GLOBAL JOURNAL OF SOCIAL SCIENCES VOL. 2, No. 1, 2003: 45-53
 ISSN 1596-6216

POPULATION CHANGES AND FOOD INSECURITY IN THE NIGER DELTA

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(Received 8 October 2002; Revision accepted 7 February 2002)

ABSTRACT

The paper examines the population trend and the prices of staple food in the Niger Delta region of Nigeria from 1991 to 2002. The survey reveals that population increase is the major factor for unsustainable production, unavailability and inaccessibility of vital food resources required by the people of the Niger Delta. Although, the effect of food insecurity is devastating in the region, but the paper concludes by presenting recommendations that can improve food security such as intensification of family planning education in the rural areas, state involvement in food production, community participation in programmes aimed at ensuring food security, assistance to food producers in the area among others.

KEY WORDS: Insecurity, Sustainability, Environment, Agriculture, Degradation

INTRODUCTION

The greatest challenge that confronts society and governments today, and the generation to come is the changing patterns of world population. It is therefore the central focus in the study of environment. Population according to Nwankiti (1982) consists of all the individuals that have a specified character and, therefore can be real or apparent. Meaningfully, human population can be described in terms of the effect on the other organisms of the ecosystem. Thus population may be recognized as a dynamic system of interacting individuals, who do not exist by themselves, but share a common resource base with other species in the environment. It is an established fact that unprecedented changes in human numbers would in turn affect the stability of world ecosystem, which is the storehouse of food resources. The centre for International Research in 1993 observed that the unprecedented doubling of world population since 1950 is destroying agriculture s environmental support systems at record rates, reducing the living standards of hundreds of millions.

Population fluctuates depending on the type of selection imposed on the members. This selective force is a component of the environment and depending on what line it follows, the population will decrease or increase in the number of individuals. If the factors are favourable, as in most cases, the population continues to increase. It is this increase that brings worry to governments, Non governmental organisations (NGO), scholars and development agencies. Many authors (Brown and Kane,1995; Dumont, 1988 and Pickering and Owen, 1994) agree to the fact that population increase is the main cause of environmental degradation, resource depletion and food shortages.

FAO (1980) earlier observed that any solution to the problem of environmental deterioration must first cope with the basic cause of overpopulation. It is within this context that population control has been advanced as a central strategy for arresting the growing economic and ecological crisis facing the developing nations including Nigeria.

Nigeria's population has witnessed rapid increase since 1950. NEST (1991), described population in the country as a veritable time bomb which, unless it is defused, will destroy the environment by making demand on it which it cannot meet and

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destroy itself as a result of malnutrition, massive unemployment, poverty, inadequate social infrastructure, social vices, conflicts and environmental degradation. Studies so far are broad based, and little is mentioned about the impacts at regional levels. This whole picture is what induces more harm to humans. However, population increase and its effects on the quality of environment vis-à-vis food production in the Niger Delta has been played down. Rather, there is too much blame on the government for negligence of the area and the exploitative activities of the multinational oil companies as a major cause of environmental degradation that have culminated in soil depletion, thus affecting food security in the rural communities of Niger Delta. There is no doubt that these points just mentioned are some factors of food insecurity in the area in question, but this paper would examine the extent to which population changes have affected food insecurity in the Niger Delta. As a result, the study carried out a survey of the population in the region and prices of food commonly consumed in the nine Niger Delta states of Cross River, Akwa Ibom, Rivers, Bayelsa, Imo, Abia, Edo, Delta and Ondo. The main issues for discussion are the overview of population trends, carrying capacity – the Niger Delta experience, food insecurity and causes, pitfalls of population explosion and food insecurity in the area and measures for improving food insecurity.

OVERVIEW OF POPULATION TREND:

Since the eighteenth century, world population has increased eight-fold (Pickering and Owen, 1994). The population doubled from around 2.5 million in the middle of this century to about 5 billion by 1987. The projection by the United Nations population Division from 1990 figures shows an increase by 60 percent to 8,488,600 by the year 2025, this tripled the 1960 levels and reached about 11.3 billion by the year 2100.

TABLE 1: ESTIMATED POPULATION OF NIGER DELTA BETWEEN 1991 – 2002.

STATES	1991	1998	1999	2000	2001	2002	Cumulative increase within the period	Cumulative percentage increase within the period
Cross River	1,911,297	2,327,549	2,400,894	2,475,550	2,551,497	2,629,739	718,442	9%
Akwa Ibom	2,409,613	2,936,756	3,026,694	3,120,980	3,216,568	3,315,191	905,585	11%
Rivers/Bayelsa	4,309,557	5,252,971	5,413,854	5,581,825	5,753,419	5,929,867	1620310	20%
Delta	2,590,491	3,157,273	3,253,965	3,355,256	3,458,190	3,564,128	973,637	12%
Edo	2,172,005	2,647,302	2,728,378	2,813,225	2,899,524	2,988,438	816,433	10%
Imo	2,485,635	3,029,250	3,122,019	3,219,446	3,317,888	3,419,616	933,981	11%
Abia	2,338,487	2,850,039	2,937,321	3,028,856	3,121,591	3,217,306	878,819	11%
Ondo/Ekiti	3,785,338	4,613,640	4,754,937	4,902,846	5,053,209	5,208,164	1,422,826	17%
Total	**22,002,423**	**26,814,774**	**27,688,062**	**28,497,984**	**29,371,886**	**30,272,454**	**8,220,031**	**100%**

Source: National Population Commission

The annual growth in world population is the result of an excess of births – roughly 140 million over death of some 50 million. Of the 90 million added each year 84 million live in the third world (Brown and Kane, 1995). In Africa, each of the three most populous countries – Nigeria, Ethiopia and Egypt – add more people than does all of western Europe combined (population Reference Bureau, 1993). Although Africa was the least populated continent in the early eighties, the rate of growth of its population at 2.7 percent is comparatively higher than most continents (Udoh, 1981). In addition, Brown and Kane (1995) reported that the fastest – growing regions are Africa and Middle East, each expanding at almost 3 per cent per year, and each with a particular set of population-related issues.

Population trend in Nigeria is not different from the global perspective. In 1963 the population was 55.67 million (Iloeje, 1981) and was approximately 2½ times as large as the 1921 figure. And over a short period of 20 years (1953 – 1973) the population roughly doubled itself, rising annually by 3 per cent. Today, the rate is perhaps over 3.3 percent, making Nigeria about the world's fastest growing nation (Nest, 1991). It is likely that the population of Nigeria will double in less than 20 years from the 1991 census figure of 88,514,501. There are however, great variations in population densities of the various sub-regions. While some regions are densely populated (Excess of 200 persons per KM^2), others are sparsely populated. Areas of high population density includes the Niger Delta States of Akwa Ibom, Imo, Abia, Edo, Delta, Rivers and Cross River State, others include Anambra, Kano, Lagos, Oyo, Sokoto, etc. The paper is specifically concerned with the Niger Delta which according to Table I had a population of about 22 million in 1991, that is about 25% of the population of Nigeria. Notice also is an acceleration of population growth.

Within the two periods (1991 – 2002), estimated figure in 2002 is above 30 million people in the sub-region representing 27 percent increase in the country. Population increase in the region is not even within the periods, it varies from one state to another. For instance, Rivers state (Bayelsa inclusive) has increase over 1 million above other states, representing about 20% increase in the region. Therefore, over 8 million people are added to the population of the Niger Delta states within ten years (Table 1). Increased population in the region is attributed to several factors among which are increased birth rate over death rate due to improved health care, cultural practices of the people, high fertility rate of women, increased urbanization, increased immigration and economic development in the sub-region.

It is easy for human number to increase as observed in the region, but the critical issue confronting us is how to cater for such a huge number, in the face of depleting resources (food). The paper will present more light on this, in the latter part of our discussion. The impact of population growth during this period on the environment is significant. The demand for agricultural land increased, leading to widespread deforestation. Fallows periods are progressively shortened, leading to progressively soil exhaustion and reduced crop yields that has introduced food insecurity in the sub-region and the entire country.

CARRYING CAPACITY: NIGER DELTA EXPERIENCE

Human life is supported by the resources of the Biosphere – the systems of land and the vegetation it supports, air and water commonly referred to as the life support systems. For Africans in particular, livelihood depends on access to a great variety of environmental resources for food, fuel, medicines, housing materials, cultural development and economic security. Most communities, for instance, depend on forest resources on a daily basis for food. Forest trees produce variety of seeds rich in edible oil and protein. Plants provide numerous foods, spices, flavouring and mushrooms. Bush meat, a source of protein for the population is easily hunted from the forest

ecosystem. In addition, traditional agricultural is largely forest – based as the presence of wild, woody plants in fallows and secondary forest helps in restoring soil fertility under long fallow periods (African Biodiversity, 1993). It is necessary to know that, any negative impact on the forest ecosystem is indirectly denying the human population most of the food resources collected from the forest. According to Simons (1991) every human can be considered as requiring two sorts of resources – metabolic and cultural resources. Metabolic are those which are simply needed for survival e.g food resources. On the other hand, cultural resources are derived from the culture of the people. Therefore, for every extra number of people added to the population a very much higher demand upon the earth is required.

The links between population and environment is not as straight forward as most scholars opined. There are many mediating mechanisms between population and human activities. Demographic factors are part of a complex nexus of socio-economic and ecological causes and effects most of which are yet poorly understood (Salua, 1992). For example, many studies have found that ecological problems such as deforestation or soil erosion could not be ascribed to the classical malthus problem of too many people seeking to make a living on too little land resources but much more often the result of either inequitable land owning structures or of companies which received such a high return in short-term that environmental degradation of the resources was not judged to be a problem (Satterthwalte and Mitlin, 1990). However, the issue of whether the earth resources can cater for the ever-expanding world population is critical to must nations.

The earth resources are in quick response to the increase in human number. Therefore, carrying capacity of the earth is considered in terms of the population that the resources of the earth surface can support. This is dependent on at least four main factors such as food production, living space, waste assimilation, resource availability. All ecosystems have a definite carrying capacity for its population. To achieve the aim of this paper, we would narrow our discussion on food production and population expansion in the Niger Delta. Although humans can expand the carrying capacity of the earth through development, tool making, agriculture, industry and medicine. but the present population of over 30 million in the Niger Delta (Table 1) has exceeded the carrying capacity. This claim is seen in the light of the following indicators especially in the region:

* pollution of land, air and water
* depletion of biodiversity (water and forest)
* extinction of species diversity
* deforestation
* erosion of landscape resulting in soil degradation
* widespread starvation
* poverty
* food insecurity for the population
* increasing malnutrition
* land hunger
* Farmland fragmentation
* Declining agricultural yields
* Shifts to alternative and less demanding crops

(NEST, 1991).

The main problem concerning world population is that, it is increasing at a faster rate than food resources and other production. In the rural communities of Niger Delta, production is not increasing sufficiently fast to raise living standards. Today, there is a food most of which experience acute shortages of food resources leading to high prices (Table 2).

With the slowing down of crops yield, shortage of bush meat and fish, and unlikely increase of prices of resources in the region, there is an urgent need for a regional assessment of carrying capacity. Otherwise, there is a real risk that the region will blindly over run their productive lands for other

economic activities instead of ensuring sustainable agricultural production. It is suicidal for any nation to concentrate on activities that would cause starvation, poverty and scarcity of food resources to her population. We will therefore examine food insecurity in the face of expanding population in the rural communities of the Niger Delta in the next section of this paper.

FOOD INSECURITY IN THE NIGER DELTA

The future of agricultural land is critical to the world's families that support themselves directly by farming, as well as to non-rural people who depend on arable land for their food supply (Stoddard et al, 1986). Food insecurity has become a sensitive problem that affects many nations especially the developing countries due to the ever increasing population. Before we consider this, let us first and foremost explain the concept of food security. Esu (2000), highlighting from a report by United Nations Research Institute for Social Development, described the concept to mean sustained and assured access by all social groups and individuals to food adequacy in quantity and quality to meet nutritional needs. He further presented the following as characteristics of a food system offering security:

* Capacity to produce and store sufficient food to meet basic food needs for all groups;
* Maximum autonomy and self–determination, reducing vulnerability to international market fluctuation and political pressure;
* Reliability, such that seasonal, cyclical and other variation in access to food are minimal,
* Sustainability such that the ecological system is protected and improved over time; and
* Equity in distributional and dependable access to adequate food for all social groups.

There are many measures of food security, from the personal to the global. The global indicators are grain production per person and carryover stocks of grains. The first gives a sense of whether overall food availability is improving or deteriorating; the second shows if production is exceeding consumption or if the opposite is occurring (Brown and Kane, 1995). Although world grain production has increased from 631 million tons in 1950 to 1,649 million in 1984 (U.S. Department of Agriculture, 1993), but this may not commensurate with the increasing population in the world. The trend of grain production per person is more revealing. For instance, from 1950 until 1984 it climbed from 247 kilograms to 346; a rise of 40 percent (USDA, 1993). Although these numbers show the global trend, they do not reflect the contrasting developments within regions.

The ultimate objective for any nation should be, to provide adequate food for all at affordable prices. It is necessary for nations to organize the production of food in sufficient quantity and quality for its population. But in African, Brown and Kane (1995) observed that, farming technologies that can ensure sustainable production were limited especially in semi arid regions, and population growth was the fastest of any continent in history, leading to a steady decline of food resource. This has introduced the opposite of food security, that is food in security.

Food insecurity simply means, uncertainty, unsustainable production, availability and inaccessibility of vital food resources to meet the daily food need of the population. Various scholars have confirmed population increase as one of the major causes of food insecurity (Pierce, 1990). The problem of food insecurity in the Niger Delta region is seen in the light of what happened in some African countries like Senegal, Togo, Cameroun, Benin Republic and Ethiopia Studies (Dumont, 1988) have shown how widespread deprivation is before the harvest of crops. When the soil of an over populated area is exhausted, human want becomes

TABLE 2: AVERAGE PRICES OF BASIC FOOD NEEDS IN THE NIGER DELTA FOR 1991 AND 2002.

Food Type	Weight Qty	Price in 1991 (Naria)	Price in 2002 (Naria)	Percentage increase
Garri	100kg	750	1,500	500%
Rice	50kg	1200	3,500	192%
Yam	5 tubers	250	2,000	700%
Bean	200kg	1350	7,000	419%
Palm Oil	20 litre	350	2,000	471.4%
Melon	1 cup	5.00	40	700%
Meat (Bush)	1 kilo	40.00	400	900%
Fish (Dry)	1 kilo	120.00	800	567%
	Total	N4065	N20,240	398%

Source: Field Survey

chronic, as is the case with the Kabrais in Northern Togo, the Kirdis in the Northern Cameroun, and the Boukombe regions in Benin Republic. When seasonal variations are extreme, chronic want become, real famine. This occurred in Mali from 1913 to 1914, and Rwanda – Burundi in 1943, where there were, 36,000 deaths. Soils are impoverished in many communities due to pressure, causing poor harvest, which in fact leads to increase in prices of basic staple (Table 2). This occurrence is the basis for reduction in the intake of nutritious food, number of times people feed and scarcity and extinction of most food product. The most serious and widespread nutritional lack is protein, particularly protein of animal origin, since the ecosystem has been cleared for farming. This applies especially in the remaining rainforest region of Cross River State. Population in these areas lives on tubers (yam, cassava etc) and maintain, all of which are greatly deficient in nitrogen (Dumont, 1995). This is more serious for those population that are more sensitive to the deficiency, such as pregnant women and nursing mothers. Infants being weaned often go directly from their mothers milk to starchy tuber that contain no nitrogen, and contact Kwashiorkor, and many died of it and those who survived are physically and mentally scared throughout the rest of their lives. Other deficiencies include mineral salt and vitamins and sometimes fat. The lack of vitamin A results to night blindness in most communities of Niger Delta.

A survey of the prices of vital food resources eaten daily by the population in Niger Delta states between 1991 and 2002 reveals some interesting trends (Table 2).

From 1991 to 2002 there was a general increase in the prices of food in the region. Table 2 shows the trend of market prices for major food stuff consumed in all the states of the Niger Delta. Foods such as garri, rice, palm oil, meat or fish are commonly eaten by almost the entire population. In fact, there is no day of the month that 95 percent of the population do not acquire these products for consumption. The survey reveals that there is no food product within the period that has below 100 percent increase in price. In fact, some products like garri, yam, melon, meat and fish are over 500 percent increase. This trend corresponds with the increasing population in the area (Table 1). The

end result of this imbalance is the reduction in the consumption pattern of the vital food resources by the population. This ugly situation is the roots of chronic hunger, famine and malnourishment in the area. In fact, most cities such as Port Harcourt, Benin, Warri, Uyo, Owerri, Aba and Calabar are now faced with the problem of many families being involved in begging along major streets. This has never happened before this present era in the Niger Delta. The reason for this is obvious, the population increase is alarming (Table 1). It is a major cause of food shortages. For instance, the soils in the region are far more exposed to degradation by over use due to increase in population, pollution and erosional activities. This leads to total destruction of the fertility of the soils, since the protective top soil has been carried off, and they are completely desicated by the exposure of their surface and the alteration of the rainy and dry seasons. A number of communities especially in the coastal areas are surrounded by hydromorphic soils, which are formed on sandy deposits and do not have fine texture and not water retentive (Bisong and Ajake, 2001) and cannot allow cultivation of most crops without adopting sustainable food production techniques to meet the needs of the population.

What is happening in the Niger Delta is an affirmation of what Malthus predicted in the mid-17th century. As a visionary scholar, he saw a situation of hunger and pestilence striking the world due to population explosion. This he envisaged because the world's population was increasing at an alarming rate, making demands on cultivable land for shelter and yet not able to do much to retrieve waste lands for cultivation. In addition Wisner (1988) observed that population growth, urbanization and environmental degradation in the form of erosion and deforestation usually top off a list of factor, affecting food security. Although, presenting these issues becomes dangerous close to

In addition, Esu (2000) stated that, food insecurity undoubtedly promotes food aid and reliance on importation of food by a country. The former has frequently been used by developed countries to promote long-term dependence on foreign food imports. The survey conducted by this author observed that, across the major markets of the Niger Delta region, imported food products are more commonly seen than the locally produced. For instance, rice and chicken consumed by majority of the households are imported. This has prompted the recent ban on the importation of frozen chicken and other products.

CONCLUSION: IMPROVING FOOD SECURITY IN THE NIGER DELTA

To boost food production in Nigeria, various governments have been seen to be blaming the victims – people for having large families, over-use the land and vegetation, and in the end, abandon their homes and seek refuge in or around centres of food and possible employment because of the pressure of instability and the deterioration of their rural lives. Whatever, population growth, migration and environmental degradation are the results of instability and deterioration of food system in the Niger Delta region.

PITFALLS OF FOOD INSECURITY IN THE NIGER DELTA:

Although, much of what is expected here has been discussed previously, this section will therefore present a summary of the major pitfalls of food insecurity in the Niger Delta. These are:

(a) Deprivation of vital food resources to the people;
(b) Starvation and famine;
(c) Reduction in the intake of nutritious food and the number of times required to eat.
(d) Deficiency in minerals salt and vitamins by the people
(e) Most children suffer kwashiorkor due to malnourishment.
(f) People suffer certain diseases such as night blindness and subsequent death
(g) Stunted growth among children.

(h) Increase in social vices such as prostitution, stealing.
(i) Begging among the population along major streets.

supporting initiatives aimed at increasing crop yields and to ensure food security. Government programmes such as Green revolution, Operation Feed the Nation (OPN), Agricultural Development Projects (ADPS), River Basin Development Authorities and various erosion schemes, National Horticultural Development Programme, National Accelerated Food Production Programme (MAICPP), Food Crops production Transfer stations, plantain/banana Development programme, the National Fadama Development programme etc. are set up to implement this laudable objectives (Esu, 2000). Despite all these in the Niger Delta, the functional indicator of increasing food resources (quality and quantity) for the increasing population is yet have impacts. Food products are still in short supply and their prices are still very high (Table 2). Moreover, imported grains are more easily seen in the markets than locally produce grains. Agriculture with high yield and uninterrupted planting is relatively skeletal in the region. Uncertainty in fallow system has been the practice on large scale. Food production has been and is still in the hands of technically less developed people who have a few crude tool. This explains why the huge population in the Niger Delta have always resorted to bush fire to clear the forest and cultivation is in a small scale among the peasant farmers. It is therefore a vicious circle of low-yield agriculture on unfertilised land, cultivated by underfed workers (Dumont, 1988).

On the other hand, the national policy on population had a laissez faire attitude to population growth. The policy goals are improving the standards of living and quality of life of the people of the nation; to promote their health and welfare, especially through preventing premature death and illness among high-risk groups of mothers and children; to achieve lower population growth rates, through reduction of birth rates by voluntary fertility regulation methods which are compatible with the attainment of economic and social goals of the nations; and to achieve a more even distribution of population between urban and rural areas (NEST, 1991). These are not taken seriously. The population in the region is still increasing rapidly against the depleting resources. The result is the promotion of hardship and under-nourishment among the citizenry.

To attain food security in the Niger Delta, the following measures are recommended:

(a) National development policies, plans, and programmes should be based on an integrated approach that takes into consideration inter-relationship between population and resources.
(b) The national population policy trust on family planning should be intensified in the rural communities of the Niger Delta and proper education about the impacts of population explosion should be through formal and non-formal methods.
(c) State involvement in food production should be taken seriously. The present practice of setting-up gigantic projects without yielding results should be discouraged.
(d) Community participation in the programmes aimed at ensuring food security should be ensured.
(e) Sufficient protection and assistance to food producers is a necessary condition, since it would enable small scale peasants to afford and improve their crop yields.
(f) Infrastructural development that would benefit peasants in their local communities and reduce migration to urban centres should be provided.
(g) Agricultural extension agents in the region should work with the farmers and improve upon an indigenous sustainable farming system.
(h) Importation of grains that are also locally produce should be reduced.

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