POPULATION, ENVIRONMENT AND PLANNING FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

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Abstract
The achievement of sustainable development as a new parameter to improve the living conditions of people in different parts of the world requires much from the interaction between population and environment. We examine this interaction in the context of Nigeria based on logical assessment and synthesis of ideas from a pool of literature. The major standpoint in the population-environment relationship in most submissions is that man definitely depends on the environment for survival and most of his activities are detrimental to the environment. Most common pathways of human pressure on the environment include agricultural (farming) activities, deforestation, urbanization, industrialization, waste disposal, pollution, flood and the devastating effect of climate change. Nigeria which has a young and growing population at about 2.61 percent with infant and child mortality rates of 61 and 27 per1000 respectively, maternal mortality rate of 917/100,000), total fertility rate of 3.7, life expectancy rate of 54.07, a dependency ratio of 87 and a high rate of natural increase presents a terrible scenario. This paper argues that to plan adequately for sustainable development in Nigeria, strategic actions should be taken to put the population under control, establish a comprehensive data bank on human activity patterns on the environment to smoothen policy formulation and enforcement of relevant laws related to environmental protection, and reduction in the rate of poverty among the people.

Keywords: *Human Population, Pressure, Development, Environmental Sustainability*

Introduction

There has been increasing discourse on the population-environment interaction, but the dynamics of the two concepts have made the discourse elastic and unending. Several scholars including Cafaro and Götmark (2019), Theodore (2006), Cole and Neumayer (2004), Dietz and Rosa (1994), have investigated and also suggested ways in which the challenges arising from the messy relationships could be handled. In the future, the interaction may continue to evoke attention as man depends on the environment for survival and as most of his activities are detrimental to the environment particularly in Africa, where greening is still fragile and challenging, despite the commitments of both national and foreign governments and international organizations. However, the age-long view of this interaction suggests the pressure sustained by the environment as human population continue to increase. The correlation is, the more people are there on the earth surface, the greater the impact on the environment and pressures on resources (Ogunwale, 2015). This is so since every new person is a new mouth to feed, a new body to clothe and keep warm, a new consumer of resources and a new producer of waste.

In all human societies, as a new person is added to the existing population, additional pressure is exerted on the environment and this alters the nature and form of the environment. Many researchers like Weeks (2008) and Onokerhoraye (1994), have documented copious evidence to substantiate the population-environment interaction in many parts of the world. Similarly, Apata, Samuel and Adeola (2009); Wolfe, Schwartz, Lakso, Otsuki, Pool and Shaulis (2005), have identified what could be termed the proximate

factors through which human population impacts on the environment. These include agriculture (farming), deforestation, urbanization, industrialization, waste disposal, pollution, flood and the current but globally most devastating effect of climate change; all of which are associated with varying degree of human activities on the environment. Recent studies such as Chopra (2016), Mechler and Bouwer (2015), Jha, Robin and Jessica (2012), Junge, Abaidoo, Chikoye and Stahr (2008), United Nation Development Programme. (2004), United Nation's Report. (2001), Hoornweg, Thomas and Otten (1999), Panayotou (1996) and Myers (1994), have shown that there is absolutely no country in the world that is not affected by one or more of the aforementioned.

Population increase is a natural and constant phenomenon in all societies, even though some countries particularly in the advanced and industrialized world have experienced near zero growth level. Among many countries in Africa, Asia and Latin America, the continued increase in human population has been a common and similar experience for many decades. National level data for the most populous countries in Africa reported by Worldometers in 2019 show that Ethiopia has a growth rate of 2.6 percent, Egypt (2.4%), Democratic Republic of Congo (3.2%) and South Africa (1.4%). For the least populous countries, Saint Helena has a population growth rate of 0.7 percent, Seychelles (1%), Sao Tome and Principe (1.9%) and Cape Verde (1.2%). All of these are, in spite of the efforts at national levels to check excessiveness in the rate of population growth. In Nigeria, population growth has always been an increasing phenomenon in all states and regions. The report of the Nigeria Demographic Health Survey (NDHS, 2013) indicated overall national growth rate of 3.2 percent: a lower total fertility rate in the South East (4.7), South-South (4.3), and South West (4.6), and a higher rate in the North West (6.7) and North East (6.3). As observed earlier by Onokerhoraye (1994), this increase spurs land use intensity as more people are brought into existence who invariably require space for residential and socio-economic activities.

According to Ehrlich and Ehrlich (1990) and Abrahamson (1989), in the attempt to meet the increasing needs for food and raw materials required by the population, man rapidly depletes fertile soils, fossil, groundwater, biodiversity, and numerous other non-renewable resources to meet his needs. The concept of depletion (of resources) which means depreciation or wearing out in quality and quantity or amount particularly of the non-renewable resources available for human use, underscores a condition of environmental degradation.

Environmental degradation (Chopra, 2016) has been defined as the disintegration of the earth or deterioration of the environment through consumption of assets, like air, water and soil. To many others (Ekiugbo & Isanbor, 2012), it is partly the deterioration of the environment through exhaustion of natural assets or the depletion of resources such as air, water and soil; the destruction of ecosystems; habitat destruction; the extinction of wildlife; and environmental pollution. The definition of this phenomenon is quite numerous, but most appealing is the one by the UN International Strategy for Disaster Reduction cited in Ekiugbo and Isanbor (2012) which portrays it as the reduction of the capacity of the environment to meet its social and ecological objectives and needs for the development of the human society. Environmental degradation connotes the negative consequences arising from the combination of a large and increasing human population to a fixed and non-resuscitated land or environment to propel a continually increasing economic growth in order to meet the demands of the growing population.

Nigeria is said to have the fastest depletion of natural resources in the world according to the Food and Agricultural Organization (see **Falaju,** 2018**)**. The country's soils are generally of light texture and low in Cation Exchange Capacity (CEC) with a clay content that range from 9 to 43% in more than 60% of the total landscape, on account of human limitless exploitation of the environment. Several studies (Bakare, 2017; Emeribeole, 2015; Aderoju, Okeke, Nwadike, Eta, Onuoha, Ihenacho & Eshiet, 2014; Ogu & Fadeyi, 2014; Aderogba, 2012) have discussed the dimensions or severity of environmental damage or degradation due to agriculture (farming), population growth, deforestation, urbanization, industrialization, overcrowding, waste disposal, pollution, flood and climate change. A study on soil conservation in Nigeria past and present on-station and on-farm initiatives by Junge, Abaidoo, Chikoye, and Stahr (2008), has revealed that soil degradation and desertification are severe issues in the Sub-Saharan Africa, where smaller size and resource-poor farmers follow extractive farming practices arising from increase in population, thereby causing the per capita arable land area in many countries of the region to decline rapidly. Similarly, Drechsel, Gyiele, Kunze, and Cofie (2001), who based their argument on data collected in a survey from 37 countries in Sub-Saharan Africa region, confirmed a significant relationship between population pressure, reduced fallow periods and soil nutrient depletion (including erosion); and generally unsustainable dynamism between population, agriculture and environment.

In every society, human uses the environment in three basic ways: as a resource bank that supplies the raw materials needed to maintain their existence, and their social and technological structures; as a habitat - which provides space for people per individual than required by any other species; and as a sink for wastes (Ndahlahwa 2005) in which human beings dispose the unwanted materials produced at domestic or industrial settings. The usages illuminate both the domestic chores and the various socio-economic activities undertaken by man to meet his daily needs. It also underscores the human indispensable roles in development as illustrated in the dialectic postulated by Ottong (2006) that 'human population is a major asset, as resource for development, and also the prime of beneficiary of development in society'. The implications of this dialectic in Nigeria is both dynamic and challenging. At least 70 per cent of the population interact with the environment in the form of agriculture to articulate development, quite a large number carry out mining of sand or coal; an indeterminate number undertake construction works whereas many others are engaged in several social, economic and political activities that in one way or the other exploit the human environment.

A grasp of the pressure caused by human beings on the environment; the magnitude of damages and the need to preserve, protect and promote the environment has become a headache to many nations and dominate economic and political discussions and activities of government and non-governmental organizations across the globe (Beyioku, 2016). Similarly, the growing concerns about environmental unsustainability of economic growth patterns and increased awareness of a potential forest degradation crisis have made it clear that the environment and the economy can no longer be considered in isolation (Ogunwale, 2015). Rather, given the challenging experiences of high population, rising and proliferating heaps of wastes, persistent flooding, and climate change in Nigeria, it has become imperative in this paper to examine the population-environment (physical environment) interaction in order to assess and provide a model for sustainable development planning in Nigeria.

Theoretical Arguments

Many scholars have discussed the interaction between population and environment in diverse settings but constantly missing in academic literature are theories with specific assumptions to justify such discussions. The ideas contained in the theories of Robert Thomas Malthus (Malthusian Growth Model) and Demographic Transition as well as the thoughts of William Catton and Julian Simon are central to the changes in population number on land (environment) and its quality over time, particularly William Catton's hypothesis on the link between population and carrying capacity of the ecosystems (the cornucopian myth). However, the general hypothesis holds that human population depends entirely on the environment whereas the environment becomes altered in different magnitude as man continues to carry on it his unending social, economic and political activities. For instance, an increase in population means more land for settlement and farming, which consequently results in deforestation; a factor leading to environmental degradation. Paradoxically, however, Gupta, Bongaarts and Cleland (2011), posit that population growth traditionally is known to exert pressure on environmental common property resources; even though part of the pressure on the resources can be mitigated by reducing the rate of population growth. According to Mike (2019), a rapidly growing population does not only increase pressure on marginal lands, over-exploitation of soils, overgrazing, over cutting of woods, soil erosion, silting, flooding but also increases excessive use of pesticide, fertilizers and many other agrochemicals that degrade natural quality of the soil.

It is certain that all living organisms in the biosphere require three basic things, namely, resources such as food, water and energy; space to live; and space to dump waste (Weeks, 2008). Also certain is the fact that many activities carried out by man results in waste creation which pollutes the environment thus, deteriorating the surroundings. The growing effect of this is that the population and its activities are slowly destroying the very environment that supports human life (Mike, 2019). As posited by Olaniyi, Funmilayo and Olutimehin (2014), in all parts of the world, natural events and human activities are prime contributors to the increase in average global temperatures. Moreover, the nature and prospects of the future are determined by the safety of the environment and this fact has increased the need for a healthy and functional plan to preserve and protect the environment (Beyioku, 2016). In Nigeria, waste creation or generation increases correspondingly with an increase in the population size. Many studies, for instance, by Nyenwe and Victor-Ishikaku (2015), Olaniyi, Funmilayo and Olutimehin (2014) have documented the series of events and activities that are major contributory factors to climate change. These vary from bush fire, from pastures, change of land use, and deforestation for pasture establishment, use of fire to maintain pasture, promotion and subsidies on mechanization, motorization and replacing draught animal power. In view of this, the Intergovernmental Panel on Climate Change (IPCC) and major scientific organizations of industrialized countries conclude that the increase in global temperature since the middle of the twentieth century has been mainly due to human induced (anthropogenic) greenhouse gases concentration via the greenhouse effect; while the warming effect of natural phenomenon such as solar variation contributed a small warming effect from pre-industrial times to 1950, and from then a reverse cooling effect (Olaniyi, Funmilayo & Olutimehin, 2014).

This illustration portrays that human number is both dynamic and a critical factor that cannot be ignored in both impact assessment of the environment and development discourse of the state or nation

notwithstanding the level of advancement in key institutions such as health, education and, science and technology. Although Paul Ehrlich, an entomologist and the author of the famous 1968 book "The Population Bomb" and, John Holdren, a physicist, have presented a counter argument that humans' environmental impact was a function of population and consumption levels and not only the changes in population size, and the "I=PAT" equation hypothesis which states that humans' impact on the environment (I) is the product of population (P), affluence (A) and the impact of technology (T), a multiplicity of factors, not necessarily a doubling population, the fact remains that changes in population size or human number imply increase in the demand for space to live, quantity of food, energy, and increase in the quantity of wastes generation among others, all of which alter the nature of the environment in many ways. Moreover, a 20th century population theorist Julian Simon posits that population growth is a critical factor that spurs economic development in societies.

Dynamics of Nigeria's Population Structure

According to the Nigeria Demographic Health Survey (NDHS, 2013), Nigeria's population structure is a combination of high fertility rate, a moderately low mortality and a high rate of natural increase. The country is ranked currently as the seventh most populated country in the world but the first in the African continent. She has a young and growing population that is made up of 50.8 percent males and 49.18 females. The current projected estimate of the country's population is 202,802,887; about 2.61 percent of the world's population. This comprises underage, 0-14 years (37.34%); elderly, 65+ years (3.25%) and working class, 15-64 years (59.41%). Nigeria's population is growing at the rate of 2.6 percent. Evidence based on the 2016/2017 Multiple Indicator Cluster Survey (MICS) indicates that the country has a fertility rate that is nearly 6 children per woman and a median age of 18 (Obinna, 2018) particularly in northern Nigeria. The other indicators of the country's population include total fertility rate of 3.7, maternal mortality rate of 917/100,000), infant and child mortality rates of 61 and 27 per1000 respectively, a sex ratio of 1.04 males to every 1 female, and a life expectancy rate of 54.07 (an average of 53.7 years for men and 55.4 years for women). About 50 percent of the population (100,000,000 people) are poor and depending on less than one dollar a day. This gives rise to a national dependency ratio of 87.

Given certain critical indicators like health, education, manpower development and level of industrialization, Nigeria at the moment is at the third phase of second stage of the demographic transition. She is characterized with low mortality and a fertility level that is not completely low. More so, there is high rate of unemployment and poverty; literacy level is at average, low use of contraceptive, and the persistence of traditional values in many rural areas which still hold down the rights of majority of the women and the girl child. These dynamics portray the country as one with a high propensity of population increase. As speculated, although the rate of increase in the population of Nigeria is expected to drop to 2.04 per cent by 2050 from the current 2.62 percent, by 2020, the population will hit 206 million and 264 million by 2030, then, crossing the 300 million threshold by 2036. This appears quite threatening as the country depends absolutely on the environment (land and water) where oil is drilled and more than 70 percent of the population exploit the land environment for agriculture, alongside other social, economic and political activities.

Table 1: Showing the size and some dynamics of the Nigerian population

Year	Population Estimate	Growth Rate	Population Density
1960	45,137,812	1.90%	48.9
1965	50,127,214	2.12%	54.3
1970	55,981,400	2.23%	60.6
1975	63,373,572	2.51%	68.6
1980	73,423,633	2.99%	79.5
1985	83,562,785	2.62%	90.5
1988	90,773,620	2.63%	99.3
1990	95,617,340	3.3%	104.5
1991	88,992,220	1.74%	107.2
1995	99,200,000	2.54%	116.9
1999	113,800,000	2.5%	130.9
2000	122,283,335	2.67%	132.4
2001	126,014,900	2.61%	137.7
2002	128,596,079	2.54%	141.2
2003	131,900,634	2.53%	144.8
2004	135,320,419	2.45%	148.6
2005	138,865,016	2.37%	150.3
2006	140,431,790	3.09%	156.5
2007	146,339,971	2.38%	160.7
2008	150,269,621	2.03%	165.0
2009	154,324,939	2.00%	169.4
2010	158,503,197	1.97%	174.0
2011	162,471,000	2.96%	178.8
2012	166,200,000	2.55%	183.6
2013	174,507,539	3.64%	188.6
2014	177,476,000	2.47%	193.7
2015	182,202,000	2.18%	198.9
2016	185,960,241	2.66%	204.2
2017	191,836,000	2.61%	206.6
2018	195,874,683	2.62%	215.1
2019	200,581,173	2.60%	217.6

Source: (1) NPC (1994)
(2) NPC (2009)
(3) Worldometers (2019)

Table 1 provides data on Nigeria's population estimate and two dynamics, namely, growth rate and population density from 1960 to 2019. For most of the years, particularly the inter-censal years, the population figures have been projected. The data illustrate changes in the size of the population that depend and are still depending on the fixed land size that has not increased from 923, 770 sq. km. Even though the population growth is retarding, the size is still on the increase, leading to a corresponding increase in the density. It shows the prevailing impacts on both the environment and economic resources as informed by data in the table.

The Nature of Nigeria's Environment

Nigeria combines a rain forest belt and an arid conditioned environments. The high rain forest belt covers the southern part (South West, South East and South-South regions) of the country, spanning from the Atlantic Ocean at the coast and covering seventeen states in the country. On the contrary, the arid

conditioned environments stretched from the middle (North Central), North East and North West regions which altogether house 19 states in Nigeria and the Abuja Capital Territory. The list of buildup mineral resources in Nigeria is quite long. A tabulation of the resources is indicated in table 2. Although there are no reliable data on the estimated number or at least the percentage of people whose livelihood is entirely supported by mineral resources exploitation, several academic findings reveal the economic importance of the activities to families, communities and governments in Nigeria. Similarly, many studies have found that the Nigerian environment is characterized with a number of environmental challenges most of which are direct or indirect consequences of the methods in which the resources are exploited. Example of the environmental challenges is gully erosion in states such as Akwa Ibom, Abia, Anambra, Imo and northern Cross River which either occurs naturally or exacerbated by mining activities. Another example is flood that ravaged Adamawa, Bayelsa, Delta, Taraba and Lagos States especially in 2017 and 2018. This has been due to the blocking of drainages and water corridors by human activities.

To Emeribeole (2015), flood events like in many capital cities in Nigeria, are mostly due to the poor consciousness of the inhabitants to environmental information, inadequate (or sometimes absolute lack) of spatial information on the flood prone areas, waste dump and construction of buildings (both commercial and residential, even public offices) on river channel without adequate measure for water flow. Also, Nigeria has experienced severe challenge of wastes disposal and management that is caused by population implosion in many urban centers and cities. Similarly, it has been observed that deforestation is a contending problem particularly in the southern region of Nigeria unlike in the north where afforestation is a routine practice because of its numerous economic importance.

Table 2: Showing the Mineral Resources by States in Nigeria

S/N	Mineral	State(s) that are Found
1	Baryte	Benue, Cross River, Nasarawa, Plateau, Taraba, Zamfara
2	Benonite	Borno, Edo, Kogi, Ogun, Ondo
3	Bismuth	Kaduna
4	Bitumen	Edo, Lagos, Ondo, Ogun
5	Cassiterite	Bauchi, Cross River, Kaduna, Kano, Kwara, Nasarawa, Plateau
6	Clay	Found in all the 36 states and FCT
7	Coal	Abia, Adamawa, Anambra, Bauchi, Benue, Cross River, Delta, Ebonyi, Edo, Enugu, Gombe, Imo, Kogi, Nasarawa, Plateau
8	Columbite	Bauchi, Cross River Kaduna, Kano, Kwara, Nasarawa, Plateau
9	Diatomite	Borno, Yobe
10	Feldspar	Bauchi, Borno, FCT, Kaduna, Kogi
11	Fluorite	Bauchi, Ebonyi, Plateau, Taraba
12	Gemstones	Bauchi, Kaduna, Kogi, Kwara, Nasarawa, Niger, Ogun, Oyo, Plateau, Taraba
13	Gold	FCT, Kaduna, Kano, Katsina, Kebbi, Kogi, Kwara, Niger, Osun, Zamfara
14	Gypsum	Adamawa, Edo, Gombe, Ogun, Sokoto, Yobe
15	Ilmenite	Bauchi, Cross River, Kaduna, Plateau
16	Iron ore	Enugu, FCT, Kaduna, Kogi, Nasarawa, Zamfara
17	Kaolin	Akwa Ibom, Anambra, Bauchi, Bayelsa, Ekiti, Imo, Katsina, K ebbi, Kogi, Ogun, Ondo, Plateau, Rivers
18	Kyanite	Kaduna, Niger
19	Lead	Cross River, Ebonyi, FCT, Plateau, zamfara
20	Limestone	Benue, Cross River, Ebonyi, Edo, Gombe, Kogi, Ogun, Sokoto
21	Lithium	Kaduna, Nasarawa, Niger, Zamfara
22	Magnesite	Adamawa, Zamfara
23	Manganese	Katsina, Kebbi, Zamfara
24	Marble	Edo, FCT, Kogi, Kwara, Nasarawa, Oyo
25	Mica	Ekiti, Kogi, Kwara, Nasarawa, Oyo
26	Molybdenite	Plateau
27	Phosphate	Ogun, Sokoto
28	Rutile	Bauchi, Cross River, Kaduna, Plateau
29	Silica sand	Delta, Jigawa, Kano, Lagos, Ondo, Rivers
30	Silver	Ebonyi, Kano
31	Ta l c	Ekiti, Kaduna, Kogi, Niger
32	Tantalite	Cross River, Ekiti, Kogi, Kwara, Nasarawa
33	Wolframite	Bauchi, Kaduna, Kano, Kwara, Nasarawa, Niger, Zamfara
34	Zinc	Cross River, Ebonyi, FCT, Plateau, Zamfara

Source: Lar (2018)

Table 2 shows the distribution of mineral resources according to states in Nigeria. It excludes oil that is predominantly taken from nine states in the Niger Delta region, namely, Akwa Ibom, Abia, Bayelsa, Cross River, Edo, Delta, Imo, Ondo, and Rivers States. Based on these data, the country has vast deposits of numerous resources with every state having at least three in large and inexhaustible quantities. Some states like Kaduna and Plateau have monopoly over Bismuth and Molybdenite, respectively. Other states such as Borno and Yobe have comparative advantage of large deposits of Diatomite. The same is applicable to Kaduna and Niger states that have advantage over Kyanite; Adamawa and Zamfara states that own Magnesite in quantities; Ogun and Sokoto states where Phosphate is also available in quantities as well as Ebonyi and Kano states that Silver is found in abundance.

Apparently some resources as indicated in the table have wide deposits in many states across the country. An example is Clay that is available is all the states and Abuja Federal Capital Territory. Coal is present in 15 states, namely, Abia, Adamawa, Anambra, Bauchi, Benue, Cross River, Delta, Ebonyi, Edo, Enugu, Gombe, Imo, Kogi, Nasarawa and Plateau states; compared to Kaolin that is found in 13 states which include Akwa Ibom, Anambra, Bauchi, Bayelsa, Ekiti, Imo, Katsina, Kebbi, Kogi, Ogun, Ondo, Plateau and Rivers. The availability in every part of the country of resources that either directly or indirectly supports human livelihood and existence invariably implies that there is no part of the country without severe impact on the environment both by individuals in the population that tap the resources illegally and companies that exploit the same resources officially.

Concepts of Development and Sustainable Development in Nigeria

There are several definitions of the concept of development that cram academic literature. Put simply, development is the transformation in both status and condition of a society and people over a certain period. According to Ogu and Fadeyi (2014), it is the most and essentially sought after outcome among government and people. Chrisman (1984) reported in Lawal and Abe (2011), defines the concept as a process of societal advancement, where improvement in the well-being of people are generated through strong partnerships between all sectors, corporate bodies and other groups in the society. To Gboyega (2003), development embodies all attempts to improve the conditions of human existence in all ramifications. However, most captivating is the definition given by Noami (1995), which sees development as a process that involves not only economic growth but also some notion of equitable distribution, provision of health care, education, housing and other essential services, all with a view to improving the individual and collective quality of life.

Like the concept of development, sustainable development can be defined in many ways. Ordinarily, it means a social and dynamic process of planning and achieving targets but without exhausting the economic resources available to support the survival of the present and future generations. According to the World Commission on Environment and Development (WCED, 1987) cited in Olaniyi, Funmilayo and Olutimehin (2014), sustainable development is defined as a type of action that meets the needs of the present without compromising the ability of the future generation to meet their needs. The definition by Ekiugbo and Isanbor (2012), portrays sustainable development as the human moral response to think and act in the interests of themselves and their posterity, especially by protecting earth's natural habitats. Yet, the IUCN (1980) has defined it as a process of social and economic betterment that satisfies the needs and values of all interest groups, while maintaining future options and conserving natural resources and diversity.

The Sustainable Development Goals (SDG) is an economic plan designed to remedy the shortcomings inherent in a country's National Development Plan; address the unfinished parts of the Millennium Development Goals (MDGs) and; accelerate development evenly across all geographical regions by building lasting, meaningful and global effective partnerships to fight against poverty, hunger, and unemployment as well as address environmental and climate change. The Plan (SDGs) has 17 goals with 169 targets and 230 indicators which are all integrated and indivisible. Although for many world countries, the adoption of the new economic plan was based on the understanding that poverty is the greatest global challenge and eradicating it in all its forms and dimensions, including extreme poverty, was indispensable requirement for sustainable development, emphasis on its achievement was in three dimensions, namely, economic, social and environmental (UN, 2017). The turning point in the goals and targets is the determination to enforce a lasting protection of the planet and its natural resources which constitute the fulcrum for the attainment of the 17 goals and 169 targets.

Indeed, after the Millennium Development Goals (MDGs) that was implemented from 2000 to 2015, the country (Nigeria) endorsed the Sustainable Development Goals (SDGs). As a backup to this new economic agenda, government launched the Economic Recovery and Growth Plan; a medium term plan expected to span between 2017 and 2020. The specific initiatives that constituted the strategies for achieving the plan include the National Social Investment Project made up of five items, namely, Cash Transfer Programme, Home-grown School Feeding Programme, Government Enterprise and Empowerment Programmes, Women's Entrepreneurship Development Scheme and N-Power Programme for skills development, especially for the youth; and Conditional Grants Scheme (CGS) to states and local government areas. The Sustainable Development Goals (SDGs) cover a wide range of issues. These include the traditional MDG areas such as poverty, hunger, health, education, and gender inequality with new topics such as energy, infrastructure, economic growth and employment, inequality, cities, sustainable consumption and production, climate change, forests, oceans, and peace and security. Regrettably, in Nigeria as in most other developing economies, the growing and expanding youthful population, poor human development, corruption and unemployment are stiff problems. Similarly, the excessive exploitation of natural resources and unfriendly environmental practices which associate with gas flaring, bush burning, indiscriminate deforestation and dumping of refuse as well as the industrial and oil exploitation activities that discharge Chlorofluoro carbons, methane gas and nitrogen oxides into the atmosphere that cause acid rain, global warming and the depletion of ozone layer are serious challenges to development, hence, the need for adequate and sustainable planning.

Environmental Development Policies in Nigeria

The aspiration for environmental protection, development and sustainability has endeared Nigeria to adopt a number of important policies. Some of these policies are National Environmental (Soil Erosion and Flood Control) Regulations (2011); National Policy on Drought and Desertification; Drought Preparedness Plan; National Forest Policy; and National Biodiversity Strategy and Action Plan. There are also Prevention of Pollution of Sea and Land 1954 (Amended 1962), Petroleum Regulation (1967), Oil in Navigable Waters Decree No 34 of 1968, among others. According to the Federal Ministry of Environment (FME, 2010), it is the desire to address the key environmental problems and challenges of land degradation (deforestation, desertification and coastal and marine environment erosion), and air and water pollution, urban decay and municipal waste, as well as hazards of drought, coastal surges, floods and erosion, that the Nigerian government elaborated a National Environmental Policy in 1989.

Apart from environment related policies, the catalogue of development policies in Nigeria also include quite a number of policies and programmes meant for environmental development. For instance, in Kyoto Japan, 160 nations met on 11th December, 1977 to proffer ways of reducing human activities that led to enhanced greenhouse gases that impact on the temperature of the climate and all the living things that exist in it. Nigeria as a country joined other nations on 24th February, 2005 by ratifying the Kyoto protocol. Similarly, in June 1992, the country in the league of 154 nations met under the name of United Nations Framework Convention on Climate Change (UNFCC) to establish commitment to tackling the problem with available resources. Thus, the Federal Ministry of Environment (FMENV), was established on 12th October, 1997 and the states followed by setting up State Ministry of Environment (SME). Moreover, in an attempt to fight the impacts of climate change, the Federal Environment Protection Agency (FEPA) was set up by the government by Decree 58 of 1998. The National Emergency Management Agency (NEMA) came later as it was founded via Act 12 as amended by Act 50 of 1999 while the National Environmental Standards and Regulations Agency was established in 2007. All these measures have been taken to check human activities that constitute impacts on the environment since human activities are said to be the highest contributory factor to climate change and environmental damage.

However, although none is without limitations, the environmental development policies have been significant to the sustainable development of the environment. The National policy on Erosion and Flood Control for example could facilitate the coordination and adoption of a systematic measures in the management and control of the climate-related hazards and risks of erosion and floods to reduce their impacts on the people and the environment. Similarly, in line with the envisaged goals, the policy helps to protect the quality of environment by raising public awareness and promoting understanding of the linkages between environment and development, restore and maintain the ecosystem and ecological processes as well as preserve biodiversity for the health and wellbeing of the human population.

Population - Environment Interaction: The Needs for a Sustainable Development Planning in Nigeria

Like many other countries of the world, Nigeria is gnawed with natural resource depletion and adverse impacts of environmental degradation, including desertification, drought, land degradation, freshwater scarcity and loss of biodiversity, among others which add to, and exacerbate, the list of challenges which humanity faces as well as undermine the ability of the government to achieve sustainable development (UN, 2017). The main cause of this experience is the population factor. Unfortunately, as it is in many other countries, there is spurious data on the state and trend of socio-economic activities on the environment by the population, the rate of exploitation of resources and impacts on the environment. This places serious constraint on the capacity of government to determine if the trend of exploitation of the Nigerian environment is done in a sustainable manner or not. Evidence shown in the reports of the 2018 National Demographic Health Survey (NDHS, 2018) reveals that the country is still experiencing a low rate of economic growth given important indicators such as a 36.8 prevalence rate of stunting among children under 5 years of age, 8.9 prevalence rates of malnutrition and 6.8 of wasting among children in the same age cohort; maternal mortality ratio of 512 per 100,000 women and under 5 mortality rate of 132 per 1000 live births; and a proportion of population with access to electricity that varies between 81.7 for urban residents and 37.1 for rural residents. As Kaldaru and Parts (2008) argue, the awareness of the harm done on the environment by man has made it obvious to focus on sustainable development which means that today's development need not compromise the capacity of future generations to satisfy their needs. Indeed, the exploitation of the earth, the planet on which we are living, demands rational and honest planning (Ekiugbo & Isanbor, 2012). Such an idea or planning should be captured in the universal Sustainable Development Goals (SDGs) since the sustainable administration of the earth and natural resources according to Chopra (2016), is essential for financial development and human prosperity. Besides, the Sustainable Development Goals (SDGs) are significant to help address the key drivers of the planet's sustainable development challenges namely unsustainable lifestyles, production and consumption patterns and the impact of population growth. Similarly, the goals are critical to help stabilize the world population in order to avoid it overtaking the world's carrying capacity, ensure equitable development for all, and decoupling or ensuring that consumption and production are within the regenerative and absorptive capacities of the planet.

Recommendations and Conclusion

The change in human number is a constant phenomenon in all parts of the world and may continue to impact on the environment since 'human cannot survive without food and water (Weeks, 2008)' among other essentials of life. In the course of hunting for food and other needs, humans cause climate change that releases greenhouse gases and aerosols into the atmosphere, changing of land surface, deplete the stratospheric ozone layer, water vapour (H2O), carbon dioxide (CO2), burn fossil fuels like oil, coal and natural gas (Moyinoluwa, 2013; Weeks, 2008; The National Weather Service, 2007). Human activities

constantly cause damage such as soil erosion, soil degradation from excess salts and water; desertification; deforestation; loss of biodiversity; strip mining for energy resources; and dumping of hazardous waste. However, since every environment cannot carry beyond a certain capacity and the planet earth also naturally has a particular temperature level which constitutes a support system that maintains and nourishes every living thing on it, it is recommended that:

i) A pragmatic action on population control should be taken. This should take into consideration every element of fertility limitation through contraceptive use and a robust family planning. As observed, the Nigerian population estimate which is currently 200,581,173 appears rather more harmful than beneficial to the natural environment and biodiversity everything that provides, foods, energy, medicines, genetic resources and a variety of materials fundamental for people's physical well-being and for maintaining culture (Mike, 2019). Besides, a persistently high fertility in developing countries like Nigeria, if not checked, will outpace available renewable and non-renewable resources leaving people at risk of hunger and water scarcity.

ii) Planning for the present and future is not possible if it is not based on reliable data. Hence, a comprehensive data on the several activities undertaken and damages done as well as the distribution of population in the environment should be documented. This will help establish a convenient measurement of the environmental carrying capacity, guide redistribution of resources, migration estimation and planning for cushioning the effects.

iii) The attainment of any goal and objective is determined by the degree of enforcement of relevant laws and the degree of law enforcement is contingent upon the political will of the government in power. This is most critical because of the influence of corruption, ethnic sentiment, and politics among other factors that often constraint policies formulation and programmes implementation in Nigeria.

iv) Already there are environmental laws in Nigeria with weak enforcement. An example of such is that under the watchdog of the Federal and State Environment Protection Agencies deforestation, illegal mining, bunkering, bush burning and indiscriminate wastes disposal are on the increase despite the effort of the monitoring agencies. For a sustainable environment, population and development planning in Nigeria, every relevant law should be proactive and adequately enforced.

v) Poverty is a serious problem in Nigeria. It is often blamed for most of the illegal activities carried out on the environment such as sand, gravel and limestone mining, and oil bunkering. To reduce the rate of man-made environmental destruction and loss of resources associated with illegal tampering with the environment and its resources, there is need to scale down both rural and urban poverty level via reduction in unemployment and underemployment; dependency ratio; step up female education, youth empowerment and skill acquisition in competitive trades.

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