

## **FOOD SECURITY IN AFRICA : CHALLENGES AND PROSPECTS**

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### **Summary**

Food insecurity and hunger are widespread in sub-Saharan Africa (SSA). *Food security* implies the provision of safe, nutritious, and quantitatively and qualitatively adequate food, as well as access to it by all people. The chronic food insecurity in SSA is largely due to the fact that 85-90 per cent of agriculture is rain-fed and accounts for 35 percent

of the region's gross national product (GNP), 40 percent of exports and 70 percent of employment (World bank 2000). Domestic food production accounts for about 80 percent of the region's consumption (UNEP 2002:289). The yield of roots and tubers in Africa is the lowest in comparison to the other regions of the world (McGranahm et al 1999:104). However, an estimated 40 percent of people in SSA live below the poverty line, and both income and human poverty are increasing (UNEP 2002: 16). This paper examines these complex sustainable development problems and suggests appropriate measures for reducing poverty, ensuring food security, fighting hunger and promoting a sustainable management of natural resources. The paper argues that the principles of *sustainable agriculture* and rural development (SARD) enunciated in the den Bosch Declaration (FAO 1996:39) constitute the foundation for achieving food security in Africa.

## 1. Introduction

Africa faces a number of critical challenges. According to Klaus Topfer (UNEP 2002 : XV), the environment continues to deteriorate ; social and economic inequality is increasing ; and *globalisation* is sweeping across the world, largely leaving Africa behind. Rapid changes in the global economy, in consumption patterns and in population and demographics are having a negative impact on the environment. In spite of the introduction of economic reforms in many Sub-Saharan African (SSA) countries, economic growth continues to be sluggish or negative, impacting heavily on the welfare of the people, especially the rural population. In addition, major environmental disasters in the continent such as recurrent drought and floods have serious devastating socio-economic and ecological impacts. Poor land policies and management practices, which lead to land degradation and deforestation, contribute to increased flood disasters in some risk areas.

A clear outcome of these nefaste processes is a significant decline in agricultural production, *poverty* and *food insecurity*. Agriculture, of which 85-90 per cent is rain-fed in sub-Saharan Africa, accounts for 35 percent of the region's gross national product (GNP), 40 percent of exports and 70 percent of employment (World bank 2000). Year-to-year swings in GDP can be as high as 15-20 percent, largely due to the effects of *fluctuations in rainfall* on agricultural production. About one-third of the region has a mean annual rainfall of less than 700 mm, which is too little to sustainably support *rain-fed crop production*. In SSA, domestic food production accounts for about 80 percent of consumption (UNEP 2002 : 289).

### 1.1. The Research Problem, Objectives and Premises

An estimated 40 percent of people in SSA live below the poverty line, and both income and human poverty are increasing (UNEP 2002 : 16). Using the Human Development Index (HDI) as a measure of the quality of life, in 2000 there were no African countries in the high HDI group. A number of countries were in the medium HDI group, while the majority were ranked in the low HDI group. Forecasts indicate that human vulnerability in Africa is set to worsen in the future. This will lead to increasing poverty ; less attention being paid to the environment ; women and children will continue to bear the

brunt of environmental change ; migration and brain drain will intensify ; and the overexploitation of the environment will be accelerated.

This paper analyses food insecurity and related problems in SSA in general and Ghana in particular and proposes the adoption of strategic measures to mitigate human and environmental vulnerability. It argues that ensuring food security is a key strategy for achieving this objective. Projections on food production estimate that Africa as a whole needs to increase its grain production by almost four times and its animal production by seven times, given a population of 2,200 million in the year 2050 (McGranahm et al 1999:104). Ideas on how to meet this challenge vary enormously; some are optimistic, even complacent, others are darkly pessimistic. Some indicate that not much needs to change; others argue for fundamental reforms to agricultural and food systems. Some indicate that a significant growth in food production will only occur if new land is taken under the plough; others suggest that there are feasible social and technical solutions that would increase yields from existing farmland.

The guiding premise of this paper is that without deliberate changes from the normal course of events, many of the food security problems of today will persist and some will become worse. Action needs to be taken now to promote poverty-reducing growth and agricultural development as well as to put agriculture on to a more sustainable path. A second hypothesis of the paper is that *modern agriculture undermines food security and health by putting the rural poor at a disadvantage, threatening their land tenure, and degrading wild resources*. Agricultural production in the future therefore needs to take into consideration the issue of sustainability.

## **2. The Concept of Food Security**

According to the World Food Summit organised in Rome in 1996, food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO 2001 : 4). Tracking trends in food security requires two interrelated variables (FAO 1996a, Vol 1, Ch2 :3). The first is the *per caput availability of food* for direct human consumption (also called per caput food supplies). It can be used to construct the *pattern of world distribution of food supplies* to show what part of the world's population lives in countries with given levels of per caput food supplies for consumption.

The second variable concerns the *distribution of the food supplies within each country*, i.e. given the national average of the preceding variable, what proportion of a country's population has access to any given level of per caput food supplies. One such relevant level for food security analysis is that of per caput food supplies (Calories/day) equal to 1.55 times the *basal metabolic rate (BMR)*. If a person's access to food is below this level, s/he may be classified as chronically *undernourished*. From 1969 to 1971, 900 million people in the developing countries (35 percent of their total population) were so classified. By 1988-1990, the proportion had fallen to 20 percent, but there were still about 800 million undernourished people, given that the population of the developing countries had in the meantime increased from 2.6 to 4.1 billion.

*Food security*, therefore, implies the provision of safe, nutritious, and quantitatively and qualitatively adequate food, as well as access to it by all people. Food security has three dimensions (UNEP 2002:288):

- availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports ;
- access by households and individuals to appropriate foods for a nutritious diet ; and
- optimal uptake of nourishment, thanks to a sustaining diet, clean water and adequate sanitation, together with healthcare.

## 2.1. Access to Food

It is important to emphasise that *more food production does not necessarily mean more food for those who need it*. Most experts would agree that the largest part of the production increase has to come from yield increases. Current levels of agricultural productivity and production say little about potential levels, because they are simply a response to present levels of demand and price/market conditions.

It is however important to note that *food production is not the same as food availability* (production minus exports plus imports), and that *aggregate availability and the ability to acquire food (food entitlements) are very different things*. The yield of roots and tubers in Africa is the lowest in comparison to the other regions of the world (McGranahm et al 1999 :104). Whilst food production undoubtedly influences food entitlements, the connections are complex and there are also other matters involved.

People's *access to food* depends both on the purchasing power of their income, and on their *non-market entitlements*, such as rights to land for subsistence farming and foraging purposes. Households seeking to preserve *food security levels* may resort to a number of *coping strategies* to gain *access to food*. These include : maintaining normal income generating patterns ; adaptation by means of innovative use of available resources or some divestment of liquid assets ; divestment of productive assets, such as stock or land ; and out-migration and destitution.

However, the *market economy* is not expected to grow rapidly, and many *non-market entitlements* are in danger of decline. *Food entitlements for urban dwellers* are most often mediated through the market, whereas for *rural dwellers* in general, and *subsistence farmers* in particular, these *entitlements* tend to depend more on the local production.

Clearly, *food insecurity* is basically a problem of poverty, affecting those social groups with the weakest or most fragile food entitlements, both in terms of access to social networks and safety nets or productive assets (capital, land, agricultural inputs).

*Malnutrition* can thus be a threat to urban and rural dwellers at different times and for different reasons. *Urban-rural links* are often created in the pursuit of *food security*, and hence urban dwellers will maintain rural contacts, or even land, to provide *food security*

in case their purchasing power is disrupted, whilst rural dwellers will maintain urban contacts, in part to ensure against the loss of local food entitlements.

## 2.2. Adequacy of Food Supply

Agricultural output in Africa has been lagging behind population growth since the 1960's. Between 1965 and 1990, agricultural production grew at an annual rate of 1.7 percent, while there was annual population growth average of 2.8 percent. Food imports including food aid in the African region have increased substantially to offset the deficiencies, and in early 1994 represented about 10 percent of the food consumed. At the current growth rates, the food gap is projected to increase to more than nine times the present gap by 2020 (Agyare-Kwabi P., 2003).

## 2.3. Acceptability of Food

As a result of its agro-ecology, trade history, and position most African countries have diverse diets in terms of staple foods. This is a great advantage in terms of food security because many consumers will substitute among the five broad categories of staple - cassava, yams and tubers, plantain, millet, maize and rice - according to national and also tribal taste preferences and changing relative prices.

Women have distinctive roles to play in determining the acceptability of food basically because of their traditional role as wives and mothers who cook for their families. Transforming food from its raw state into processed or cooked food has long been the preserve of women. As prepares of food women can get whole households to accept one menu over the other ensuring that family members accept one available food over the other. An ongoing national programme in Ghana - The Cook Art - which is organised with the primary motive of getting some of the authentic Ghanaian dishes back on the national menu is a step in the right direction. It is a programme that would get Ghanaians, especially the youth to start appreciating their traditional diets.

## 2.4. Determinants of Food Security

These factors are directly and indirectly interrelated. Available food must be accessible to all members of the populace. What is available must also be adequate and the populace must be willing to eat that is what is available must be accepted as a preferred food.

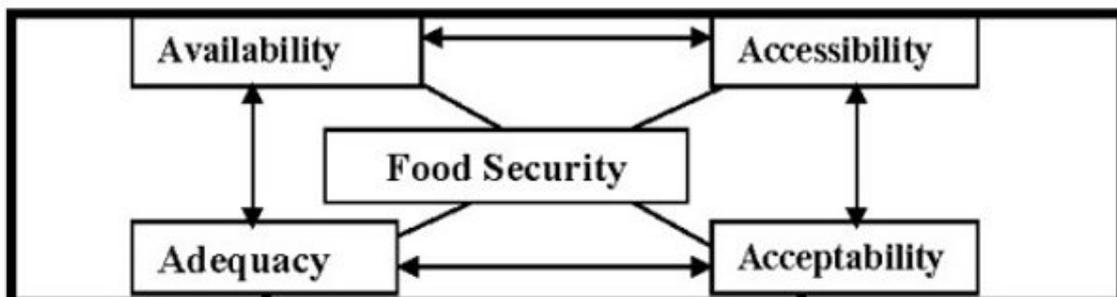


Figure 1: The Intricate Determinants of Food Security

Practically, a food glut in the rural communities may not necessarily be reflected on the market due to problems relating to accessibility – road and transportation networks, more market distributors are not willing to move into the hinterland to cart food to the urban centers. Similarly, a glut of cassava and plantain may not necessarily be that important for example to the Ghanaian non-Akan ethnic groups who do not necessarily accept or prefer to eat “Fufu” or “Ampesi”.

## 2.5. Monitoring Food Security

The main indicator for *monitoring food security* in the world is *per caput food consumption*, measured at the national level by the *average dietary energy supply* (DES) in Calories on the basis of *national food balance sheets* (FBS) and population data (FAO 1996a :vii). However, there are no internationally comparable comprehensive data for tracking the evolution of access to food for individuals or population groups within countries.

*Undernutrition* in a given country is determined by its DES in relation to a *minimum threshold* defined as corresponding to the average DES that represents a *minimum level or energy requirements* for individuals, allowing for only light activity. This level ranges from 1,720 to 1,960 Calories/day/person, depending on the country. For countries where the average DES is close to the threshold, the majority of individuals are undernourished, while experience shows that for countries with DES about a level of say, 2,700 Calories, the proportion of undernourished individuals becomes small, except under conditions of extreme inequalities.

## 2.6. Agricultural Production Trends in Sub-Saharan Africa

For several developing countries, the 1970s was a decade of improvement in agricultural production faster than that of the 1960s. Rapid progress continued up to about the mid-1980s, and at a slower pace afterwards. But several countries and whole regions failed to make progress and experienced outright reversals, foremost among them many African countries, while South Asia made only meagre progress in the 1970s but more substantial gains in the 1980s. In many developing countries, *per caput food supplies* may remain stubbornly inadequate to allow for significant nutritional progress (FAO 1996a : ix). The dependence of the developing countries on food imports will most likely continue to increase with net imports of cereals growing to cover 160 million tonnes by 2010.

In Ethiopia, 14 million and on average 1-5 million are at risk of food insecurity each year. On 28 August 2003 a new coalition of international agencies, donors, civil society, and private sector and the Government was formed to work out strategies to improve Ethiopia's food security by 2006. In the 1990s Ethiopia reduced the percentage of its 67 million people who are undernourished from 59 per cent to 44 per cent. The Government and development partners engaged in consultations on food insecurity issues over the last two years. In a UNDP funded forum, they agreed to form a Coalition for Food Security in Ethiopia, to foster partnerships to take action to lessen the impact

of droughts, improve livelihoods and ensure that communities have adequate food supplies. Supported by the UNDP-administered funding pool, the US Agency for International Development and the World Bank, the coalition set up a technical group of Ethiopian and international experts.

The group is focusing on several priorities, including improving livelihoods, agricultural and livestock production, access to food, a safety net and asset protection for rural communities, and marketing agricultural products. They are also working on implementation strategies and budgeting, access to land for voluntary resettlement of families in drought-prone areas, and health and nutrition. So far despite Ethiopia's food needs of 1.5 - 2.2 million metric tonnes the unmet needs amount to 1.5 -2.2 million metric tonnes.

**Source:** U.S. Agency for International Development (USAID) 2002 *Food Security Crisis in Ethiopia and Eritrea*, USAID Fact Sheet Washington, DC November 13, 2002  
<http://www.state.gov/p/af/rls/fs/15208.htm>

#### Box1 : Ensuring Food security in Ethiopia

*Expansion and intensification of agriculture* has often been associated with the buildup of pressures that have led to *resource degradation* and *adverse impacts* on the wider environment. Such pressures will continue to increase in the future and a major issue will be how to minimise the negative effects on the resources, the environment and the sustainability of agriculture. This is particularly important for African countries where the exploitation of agricultural resources is the mainstay of their economies and the deterioration of their resources threatens both their food security and overall economic well-being. At the same time, it is in these countries that continued poverty and further increases in the population and dependence on agriculture intensify pressures that contribute to degradation and unsustainability (see Box 1).

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### **Biographical Sketch**

**Emmanuel Kwesi Boon** obtained his B.A. in Economics and Geography at the University of Ghana in 1979. He also has a Master's in Industrial Location and Development from the Free University of Brussels. After obtaining an M.B.A. Degree from the University of Antwerp (UFSIA), he received his Ph.D. in Economic Sciences from the Free University of Brussels (VUB) in 1986. He lectures at the School of Administration of the University of Ghana in Accra and is a visiting professor to several universities and institutions in Africa, Asia, Europe, and South America. Currently, he teaches three courses to the postgraduate students of Human Ecology at the VUB: "Environment and Development," "Communication, Leadership Skills, Multi-media, and GIS," and "Issues on Gender, Youth, Age, Culture, and Ethnic Groups." He is also actively involved in research, consultancy, and extension projects. He is the founder and chairman of the International Centre for Enterprise and Sustainable Development (ICED) based in Accra, Ghana.