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FOOD SECURITY AND SOVEREIGNTY IN AFRICA: *ISSUES, POLICY CHALLENGES AND OPPORTUNITIES*

Peter K. Arthur

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This paper examines the causes and consequences of Africa's food insecurity, the policy challenges, and the necessary interventions that can address the varying challenges that have contributed to this food insecurity. Interventions suggested include putting in place appropriate capacity development initiatives complemented by food sovereignty principles including promotion of core citizen participation, agrarian reforms, property rights, access to markets, and participation in decision making by producers and consumers on food issues.

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FOOD SECURITY AND SOVEREIGNTY IN AFRICA: *ISSUES, POLICY CHALLENGES AND OPPORTUNITIES*¹

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ABSTRACT

The last few decades have seen food insecurity as an emerging crisis that has bedeviled many African countries. While many post-colonial African governments have widely recognized the role of agriculture in national development and capacity development efforts for education and skills have been ongoing for several years, progress to attain food security has been slow. This is partly due to the adoption of approaches which have not been long-term and institutions that do not have supporting mechanisms to use the capacities generated. This paper is therefore an examination of the causes of Africa's food insecurity, the consequences of food insecurity, the policy challenges, and the necessary interventions that can address the varying challenges that have contributed to this food insecurity. It is argued that putting in place appropriate capacity development initiatives can help alleviate the problem of food insecurity in Africa. In addition, food security efforts in African countries need to be complemented by food sovereignty principles that have at their core citizen participation, agrarian reforms, the promotion of property rights for local people, access by small-scale farmers to local and regional markets, and the putting of producers and consumers at the centre of decision-making process on food issues.

Key words: Africa, CAADP, capacity, food security, food sovereignty

I. INTRODUCTION

The last few decades have seen a drastic shift in the nature of crisis that has bedeviled many African countries. While conflict in terms of civil wars has been the focus of much of the recent crises facing some African countries, a new form of crisis as embodied in food insecurity has arisen. Although agriculture is the mainstay of the economies of many Africa countries, as evidenced in the fact that the sector accounts for about 35 percent of the region's Gross Domestic Product (GDP), 70 percent of employment, and 40 percent of exports (Cheru, 2002, p. 89), many African countries are still unable to meet the food needs of their citizens. This is of concern because providing basic needs is one of the roles and responsibilities of governments throughout the world, and this is especially true in the ability to attain food security. In fact, the right to food security, adequate nutrition, freedom from hunger and malnutrition, and the obligation of states to promote food security among vulnerable groupings is enshrined in a number of regional and international conventions, agreements and protocols (Sowman and Cardoso, 2010). It is unsurprising that reducing poverty and halving hunger by 2015 was one of the goals of the Millennium Development Goals (MDGs) (Sowman and Cardoso, 2010), which was a framework agreed to by world leaders at the United Nations in 2000 to ensure that human development was attained by all countries. Similarly, there is the African Union's (AU) New Partnership for African Development (NEPAD)'s Comprehensive Africa Agriculture Development Programme (CAADP) initiative that several African countries are trying to adopt to boost agricultural productivity, eliminate hunger and reduce poverty. The 2003 CAADP initiative which involves improving rural infrastructure and trade-related capacities for market-access; improving risk management, increasing food supply, income for the poor to reduce hunger and malnutrition; and improving agriculture research, technology dissemination, and adoption of profitable and sustained agricultural growth (Giyose, 2011), aims at ensuring that African countries would all achieve agricultural Gross Domestic Product (GDP) growth of 6 percent annually by 2020 (Ackello-Ogutu, 2011, p. 105), and reduce food insecurity.

While countries like Rwanda, Mozambique, Ghana and Ethiopia have been quite successful in meeting or exceeding CAADP's annual target of 6% productivity growth (NEPAD, no date), many other African countries are still food insecure, and the goal of reducing poverty and halving hunger by 2015 is unlikely to be met (Ackello-Ogutu 2011, p. 101). As Holmes (2006) notes, although progress has been achieved in raising agricultural productivity, this has so far been insufficient, unstable and unequally distributed, resulting in sub-Saharan Africa (SSA) having the highest proportion of people who are hungry, undernourished or food insecure. Using a factor and sequential typology analysis and various indicators (food production and consumption levels; trade security levels; and agronomic conditions and agricultural potential) to categorize groups of 175 countries into low food security; lowest and low food security; and middle and upper middle food security, Yu, You and Fan (2010) conclude that the lowest and low food security countries are overwhelmingly in SSA, with the most troubling spots found in the Democratic Republic of Congo (DRC), Eritrea, Burundi, Niger and Sierra Leone (Ackello-Ogutu, 2011, p. 105). Similarly, countries in Eastern and Southern Africa (ESA) such as Tanzania, Kenya, Uganda, and Malawi experienced sharp increases in prices for food commodities like maize, rice and beef during the 2007/8 food price crisis, contributing to food insecurity in those countries (Karujia et al., 2009). Thus, although the relation between food availability, food prices and conflicts is complex, as a basic necessity of life, the inability to attain food

security can be quite dangerous. Food price increases and food insecurity was behind the protests and demonstrations that took place at the start of 2008 in nearly 40 countries on different continents, notably SSA (Maccatory et al., 2010). It is as a result of these that issues pertaining to food security, hunger and undernourishment have assumed a central focus on the international agenda.

While much has been written about food insecurity in many African countries, what is missing is a discussion of the capacity building measures needed to promote food security on the continent. The appropriate capacity development measures, defined in this paper as institutional infrastructure, and comprehensive programmes of education, skills training, professional development activities, and other systemic approaches to improve or enhance the performance of personnel within a sector or institution (Development Associates Inc, 2003), to promote food security in Africa seem not to have been adopted. Thus, while many post-colonial African governments have widely recognized the role of agriculture in national development and capacity development efforts for education and skills have been ongoing for several years, the progress being made to attain food security has been slow. This is partly due to the adoption of approaches which have not been long-term and institutions that do not have supporting mechanisms to use the capacities generated. This paper therefore examines the causes of Africa's food insecurity, the consequences of food insecurity, the policy challenges, and the necessary interventions that can address the varying challenges that have contributed to this food insecurity. In particular, the paper is interested in the place and role of capacity development initiatives in helping alleviate the problem of food insecurity in Africa, as well as the opportunities for attaining food sovereignty.

In examining these issues, the paper analyses the specific capacity building and development initiatives that need to be implemented to contribute to the attainment of food security and food sovereignty in Africa. It draws on examples and experiences of African countries in order to show the importance of capacity building to food security. By focusing on and examining these issues, the paper's findings are useful to various stakeholders with an interest of understanding the issues pertaining to food insecurity in Africa, and policies and measures that need to be adopted and implemented to help attain food security and food sovereignty on the African continent. In particular, the lessons from the research helps position the African Capacity Building Foundation (ACBF) to take the lead both theoretically and in terms of policy direction on issues relating to capacity building and development and food security in Africa.

In terms of organization, the paper has seven sections. Section one is devoted to a conceptual discussion of food security and food sovereignty. Section two looks at the various theoretical explanations and causes of food insecurity in the developing world, and Africa in particular. In section three, the consequences of food insecurity in Africa is examined. Section four analyzes the current efforts and strategies to deal with the challenges in the agricultural sector in order to realize food security. Section five provides an analysis of the role of capacity building and strengthening as a mechanism of promoting food security. The sixth section deals with lessons from the efforts to realize food security and the role of food sovereignty in this process. The final section concludes with an analysis of the constraints and challenges present in the current attempts at promoting food sovereignty.

II. CONCEPTUAL FRAMEWORK: CONNECTING FOOD SECURITY AND FOOD SOVEREIGNTY

While an important antecedent to the emergence of food security as a template mechanism was the post-war thought that stressed national food self-sufficiency in developing countries (Boyer, 2010, p. 322), the need for food security became a matter of concern and shot to prominence in the international community following the oil crisis and the concomitant world food crisis of 1972-1974. The focus on food security was to increase even further following the drought and famine that many African countries had to grapple with in the early part of the 1980s. The concept and idea of food security has evolved over the past few decades in recognition of changes in the perspectives among policy makers, governments, international agencies and others focused on addressing issues centred on the challenges facing the agriculture sector in various parts of the world. It is not surprising that there are a number of definitions for food security. Tweeten (1999, p.474) points out that, the World Bank, Food and Agriculture Organization of the United Nations, and the US Agency for International Development (USAID) for example, define food security as 'access by all people at all times to enough food for an active and healthy life.' Be that as it may, the most widely used definition was offered at the Rome Declaration of the World Food Summit of 1996. This declaration defined food security as existing when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life (Boyer, 2010; Sowman and Cardoso, 2010), and their dietary needs and food preferences (Scanlan, 2001). As Ehrlich, Ehrlich and Daily (1993, p. 3) argue, a nutritionally secure society has the ability to provide its entire people with diets adequate to sustain work and other normal daily activities. This means that individuals and society have buffers against inadequate harvest due to regional drought or other climatic events and against difficulties in obtaining food through international trade.

Based on this definition, it can be stated that the main aspects and dimensions of food security are food availability, food access and acquirement, as well as food utilization for individuals at the household level. Food availability deals with the actual supply of foodstuffs in any country from local production or imports. It involves sufficient quantities of appropriate necessary types of food from domestic or local sources. According to the International Fund for Agriculture Development (IFAD, no date), food access and acquirement on the other hand refers to the ability of households to acquire food for personal consumption through production, exchange, or transfer. This means that individuals at the household have adequate sources of income to purchase or obtain the levels of appropriate foods needed to maintain consumption of an adequate diet or nutrition level. It also involves the ability to cope with shocks to acquirement as well as the ability to improve and maintain the level of acquirement. Food access and acquirement is important because not having the resources to buy may contribute to food insecurity even when enough food is produced (IFAD, no date). Finally, food utilization involves the appropriate use based on knowledge of basic nutrition and care, food processes and storage techniques, as well as adequate water and sanitation. It entails the situation where there is actual biophysical consumption of food and whether or not that food has adequate nutritional properties to meet the basic health needs of any given population (Tweeten, 1999, p. 475; Jenkins and Scanlan, 2001; IFAD, no date). Despite the different definitions and dimensions, underlying all is the idea that food security is about the ability of people in a

household to easily have secure, quality and culturally acceptable access to sufficient food for a healthy life as and when they need it. This paper thus adopts the perspective of Devereux and Maxwell (2001) in conceptually defining food security as the success of local livelihood strategies to guarantee access to sufficient and nutritious food at the household or family level for a healthy life.

While food security is about having access to sufficient, safe and nutritious food, the idea of food sovereignty emerged and developed in the 1990s as a reaction to the perceived failures and weaknesses in the approach to attaining food security. There was growing concern by international civil society that the knowledge, priorities and aspirations of small-scale producers, and other citizens whose livelihoods depend on food provisioning, were rarely included in policy debates on the future of food, farming and development (Edelman, 2003). Thus, the idea of food sovereignty was launched in the 1990s by the global farmers' movement and transnational coalition, La ViaCampesina. The focus of food sovereignty, which adopts a rights-based approach, is more on access to productive resources (Windfuhr and Jonsén, 2005), and the international framework and the international factors that contribute to food insecurity, hunger, malnutrition and undernourishment (Boyer, 2010). The need for food sovereignty in Africa has received a lot of attention because of its ability to provide the base from which local decision-makers and professional organizations can regain leadership in defining and directing policies (SWAC, 2006). Indeed, the Declaration of Nyéléni, which occurred in 2007 at the International Forum for Food Sovereignty at *Sélingué*, Mali, defined food sovereignty as the right of people to have a healthy and culturally appropriate food produced through ecologically sound and sustainable methods and the right to define their own food and agricultural system. This paper thus operationally defines food sovereignty as the process of restoring sectoral policies and public intervention in the agricultural sector (SWAC, 2006), as well as placing food producers at the centre of the agricultural system rather than the demands and expectations of the big businesses and corporations, the market, and international forces (Boyer, 2010).

III. CAUSES OF FOOD INSECURITY- REVIEW OF EVIDENCE

Policy Failures

While food insecurity occurs in many parts of Africa, the academic literature is replete with divergent conceptual and theoretical perspectives and paradigms to explain it. Hence, not only will it be impossible for this paper to be exhaustive in terms of the factors behind food insecurity, but also it is important to point out that rather than one singular perspective, there is diversity of reasons and causes of food insecurity in Africa. One of the earliest theories advanced to explain food insecurity in Africa was offered by Robert Bates (1981, 1988). Arguing from a rational choice perspective, Bates (1981, 1988) asserted that while most Africans dwell in the rural areas and make a living in farming and the agricultural sector, the policies undertaken by their governments often go against the interests of the farmers, and this for him contributes to a decline in food production to feed citizens. According to him, African governments generally tried to increase agricultural supplies by means of costly and inefficient state-run projects, and subsidies for farm inputs, rather than raising prices (Leys, 1996, p. 44). With support from the urban elites and interests, governments pursue policies

that take resources away from the agriculture sector to advance the supposed industrial development goals of their countries. The nature of government policy involved the extraction of rents and other resources from the agricultural sector through the activities of various marketing boards who determined prices offered to farmers, most of which were below the prices on the world market. In addition, African governments adopted the policy of subsidizing farm inputs like machinery, fertilizer and seeds which are more often used by large-scale farmers as opposed to small-scale ones (Bates, 1981, 1988). While such inefficient policies by governments created market distortions and the misallocation of resources, negatively impacted the collective welfare, and were thus economically irrational, Bates (1981, 1988) suggested that the policies brought political benefits that enabled the political leaders to hold on to power. The collective welfare would have been best served by allowing prices for farm produce to rise in response to conditions of demand and supply. However, because large-scale farmers are few and they benefit from subsidies on their input, and urban workers are concentrated and more easily organized and benefit from cheap food (Leys, 1996, p. 45), African governments pursue such policies because it is politically rational for them.

In sum, declining agricultural output that contributes to food insecurity in Africa is part of the wider pattern whereby governments of all ideological persuasions have tended to favour projects in urban areas or on highly mechanized export agriculture at the expense of small farmers (Cheru, 2002, p. 109). Central authorities naively believe that they are better placed to make key decisions on agricultural policy than illiterate peasants. As a result, poor policies and institutional failures have undermined the productivity of peasant farmers and contributed to food insecurity in Africa. The low prices granted to farmers fuel the downward spiral in agricultural output as the farmers switch to other more lucrative activities outside of the formal market (Cheru, 2002, pp. 94-95). Given that inappropriate and inefficient state-led policies served as a hindrance to the overall socio-economic development of African countries, Bates (1981, 1988) implied that it was important that African countries pursued a much more neoliberal and market-friendly approach in their agricultural policy. Thus, by reducing the bias against the agricultural sector and 'getting the prices right,' the supply response by farmers would dramatically improve and set the foundations for a well-functioning market (Cheru, 2002, p. 92) that can also help attain food security in Africa.

The argument by Bates (1981, 1988) has however, come in for some criticism. As Leys (1996, pp. 45-46) points out, Bates (1981) represents low producer prices as 'exploitative' for peasants and assumes that the resulting surpluses cannot be used to invest in the creation of a more diversified economy that could ultimately serve the interests of agriculture producers. Moreover, Bates (1981) is criticized for relying on 'stylized facts' rather than a systematic analysis of comparative evidence to support his argument and conclusions. This means that he simply proposed a general or common pattern, whose accuracy or validity was supported only by reference to rather than general examples from various countries (Leys, 1996, p. 46).

Institutional, structural and health-related challenges

Aside from the Bates' rational choice paradigm, there is the perspective and argument by Cheru (2002) that many African countries face the challenge of being food secure because of the lack of investment in agriculture production, insecure land tenure system, the lack of political will, as well as

inadequate support services and infrastructure. According to Cheru (2002), land degradation is becoming a major mechanism through which poor peasants in Africa are being pushed off the land. Environmental degradation, desertification around fertile lands that stem from global warming and climate change, overgrazing, and biodiversity loss have worsened the food insecurity situation of many African countries. In particular, the depletion of groundwater, decreasing of croplands, and the dying of livestock has meant increasing poverty, food insecurity and the subsequent movement of the farming population. In addition, Cheru (2002) notes that productivity decline in agriculture and food insecurity can be explained by the lack of extension services and the absence of efficient research and inadequate training opportunities. For example, the Development Associates, Inc (2003) report on Mozambique that was prepared for USAID concluded that farmers in the country lacked well-prepared researchers, basic skills in areas important to farming, and also lacked trained technical extension specialists serving rural areas, as well as basic business and management skills. In Mozambique, as is the case in many African countries, the provision of extension services is small, and the majority of farmers have low technical education. This is exacerbated by inadequate marketing and transport services. Because of transport bottlenecks that stem from poor state of roads, short and expensive supply of motorized transport services, farmers cannot market their goods or access basic supplies in the major cities (Development Associates, Inc, 2003).

Coupled with the above, the lack of proper storage facilities leads to the situation where many African farmers lose a significant amount of harvested crops to pests and insects (Cheru, 2002). According to the FAO/World Bank (2011) report, *Missing Food: The Case of Post-harvest Grain Losses in Sub-Saharan Africa*, which was produced in collaboration with the United Kingdom's Natural Resources Institute, losses occur when grain decays or is infested by pests, fungi or microbes and physical losses are only part of the equation. Losses can also be economic, resulting from low prices and lack of access to markets for poor quality grain, or nutritional, arising from poor quality or contaminated food. Physical grain losses prior to processing, which range from 10 to 20 percent, contribute to high food prices by removing part of the food supply from the market. They also have negative environmental impacts as land, water and non-renewable resources such as fertilizer and energy are used to produce, process, handle and transport food that no one consumes. Indeed, post-harvest grain losses in sub-Saharan Africa stand at around \$4 billion a year. This lost food, the FAO/World Bank (2011) notes, could meet the minimum annual food requirements of at least 48 million people. In Eastern and Southern Africa alone, food losses are valued at \$1.6 billion per year, or about 13.5 percent of the total value of grain production. While no similar regional loss estimates are available for Central or West Africa, assuming losses of a similar magnitude, the value of post-harvest grain losses in sub-Saharan Africa could total \$4 billion a year out of an estimated annual grain production worth \$27 billion (2005-2007 annual average). This is roughly equivalent to the value of annual cereal imports in the region during the same period. Given the near doubling of global grain prices since 2005-2007, the value of current losses, according to the FAO/World Bank (2011) is likely much higher.

Another trend of great concern for farmers and food security in Africa is the HIV/AIDS epidemic (Jayne, Mather, and Mghenyi, 2010, p. 1391). de Waal and Whiteside (2003) have argued that the food insecurity that has bedeviled much of Southern Africa for example, was distinct from the conventional drought-induced food shortages with respect to those vulnerable to starvation and

the course of impoverishment and recovery. For them, food insecurity in Southern Africa was attributable to the HIV/AIDS epidemic in the region. In their argument, they hypothesized that caring for HIV/AIDS infected and affected individuals take the productive adults away from formal work. The implication and consequence is that there are fewer working adults, especially in the agriculture sector, and that in turn contributes to a decline in agricultural production and food insecurity. In sum, household labor shortages attributable to adult morbidity and mortality; the loss of assets and skills from increased adult mortality; the burden of care for sick adults and children orphaned by AIDS have all contributed to food insecurity in the Southern African region. This argument is consistent with household survey evidence from Kenya, Zambia, and Rwanda which showed significant adverse impacts on the crop output, assets, and non-farm income of households incurring the death of a male household head (Jayne et al., 2010, p. 1392).

Maldistribution, natural hazards and political crisis

Another reason often given for food insecurity in Africa and other parts of the developing world has centred on increasing mismanagement and poor distribution/mal-distribution of food supplies. Ehrlich, Ehrlich and Daily (1993, pp. 3-4) note that the persistent widespread food insecurity and chronic undernourishment results from mal-distribution of otherwise abundant food supplies and that better distribution would solve the hunger problem. For them, outright starvation today is primarily a problem of food distribution failures, often precipitated by political turmoil in an already vulnerable, poorly nourished population as in the tragic situation in Somalia and a few years ago in Ethiopia and Sudan. Similarly, the political crisis and the post-election violence of 2010 in Cote d'Ivoire hindered food supply and food security in parts of the country, as well as in neighboring countries like Burkina Faso and Mali that are heavily dependent on Cote d'Ivoire for food supplies. Also, in Egypt, disruption to food stocks, loss of manpower and population movements which arose from the political turmoil of 2011 has affected food security in the country. The inability of farmers to get access to seed, fertilizers and other resources because of political instability has affected both the short and long-term future of agricultural food production, food security and income generation. In effect, food insecurity can also be explained by political crisis and maldistribution resulting from poverty and related economic factors.

Finally, one cannot ignore the fact that natural hazards and droughts that stem from the lack of seasonal rains do contribute to food insecurity in many parts of Africa. Indeed, the last two years has seen some countries in the Horn of Africa (Somalia, Djibouti, and Eritrea) as well as parts of East Africa (Kenya, and Uganda) experience the worst droughts in decades. Poverty, the successive failed rains and pasture shortages, together with an unstable social and political environment that can be traced to increasing civil strife and conflict, as well as the absence of good governance have combined and contributed to serious food crisis and food insecurity in the Horn of Africa. In the face of the worst drought in more than half a century and the official declaration in July 2011 by the UN of a famine in some areas of southern Somalia, militant groups like al-Shabab banned and denied some aid organizations like UN's World Food Program and Mercy Corps access to areas in southern Somalia to provide much needed food to starving people. This shows the extent to which food insecurity and famine, as Brunel (2007) argues, is a political tool and can be used as a weapon of war by some militant groups.

International conditions and factors

While the domestic factors that contribute to food insecurity in Africa cannot be ignored, it would be disingenuous not to take into consideration the international dimensions of the problem. One such international factor relates to the efforts to promote biofuels. Montefrio and Sonnenfeld (2011) have pointed out that governments throughout the world have expressed their commitment to promote biofuels by formulating and enacting new policies and laws. Countries like Mexico, Paraguay, Peru and Philippines have mandated both the production of biofuels and their blending with fossil fuels sold in retail fueling stations. While these policies are seen as crucial to advancing environmental policies by curbing greenhouse gas emissions, reducing reliance on fossil fuels, satisfying domestic energy needs in the face of rising oil costs, and mitigating climate change (Montefrio and Sonnenfeld, 2011; International Food Policy Institute, no date, a), critics note that this has the propensity to undermine food security and also force up global food prices. Oxfam (2008) has pointed out that the promotion of biofuels does not help food security because at a time when food prices are increasing, the United States and European Union (EU) use much as 15 percent of world maize production to make fuel. Similarly, biofuels absorbed around 20 per cent of sugar cane in 2007-2009, 9 per cent of oilseeds and coarse grains and 4 per cent of sugar beet. Thus, not only have biofuels sparked a fierce “food versus fuel” debate since a spike in food prices in 2007/08 that triggered riots in some developing countries, but they have also come under increasing scrutiny for encouraging deforestation, a side-effect that can sometimes make their carbon footprint bigger than that of fossil fuels (Dunmore, 2011). In addition, biofuels increase stress on water resources and habitats and accelerates the release of soil carbon into the atmosphere, potentially undermining efforts to reduce greenhouse gas emissions that many governments hope to achieve through the use of renewable fuels and alternative energy sources (International Food Policy Research Institute, no date, a). In sum, not only can ethanol and biofuels production lead to extensive environmental problems, but also critics point out that to use agriculture land for production of goods other than food is unethical because it is wrong to produce anything else but food when people are starving (Swedish FAO Committee, 2009).

In addition, there is the argument by Daily and Ehrlich (1996) that colonialism played a role in the current food security predicament that many African countries find themselves. According to this perspective, colonial rule led to foreign businesses taking over the arable and fertile lands of Africans, and then pushing them to areas that were less fertile. With many of the big foreign businesses using the land to produce primary products like cocoa, tea, coffee and cotton for exports, the less fertile lands used by African to produce food was simply unstable to sustain the needs of the local population. Thus, many of the colonized African states imported food products to meet the needs of the population. This economic restructuring of the economies of many African countries undermined the agricultural self-reliance that many of them hitherto enjoyed (Daily and Ehrlich, 1996). This situation has recently been worsened by the increasing sale of land and agricultural resources by African governments to foreign farmers from countries like China and India. While often presented as way of addressing food insecurity in Africa, unfortunately, many of the foreign farmers and their governments seem to be only interested in taking advantage of the available land and establishing bases in Africa to enable them to feed the population of their home countries. Aside from that, Boyle and Holben (2006) attribute food insecurity in Africa to the nature of international

trade and the concomitant debt of many countries on the continent. For them, the increasing prices of imported manufactured products relative to the primary products exported by African countries means that there is an unequal terms of trade between African countries and the rest of the world. The consequences are increasing payments on interests to the West; monies that could have been used to provide social welfare needs or improve agricultural activities and reduce food insecurity.

IV. CONSEQUENCES OF FOOD INSECURITY

Whatever the causes, one thing that is undoubtedly clear is that food insecurity has a number of negative consequences. First, food insecurity contributes to inadequate dietary intakes, reduced dietary diversity, and acute malnutrition, which also has implications for the ability of individuals to properly manage medical situations and conditions. In addition, it limits the choices that people have about education, as well as the options that they have about work, and earn an income. Furthermore, the negative consequences of food insecurity are evident in the fact that it can lead to poor physical, psychological, socio-emotional and cognitive development of people, and especially children's school attendance and adults' long term income-earning ability (Drimie and Casale, 2009, p. 30). In addition, food insecurity does lead to socio-emotional and behavioral problems such as stress and anxiety, and also affects human development. According to Drimie and Casale (2009, p. 31), food insecurity affects the ability to recover from various stressors and other socioeconomic shocks, and also adequately plan or act for the future. They note that children suffering from food insecurity are not provided with adequate foundations such as sufficient investment and attention to human capital development that are essential to achieving a stable existence in a fast changing political economy. Aside from that, Jenkins and Scanlan (2001) note that food insecurity and malnutrition represents a major impediment to the socioeconomic development and growth of any society because it affects the ability of the population to live and maintain normal lives and be economically and socially productive. It is in this regard that there is the need to urgently increase food production to alleviate the widespread food insecurity in the region (Kijima et al., 2011), as well overcome the negative consequences and implications of food insecurity.

V. FOOD SECURITY: THE WAY FORWARD

While there is an urgent need to improve food security in SSA as well as increase productivity in food-crop agriculture, how to achieve this is a matter of intense controversy (Holmes, 2006). While different types of countries require appropriately tailored policies to achieve food security and there is no one-size-fits-all solution (Yu et al., 2010), the increasing food insecurity and its negative impact in many parts of Africa have spawned a number of recommendations and strategies by development practitioners, policy makers as well as other actors (states, international organizations and NGOs) on addressing it (Puplampu and Essegbey, 2004). For example, in its efforts to address global food insecurity, the Group of 8 (G8) at its 2008 meeting resolved to promote local purchases of food aid; provide financial commitment including Emergency assistance to countries; set up a Global Partnership for Agriculture and Food Security (GPAFS); and reform the FAO to enhance its effectiveness in helping to ensure food security for all (G8, no date). Similarly, the ongoing food

insecurity in the Horn of Africa is being dealt with by NGOs and international organizations such as UNICEF, World Food Programme, International Committee of the Red Cross, Oxfam, and Mercy Corps among others through medical assistance, water and sanitation needs, and emergency relief operations and humanitarian appeals to donors and the international community. While laudable, the reliance on humanitarianism and donor relief supplies is only a temporary measure and does not address the root causes of the problem of food insecurity. Hence, a comprehensive and alternative approach that involves investing in programmes at the local and national level that will improve and sustain the livelihood of individuals and households, especially vulnerable ones like women and children, will represent the first step to overcoming food insecurity in Africa. Moreover, given that dealing with food insecurity has to be specific to particular areas and countries, improvements in indigenous crops and species together with local planning and the adoption of traditional methods of dealing with anomalies in climate will go a long way in helping overcome food insecurity in Africa.

Similarly, as Vandenbosch (2006, p. 13) argues, to overcome challenges in agriculture, it is incumbent on African governments to address challenges pertaining to low internal effective demand which stems from poverty; vagaries of climate and consequent risk that deters investment; limited access to technology and low human capacity to adopt new skills; poor governance and institutional weaknesses for service provision to the entire chain from farm to market; and low levels of past investments in rural electrification that are essential for reducing transaction costs in farming and thereby increasing its competitiveness in serving production, processing and trade. For example, in Senegal, to boost the country's self-sufficiency in food production as well as address the food insecurity of 2007 that stemmed from poor harvest and rising food prices, the government in 2008 introduced the Grande Offensive Agricole pour la Nourriture et l'Abondance (GOANA) policy that significantly increased its agricultural investments. In particular, the government increased funding to the agriculture sector from the 2007 level of US \$58.8 million to US\$106 million in 2008. The increased money was used to purchase and distribute seeds, strengthen rural credit schemes, modernize irrigation and water conservation, as well as subsidize fertilizers and pesticides.

In addition to the foregoing, there is the argument by Ehrlich, Ehrlich and Daily (1993) that future food supplies in Africa could in principle be expanded without increasing production simply by increasing the share of the harvest that appears on people's dinner table- that is, by reducing the large fraction that is wasted now. For Ehrlich, Ehrlich and Daily (1993, p. 16), a program to improve crop storage and transport facilities could result in expanded food supplies in a relatively short time by reducing losses to pests and spoilage after harvest. This perspective is very similar to the position of the FAO/World Bank (2011) which states that reducing food losses is increasingly recognized as part of an integrated approach to realizing agriculture's full potential, along with making effective use of today's crops, improving productivity on existing farmland, and sustainably bringing additional acreage into production. Thus, addressing waste across the entire food chain must be a critical pillar of future national food strategies. The FAO/World Bank (2011) suggest that investing in post-harvest technologies to reduce food losses could significantly increase the food supply in sub-Saharan Africa. A variety of practices and technologies are available for reducing post-harvest losses, including crop protectants and storage containers such as hermetically sealed bags and metallic silos. While a number of these technologies have proved successful in Asia, more research and piloting is needed to identify interventions adapted to local environments in Africa. To succeed, interventions must be sensitive to local conditions and practices, be viewed within a value chain lens,

and ensure that appropriate economic incentives are in place. Technologies that have taken off in Asia, such as small-scale rice-drying technology and the introduction of pedal threshers and rice mills, have had successful adoption in some parts of Africa and may become more even more accepted as migration and aging farming populations reduce available labor and raise wages. Governments can help by creating an enabling environment; reducing market transaction costs by investing in infrastructure such as roads, electricity and water; and strengthening agricultural research and extension, particularly in identifying where losses occur along the food chain and how to tackle them (World Bank/FAO, 2011).

Similarly, Roling (2010, p. 961) argues that many scientists in both public and private sectors see smart technology or precision, enabled by genomic, as the pathway to global food security and a sustainable agricultural sector for countries in the developing world. The World Bank (1989, p. 31) has pointed out that “the direct use of biotechnology for plant propagation and breeding could drastically raise crop productivity and overall food production in developing countries.” Their argument is similar to that of Juma (2011), Ackello-Ogutu (2011) as well as Sowman and Cardoso (2010, p. 285) who contend that new technology, especially biotechnology can play a significant role in addressing food security challenges in SSA since it can help in increasing food and livestock productivity, and ultimately deal with increasing poverty and also enhancing food nutrition. Indeed, biotechnological innovations are being touted as a solution to the growing food insecurity in many African countries (Puplampu and Essegbey, 2004). Proponents such as Juma (2011) are of the view that modern technologies including biotechnology and investment in geographical sciences for improved natural resource management, can contribute to agricultural increases and bring about technical efficiencies in production. For advocates, improvements in seed technology will enable farmers to create better products that meet specific needs and within shorter periods of time (Puplampu and Essegbey, 2004). It is against this backdrop that Kijima et al. (2011) argue that in an effort to boost food security in SSA, there is no substitute or alternative to the Green revolution, which enhances crop yield per unit of land. This revolution for them was evidenced in the successful adoption in Uganda of the New Rice for Africa (NERICA) varieties. This high yielding up-land varieties which is suitable for the African environment was developed by the Africa Rice Centre (WARDA). Despite its success in Uganda, Kijima et al. (2010) argue that in order to achieve a wider dissemination of NERICA and to realize a rice Green revolution, the extension system must be strengthened with regard to teaching farmers how to grow rice. This is especially true in the appropriate timing of planting to avoid crop failure.

Notwithstanding the views of advocates of biotechnology as a solution to Africa's food insecurity, critics charge that not only is the impact of biotechnology, which is equated to genetic engineering, uncertain, but also it poses a danger to human health and the environment (Puplampu and Essegbey, 2004). As Omiti, Chacha and Andama (2002) have pointed out, biotechnology has attracted some controversy because some see it as “interfering with the workings of nature and creation,” which might involve risk taking for commercial gain. In addition, potential environmental hazards from new products of biotechnology have raised concerns that companies may use African and other developing countries as “test sites” for their products. Some of the potential environmental risks concern plant pests, where gene escape from genetically modified organisms (GMOs) could result in increased weediness in sexually compatible wild species. Another worry

about GMOs, according to Omiti et al. (2002), is the possible inadvertent production of toxins and allergens. This situation places African countries in a precarious position and in need of assistance for designing appropriate legislation and setting up regulatory bodies for all aspects of bio-safety. Finally, GMOs are seen by farmers' movements as part of the economic and ecological logic of intensive agriculture and a US- and corporate dominated food system that threaten to undermine health, environment, and cultural specificity (Edelman, 2003, p. 212). Despite the controversy and varying perspectives and arguments, Omiti et al. (2002) are of the view that the debate about biotechnology should not be necessarily whether or not the continent needs biotechnology but rather how biotechnology can be promoted, supported and applied in safe and sustainable ways that contribute to improved agriculture and livelihoods. They note that biotechnology will perhaps affect even the most isolated villages on the African continent. It may be neither wise nor justified for Africans not to pursue effective participation in this revolution. African nations must fight to gain some of its expected advantages with due recognition of related dangers or risks. Developing policies that encourage investment, education, collaboration, and technology access will promote technology transfer and access to biotechnology products that can improve livelihood and food security in Africa (Omiti et al. 2002).

Puplampu and Essegbey (2004, pp. 281-284) argue that while biotechnology can assist African agriculture, that optimism should not be taken as inevitable since technological innovation does not function in a vacuum but rather in a socio-cultural, political and economic context. It is in this vein that they particularly call for institutional support and infrastructure as evidenced in a number of African countries such as Ghana, South Africa, Kenya, Zimbabwe, Nigeria and Egypt to assist the biotechnological sector. They note that while it might be a good idea, biotechnology should involve institutional support by research agencies and institutions in order to effectively harness the technology. Thus, attention by policymakers should be paid to institutional and organizational mechanisms that would enable researchers to engage in technology and bring about its expected political, social and economic benefits. This institutional support should focus on the incentive framework, funding, access to foreign technology, infrastructure and the supply of human capacity and human capital. According to Puplampu and Essegbey (2004), Kenya's Agricultural Research Institute (KARI), which places value on biotechnology research to enhance food self-sufficiency, as well as Ghana's Biotechnology and Nuclear Agriculture Research Institute (BNARI), which was set up in 1983 under the Ghana Atomic Energy Commission, have contributed positively to their respective countries in the efforts to make use of biotechnology to address food insecurity.

VI. CAPACITY STRENGTHENING NEEDS FOR FOOD SECURITY

Notwithstanding the contending stakeholder views, it is the position of this paper that capacity development represents one of the most significant variables that can enhance productivity, transform the agricultural sector in many African countries, reduce poverty, and thus promote food security and socioeconomic development. Indeed, besides its focus on building the institutional infrastructure of developing countries, capacity development is a long-term and sustainable approach by individuals, groups, societies, and institutions to identify, promote and realize their socioeconomic development goals, and thereby transform and improve the conditions and quality

of life for members of the community. While capacity development is critical for food security, many of the African countries with research agencies are severely under-funded and under-resourced, thereby negatively impacting their ability and capacity to undertake research that can assist the agricultural sector. Puplampu and Essegbey (2004, pp. 282-284) have observed that it is unfortunate that institutions in Africa that can help in the development of for example, the biotechnology sector are beset with problems ranging from shortage of staff, lack of adequate resources to constraining working conditions. The high turn over from research agencies to other areas and sectors and even due to emigration to the developed world, coupled with the lack of investment in human capacity development all undermine food security efforts in Africa. Moreover, the paucity of agricultural personnel in various teaching and research institutions that will help in the development of the biotechnology sector does not bode well for efforts to address food insecurity. This is because it affects the ability of African countries to engage in sustained and quality research in biotechnology and agriculture in general.

For Puplampu and Essegbey (2004), it is important to not only increase the number of graduates with agriculture training but also there is the need to ensure that there is an institutional and enabling environment that will enable those in the sector to thrive in their work. African countries can take a lesson from Egypt for example, where not only is the Ministry of Higher Education and Scientific Research key in the formulation of the national strategy for Genetic Engineering and Biotechnology but also the Ministry is heavily involved in the activities of Genetic Engineering and Biotechnology Research Institute (GEBRI). Thus, to enhance capacity development, the performance of higher educational institutions in biotechnology research for example, should not only be streamlined but also a high-level unambiguous premium should be placed on human resources and capacity development (Puplampu and Essegbey, 2004). Furthermore, capacity development programmes that aim at promoting food security and sustainable rural development should include entrepreneurial training skills, business skills, income-generating skills, and marketing skills (Vandenbosch et al., 2005). Such services can help meet the needs of farmers, and in turn assist in the productivity and income levels of farmers. In addition, it is important that there is an increase in the number of technically and scientifically trained people with a focus on agriculture education and research. This is because the rate of technological change that can help improve food security depends ultimately on agricultural research (Cheru, 2002, p. 108). In particular, support for agriculture training at the tertiary level will also help provide the necessary expertise and professionals working and involved in the agriculture sector. Agriculture research can help create opportunities for the small-scale sector, and ultimately help control food insecurity in Africa (Roling, 2010). Agriculture research will also enhance the creativity of farmers and allow them to apply some of the indigenous knowledge and expertise in agriculture production. Furthermore, agriculture education and training institutions need to incorporate population education concepts and principles into their curricula by making learners to understand the dynamic interrelationships between food, population, environment and national socioeconomic development (Vandenbosch, 2006, p. 15).

Moreover, capacity development programmes should come in the form of building the capacity of research institutions and the establishment of a positive relationship between the research institutions and farmers through a process where trained technical extension specialists serve the

agriculture sector, especially those in the rural areas. Cheru (2002, p. 115) notes that in many African countries, the overemphasis by governments on both extension and other resources in high-potential areas has left subsistence farmers to fend for themselves. He therefore argues that there is the need by African governments to improve the outreach capacity of agencies responsible for the agricultural sector, by strengthening extension networks in the field, and developing communication systems, extension manuals and audiovisual materials for the dissemination of information to peasants. As the International Food Policy Research Institute (no date, b) points out, agricultural extension as a rural extension support service is needed to meet the new challenges agriculture is confronted with: changes in the global food and agricultural system, including the rise of supermarkets and the growing importance of standards and labels; growth in non-farm rural employment and agribusiness; constraints imposed by HIV/AIDS, and other health challenges that affect rural livelihoods; and the deterioration of the natural resource base and climate change.

It is therefore encouraging that during his time in office from 2001 to 2008, President J. A. Kufour of Ghana reactivated agriculture extension services in addition to paying attention to educating farmers on best practices. These policies helped Ghana's cocoa production to double, while food crops such as maize, cassava, yams, and livestock production also increased. Similarly, in Ethiopia, to boost agricultural production and productivity, particularly with respect to the food staple crops that are critical to reducing poverty in the country, the government specifically increased the availability of improved seed, chemical fertilizers, and especially extension services for small-scale, resource-poor farmers. According to Spielman, Kelemwork and Alemu (2011, p. 25), the federal and regional extension programmes in Ethiopia increased the number of public extension staff almost three-fold from approximately 15,000 development agents (DAs) in 2003 to almost 47,500 in 2008. This rapid expansion was accompanied by the establishment of Farmer Training Centers (FTCs), each of which housed three DAs with a range of technical skills, and provided a broad range of demand-responsive extension and short-term training services. Despite a few challenges, these capacity development programmes and extension services led to improvements in both agricultural output and yields. Finally, in a number of East African countries (Kenya, Tanzania, Uganda), between 1999 to 2008, farmer field schools (FFSs), an adult education approach that uses experiential learning and a group approach to facilitate farmers in making decisions, solving problems, and learning new techniques, was adopted by their governments as part of their strategy to agricultural extension (Davis et al., 2010). Davis et al. (2010, p. 31), further notes that although the per capita agricultural income increase for male-headed households was not significant at the regional level and in Kenya and Tanzania, crop productivity and per capita agricultural income of female-headed households participating in the FFS project increased significantly in Kenya and Tanzania. In Uganda, livestock income for female-headed households also increased significantly more than for male-headed households. These results, for Davis et al. (2010) demonstrate that the FFS approach was more beneficial for female-headed households than for male-headed households. The results also suggest that the FFS approach could serve as a key strategy to provide agricultural extension services to female farmers whose access to agricultural extension in Sub-Saharan Africa is generally poor.

VII. LESSONS FROM THE REVIEW AND THE ROLE OF FOOD SOVEREIGNTY

The foregoing discussions have highlighted some of the causes of food insecurity and the way out of this predicament for African countries. While the approaches to addressing food insecurity are laudable, it places emphasis on a global approach to attaining food security and also puts large multinational corporations in charge of the food chain. According to Schanbacher (2010), the current model for dealing with world hunger and food insecurity advanced by the United Nations, World Bank, International Monetary Fund (IMF), World Trade Organization (WTO) and other international organizations are too dependent and focused on trade as well as over-reliant on international agribusiness. This approach also generally negatively impacts the right to self-determination and ability of local people to be autonomous in the food chain. Windfuhr and Jonsén (2005, p. 9) argue that people facing hunger and malnutrition are, to a large extent, smallholders, landless workers, pastoralists or fisherfolk, often situated in marginal and vulnerable ecological environments. These people are often neglected by both national and international policies. Without proper support they cannot compete with increasingly subsidized industrialized agriculture. For many of them, market liberalization has resulted in damaging and often unfair competition with farmers or commercial entities that have 'acquired' comparative advantages through decades of direct and indirect subsidies. According to Windfuhr and Jonsén (2005), the situation often results in smallholders being forced off their land and moving to even more marginal areas or migrating to the shantytowns around cities.

Given that current mainstream answers to the problems causing malnutrition are failing and adherence to a set of central ideas or principles, based around an ever-greater concentration on trade-based food security is inadequate to tackle the problems, additional analysis and a search for new, innovative solutions are needed (Windfuhr and Jonsén, 2005). However, due to the fact that the role of international trade and international agribusinesses cannot be completely ignored, the search for an alternative became embodied in the idea of food sovereignty. Also, as a result of concerns with the neo-liberal approach to promoting food security that emphasized market deregulation and the rolling back of the state in various sectors of the economy, including agriculture, food sovereignty was seen as a food enhancing paradigm and an alternative to the neo-liberal model. According to SWAC (2006), food sovereignty principles call for the re-organization of food trade, social peace, and protecting natural resources and also require placing priority on food production for domestic and local markets, based on peasant and family farmer diversified and agro-ecological production system. It also ensures fair prices to farmer, which means power to protect internal markets from low-priced dumped imports; access to land, water, forests, fishing areas and other productive resources through genuine redistribution. Moreover, it places emphasis on the recognition and promotion of women's role in food production and equitable access and control over productive resources. In addition, food sovereignty entails public investment in support of the productive activities of families and communities that are geared towards empowerment, local control and production of food for the people and local markets (SWAC, 2006).

1. The international trading system and the rights of indigenous people

Another important aspect and principle of food sovereignty centres on the rights to territory for indigenous peoples and their perspective that nature is a living being which is essential to the identity and culture of their communities and people. Currently, as part of the world trading system, there is the trade-related aspect of intellectual property rights (TRIPs) that was adopted by the WTO in 1994. The TRIPs agreement seeks to ensure that the rules and laws relating to the protection of intellectual property are consistent among WTO member countries, and in the process facilitate trade. It also involves the equal application by all members of minimum standards of protection in relation to all categories of intellectual property. Furthermore, the TRIPs agreement developed minimum standards of protection in the areas of copyright, trademarks, geographical indicators, industrial designs, patents, and the protection of undisclosed information (Edelman, 2003, p. 204; Arthur, 2004).

However, there are a number of concerns with the TRIPs that have negative implications for food sovereignty in Africa. First, the TRIPs agreement allows individuals and multinational corporations (MNCs) to profess exclusive rights over life forms, genes, microorganisms and the micro-processes by which they perform their functions, as well as ignores the knowledge of indigenous people, and ultimately makes it easier for their knowledge to be appropriated. Biodiversity resources that are indigenous to African communities as well as other parts of the developing world are patented by MNCs as their own discoveries. Since intellectual property protection was frequently non-existent in developing countries, MNCs are going to developing countries and engaging in 'biopiracy' by patenting products, as well as claiming monopoly rights over traditional knowledge and resources, which have been in existence since time immemorial (Arthur, 2004). For example, companies such as WR Grace, a US-based agriculture company that self describes itself as a 'premier specialty chemicals and materials company' had acquired US patents for active ingredients in the seeds of the neem tree, which many countries in both Africa and South Asian had utilized since ancient times as an insecticide, toothpaste substitute, and medicine (Edelman, 2003, p. 204). Thus, the TRIPs agreement does not take into consideration the cultural basis of knowledge, whereby all of society shares research findings (Arthur, 2004).

There is therefore the need to address the issue of the TRIPs agreement, which allows MNCs to patent biological materials and life-forms found in Africa, and which undermine the rights of African farmers over seeds and other forms of indigenous knowledge (Arthur, 2004). As food sovereignty advocates contend, the current situation in the world trading system where intellectual property rights over living resources including seeds, plants and animals is the norm and contributes to de facto biological monopolies and where the seed or breed is rendered sterile, needs reexamination and possibly banned if African countries are to attain food sovereignty. African countries should therefore push the WTO to recognize the fact that they have the right to their biological resources, knowledge and techniques, so there is no reason why the collective nature of these should be patented (Arthur, 2004). A food sovereignty framework would allow local people to have equitable access to resources and the rights to use them rather than have them patented by foreign MNCs.

Aside from that, it is unfortunate that in an era where the West and many international institutions such as the IMF, World Bank and WTO all advocate neoliberalism and the Washington-consensus model to socio-economic development, they have not put into practice what they call for, especially as it pertains to agricultural sector. Indeed, western countries have persistently adopted protectionist policies and also subsidized their agricultural sector, while the WTO has failed to ensure the enforcement of the liberal trade policies and obligations that it has agreed to with member states (Lee and Smith, 2008, p. 259). The WTO has been unable to compel the USA and the EU to stop the subsidization of its domestic industry, which reinforces an unequal playing field between African countries and the West (Lee and Smith, 2008, p. 269). Thus, despite the pronouncements of Western governments to engage in free trade and reduce agricultural subsidies, this has not been the case. Rather, export subsidy levels have either remained the same, or in certain instances actually increased, and this has certainly affected the economic development efforts of African countries. Export subsidies by Western governments such as the USA and EU generate food surpluses that benefit big farmers and businesses in their countries but distort the world market and also make farming and agricultural activities in developing countries expensive and uncompetitive. In addition, they result in the dumping of subsidized agricultural products from the West on the markets of African countries, and invariably contribute to the impoverishment of farmers in Africa (Arthur, 2004). For example, African countries became victims of 'dumping,' such as occurred when European C-grade beef entered South African market, thereby undermining Namibian beef exports to South Africa (Cheru, 2002, p. 27).

It is therefore important that western governments remove provisions of current national policies that subsidize their agricultural sector and which in turn negatively impacts food sovereignty in Africa and other parts of the developing world. It is hypocritical for the West to call for free trade, and then provide huge export subsidies to their farmers (Arthur, 2004). Until there is a fair and transparent world trading system and western governments change their current agricultural policy approaches, there is no reason why African countries should not undertake reforms in the agricultural sector that entails a central and dominant role for the state and which can contribute to food sovereignty. For example, a comprehensive agricultural input subsidy program introduced by the government of Malawi from 2005/6 to 2008/9 has achieved substantial benefits and successes. Through the provision of vouchers to farmers to receive fertilizers for tobacco and maize production, as well as improved maize seeds, wider economic growth, poverty reduction, higher real wages, and food availability and security were all attained (Dorward, Chirwa, and Jayne, 2011). Similarly, in Ghana, the intervention by the government from 2001 to raise productivity in the cocoa sector through the adoption of hybrid cocoa varieties, increase in the use of fertilizer, better disease and pest control, as well as favorable price regimes and improvement in marketing all combined to increase productivity by 30 percent, reduce poverty, and improve the living conditions of cocoa farmers and the sector as a whole (Kolavalli and Vigneri, 2011). Such policies together with the increase in agriculture extension services to food farmers helped to advance and promote food security and food sovereignty in Ghana, and resulted in the World Food Prize Foundation awarding Ghana's former President J. A. Kufour, together with Luiz da Silva, former president of Brazil, the 2011 World Food Prize.

2. Institutional growth and citizen participation

A further principle and opportunity for attaining food sovereignty will be dependent on developing countries meeting their own needs through food self-sufficiency rather than relying on the developed world. This would involve an improvement in the local food systems of African and other developing countries, as well through food distribution systems that will entail improvements in infrastructure like roads and other transportation systems (Cheru, 2002). Aside from that, underlying all the various arguments is the fact that food sovereignty can be attained when there is a sustainable economic growth in Africa. This in turn can be realized under circumstances when there is an enabling environment, good governance structures and of course the necessary capacity development initiatives. As Tweeten (1999) asserts, although not essential, democracy is a positive force for food sovereignty and security to the extent that it creates an orderly succession of leadership useful for business planning. A democratic system can expose corruption and provide checks and balances, as well as provide some empowerment through voting by the poor to receive human resource investments in health, education, and food transfers from governments for broad-based developments. Thus, the promotion of good governance and reforms as well as direct democracy in the agricultural sector would not only help in stemming the tide of food insecurity, but can also help create the conditions and enabling environment for food sovereignty and a dynamic agricultural sector that can contribute to further socioeconomic development in African countries. More importantly, a food sovereignty framework that adopts the direct democracy model will also help promote the greater involvement and participation of the local population in the formulation and implementation of policies, as well as research agenda for the food and agricultural sector.

3. Agrarian reforms

Another important element of food sovereignty is on the need for comprehensive agrarian reforms that uphold the individual and collective/community rights of access to and control over territories. According to La ViaCampesina, one of the principles to achieve food sovereignty is the need for a genuine agrarian reform which gives landless and farming people – especially women – ownership and control of the land they work and the return of territories to indigenous peoples. Since land belongs to those who work it, the right to land must be free of discrimination on the basis of gender, religion, race, social class or ideology (Windfuhr and Jonsén, 2005, p. 17). Equitable access to and control of land, labor and agrarian resources, and state support particularly to small producers, are critical to reversing the social costs of human deprivation arising from food insecurity, and to achieving food sovereignty (Moyo, 2010). It is widely accepted that improved access to land is good for the poor, in particular in terms of food security. This is because not only does income increase with land access, but also it leads to the relaxation of credit constraints, which allows households to undertake profitable investments (Valente, 2009, p. 1541), and also increase wages and the availability of basic food for consumption by the majority working people (Moyo, 2010). Aside from that, land reforms in Southern Africa (Namibia, South Africa, and Zimbabwe) for example, were adopted with the primary objective of redistributing land from white settlers to black people who were dispossessed of valuable land during colonial and apartheid eras (Malope and Batisani, 2008, p. 383). In sum, the essence of agrarian reforms was to ensure that governments in Africa implemented effective public policies that guaranteed community (those who derive their livelihood) control over

all natural resources. It also contributes to strong accountability mechanisms that help deal with the concerns associated with the violations of these rights.

It is important to note that land and agrarian reforms in many Latin American and African countries like Zimbabwe are often disparaged in the Western media as only contributing to political opportunism, cronyism, violence and deadly attacks, and a destruction of food production and socioeconomic activities. Critics of agrarian reform argue that not only is the so-called modern neo-liberal approach essential for food security, but also large-scale agriculture promotes development and has a positive trickle-down effect on the poor. Valente (2009) concludes from two national surveys in South Africa that on average, land grant recipients in South Africa were more food insecure than comparable non-participants. Similarly, in Botswana, land reform policies harmed many poor households living in communal areas. Also, poor people were excluded from the benefits of land reforms by constraints such as high financial and development costs and the lack of human capital (Malope and Batisani, 2008). It is these challenges, constraints and criticisms that have made land reforms as part of agrarian reforms difficult to implement in many African countries seeking to do so. It also helps explain the call by international institutions like the IMF and World Bank for a neoliberal approach to land reform, which takes the form of secure property rights and 'willing-buyer-willing-seller.'

Despite the criticisms of the state-led agrarian reforms in countries like Zimbabwe, under the neoliberal approach of agrarian reforms, many indigenous farmers and peasants are unable to have adequate access to land. Aside from that, the neo-liberal approach leads to commercialization of lands, lack of access to land by the poor, increased debt for poor rural farmers, and the concentration of lands in the hands of the urban elites, most of who are absentee farmers. It is in this regard that rural actors have mobilized in Southern Africa and Latin America to demand changes in their relationship to property and land (Wolford, 2007, p. 557). Indeed, a recent study led by Ian Scoones of the Institute of Development Studies at the University of Sussex has called into question the myths about land and agrarian reforms in Zimbabwe. The study showed that contrary to western media depictions and stereotypes of abject poverty, land and agrarian reforms in Zimbabwe was not a total failure and did not overall negatively impact food security. Besides finding that 'ordinary' low-income people were the main beneficiaries of land reforms as opposed to political cronies, many rural farmers also invested heavily on their resettled lands (Winter, 2010). Such findings are similar to ones in Philippines and other Asian and Latin American countries that showed that agrarian and land reforms contributed positively to overall socioeconomic development, increase in household incomes, and reduction in poverty. It is in this regard that land reforms as part of food sovereignty should take the form of providing complementary resources such as credit, titling, irrigation, technical assistance and transport, processing and marketing facilities that are required for successful peasant enterprises (Edelman, 2003, p. 207).

VIII. CONSTRAINTS TO FOOD SOVEREIGNTY

Windfuhr and Jonsén (2005, pp. 31-34) note that it is possible to identify some constraints and counter arguments that can be used to challenge the food sovereignty framework. First, there is a risk that food sovereignty policies will favour producers who are less 'efficient' in conventional economic terms. Moreover, they point out that since one of the advantages of the food sovereignty framework is that it addresses both new international regulations and the need to decentralize decision-making to local or national levels as well as the revitalization of rural development and rural policies in international policies, the question about the need for more global governance arises. The level of 'global governance' that is needed in the future is an ongoing debate in international relations and among non-governmental organizations (NGOs), civil society organizations (CSOs) and social movements. Would it not be wiser to invest more energy in developing the right international instruments instead of focusing on sovereignty and improved democracy at national or even local levels? Finally, Windfuhr and Jonsén (2005, pp. 31-34) state that food sovereignty poses political challenges, which require that states should regain the necessary policy space to conduct their fight against hunger and to be able to implement fully their obligations to their citizens to ensure both their 'Right to Adequate Food' as well as their other human rights. Moreover, states should provide an environment that facilitates the implementation of all human rights obligations. However, the availability of the necessary policy space does not automatically lead to national policies that promote or even consider the interests of smallholder farmers, pastoralists and fisherfolk or remote rural areas, because national governments are often not respectful of the needs of the poorer segments of their society.

These are emerging questions that have yet to be fully resolved by the food sovereignty framework. While these constraints and challenges cannot be ignored, one can at the same time see the merits of the food sovereignty principles and approach as outlined above. By adopting strategies and approaches- deepening citizen participation, agrarian reforms, promoting property rights for local people, access by small-scale farmers to local and regional markets, putting producers and consumers at the centre of decision-making process on food issues- that are in keeping with the principles of food sovereignty, as well as promoting capacity building initiatives and measures, African governments can exploit and take advantage of their enormous potentials, abilities and opportunities to help them improve their agricultural sector.

IX. CONCLUSION

The focus of this paper was to examine the causes of food insecurity in Africa, the means to overcome it, and how food sovereignty could transform the agricultural sector in African countries. The paper noted that political issues, choice of crops, changing needs and changing food habits with globalization, land degradation, land renting and sale to foreign companies on a large scale do contribute to food insecurity in Africa. However, given the difficulty of discussing all these factors in detail, the paper focused on and argued that food insecurity can be explained by factors which include poor policy choices by governments, maldistribution of food supplies, lack of rains and

drought, lack of proper storage facilities, and the recent attempts in the international community to promote biofuels. It was noted that efforts to overcome food insecurity could be realized through improvement in storage facilities, infrastructure, and the promotion of biotechnology. In particular, it was argued that capacity building and capacity development efforts as embodied in the provision of extension services, training and educating personnel for agriculture sector, entrepreneurial, and marketing skills, are crucial to attaining food security in Africa. Countries like Ghana, Malawi, Ethiopia, Tanzania, and Zambia have experienced huge improvements in food production and the agriculture sector as a whole through capacity building measures and government support and investment in research and extension services. However, at the same time, extensive investments both in infrastructure and institutional capacity building as well as increased investment in modern technology and a determined effort to build up public research capacity will be needed to sustain the food security currently enjoyed by these countries (Swedish FAO Committee, 2009).

Moreover, notwithstanding the contribution of existing capacity development measures to promote and sustain food security, there is the concern that many of the current food security promotion measures, which have international trade and agribusiness at the centre of the food chain, only reinforce the neo-liberal paradigm advanced by international institutions. It is in this regard that food sovereignty has been advanced as a supplement that can remedy the problems associated with the current approach to promoting food security. Food sovereignty, as embodied in deepening citizen participation, agrarian reforms, promoting property rights for local people, access by small-scale farmers to local and regional markets, putting producers and consumers at the centre of decision-making process on food issues, while having its constraints, represent a way out for African governments efforts to reform and improve their food and agriculture sector.

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