FARA
Forum for Agricultural Research in Africa

Policy Brief

Strengthening African Agricultural Research and Development Towards an Improved Africa Food System

"One Africa Voice" towards the 2021 UN Food System Summit

ONE AFRICA VOICE

UNITED NATIONS FOOD SYSTEMS SUMMIT 2021

FARA
Forum for Agricultural Research in Africa

AFAAS

CAADP XP4 PROGRAMME

FANRPAN
Platform for a Food Secure Africa

AGRA
Growing Africa's Agriculture

ASARECA
Transforming Agriculture for Improved Livelihoods

CORAF

CCARDESA
Centre for Coordination of Agricultural Research and Development for Southern Africa

POLICY SHIFTS REQUIRED TO SUBSTANTIALLY IMPROVE OUTCOMES FROM AFRICAN AR4D

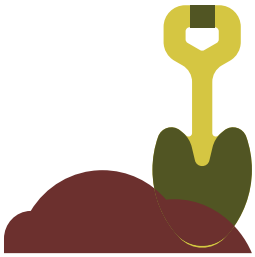
1. Increase public investment in AR4D and in developing trade and markets within Africa and between Africa and other global regions; catalyse increased private sector investment in local research and innovation particularly for market access;
2. Build appropriate capacity (infrastructure, equipment and expertise) at local level to enable African research and education institutions develop solutions for increased productivity, resilience to shocks, value added production and quality assurance for market access and waste management.
3. Build and strengthen solidarity and collective actions through partnerships that mobilize research and innovation expertise for the design and testing of long-term models for financing agriculture, enhanced use of research and innovation outcomes for sustainable agriculture, rural entrepreneurship and agribusiness.
4. Enhance the capacity of farmers and consumers to contribute to research and innovation, and to policy formulation and implementation.
5. Harness the potential of the youth, women and persons with disability to equitably and gainfully participate in the food system.
6. Create a regional pool for financial resources to be accessed by institutions and governments which have research topics aligned to regional priorities in the Regional Agriculture Investment Plans of RECs
7. Co-creation of technologies and innovations with farmers, to address the farm's challenges while providing local solutions. Hence, the need to create communities of practice promoting co-creation and uptake of already developed technologies.

BACKGROUND AND CONTEXT

The challenge for Africa to feed itself and become a major food supplier for the world is compounded by the need to produce healthier, safer, and more nutritious food on less land, using less water and chemicals and producing less waste and, fewer greenhouse gases. In 2019, there were 235 million hungry people in sub-Saharan Africa (SSA), including 66 million people in acute food insecurity. Moreover, healthy diets are unaffordable for nearly a billion Africans. Nowhere is the need to achieve the 17 Sustainable Development Goals (SDGs) more urgent than in Africa.

The 2021 Food Systems Summit (FSS) will launch bold new actions to deliver progress on all SDGs, each of which relies to some degree on healthier, more sustainable, and equitable food systems.
Rebuilding the food systems of the world will also enable us to answer the UN Secretary-General's call to "build back better" from the effects of the COVID-19 pandemic. It will however be conditional on the wide-scale deployment of relevant technologies and innovations. It is against this background that the Forum for Agricultural Research in Africa (FARA), working with the Sub Regional Research Organisations (ASARECA, CCARDESA, CORAF, and NAASRO), the National Agricultural Research Systems (NARS), African Forum for Agricultural Advisory Services (AFAAS), the Alliance for a Green Revolution in Africa (AGRA) and the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), convened an FSS independent dialogue aimed at forging a "One Africa Voice" on Strengthening African Agricultural Research and Development towards an Improved Africa Food System. The outcome of this dialogue is a policy brief that will be communicated to the FSS through its Science Group.

The dialogue was structured into two webinars and an online discussion in between the webinars. The first webinar held on 16th February 2021 was devoted to eliciting from stakeholders the content of the brief which is summarised herein. This draft of the brief is meant to stimulate discussion that will identify key game-changers needed to strengthen African agricultural research and development towards an improved Africa food system. Further inputs from across the continent will bewere collated and validated during a at a second webinar which took place planned for on the 9th of March 2021.



UNDERSTANDING THE CHALLENGES OF AFRICAN FOOD SYSTEMS

The Summit's five action tracks (Table 1) offer stakeholders a space to share and understand the challenges facing Africa's food systems, intending to foster new actions and partnerships and amplifying existing initiatives.

ACTION TRACK	CHALLENGES
ACTION TRACK 1 **Ensuring access to safe and nutritious food for all.**	• 237 million Africans suffer from chronic malnutrition in SSA (FAO, 2021). Some info on food Safety and the narrowness of diets. • Lowest levels of productivity compounded by high post-harvest losses of about 14% (Sawicka, 2019). • Africa has the highest incidence of foodborne illnesses leading to over 130,000 deaths and 91 million acute illnesses
ACTION TRACK 2 **Shifting to sustainable food consumption patterns.**	• Poor diets have become the leading global health risk and every year accounts for 11 million premature deaths globally, and effects of child undernutrition are mostly irreversible. (https://ncdalliance.org/news-events/news/bad-diets). • In Africa, 33% of adults are overweight, with a further 11% tending towards obesity. (https://doi.org/10.1371/journal.pone.0215045). • Levels of diet-related non-communicable diseases are rising as a result of rapid urbanization, and rapidly changing food systems. • Diets have become the leading contributor to global environmental degradation, affecting land, water, biodiversity, climate, and air quality.

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ACTION TRACK	CHALLENGES
ACTION TRACK 3 **Boosting nature-positive food production at scale.**	• Agriculture uses 34% of all land on the planet, withdraws 70% of fresh water, and is responsible for 68% of total biodiversity loss -70% on land and 50% in freshwater. ***(UN Discussion Starter, 2020).*** • In Africa growth in production is mainly achieved through the expansion of the cultivated area. From 2000 to 2018, 12 million ha of forests were converted to cropland, ***(UN Discussion Starter, 2020).*** • Africa has contributed only 2-3 percent of the global emissions, but it is the region most vulnerable to climate change. ***(United Nations Fact Sheet on Climate Change, 2020)***
ACTION TRACK 4 **Advancing equitable livelihoods.**	• Socio-cultural drivers underpin inequalities among and within African societies and constrain the potential for some to benefit from actions to improve livelihoods, particularly for women, youth, disabled, aged persons, and indigenous populations. • Structural barriers for several groups, particularly women and youth, include land rights, access to financial services, among others.
ACTION TRACK 5 **Building resilience to vulnerabilities, shocks, and stress.**	• Vulnerable populations in Africa contend with recurrent crises and stresses that leave them struggling to recover and unable to improve well-being. • Over the next decade, food systems will face complex challenges to deliver sufficient, safe, and nutritious food for all. • The Covid-19 pandemic is delivering new severe shocks to food systems, impacting demand and supply potentially leaving an additional 132 million people undernourished worldwide ***(FAO - Policy Support and Governance Gateway, 2020).***
ACTION TRACK 6 **Increase private sector investment and engagement in AR4D**	• Over the years, there has been minimal change in technology uptake, productivity, climate protection, post-harvest storage, processing, and marketing innovation. • While the private sector is a strategic development partner offering innovative tools, resources, knowledge, and technologies, there is little data, on how many private players invest or are engaged in Agriculture. • The continent's economic models should be promoted to ensure market-based approaches for agricultural products
ACTION TRACK 7 **Promote ICT and generational sustainability of agriculture**	• Making agriculture attractive to youth and enabling all economical, socio-cultural, political, and friendly policies for easy adoption is key. • The slow digitalization of the sector has impeded growth and development as this is a useful tool for meaningful inclusion of youth. • There is also a need to track the progress of the implementation of prospective activities through a reporting mechanism and timeline.

FAO's 2020 Report on tracking progress on food and agriculture-related SDG indicators shows that Africa is not on track to meet the SDG2 targets (i.e. zero hunger) by 2030. Moreover, healthy diets have become out of reach for nearly a billion people in Africa. In the wake of the Covid-19 pandemic, fifteen African countries have been identified as "high-risk" of severe deterioration of food security and nutrition.

3.3%

According to the World Bank estimates , real GDP declined by about 3.3% in 2020, which was the first recession in 25 years.

However, a modest recovery in economic activities is projected in 2021.

Agriculture is expected to make an important contribution to this recovery process, but the capacity of significant actors at national and local levels, particularly small producers and the government remains key for success.

OPPORTUNITIES FOR TRANSFORMATION

The potentials for increased productivity and opportunities for agrifood transformation are huge in Africa. For example, according to some estimates, Africa could be two to three times more productive if it gets its agri-food systems in order, which means getting priorities right in terms of policy, governance, and investment. The World Bank estimates that the value of annual agricultural output can potentially be increased from US$ 280 billion to as much as US$ 1 trillion by the year 2030.

Advances in science, technology, and innovation are providing immense options in generating knowledge and providing solutions to increase productivity. New digital technologies are driving the agri-food transformation process at a faster pace than has never been experienced before, shifting how agricultural value chains are organized, providing new opportunities for more and better jobs, entrepreneurship, and innovations to address binding constraints in food systems. The Science Agenda for Agriculture in Africa (S3A) represents a delayed yet urgent and realizable opportunity for Africa to realize its agriculture potential. It articulates the science, technology, extension, innovations, policy, and social learning that Africa needs to apply to meet its agricultural and development goals.

The development of foresight systems to guide transdisciplinary approaches in solving complex challenges, as well as post-production segments of food value chains, including processing and logistics, could particularly have a big impact on productivity, competitiveness, and job creation. With the Africa Continental Free Trade Agreement (AfCFTA) entering into force, the African food markets are growing. The UNECA estimates that the AfCFTA would expand intra-regional trade in agri-food products by 20 to 30 percent by 2040, with particular gains in sugar, fruits and vegetable, nuts, beverages, and dairy products.

Bridging the "Missing Middle"

On the one hand, it is argued that already enough is known and available globally to address the science-technology-innovation deficit in Africa and that opportunities and mechanisms should be devised to facilitate the transfer of this available stock of knowledge and technology. In a sense, this argument discounts claims that attribute low productivity to the unavailability of technologies.

On the other hand, it is also argued that innovation and deployment of technology should be driven by a bottom-up inclusive process, with smallholder producers and SME agribusinesses at its center (farmer, herder, fisherfolks). This argument highlights the imperatives for building support systems and capacities for smallholder producers and SME agribusinesses. Surely, in the African context, this concerns the millions of smallholder family agriculture and their networks and institutions.

Strengthening the capacities of the smallholder producers and SMEs is a key element in all its aspects (information and knowledge, skills, behavioral, institutional, organizational, financial, etc.) to generate effective demand for science, technology, and innovation. Harnessing science, technology, and innovation, including digitalization, therefore, raise issues of growing concern about sustainable and equitable accessibility and affordability to significant actors, small producers, particularly in the African context.

There is a "missing middle" between the globally available options on the one hand, and local level actions and impacts on the other. This is the space that should adequately address the quest for actionable science, technology, and innovation at national and local levels. The science and research community in Africa should be concerned with how best this could be articulated and addressed in a coherent, holistic, sustainable, and inclusive manner.

LEVERAGING AGRICULTURE RESEARCH AND DEVELOPMENT (AR4D) TO IMPROVE AFRICA'S FOOD SYSTEM

AR4D offers many opportunities for transforming the African Food System by providing options for increasing productivity, diversification of diets, reducing post-harvest losses, improving food safety, improving the efficiency of markets, improving resilience to shocks, and improving the sustainability of food production, and consumption.

Leveraging the potential offered by AR4D and its products i.e. technologies and innovations requires the following:

a

Getting the narratives right on the priorities and incentives

The major issues are related to policy, governance, and investment. According to FAO's Agriculture Orientation Index for Government Expenditure, between 2001 and 2018, SSA has fared the worst when it comes to allocation of public investment to agriculture. Public expenditure/investment in agriculture vary among African countries, with 23% recorded for Malawi and as low as 0.01 recorded for Togo with an overall average of 3.3% (FAO, 2017). This is notwithstanding the CAADP's commitment to allocate at least 10% of the national budgets to agriculture.

The underinvestment in STI shows that policymakers are not convinced about the returns (economic, strategic, and political) accruing from investment in food and agriculture versus other sectors. The fact that Africans can afford to pay USD 50 billion in importing food shows that the resources exist. What is lacking is the political will to invest in the systems that support national food systems to make them more self-sufficient in food. This is also a reflection of weaknesses in the governance of food and agriculture.

There is a need to devote more attention to the collection of data and development of capacities for analyses showing the returns to AR4D and capacities for equitable policy formulation and implementation, e.g. policies reinforcing property rights, including Intellectual property Right (IPR), rewarding farmers for ecosystem services, climate smart practices, ensuring safe and healthy diets at affordable prices. Extension workers should also be trained as knowledge facilitators, especially if they operate within specific agroecological zones.

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LEVERAGING AGRICULTURE RESEARCH AND DEVELOPMENT (AR4D) TO IMPROVE AFRICA'S FOOD SYSTEM

ACTION TRACK 3

b

Exploring what is emerging and how it can be considered as an opportunity

Action track 3 calls for improvement in the sustainability of agri-food systems, in terms of protecting, managing, and restoring ecosystems to "produce more from less". Clearly, it does not bode well for Africa to continue the practice of deforestation to expand agricultural land. A full contribution of the linkages of climate change in agriculture to food systems, markets and energy should also be explored. Naturally, nature-positive solutions are context-specific and based on bottom-up and territorial processes, and can be strengthened by science, technology, and innovation as well as by enabling policy environments and improved governance systems. Africa can have a comparative advantage and make a significant contribution in this regard. Practically, supporting farmers to differentiate products and develop means of accessing markets will not only boost agroecological production patterns but also create demand for sustainable production systems.

c

Bridging the missing middle point between the global-scale scientific options and the local and national level capacities to innovate and share

Agricultural commodities produced under different contexts and regimes meet at the local marketplaces – often resulting in displacements of less-competitive products and systems. In the face of large and rising food imports, African local products are often on the displacement side of the equation. This is attributed to the fragmentation and inefficiencies in the "missing middle" that increase the production and marketing costs of African food products. Bridging the missing middle entails building capacities for innovation from the bottom up. Women constitute a large part of food production, thus supporting the self-organized groups with structural assets can increase women's participation in decision-making.

d

Embracing a systems approach and catalyzing non-State Actors (private sector, farmers, NGOs)

Improving a food system necessarily calls for a systems approach which in turn entails devising an institutional mechanism for the relevant actors to work systemically. Concerning AR4D, Innovation platforms that bring together stakeholders with a common interest to leverage skills, research technologies, competencies, markets, financing, social capital, and other resources are critical for economies of scale in the deployment of technologies and innovations. Adopting foresight methodologies will also contribute to valorisation of strategic products such as cocoa, cashew nuts among others while supporting financiers in developing credit-friendly products for the producers. Market-driven approaches should be promoted and strengthened, given that they can serve as reinforcement of agroecological production patterns

e

Creating an enabling policy environment for Raising the Productivity of Africa's Food Systems

Governments and their higher-level structures at the regional and continental level (i.e. RECs and the AUC) should take responsibility for directing this transformation and provide opportunities for closer engagement with all actors in the food system. The policy environment is the most critical factor that will underpin the continent's transform. The policy environment should assure that activities and services across the entire spectrum of the food system function to accelerate progress to the achievement of SDG 2 (zero hunger).

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