Conclusion: Fostering Nutrition Security,
Climate Adaptation and Sustainable
Agriculture Strategies Amid COVID-19
Pandemic

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Sustainable Agri-Food Policy Recommendations for Africa

Improved dietary patterns and nutrition security have been identified as major drivers of healthy living. In other words, the provision of tailor-made dietary and nutrition information services is increasingly gaining importance as a vital preventative strategy against selected non-communicative diseases (NCDs). Based on the available literature, there is a positive correlation between improved dietary patterns and better health outcomes on one hand, as well as the use of this evidences to influence health-related policy making processes on the other hand. According to Feeding America, ‘Food insecurity describes a household’s inability to provide enough food for every person to live an active, healthy life. Food insecurity is one way we can measure and assess the risk of hunger. In the United States currently, 1 in 9 people struggle with hunger’. Its effects include health complications and serious healthcare conditions. Nutrition and dietary intake pose profound impact on health throughout the human life course and is inextricably linked with cognitive and social development, especially in early childhood, as well as on diet-related infectious and non-communicable diseases (NCD) in adulthood. In the developed countries, like the U.S., excessive intakes of macro-nutrients (over-nutrition) and sub-optimal intakes of micro-nutrients (hidden hunger), mainly because of low fruit and vegetable consumption, lead to obesity and related NCDs. Further, the diet quality of U.S. children is sub-optimal and according to the Dietary Guidelines for Americans (DGA) children between 9 and 13 years of age should consume at least 4–5 servings of fruits and vegetables (FV) each day, while data reveals that more than 80% of 9–13-year-old children do not consume the minimum recommended daily servings of fruits and vegetables (Arcan et al. 2019). The verifiable estimate is that one in every 5 Sub-Saharan African is undernourished.

As selected African governments continue to provide limited palliative measures in the form of either cash transfer or food items, one of the challenges being faced border on alleged diversion of stimulus packages by government officials, who were saddled with the distribution process. The mechanism put in place by the executive arm of government has been ‘hijacked by politicians’ who gave out the items to loyal party members at the expense of the very poor in the society. Palliatives from government have not really been effective. The distribution channel has been very
poor and ineffective. The items have not reached the poorest of the poor as government envisaged but in hands of party chieftains and faithful. In some instance, the quality of the palliative (raw food, bread, and beverage) has been questioned as the items are rarely enough as a meal for a family of four. The impact of the lockdown is felt across the country through unevenly. Farm operations are the worst hit, while small businesses in the cities are faced with enormous challenges. Governments at all levels must develop a policy framework that will respond to these impacts to avoid supply chain disruptions, higher food prices and serious economic fallout for millions of small business owners. It advised that there are many strategies that can support community resilience and mental health, protect access to essential goods and services, and limit the economic impact of stay-at-home measures where these are deemed necessary.

Climate change is already affecting the livelihoods of smallholder farmers in the West and Central Africa who rely on rain-fed agricultural techniques which may make food shortages more acute as the regions is facing challenges (FAO 2010; IPPC 2001). Farmers in the region are trying to cope with irregular rainfall, flooding, farm destruction by militant groups and degraded soil. With the shift towards Sustainable Development Goals (SDGs) approaches that severe multiple purpose and provide cross-cutting benefits are highly needed in Africa and elsewhere. For example, achieving food security is unmanageable without adaptation and resilience to climate change measures and practices that not only support farmers in producing enough food to meet people’s nutritional needs, but that also preserve ecosystems from degradation. Approaches with the potential for informing and guiding policy and practices are imperative. This article examines the influence of climate change variability on food systems among smallholder farmers with the aim of enhancing food systems and resilient livelihoods, and ultimately achieves food security in a changing climate.

The agricultural sector (in the broad sense, including forestry, animal production, aquaculture, etc.) represents the dominant part of the economies in most countries in West and Central Africa and provides the majority of employments and livelihoods (Clover 2003). Agriculture according to most experts, will continue to have a central role to play in the development process of the African continent. As the African population continues to grow, diet changes associated with rising incomes drive greater demand for food and other agricultural products, while global food systems are increasingly threatened by land degradation,
climate change and other stressors. Ultimately, climate change is about human acting in socio-ecological settings in which biophysical, socio-cultural, economic, institutional, political and legal mechanism operate. Agriculture must change to meet both rising demand and become ecologically sustainable. Approaches with the potential for informing and guiding policy and practices are imperative. One of these approaches is Ecosystem-based adaptation (EbA), which provides flexible, cost effective and broadly applicable alternatives for building robust food systems on less inputs and reducing the impacts of climate change. Practices such as agro-forestry, buffer strips, on-site water conservation, use of native species, etc. practised by farmers in these two regions have demonstrated that ecological-based approaches can provide just one right framework for catalyzing transformative change on a larger scale.

The infusion of the indigenous knowledge and the scientific views and cross-cutting initiatives at the local and national levels has led to the restoration of both terrestrial and marine/aquatic species. A range of specific techniques were adopted to enhance climate change adaptation, among these Payment for Ecosystem services (PES), preservation and promotion of indigenous species and sustainable harvesting practices, afforestation and mangrove rehabilitation, water system rehabilitation (including reservoirs, wastewater reuse, and early maturing and drought resistant crop adaptation) were among the most successful practices.

As Africa continues to experience population growth, natural systems that support us all may not be able to withstand the pressure that this growth exerts. Water scarcity, land degradation and the loss of natural (ecosystem) services we all depend on, point to fundamental problems caused by unsustainable development. The direct causes of inadequate food access are poverty, environmental stressors and conflict. Catastrophes like floods, earthquakes, drought and conflict in vulnerable countries force the poor to abandon their homes and livelihoods, creating even more victims of hunger. It is in this complex system that disasters emerge, and that society has to cope with. Human and food security within the context of climate change remains relatively under explored. It has now been widely established that the pervasive societal emphasis on the modes and volume of food production in developing countries has been detrimental to resolving problems relating to food distribution, affordability and accessibility. The singular focus on production has consequently amplified food insecurity in many parts of the world. Agriculture must change
to meet both rising demand and become ecologically sustainable. Agriculture has significant linkages to poverty and hunger, nutrition and health, peace and security and preserving the world’s natural resources. Variability in climatic conditions has been argued to be a stumbling block to food security in most developing countries and especially in Sub-Saharan Africa. This is because, Sub-Saharan Africa already experiences high temperatures and low (and highly variable) precipitation; second, because the economies are highly dependent on agriculture and third, because there is low adoption of modern technology. Extreme poverty, hunger and undernourishment can be eradicated by 2030 while protecting and even reversing harm to natural resources, despite the challenges of climate change and weather extremes.

Further, the search for synergies should intensify as governments at different levels (International, national and local) engage private and citizen groups to identify opportunities for resource optimization through efficient use of nutritional, environmental and budgetary resources. How equipped is the scientific community to capture changes in human behaviour (such as cropping practices), analyze their impact on biophysical processes and build capacity of governments to predict and respond to environmental shocks and stresses (examples: decline in soil fertility and air quality). We must also realize that smallholder farmers play a key role when it comes to ensuring food for all and climate change and hence need our help. A more integrated approach is needed which recognizes the impacts of, and relationship between agriculture and other development activities. By neglecting the management of natural resources, unsustainable pro-poor land and water allocations, which increase resource efficiency, our ability to as a global community to meet future food needs and address climate change in West and Central Africa may be compromised. With the anticipated impacts on coastal ecosystem, from climate change, it is vital that measures be put in place to ensure measures for resilience, to allow a system to absorb and recover from the effects of a hazardous event and maintain its essential functions and structures.

Thus, there is need for increasing amount of innovative research that analyze the determinants of across-the-communities disparities in nutrient intake from dietary sources (not supplements) among vulnerable groups—infants, children, mothers, elderly, etc with a focus on priority nutrients and food groups for future food assistance package revisions for most underserved communities in Africa, and all over the world. In
recent times, global health and hunger-relief organizations have continually collaborated in solving seemingly unsolvable community challenges. Understanding the relationship between food, diet, nutrition, health, the environment as well as the multifaceted nature of global health.

According to the Food and Agriculture Organization of the United Nations (FAO), the COVID-19 pandemic is impacting global food systems, disrupting regional agricultural value chains and posing risks to household food security. Most African Governments have been engaging at their respective ministerial level to improve COVID-19 food supply chains. The COVID-19 crisis require a consolidated intervention which places emphasis on sustainable agricultural systems towards addressing issues, challenges and innovative solutions that would permit easy access for the food supply chain on the continent and in alignment with broader government’s objective of ensuring a healthy and food secured nation in the face of COVID-19 Pandemic.

There is a dire need for awareness creation, knowledge dissemination and capacity strengthening on enhanced implementation of sustainable agriculture strategies and programmes. Apparently, there are ongoing huge disruptions as well as losses of employment and income opportunities in the informal sector which is the bulk of most African economies for fostering sustainable agriculture practices. In addition, agri-food exports and horticultural supply chains are being disrupted in Eastern and Southern African countries. Consequently, countries and development partners have deployed innovative tools in combating not only the spread of the virus but also the adverse impacts of its rapid evolution on livelihoods and communities all over the world. For instance, the African Development Bank Group has allocated for the financial year 2020 the amount of USD 10 billion in resources for supporting Regional Member Countries (RMC) and their private sector enterprises in response to the COVID-19 outbreak.

In addition to financial resources being allocated to develop vaccines, there is dire need for evidence-based knowledge capacities strengthening and sustainable agricultural programming, as well as technical assistance support to making prompt decisions in addressing COVID-related knowledge gaps and policy guidance to African countries in a post COVID-19 era. For instance, the African Development Institute (ADI) manages its
Virtual Capacity Development Academy (VCDA)\textsuperscript{1} Global Community of Practice (G-CoP) to facilitate policy guidance, technical assistance and knowledge support on COVID-19 Response Strategies in Africa.

From an macroeconomic viewpoint, COVID-19 is a sudden shock which poses unprecedented impacts on the global economy but with more devastating implications for the developing world, especially most Sub-Saharan African countries (SSA), which ordinarily and before-COVID-19 were struggling to combat their food and nutrition insecurity, climate change challenges, market infrastructure and logistics deficiencies and public health challenges. Some of the current strategies which are aimed at crushing the COVID-19 trends are border (aviation and land borders) closures, lockdown, social distancing, disruption of national, regional and global food and non-food supply chains, etc. For instance, sudden decline in the global demand for African agricultural exports such as cocoa whose world price dropped by 25\% in late April 2020, thereby reducing exports earnings as well as revenue generation capacities at the time when fiscal stimulus is most critically needed. The unsustainable nature of this agri-food systems has resulted in the current responses to the COVID-19 pandemic such that panic buying, exchange volatilities, food supply chain disruptions, protectionist measures and severe children malnutrition are being experienced in most SSA countries. By implication, there is need to develop and implement more resilient and sustainable agri-food programmes in order to build on rather than wipe out some of the Pre-COVID-19 socio-economic gains recorded in African countries, as well as being capable to absorb current and future shocks and related-pandemics.

\textsuperscript{1}VCDA is a virtual interactive collaborative environment that enables a consortium of certified global experts and anchor institutions to engage in facilitated policy dialogue and to provide evidence-based policy advice, technical assistance and training to its clients on specialized subject areas.
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