 1 of the SDGs is to end (extreme) poverty in all its ramifications globally by the year 2030. Goal 2 is to end hunger, achieve food security and improve nutrition and promote sustainable agriculture. Target 12.3 of Goal 12 is to cut to half per capita global food waste at the retail and consumer levels and reduce food losses along the production and supply chains, including post-harvest losses. This is the future world desired by all as enumerated in the SDGs as far as the agricultural sector is concerned. The attainment of these goals requires the promotion of sustainable agriculture and ensuring food security.

Meeting the SGDs therefore requires a more productive agricultural sector. Member nations have been asked not only to take effective measures to ensure the conservation and improvement of the soil and to combat erosion and misuse of the soil in particular, but also to adopt conservation and introduce sustainable farming and forestry practices that ensures long-term productivity of land. Nigeria aspires to be one of the best 20 economies of the world in the year 2020. Meeting the world quest for sustainable development and Nigeria’s Agenda 20-20-20 requires paying urgent attention to a more productive and profitable agricultural sector that will ensure the attainment of sustainable agricultural development. Sustainability rests on the principle that we must meet the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable agriculture is the production of food, fiber or other plants or animal products using farming techniques that protect the environment, public health, human communities and animal welfare. Nigeria must endeavor to ensure the above to ensure sustainable agricultural practice in order to attain the sustainability mandate on agriculture.

57 These are International Livestock Research Institute (ILRI) established in Kano in 1964, International Institute of Tropical Agriculture (ITTA) established in Ibadan in 1967, and International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) established in Kano in 197

58 These are the Federal University of Agriculture, Makurdi established in 1980, the Federal University of Agriculture, Abeokuta established in 1983 and the Michael Okpara University of Agriculture, Umudike established in 1992

59 These are the National Veterinary Research Institute (NVI) established in Vom, Jos Plateau State in 1922, the National Root Crops Research Institute (NRCRI) established in Umuna, Abia State in 1923, the National Animal Production Research Institute based in Ahmadu Bello University, Zaria since 1928, Nigerian Institute of Oil Palm Research (NIFOR) established in Benin City in 1939, the Nigerian Stored Products Research Institute (NSPRI) established in Ilorin, Niger State in 1948, the Forestry Research Institute of Nigeria (FRIN) established in Ibadan in 1954, the Rubber Research Institute of Nigeria (RRIN) established in Benin City in 1961, the Institute of Agricultural Research (IAR) based in Ahmadu Bello University, Zaria since 1962, the National Agricultural Extension Research and Liaison Services (AERLS) based in Ahmadu Bello University, Zaria since 1963, the Cocoa Research Institute of Nigeria (CRIN) established in Ibadan in 1964, National Institute for Fresh Water Fisheries Research (NIFFR) established in New Bussa in Niger State in 1968, the Institute of Agricultural Research and Training (IAR&T) established in Ibadan in 1969, the National Cereals Research Institute (NCRI) established in Bida, Niger State in 1973, the Lake Chard Research Institute (LCRI) established in Maiduguri in 1975, National Horticultural Research Institute (NOHRI) established in Ibadan in 1975, Nigerian Institute of oceanography and Marine Research (NIOMR) established in Lagos in 1975, Agricultural Rural Management Training Institute (AMRTI) established in Ilorin Kwara State in 1980, and the National Centre foe Genetic Ressources and Biotechnology (NACGRAB) established in Ibadan in 1987.

60 See Article 6(3) of the African Convention on Conservation of Nature and Natural Resources.
If the lost glory of agriculture is to be regained and if sustainable agriculture is to be achieved, there must be an effective framework to ensure same.

**6.1 Sustainable Agricultural Practice**

Agricultural production methods that ensure environmental sustainability should be encouraged if sustainable agricultural practice is to be attained. The attainment of food security requires sustainable agricultural practice. An incredible way to combat hunger and extreme poverty is to invest in small farmers. Sustainable agriculture aims at helping small farming families to produce more food and increase their income while preserving the land for their future generations. It takes sustainable agricultural practice that guarantees the protection of the environment in order to overcome the challenge of preventing environmental damage when engaged in agricultural practice.

Reaching towards the goal of sustainable agriculture is the responsibility of all participants in the system, with each group playing its own part in its unique way, thereby contributing to strengthen sustainable agriculture community. The practice of agriculture is an important and an indispensable ingredient to the maintenance of a healthy life. Bringing sustainable agriculture to bear will not only ensure the harnessing of ecological interactions to produce food and fiber, but also promote nature and human well-being at the same time.

**6.2 Reforming Nigeria’s Agricultural Policies**

Agricultural reform is an important part of national strategy of attaining sustainable agricultural practice. Nigerian agricultural policies should be revisited to ensure gradual increase in the country’s annual budget to the agricultural sector to meet the 25% recommended by FAO. The Nigerian agricultural sector needs urgent reform that will ensure efficiency. Policies on agriculture should embrace accountability, probity, discipline, diligence etc. by those in government as well as those in charge of implementation/enforcement of such policies. The Nigerian Constitution should contain a definite statement on sustainable food security and should place the Nigerian government under an obligation to ensure same. The Land Use Act needs to be revisited so as to ensure the ready availability of land to farmers. Nigerian agricultural policies should ensure structural change in the Nigerian land tenure system such that ensures easy accessibility and acquisition of agricultural land, if sustainable food security is to be attained.

**6.3 Provision of Storage Facilities**

One of the challenges facing Nigerian farmers is lack of market as well as lack of storage facilities. Nigerian agricultural policies should place the burden of storage on another body entirely to ensure specialization and effectiveness in the handling of postharvest materials. The increase in agricultural productivity must be matched with increase in good storage system. Investment in post-harvest handling of agricultural raw materials should also be increased while infrastructures for food processing, preservation and packaging should be established. A form of contract farming and contract storage system whereby people with farmlands are provided with necessary inputs suitable for cultivation in a particular environment as done in some countries of the world\(^\text{61}\) should be established. The government agency should be established to mops up or collect harvested crops which the farmer is unable to sell off and store same for a future date when it can be sold. Infrastructures for food processing, food preservation and packaging should be established, with greater attention paid to area of handling of postharvest agricultural raw materials.

**6.4 Sustainable Food Security Policy**

The attainment of sustainable agriculture in Nigeria requires the attainment of food sufficiency and food security, increased production of raw materials, generation of gainful employment, rational utilization of agricultural resources, promotion of increased application of agricultural technology and improvement in the quality of rural life. The right to life guaranteed in the Nigerian Constitution cannot be attained in the absence of food security. Nigeria should therefore aim at attaining sustainable food security. The key features of the new policy should ensure the promotion of food security if the agricultural sector is to bring about sustainable development in Nigeria. Food security is a situation where there is sufficient quantity of food available to meet the needs of present generation of Nigerians, without compromising or jeopardizing the ability of future Nigerians to meet their own food need. Food security in Nigeria will attract foreign investors, eradicate poverty, result in good health for all and political stability, availability of raw materials for agro based industry, utilization of untapped resources and creation of more employment opportunities, healthy economy, the promotion of export of agricultural products and a reduction in the crisis of balance of payment etc. A sustainable food security policy which ensure the transformation of Nigeria from a raw material producer country to processed food exporting country is imperative in the race towards the attainment of the SDGs.

**6.5 Adequate Investment in Agriculture**

Growth in agriculture is the best way to end poverty. Improvement in agricultural performance is a pre-requisite for economic development. Investment in new technologies is one of the secrets to agricultural development. The attainment of sustainable agriculture

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\(^{61}\) China and Ghana are ready examples where successful contract farming and contract storage systems are practiced.
requires keeping pace with new technologies by investing in new technologies. Government spending on agriculture, agricultural technology and efficient rural infrastructure inclusive, provides a strong contribution to economic growth. Crop production should be separated from crop storage. To this end, an Institute responsible for agricultural storage should be established so as to release farmers from the huddle of crop storage. Such an Institute will be saddled with the responsibility and management of postharvest products. The introduction of incentives that will revive the interests of Nigerians in agriculture and encourage commercial farmers into the agricultural sector should be established.

6.6 Certification of Agricultural Produce
Nigerians must strive to strengthen her social and environmental impacts, and to create a world where social justice and environmental sustainability are the normal conditions of business. This is particularly so in the Nigerian agricultural sector. Programmes that will enable farmers to learn better farming methods and to safe-guard the environment and better secure the natural resources of the earth for the now and the future should be put in place. One of the tools to ensuring the application of principles for sustainable production of commodities is Certification of Agricultural Produce whereby a set of principles address social and economic concerns of farmers, farmer groups and communities including environmental requirements. Certification of agricultural produces is the creation of socially and environmentally responsible crop and animal production that meets the needs of buyers and producers.

6.7 Access to Productive Resources
Access to productive resources such as land, farm implement, finance etc when made available can be used to boost agricultural output. This is especially so when inter-cropping and crop rotation is practiced. By so doing food security to meet sustenance needs can be guaranteed. Women should be given access to productive resources in order to meet their household food security needs as well as to generate more income and ensure food security for their families and communities alike. This will go a long way in improving the nutritional and health needs of their households and communities.

6.8 Paying Good Attention to Peasant Farming
A person who plants a grain of rice or seed of maize for the purpose of feeding human being is more valuable than multitude of scientists or people in every other human endeavour. Life becomes meaningless if agriculturist and farmers are not accorded their rightful place. The previous experiences, approaches, policies and programmes that made agriculture a major contributor to GDP has the peasant farmer as their focal point. The most viable strategy to meet the desired agricultural productive level is to focus on the peasant farmer in addition to mechanized farming. Negative reputation impairs productivity in a significant manner. Pride of place must be given to peasant farmers as this will go a long way in rebranding peasant farmers to pleasant farmers and to encourage more people to invest in the agricultural sector of the economy.

6.9 Integrated Agricultural Development
All factors of developmental programmes are inter-related. Integrated agricultural development is sine qua non to the attainment of sustainability in the Nigerian agricultural sector. Integration is one of the principles of sustainable development. Government should adopt integrated and multi-dimensional approach to the attainment of sustainable agricultural development. To this end, activities on agriculture and other areas should be coordinated to achieve integrated development.

6.10 Participatory Approach
Participation is key in the attainment of sustainable agricultural practice. The ability of the State to deliver basic necessities of life depends to a very large extent on societal collaboration with the private sector. The building of state-society synergy tie is crucial to fostering more sustainable outcome. No matter how fundamental the capacity and entrepreneurial initiatives of the public sector may be, the fact remains that government alone cannot confront the challenges of attaining sustainable agricultural as an independent actor. The enormity of the challenges of sustainable agricultural development calls for a development partnership approach to successfully combat same. Synergistic interactions between state and society produce optimal results. Cooperation among States and key sectors of society and people is therefore imperative if sustainable development is to be attained. The Nigerian government must create the right environment not only to encourage the private sector to be engaged in the agricultural sector of the economy, but also to foster collaboration with the private sector if sustainable agricultural practice is to be attained. Agricultural production, processing, storage and marketing are best handled by the private sector. Instead of single-handed vexo decision taken by a group who know little or nothing about the agricultural needs of the people, the planning and decision making on agriculture should of necessity involve the private sector and farmers. The strategy for attaining sustainable food security should be based on the principle of working in close partnership with the people. The involvement of the people can be achieved by encouraging voluntary associations and community/ town union. The overall agricultural development agenda should be prepared through participatory process involving the people. All stakeholders at the local, State

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62 Other areas include commerce, education, industries, health, education etc.
and Federal levels should encourage their staff and community representatives to contribute their ideas when agricultural policies and programmes are formulated and implemented. Development partnership is a mechanism for ensuring that the comparative advantages of different actors and stakeholders are harmonized in a mutually supportive manner for the benefit of all.

6.11 A Right Based Approach to Adequate Food for All

The right to adequate and sufficient food which ensures the physical, mental, fulfilling and dignified life irrespective of sex or age has been guaranteed in may instruments. The adoption of a right based approach to food cultivation, production, marketing and distribution will go a long way in making food available in the right quality and quantity at all times to all citizens on a regular and permanent basis.

CONCLUSION

As a country Nigeria is blessed with a number of natural resources which, if well managed, could be used to salvage every sector of her economy. Agriculture remains a very important engine of economic development as well as a source of wellbeing. Agriculture is a major platform for national development as well as one of the major drivers of the economy of any nation. It takes a well-fed individual to perform other essential task in life. The paper identified agriculture as an indispensable requirement for life sustenance and the best way to end poverty. The ability to satisfy the essential food needs of the populace and enhance the culture, identity, pride and confidence of people rests heavily on the agricultural sector of the economy. The paper also found that despite several efforts towards attaining improved agricultural practice for food security and sustainable development, no significant result has been achieved as a result of some challenges facing this sector.

The meeting of SDGs requires a sustainable agricultural sector that will ensure availability of sufficient and nutritious food for all Nigerians come the year 2030. The attainment of the SDGs requires broad-based growth in agriculture in a sustainable manner. Inability to ensure sustainable agricultural development will endanger the future, and failure to act will attract the wrought of posterity. A legal framework for sustainable agricultural practice that is carefully designed and implemented with the necessary political will and with the involvement of relevant stakeholders is imperative if improvement in economic activities, social equity and increased environmental health is to be achieved. The paper therefore made recommendation for a workable sustainable agricultural framework that will ensure food security in order to overcome the identified challenges. The success of sustainable agricultural development depends largely on the commitment of all. All hands must therefore be on deck to ensure food security and enthrone sustainable agricultural development in Nigeria.

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