



Dr. Simeon Ehui
**Regional Director for Sustainable
Development for Africa,
World Bank Group**

Delivering Food for Africa in a Transforming Agri-food System in the 'New Normal'

It is a pleasure to share my thoughts on the above topic, especially in terms of the World Bank's response strategies for Sustainable Development in Africa, in the context of the current pandemic with a focus on Innovations for multiple agricultural and social protection measures.

The COVID-19 pandemic is unprecedented and continues to cause significant economic hardship and death throughout the world. While governments in SSA have many concerns as they tackle COVID-19 crisis, an affordable and secure food supply is certainly a top priority. The unfolding crisis is happening at the time when global

food markets are stable and food is generally available. This is a very different situation from the one we were in 2007-2008 global food crisis, when grain stocks were low and international food prices were soaring.

The main challenge today is localized disruptions along food supply chains. Labor disruptions due to lockdown and health guidelines are impacting the capacity for producing and processing foods.

New health standards have closed or limited access to food markets, in particular those serviced by informal vendors. And checkpoints to control for population movement under lockdown conditions have disrupted and increased the cost of transporting and storing food products.

Logistics disruptions of food supply chains have restricted the availability and access to food for consumers, which in some cases has led to local shortages and price hikes at a time when producers are experiencing declining farm gate prices and losses of food they are not able to sell.

Lower incomes due to job losses, significant drop in remittances, as well as disruptions in existing SP and other social programs, have already resulted in shifts in consumer behavior and food consumption with repercussions for food markets.

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The COVID-19 disruptions come at the time when food systems in SSA were already under distress as a result of droughts in Southern Africa, which have affected some 4.9 million people, conflicts and floods in Central and Western Africa, which have affected some 24.7 million people, and finally desert locus crisis in the Horn and Eastern Africa which have affected some 25 million people in acute food insecurity, and could result in \$8.5 billion in crop and livestock losses. This has come on top of depreciating exchange rates and increasing fiscal pressures caused by the drop in oil and other export commodity prices (i.e. Angola, Nigeria). This has caused sharp drop in public revenues and limited the ability of the governments to respond to the multitude of crisis.

There is a **need to act now** to avoid further deterioration of food insecurity and allow for a sustainable recovery of food systems and livelihoods. And there is a **need for bold ideas** to address the above challenges, while taking advantage of opportunities created by the COVID-pandemic.

Fortunately, there is a good deal of political will to address COVID-19 crisis. On April 16, the ministers for agriculture of African Union member states publicly committed to minimizing food system disruptions and ensuring food security and nutrition for all their citizens—especially the poorest and most vulnerable—during and after the COVID-19 pandemic. The ministers also called on partners to step up their support to avoid a potential humanitarian disaster. In doing so, they joined the ranks of other countries and organizations, such as the G-20 and ASEAN that have recognized that essential steps must be taken to keep food moving in this exceptional moment.

Helping African countries withstand the crisis and strengthen their food systems in the long run will require a range of immediate and longer-term actions. Policymakers should make supporting livelihoods through expanded safety nets and productive programs a high priority: After all, people need income to buy food.

Shifting gears on food and agriculture innovation in SSA: and what the World Bank is doing. As we all know, the Agriculture productivity in Africa has systematically fallen behind other regions of the world. As at present, the agriculture innovation system has not yielded broad benefits to Africa's food production potential. New technologies and approaches can disrupt the traditional innovation systems. In order to accelerate the post COVID-19 recovery in food production and processing, relying on the existing agriculture services in SSA (such as traditional extension services) will not produce the results in time before those technologies become obsolete. It is important for public investments in food and agriculture innovation in SSA to crowdsource disruptive technologies that can quickly and effectively enhance and scale the food and agriculture services provided to producers and consumers.

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Countries like Kenya and Uganda have tested such approaches, integrating innovation challenges and competitions into their public investments in innovation. Developing an ecosystem of disruptive agri-food technology companies in SSA is the key to catch up with the productivity gains in food systems globally. Let me give some examples:

First, **precision agriculture** is a good example of the disruptive technology that has the potential to improve productivity. Many precision innovations require little capital and can be developed by start-ups and entrepreneurs. Best known African example is Hello Tractor which has developed a two-wheel smart tractor with a GPS, allowing smallholders to request and pay for tractor services through text messages on a just-in-time basis. Farmers have seen yield increases of as much as 200 percent since its launch in 2014.

In Uganda, the WB funded project is being refocused to provide hired tractors and ox-plows to communities that have traditionally relied on hand hoes.

Mobile-based extension and other e-services have increased smallholders' productivity and resilience to climate risks. Increasing access to mobile phones has enabled delivery of timely and customized information at scale, contributing to timely farming and market decisions and yield increases¹. For example, in Kenya, digital technologies are being leveraged through the WB ongoing partnerships with 15 AgTech startups to transform the delivery of inputs, soil testing, crop insurance, credit, extension advice, and market linkages.

E-commerce which has started to make inroads in SSA, has received a stimulus in response to COVID-19 impacts on the food chain. While E-commerce may not yet necessarily benefit smallholders in the SSA, as it is currently more viable in urban areas, there may be opportunities to connect smallholders to consumers in areas where e-commerce enterprises have started to mobilize resources in procurement, logistics, operations, and marketing to maximize benefits to both farmers and consumers.

Strengthening value chains while making them more inclusive for smallholders is another way to build robust food systems. In Senegal, the WB upcoming program aims to build producers' resilience to climate change and market shocks by increasing the productivity of groundnut-based agricultural systems; it also aims to diversify agriculture by supporting the development of other value chains.

¹ A meta-analysis of e-extension services suggests that providing agricultural information to farmers or extension agents in India, Kenya, Nigeria, and Uganda increased yields by 4 percent on average (Fabregas, Kremer, and Schilbach 2019).

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Finally, **innovative logistics solutions**, such as solar-powered storage solutions in off-grid areas or areas with unreliable or expensive electricity, may offer new **opportunities to make** use of new innovations in ICT as well as to support otherwise risky interventions in food production, irrigation, and processing.

For example, in Uganda, stand-alone solar systems were used in different value chains to energize pumping and irrigation systems, refrigerator units, milling and other processing equipment, and to maintain connectivity. Such renewable energy technologies and battery storage systems that power off-grid systems would have good potential for many countries in Africa (WEF 2018). Innovative technology applications like the ones described above can enable farmers to overcome COVID-related constraints and ensure better targeting and more effective service delivery, especially in remote areas, over the long run. However, rebuilding food systems, requires actions which go beyond investments into innovative technologies and knowledge transfer mechanisms.

First, given the widespread disruptions in livelihood caused by the COVID-19 pandemic, there is a need to continue to strengthen and expand existing **social protection programs**. While SSA has seen a significant expansion of social safety nets over the last two decades --with 45 SSA countries having SP programs in place--, only 10 percent of the population is currently covered by social assistance. Due to the inability of some SP programs to deliver cash to beneficiaries (bank closures, social distancing measures have temporarily discontinued cash-for-work activities, etc.), overall household income could be further reduced for vulnerable households. There is a need to enhance the beneficiary identification and registration systems of the existing SP programs to buffer the effects of COVID-19.

Secondly, there is a need to **enhance the surveillance capabilities** of the government in the SSA to analyze and monitor the weather impacts on agricultural production systems in the region. The WB has supported such capacity building efforts through the **Ag Observatory initiative** which has: (1) supported our clients in identifying early warning of extreme events that can lead to disasters, displacements, and conflicts; (2) made state of the art weather data accessible in near real-time for proactive yield forecasts and environmental trend analyses as a decision support tool for policy makers; and (3) provided capacity enhancement for national agency staff to develop their own data platforms (i.e. Zimbabwe, Kenya, Ethiopia and Zambia).

Finally, pursuing closer **SSA food trade integration** could have good potential to shield countries against future shocks. The Africa Continent Free Trade Agreement, already approved, can both boost food production and trade. Africa is some of the binding constraints such infrastructure and trade facilitation are addresses. Our estimates show that the ACFTA could increase agricultural trade between members by 49 percent by 2035, while processed food trade could increase by 91%. During the COVID19 pandemic we have observed a higher willingness of SSA

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countries to keep their borders open to agriculture trade, in relation to the actions observed during the 2007/8 food crisis. This is an encouraging sign and SSA should build on this moment to push for further inter-regional trade.

In the long term, it is critical that countries take the steps to build resilient, climate-smart, and competitive food systems. We believe that this agenda could open significant role for the contribution of African Universities.

The workforce in farms and agribusinesses in SSA countries is in dire need of improved knowledge and skills to better respond to the emerging challenges. One of the key challenges for adoption of innovative technology solutions, such as those mentioned above, is limited availability of adequate skills for the development of agricultural innovation systems. Innovation capacity and skills are an essential precondition for long-term sustainability of the agri-food systems. The other challenge is educating solid agricultural economists who would be able to contribute to the growth of the sector, either as managers of commercial farms and agri-food enterprises, or as policy analysts who would enable their countries to better Analyze, Broker, and Communicate (ABC) their agricultural and food policy choices. Tertiary education institutions have thus very important role to create a skilled workforce for the future across the agri-food ecosystem, and to spearhead leadership for enhanced collaboration across disciplines and between industry and public agencies. Such actions can be supported by development of a more demand-driven curricula that better matches the needs of rapidly changing agri-food systems and enabling policy environment. We are looking forward to continue our partnership with RUFORUM members to develop skills for rebuilding more resilient food systems in Africa.

This is our twelfth issue in a series of articles we are releasing as part of our RUFORUM Thought Pieces on the Corona Pandemic. This Thought piece is part of the discussion points raised by Dr. Ehui during the 4th RUFORUM Webinar on “[Delivering food for Africa in a transforming agri-food system in the ‘new normal’](#)” You can get more information about RUFORUM at www.ruforum.org. You may also share your thought piece about the Pandemic with us by writing to e.adipala@ruforum.org and copying m.arena@ruforum.org

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About the Author

Dr. Ehui is Regional Director for Sustainable Development for Africa, World Bank. Prior to his appointment, Ehui was Director of the World Bank's Food and Agriculture Global Practice. Since joining the World Bank, Ehui has held a number of assignments. He was Manager of the Food and Agriculture Global Practice for Africa and South Asia.

He also served as Lead Economist and Sector Leader for the Sustainable Development Network in Nigeria covering a variety of sectors such as agriculture, environment, transport and energy. Elhui holds a PhD in Agricultural Economics from Purdue University and has published extensively in his field.

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