

# Linkage of Population and Economic Growth on Sustainable Development in Africa

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## Abstract

The paper presents the interactive effect of population and economic growth on achieving sustainable development in the world and Africa in particular. The Rio Declaration, (UN 1992) and the ICPD, (UN, 1994) places humans at the center of development. The environmental impact of human activity is attributable to three principal determinants, namely rate of economic growth, rate of technological progress in production and distribution processes and the rate of population growth. Throughout history, populations have grown slowly despite high birth rate, due to the population-reducing effects of war, plagues and high infant mortality. The recent rapid increase in human population over the past three centuries has raised concerns that the planet may not be able to sustain present or larger numbers of inhabitants. Population growth has a direct impact on sustainable development. Yet, very often the connection is not being made nor is it talked about. The needs for careful planning to support the ever growing population growth in most African countries is important to achieving the desired sustainable development.

## 1.0. Introduction

It is currently estimated that there is, or there will be shortly, six billion humans inhabiting the planet earth. The issues of population, and more specifically, overpopulation has been in the popular mind for the last thirty years or more. Schools, national governments, international legislative bodies, interest groups and the media have all but insured that the public sees the issue of population as a problem, and increasingly, in reference to natural resources and the environment. At the heart of the population resources-environment debate lies the question: can the earth sustain six billion or more people? How one answer this question depends greatly on whether or not one sees population as a problem.

Is population a problem? Some would argue that yes, population is a problem in that the earth is limited, that it can only sustain a certain number of people (although no one knows what that particular number may be), that the more numerous we become, the poorer we will become. Others argue that no, population is not a problem, but that it is government policies, economic structures and the organization of society that is the problem. Some contend that numbers in themselves do not equal poverty; rather, poorly structured societies and economies foster poverty.

How people perceive the issue of population is critical, for it is by these perceptions that international legislative policies are formed, economic development packages are crafted, federal, social and economic programs are formulated, and local sex education classes are designed. Thus, it is equally critical that people ensure that their perceptions are grounded, not in rhetoric and emotion, but in established scientific and empirical data. An accurate understanding of the data will enable people to think and act rationally with regard to population on a local, state, national, and international level.

There are many groups taking part in the current population debate. All approach the question of population from very different points of view and with different motivations. A working knowledge of the parties and their underlying philosophies will allow one to sift through the diverse rhetoric and hold them up to the light of scientific data. Frank Furedi (1997), in his book *Population and Development: A Critical Introduction* has provided a brief outline of the variety of approaches to the issue of population.

“Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature” Rio Declaration, Principle 1 (UN 1992). The Rio Declaration agreed at the United Nations Conference on Sustainable Development (UNCSD), held in 1992 in Rio de Janeiro, Brazil, as well as the Programme of Action agreed at the International Conference on Population and Development (ICPD), held in Cairo, Egypt, in 1994 places humans at the center of development. Both declarations recognize and emphasize the need to promote human wellbeing and higher living standards, but at the same time they stress the need to do so in harmony with nature. To this end, both political declarations suggest policies that promote more sustainable patterns of production and consumption, which is the hallmark of the green economy, and policies that address population dynamics.

"Sustainable development as a means to ensure human well-being equitably shared by all people today and in the future, requires that the interrelationships between population, resources, the environment and development should be fully recognized, appropriately managed and brought into harmonious, dynamic balance. To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate policies, including

population related policies, in order to meet the needs of current generations without compromising the ability of future generations to meet their own needs." ICPD Programme of Action, Chapter II, Principle 6.

The environmental impact of human activity is attributable to three principal determinants, namely rate of economic growth, rate of technological progress in production and distribution processes and the rate of population growth. Despite the recognition of these determinants, past policies and the current debate have not adequately addressed these determinants and their inter-linkages. The promotion of greener economies, which addresses two of these determinants – economic growth and technological progress has been neglected for a long time, because of the perception that efforts to green economies could contradict efforts to promote higher economic growth, create employment and reduce poverty. But in recent years, the importance of more sustainable consumption and production for environmental sustainability is receiving increasing attention.

By contrast, the consideration of a broader perspective of the third determinant, population dynamics has been largely neglected by policy makers in the discussion of environmental sustainability, particularly in the last 15 years. Some of the reasons for this trend are;

(a) the fact that population growth rates in last two decades have been declining in most of the countries and the beliefs that the “population problem” has already been solved; (b) the concern that some of the past policies implemented in order to influence population dynamics infringed on fundamental human rights and freedoms; (c) the sensitivity of the issues related with ICPD Programme of Action particularly regarding reproductive rights.

The size, composition, and distribution of populations are part of any analysis of sustainable development challenges and opportunities. The role population and climate change play in sustainable development is particularly critical for Africa. It is the only continent where population will continue growing beyond year 2100, and also has the least ability to adapt to the consequences of climate change. A large number of Africa’s people live in areas susceptible to climate variation and extreme weather. Population growth is occurring most rapidly in Africa, making people more vulnerable to climate change impacts. Africa’s population will grow from 1 billion in 2010 to 2.1 billion by 2050, with growth driven by countries in SSA. There, the population will increase from 0.8 billion to 1.9 billion by 2050. Thirty-one of the 51 countries in SSA are projected to at least double their population by 2050.

Africa’s rapid population growth stems from persistent high fertility and declines in overall mortality during the past four decades. High fertility can be largely addressed by making family planning and reproductive health universally accessible to those who want it. Yet only 16 percent of married women in SSA were using modern contraception in 2009, compared to the global average of 56 percent. About 25 percent of women in SSA have an “unmet need” for family planning, meaning they want to avoid pregnancy but lack effective contraception. Meeting the need for family planning globally could reduce unintended pregnancies by 76 percent.

A country’s population growth rate affects its prospects for economic growth and poverty reduction. A rapidly increasing population may create greater demands on an economy and constrain economic growth. When women choose to have fewer children, it reduces the number of dependents in a household and provides opportunities for increasing productivity, savings and future economic growth. Children are often healthier and more likely to attend school. Additionally, women themselves are healthier and better able to earn an income and participate in their communities. Slowing population growth also reduces pressure on the environment and natural resources.

These links were emphasized in the International Conference on Population and Development (ICPD) Programme of Action, adopted in Cairo, Egypt in 1994 and the Rio Declaration on Environment and Development, which was agreed upon at the United Nations Conference on Environment and Development in 1992. Agenda 21 discusses reproductive health programs, including family planning, as approaches that promote changes in demographic trends and sustainability. The links were reaffirmed at the United Nations Conference on Sustainable Development, Rio +20, held in Rio de Janeiro, Brazil, in 2012.

It is generally believed that population growth causes hunger and that in the Third World the current population growth rates will outstrip not only their own but the entire world's capacity to provide food and other resources and it will impede economic development in the less developed countries (Ram Prasad, 1992). To top it all, the enormous loss of resource base, apart from stagnating rather hamper the economic growth and may account for ecological crisis in the form of large scale siltation, soil erosion, flash floods, salination of agricultural lands and in the ultimate course global warming, ocean level rise etc.

## 2.0 World Population Issues

The population of the world has been growing continuously since the end of the Black Death, around the year 1400 although the most significant increase has been in the last 50 years, mainly due to medical advancements and increases in agricultural productivity. Although the rate of population growth has been declining since the 1980s, the United Nations has expressed concern on continued excessive population growth in sub-Saharan Africa. As of April 18, 2013 the world's human population is estimated to be 7.079 billion by the United States

Census Bureau, and over 7 billion by the United Nations. Most contemporary estimates for the carrying capacity of the Earth under existing conditions are between 4 billion and 16 billion. Depending on which estimate is used, human overpopulation may or may not have already occurred. Nevertheless, the rapid recent increase in human population is causing some concern. The population is expected to reach between 8 and 10.5 billion between the year 2040 and 2050. In May 2011, the United Nations increased the medium variant projections to 9.3 billion for 2050 and 10.1 billion for 2100.

The recent rapid increase in human population over the past three centuries has raised concerns that the planet may not be able to sustain present or larger numbers of inhabitants. The Inter Academy Panel Statement on Population Growth has stated that many environmental problems, such as rising levels of atmospheric carbon dioxide, global warming, and pollution, are aggravated by the population expansion. Other problems associated with overpopulation include the increased demand for resources such as fresh water and food, starvation and malnutrition, consumption of natural resources faster than the rate of regeneration (such as fossil fuels), and a deterioration in living conditions. However, some believe that waste and over-consumption, especially by wealthy nations, is putting more strain on the environment than overpopulation.

Throughout history, populations have grown slowly despite high birth rates, due to the population-reducing effects of war, plagues and high infant mortality. During the 750 years before the Industrial Revolution, the world's population increased very slowly, remaining under 250 million. By the beginning of the 19th century, the world population had grown to a billion individuals, and intellectuals such as Thomas Malthus and physiocratic economists predicted that mankind would outgrow its available resources, since a finite amount of land was incapable of supporting an endlessly increasing population. Mercantilists argued that a large population was a form of wealth, which made it possible to create bigger markets and armies.

The population of Chad has, for example, grown from 6,279,921 in 1993 to 10,329,208 in 2009. Vietnam, Mexico, Nigeria, Egypt, Ethiopia and the DRC are witnessing a similar growth in population. The situation is most acute in northern, western and central Africa. Refugees from places like Sudan have further strained the resources of neighboring states like Chad and Egypt. The nation is also host to roughly 255,000 Refugee from Sudan's Darfur region, and about 77,000 refugees from the Central African Republic, while approximately 188,000 Chadians have been displaced by their own civil war and famines, have either fled to either the Sudan, the Niger or, more recently, Libya.

According to projections, the world population will continue to grow until at least 2050, with the population reaching 9 billion in 2040, and some predictions putting the population in 2050 as high as 11 billion.

According to the United Nations' World Population Prospects report:

- The world population is currently growing by approximately 74 million people per year. Current United Nations predictions estimate that the world population will reach 9.0 billion around 2050, assuming a decrease in average fertility rate from 2.5 down to 2.0.
- Almost all growth will take place in the less developed regions, where today's 5.3 billion population of underdeveloped countries is expected to increase to 7.8 billion in 2050. By contrast, the population of the more developed regions will remain mostly unchanged, at 1.2 billion. An exception is the United States population, which is expected to increase by 44% from 2008 to 2050.
- In 2000–2005, the average world fertility was 2.65 children per woman, about half the level in 1950–1955 (5 children per woman). In the medium variant, global fertility is projected to decline further to 2.05 children per woman.
- During 2005–2050, nine countries are expected to account for half of the world's projected population increase: India, Pakistan, Nigeria, Democratic Republic of the Congo, Bangladesh, Uganda, United States, Ethiopia, and China, listed according to the size of their contribution to population growth. China would be higher still in this list were it not for its one-child policy.
- Global life expectancy at birth is expected to continue rising from 65 years in 2000–2005 to 75 years in 2045–2050. In the more developed regions, the projection is to 82 years by 2050. Among the least developed countries, where life expectancy today is just under 50 years, it is expected to increase to 66 years by 2045–2050.
- The population of 51 countries or areas is expected to be lower in 2050 than in 2005.
- During 2005–2050, the net number of international migrants to more developed regions is projected to be 98 million. Because deaths are projected to exceed births in the more developed regions by 73 million during 2005–2050, population growth in those regions will largely be due to international migration.
- In 2000–2005, net migration in 28 countries either prevented population decline or doubled at least the contribution of natural increase (births minus deaths) to population growth.
- Birth rates are now falling in a small percentage of developing countries, while the actual populations in many developed countries would fall without immigration.

### **3.0 Population Dynamics in Sub Saharan Africa**

Sub-Saharan Africa is home to around 900 million people, a number that is projected to grow to 1.2 billion by 2025, and to 2 billion by 2050. With an average population growth rate of more than 2 percent for most countries, the region has the fastest growing population in the world. Of the 2.4 billion people who are projected to be added to the world by 2050, 46 percent will be born in sub-Saharan Africa. The region will contribute 77 percent of the total increase in global population by 2100. Thirty-one countries out the region's 51 are projected to at least double their population by 2050, according to the latest population projections.

Africa's high population growth rate is driven largely by high total fertility. Although the region's population growth rate has slowed, fertility rates remain high at 5.2 children per woman on average (compared to a world average of 2.5). Only 15 countries, mostly in northern and southern Africa have fertility rates below High-fertility countries. African Countries population exhibit youthful age structures, characterized by high proportions of young people. The median age of population in sub-Saharan Africa is around 18 years, but it is as low as 15 years in some countries like Niger. The population of Countries below the age of 15 years grew by 150 percent in the region between 1970 and 2005. In countries like Niger, it increased by 200 percent.

Such young age structures mean that populations will continue to grow for some time, even after attaining replacement level, as the current generation of young people become parents themselves. For example, let's assume that Nigeria, Africa's most populous country, reduces its current fertility rate of 5.7 children per woman to the replacement level of 2.1 children by 2020. Nigeria's population in 2012 is over 167 million and will continue to grow for many more years before it stabilizes at about 300 million around the year 2100.

Population growth has a direct impact on sustainable development. Yet, very often the connection is not being made nor is it talked about. The UN released a report that emphasizes the need for careful planning to support Africa growing population. These include supporting education, women's welfare, urban planning and addressing water shortages, as well as ensuring access to healthcare. It notes that there are reasons to rejoice – falling fertility rates as well as an increase in life expectancy denotes that many educational and healthcare initiatives have taken effect.

Nigeria, Africa's most populous country at 167 million in 2012, is expected to grow to 730 million by century's end, making it larger than Europe's projected population of 675 million. The study, authored by Joseph Chamie of the New York-based Center for Migration Studies and a former director of the U.N. Population Division, says that Nigeria is currently the only African country with a population exceeding 100 million, but 10 other countries in the African continent are expected to join that club before the close of the century: the Democratic Republic of Congo (DRC), Egypt, Ethiopia, Kenya, Malawi, Niger, Sudan, Tanzania, Uganda and Zambia. Together, he says, the population of these 11 African nations is expected to reach 2.4 billion by 2100, representing about a quarter of the world's population at that time.

Will Africa's future economic growth be jeopardized by its rising population? Chamie observed that the answer depends on many factors, including the size of the population, resources, environment, education, composition and location. Generally speaking, however, he said, for many African countries, especially for the least developed, rapidly growing populations will pose serious challenges for their overall development, including future economic growth.' It would be far easier for these countries to develop and progress with low rates of population growth. Chamie said future demographic trends are critical components in effectively confronting Africa's numerous development challenges. 'The international community can play an important role in facilitating the demographic transition to low death and birth rates,' he said.

The problem of population is not simply a problem of numbers it is a problem of human welfare and of development. Rapid population growth can have serious consequences for the well-being of humanity worldwide. If development entails the improvement in people's level of living - their incomes, health, education and general well-being. It is important to frame population issue not simply in terms of numbers, or densities, or rates, or movements but with full consideration of the qualities of human life: prosperity in place of poverty, education in place of illiteracy, full opportunities for the next generations of children in place of current limitations.

### **3.1 Implications of Population Growth on Climate Change and Sustainable Development in Sub-Saharan Africa**

The relationship between population and economic growth is complex and the historical evidence is ambiguous, particularly concerning the causes and impacts (Thirlwall 1994). Becker, Glaeser, and Murphy (1999) demonstrated in a theoretical model that a large population growth could have both negative and positive impacts on productivity. A large population may reduce productivity because of diminishing returns to more intensive use of land and other natural resources. Conversely, a large population could encourage greater specialization, and a large market increases returns to human capital and knowledge. Thus, the net relationship between greater population and economic growth depends on whether the inducements to human capital and expansion of knowledge are stronger than diminishing returns to natural resources. Therefore, it is important to examine the population and economic growth nexus.



Widespread poverty, environmental conditions, the use of natural resources, economic and social development is closely linked to population growth and distribution. Ensuring that population and development strategies acknowledge these links and address the full range of related issues is a key objective of the International Conference on Population and Development (ICPD).

Malawi has a total land area of 94,080 square kilometers, of which 20.7 percent is arable land. Climate change challenges facing Malawi include: water scarcity, unpredictable weather patterns, recurring flooding and droughts, drying up of rivers and lakes, low fish supplies, excessive temperatures, landslides, frequent bush fires, increased prevalence of water-borne diseases, and low and unstable hydro-electric production.

Malawi's economy and food supply are vulnerable because of a reliance on rain-dependent agricultural production. The country's rapid population growth has put pressure on land and other natural resources, leading to fragmentation of small land holdings and over-exploitation. These effects will to be compounded as the population grows.

Malawi's population density of 126 people per square kilometer is among the highest in Africa, and it will grow six-fold to 803 people per square kilometer by 2050. Pressure on arable land is even higher. About 766 people share every square kilometer. Between 2010 and 2030, close to half of Malawi's land area will have excessively high population density, and a quarter will have densities that are higher than the current average.

One clear environmental consequence of rapidly growing population in Malawi is deforestation. Between 1990 and 2010, Malawi lost about 17 percent of its forest cover, at an annual rate of 1 percent. Agricultural expansion, growth of human settlements, dependence on wood for cooking, and low levels of reforestation all contributed to this deforestation. Malawi is also over-dependent on hydroelectric power, which is vulnerable to drought and inadequate rains.

Human activity has already affected every country, every species and every eco-system of the planet. We have even altered the world's climate. The impoverished populations in poor countries who contribute the least to climate change are most negatively affected by its effects. But they also suffer from an unsustainable pattern of agricultural production and forestry management, which also contributes to water depletion and soil degradation and gradually undermines their livelihoods.

Unsustainable patterns of consumption and production are depleting natural resources and causing environmental degradation, while reinforcing social inequity and poverty. The development challenge is to meet the needs of present generations and improve their quality of life in ways that do not compromise future generations' ability to meet their own needs.

Population growth will continue to influence development challenges in Africa. Climate change is likely to compound the challenges, as it could potentially affect the availability of natural resources such as agricultural land and water.

Climate change poses a grave challenge for the whole world and has wide ranging implications for human well-being as well as for security, including the risk of armed conflict over resources and large-scale migrations of population within nations and across national borders. It has been estimated that 150 million environmental refugees will exist in 2050, due mainly to the effects of coastal flooding, shoreline erosion and agricultural disruption. "A range of development policies are urgently needed to address this situation, including renewed commitment to meeting the globally agreed Millennium Development Goals (MDGs).

### **3.2. The Impact of HIV/AIDS on Africa Population**

The Joint United Nations Programme on HIV/AIDS (UNAIDS) estimates that 33.4 million people were HIV-positive as of December 1998, about one third of them in the 15-24 age group and 2.5 million died of the disease in 1998. It is estimated that 95 per cent of those infected live in developing countries, and two thirds live in Sub-Saharan Africa, where 8.0 per cent of adults are HIV-positive. AIDS has a terrible effect on individuals and communities, as it strikes down working people, orphans children, and places huge strains on health care and social systems.

AIDS has a major impact on several African countries. In Botswana, for instance, life expectancy has fallen from 61 years in the late 1980s to 50 years in the late 1990s, and is expected to plunge to 33 years by 2010. Because of high fertility rates, most sub-Saharan African countries are still expected to experience population growth, but for the most affected nations the pace will be much slower than it would be without the devastating consequences of AIDS.

The course of this epidemic, both globally and in particular countries, is still yet to be determined. There are some hopeful signs; infection and mortality rates are falling in a number of countries, though they are continuing to rise in others. The development of the epidemic in South and East Asia, and especially in India and China, is a particular cause of concern. Slowing and stopping the spread of AIDS will require improvements in comprehensive reproductive health care, as well as better public education about the risks and consequences of HIV infection.

In 1950, five years after the founding of the United Nations, world population was estimated at nearly 2.6

billion people. According to UN estimates, it reached 5 billion on 11 July 1987 and hit 6 billion on 12 October 1999. Now, just over 10 years later, it is approximately 7 billion.

This continuing, rapid expansion of the human footprint on what has increasingly come to seem a small planet has serious implications for nearly all aspects of life. Issues relating to health and ageing, mass migrations and urbanization, demand for housing and inadequate food supplies, access to safe drinking water, and so much more.

Rapidly increasing population exacerbates existing problems, such as transnational crime, economic interdependency, climate change, the spread of diseases such as HIV/AIDS and various other pandemics, and such social issues as gender equality, reproductive health, safe motherhood, human rights, emergency situations, and so much more.

#### **4.0 Nigeria Population Growth**

The most populous country in Africa, Nigeria accounts for approximately one sixth of African population (or one fifth of Sub-Saharan African population). Approximately 50% of Nigerians are urban dwellers. At least 24 cities have populations of more than 100,000. The variety of customs, languages, and traditions among Nigeria's 389 ethnic groups gives the country a cultural diversity. Nigeria suffers from a population explosion, with a current population in excess of 187 million (NPC, 2015) and a growth rate of more than 2% p.a. (or a doubling time of about 30 years), with all the associated problems such as youth bulge, crime, ethnic tension and high emigration.

Nigeria has experienced a population explosion for at least the last 50 years due to very high fertility rates, quadrupling its population during this time. Growth was fastest in the 1980s, after child mortality had dropped sharply, and has slowed slightly since then as the birth rate has sunk slightly. According to the 2010 revision of the World Population Prospects the total population was 158 423 000 in 2010, compared to only 37 860 000 in 1950. The proportion of children below the age of 15 in 2010 was 42.8%, 53.8% was between 15 and 65 years of age, while 3.4% was 65 years or older (Paul Obi, 2012).

#### **4.1 Nigeria Population Projections; Issues on Birth Control**

Nigeria's population has gone from 55 million in the 1950s to 88 million in the 1990s and to 167 million in 2012 and it is expected to reach nearly 200 million people in 2015, a growth rate that has raised alarm among experts. This has prompted the Federal Government to subtly suggest birth control for its citizens with serious backlash and dichotomy between proponents and opponents (Paul Obi, 2012).

In the 1990s, the Ibrahim Babaginda military government attempted compulsory family planning for Nigerians, a policy that was greeted with strong opposition and criticisms. An increased population for Nigeria will over stretch services and infrastructure. In all the challenges that come with high population density, poor healthcare remains the biggest headache. In the long run, it may lead to total collapsed of the social system. These are the fears being expressed by the government, prompting government officials to conceive the idea of family planning again. Minister of State for Health, Dr. Muhammed Pate at the London Summit on reproductive health and family planning in June 2012 said: "we are committed to achieving the goal of a contraceptive prevalence rate of 36 per cent by 2018. Achieving this goal will mean averting at least 31,000 maternal deaths. Over 700,000 mothers will be prevented from injuries or long-term complications due to childbirth."

Pate also said "In the case of family planning in Nigeria, women are more than 10 times likely to have access to family planning services regardless of geography, ethnicity or religion. We are committed to increasing the awareness and demand for family planning and reproductive health services by women regardless of their socio-economic status. In our quest to save one million lives in Nigeria by 2015, we consider all lives have equal value". The Summit underscored the importance of access to contraceptives as both a right and a transformational health and development priority.

Obviously, selling the programme to the population of Nigerian conservatives is a hard nut to crack. Chief among the opponents of family planning is the Christian community and the Islamic society. The Catholic Church leads the Christian group and is vehemently opposed to birth control. The church itself sees contraceptives as a mismatch to what it considers a presumptive problem in child bearing. Couples with the African belief system, contraceptives and birth control are alien to many Africans, a situation that will hamper the implementation of family planning.

"We are not against birth control, what we are against is the wrong way of doing it," the former President of Christian Association of Nigeria said. "We do not believe our country is over populated," ... "The use of condoms, abortion and contraceptive pills by married couples that is what we are against. The billions of dollars they are investing can be use to liberate people from poverty. Why are they not spending these billions to develop our economy," he asked. "Of course, many government officials at the Ministry of Health and non-governmental organizations (NGOs) are hungry to access these funds, they don't care about what it all means, they don't care about killing unborn babies so long as they get millions of dollars as funding," he added.

Government officials reason that an untamed population growth like that of Nigeria is just another social emergency that needs to be addressed squarely through birth control. And with bogus dollars funding across the Atlantic, it is tempting to abstain from doing nothing about birth control. But Nigeria is a tough terrain to market family planning ideology. ■

In many sub-Saharan African nations, contraceptive use is under 20%. "At this pace it will take 100-plus years to arrive at a point where fertility is controlled," Dr. Guengant said. The average number of children per woman increased to 7.3 in the predominantly Muslim north, where women often cannot go to a family planning clinic unless accompanied by a man.

In many African nations, girls usually end their schooling around age 12 when they get ready to be married off and start having babies. Not surprisingly, a low rate of education for women consistently correlates with high fertility rates. In West and Central Africa over all, 44% of girls are married before they turn 18, while it is 76% in Niger, where the fertility rate is the highest in the world (7.3 babies per woman) and many women marry in early adolescence. Going to high school gives girls skills that make them more likely to be employable and capable of attaining a measure of financial independence. They are more likely to make marriage decisions on their own rather than having their families rush to marry them off.

In elementary school, education on sex and family planning is less effective because girls at that age are too immature physically and emotionally to process the information. Prof. Osotimehin said "If you educate girls to the secondary level, then exposure to pregnancy doesn't happen until they are mature and can make choices,".

In Nigeria about 40% of the population is 14 years or younger, so having girls finish high school would have enormous benefits towards attaining a more sustainable population. Nearly 240 million people in Sub-Saharan Africa or one person in every four, lack adequate food for a healthy and active life, and record food prices and drought are pushing more people into poverty and hunger.

Investments in women and family planning are necessary to fulfill future food needs. Food security and nutrition advocates must add their voices to support investments in women and girls and voluntary family planning as essential complements to agriculture and food policy solutions (Population Reference Bureau, 2012).

#### **4.2 Nigeria Population Growth, Climate Change and Economic Development**

Over the years, it has become established that the Existence of an efficient and effective human capital is the key to economic growth and development in any nation. This stems from the fact that every other facility and resource required for economic development is driven by the availability of human capital. More so, in the absence of effective human capital development, an increasing population can have adverse negative effect on the economic growth of a nation. This is because a lot more resources are taken out to manage and cater for the teeming population that the same can generate.

As part of the strategies for achieving the millennium development goals in Nigeria, the federal government had enunciated the National Economic Empowerment and Development Goals (NEEDS). NEEDS is seen as a response to Nigeria's development challenges. It is a nationally coordinated programme of action aimed at laying a solid foundation for sustainable poverty reduction, employment generation, wealth creation and value re-orientation. The initiators of the programme assumed that it would lead to the social and economic transformation of Nigeria into a sustainable modern, competitive and prosperous economy, thus positioning her as the largest economy in Africa and a major player in the global economy.

The national policy has been further disaggregated to the state (SEEDS) and local government levels (LEEDS). As a poverty reduction strategy, the SEEDS and LEEDS were designed to create wealth, reduce poverty and generate employment opportunities through the development of the private sector but whose implementation and results have been doubtful. Furthermore, the federal government has also formulated another policy to get Nigeria to be among the twenty top developed economies in the world by the year 2020.

It is therefore correct to state that the Economic growth of a nation is significantly dependent on the growth of its population. The effect or impact can be either negative or positive depending on the existence of certain factors and conditions, when studied and understood can be managed or controlled to ensure continuous and sustainable economic growth and development.

Nigeria is one of the fastest growing countries in the world. With an estimated population of over 167 million and an annual population growth rate of 2.9 percent (NPC, 2011), Nigeria is the most populous nation in Sub Saharan Africa and the tenth most populous in the world. However, the composition of this population is mainly in the youthful category with 49 percent being youths below the age of 21 and a dependency ratio estimated at 89 percent. A large proportion of this population are living in the rapidly expanding urban area, presently estimated at over 45.2 percent and will likely hit 55.4 percent mark by the year 2015 (UNDP, 2007).

With this statistics however, the population dynamics shows profound inequities and disproportions when analyzed with the development indicators, such as: 21 doctors per 100,000 people, infant mortality rate of 112 per 1000 live births, maternal mortality of over 980 per 100,000 live births, life expectancy at birth projected at 50 years.

Nigeria has a total land area of 983,213 square Kilometres of which 773,783sq. kilometres are in the savanna zones 75,707sq. kilometers are in the derived savanna zones and 133,717 square kilometers are in the forest zone. Nigerian population is more than 167 million yielding an average density of more than 160 persons per square kilometer. Although this density may vary from one region to another, it is obvious that Nigeria is already experiencing high population density. The interaction of these millions of Nigerians with their respective environment has left indelible mark on the landscape. The manifestation of these impacts includes; urbanization, deforestation, desertification, overpopulation and all kinds of pollution. These impacts have both negative and positive effects on the natural environment.

The unwise use of the natural environment due to ignorance, poverty, overpopulation and greed amongst others has led to the degradation of the environment. The charges (degradation) occur as Nigerians attempt to adjust their seemingly endless wants and desires for food, shelter, recreation, infrastructural facilities, and so on to the land and other resources available to them (NEST, 1992). These land use activities contribute to the overall development of the country but they equally produce negative impact on the environment. These negative impacts are referred to as environmental degradation which implies “abuse of the environment” due to improper resources management.

### **5.0 Population dynamics and its implications to policy makers**

Population dynamics affect not only our overarching development objectives – poverty reduction, human wellbeing and living standards – but also have a strong impact on the social, economic and environmental dimensions of sustainable development. Efforts to combat food insecurity and hunger; discourage an overexploitation of land, oceans and ground water; promote universal access to energy; ensure sustainable urbanization; and reduce natural and man-made disasters are strongly and inseparably linked to population dynamics. Efforts to promote sustainable development cannot succeed as long as these efforts remain disassociated from the knowledge and policy options linked to population dynamics.

To address challenges associated with population dynamics and promote more sustainable development, countries must make policies, which not only respect, but strengthen human rights and freedoms and support human development.

Policy maker must recognize that better access to health care services, including sexual and reproductive health, and education beyond the primary level, not only contribute to falling infant, child and maternal mortality but also contribute to the empowerment of women and falling fertility levels.

Second, countries must empower women not only to decide on the number and timing of their children, by providing adequate access to sexual and reproductive health care, but also promote their active participation in economic, social and political life.

### **5.1 Conclusion**

In conclusion, to promote human wellbeing and raise living standards are not only ends of development but are also important means to address population dynamics and promote more sustainable development pathways. Policies that promote human development and encourage higher, sustained and environmentally sustainable economic growth must constitute the cornerstones of sustainable development strategies. To gauge progress in the implementation of sustainable development agendas, it is therefore necessary to examine progress also in the area of population issues.

There is no doubt that the population problem in Africa is real and challenging. The impact of the effect of high birth and death rates, increasing population size and density, rapid population growth, and increasing dependency burden all translate into greater demands on the African governments in productive activities which in turn accentuate the problems of unemployment, underemployment, persistent poverty, urban slums, crime and political unrest.

Population variables influence development and are also influenced by them, if Africa is to effect changes in the critical growth components of their populations (especially fertility) there must be significant reduction in Africa's population growth rate; a viable population policy should be integrated into development plans.

The programme of action of ICPD which focused on the control of population growth mainly by means of family planning and contraceptives should be effectively implemented by the government. Every country should have the responsibilities to tackle prevailing population by;

1. Integrate policies and programs to address climate change and mainstream it across development sectors. This should include setting up strong coordination and governance systems.
2. Prioritize population in national climate change and development plans, with adequate resources for effective implementation of programs. In particular, climate change plans and programs should include expanding access to family planning. This will boost resilience to climate change.
3. Prioritize meeting women and their partners' needs for family planning as it will yield a 'triple win' in the U.N. sustainable development framework. Universal access to family planning would reduce fertility rates and



slow population growth, which would help: (1) reduce poverty by improving and expanding health, schooling and economic opportunities; (2) protect and manage natural resources for economic and social development; and (3) reduce inequality and create greater opportunities for all through social development.

4. Improve technical capacity in program design, research and application of research to decision making processes. Decision makers engaged in climate change policy, planning, and implementation at all levels should have access to research on population trends, climate change and development. It is important to strengthen technical capacity of local experts to design and carry out integrated programs, and to monitor and evaluate these programs. This includes supporting efforts to improve training of local climate change experts.

5. Incorporate population, reproductive health and family planning into global and regional institutions and frameworks for sustainable development. Such institutions include the African Union and the UN Economic Commission for Africa.

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