Africa’s food systems:
The COVID-19 pandemic was a wakeup call to the glaring fragility and inequalities of the global, regional and national agri-food systems, making the resolve for sustainable, inclusive, and resilient food systems extremely urgent. In line with the agricultural priorities of the Africa Union under CAADP and the global frameworks towards the 2021 UN Food Systems Summit, the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) has organized several institutional, regional, and continental Independent Dialogues. The Dialogues attracted African Ministers, Government technocrats and other policy makers at national, regional, continental and international levels, academics, researchers, students and small holder farmers. The climax of the dialogues was the African Heads of State Summit\(^1\) hosted by His Excellency Dr. Lazarus McCarthy Chakwera, the President of the Republic of Malawi.

The dialogues have re-awakened the available development focus opportunities at different levels, and call for partnerships, and a deliberate effort for investment in home grown institutions to provide local solutions with more appropriate application to local contexts. The key messages are:

1. **Strategic science solutions for productivity growth needed**: The global agri-food systems are for the foreseeable future integrated. And, Africa with 60% of the remaining arable land for production is central to the global agrifood systems. Yet Africa’s agriculture, especially of Sub-Saharan Africa, is yet to realize full production potential to feed itself, while contributing to the global food systems. Green revolution solutions (fertilizers, improved breed/varieties, irrigation, mechanisation etc), that are tapered with sustainability innovations are needed to unlock productivity. These science solutions must however be contextualized to Africa’s producer needs and have capacity to increase the ‘bottom line’ for small holder farmers. Africa’s

\(^1\) [https://www.ruforum.org/sites/default/files/FINAL%20Lilongwe%20Declaration%2001%20July%202021.pdf](https://www.ruforum.org/sites/default/files/FINAL%20Lilongwe%20Declaration%2001%20July%202021.pdf)
agricultural research is therefore a central cog in the African Agri-food systems revitalization tool box. This if coupled with policies that harness production competitive advantage, and expand and improve markets access by eliminating trade and non-trade barriers, can support agri-food systems transformation for the present and future posterity of Africa.

2. **Improving the labour productivity.** Africa’s agriculture sector employs up to 60% of its workforce. The vast majority of these workers are rural small holder farmers, typically with low labour productivity. While Africa is rapidly urbanising, and inadvertently reallocating labor from farming to higher-productive sectors, most of the labour is still interlinked to agriculture, the vast majority being youth. Skilling Africa’s youth for entry into rewarding productive subsectors of agri-food systems, therefore, must be part of the solutions for increasing demand for production, while paying for economic growth. Policy interventions with systems perspectives for increasing labour productivity, to bolster aggregate demand for Africa’s agriculture, are key for increasing, stabilizing and sustaining the continent’s agri-food systems. Robust agriculture and tertiary higher education systems are therefore foundational for the growth and sustainability of Africa’s agrifood systems.

3. **Harness major growth drivers-** Africa’s still has some of the world’s poorest economies, yet interestingly, has leapfrogged in adoption of modern digital and their associated technologies. With its diverse diets anchored on similar staples produced across different ecologies throughout the year, and coupled with sufficient natural resources, i.e., water and land, the opportunity to feed Africa and the rest of the world abounds. By harnessing digital technologies for education, agriculture, finance, business and policy planning and measurement, the AU vision of a continent wide free trade area and grounding support for Agenda 2063 will be bolstered. Africa’s digital move is thus critical for growth of the agrifood system.

Taken together, the above efforts can enable Africa build a strong agricultural sector that leverages its food market opportunity and captures a higher share of value from increased demand from rural to urban consumers.

RUFORUM has proposed game changing solutions along the five action tracks (Annex), focusing on how Universities in Africa can trigger food systems transformation to ensure safe and nutritious food for all, shift to sustainable consumption, boost nature-positive production, promote full and productive employment, as well as build resilience to vulnerabilities, shocks and stress.
Annex: RUFORUM Proposed UNFSS Game Changers

RUFORUM universities will adopt a holistic, multi-disciplinary, multi-stakeholder approach, to ensure that traditional knowledge and modern science and technologies are integrated into our teaching, research and innovation agenda to take advantage of opportunities and overcome challenges in Africa’s food systems.

Funds that are mobilized and made available to African universities will be used to finance faculty and students working on priority food systems transformation actions in partnership with smallholders, SMEs and disadvantaged communities; women, youth and refugees thereby building trust in universities as being integral to Africa’s social and economic progress. National universities are crucial to working in local contexts, considering gender relations and conditions in local market.

To this end, successful past and ongoing initiatives including scholarships and graduate teacher training and graduate research grants programmes, will provide the foundation for the selected game changers that RUFORUM has identified consistent with the five tracks for the 2021 UNFSS.

**UNFSS Track 1: Ensure Access to Safe and Nutritious foods**

**RUFORUM Game Changer**

RUFORUM universities research and community outreach programmes on indigenous vegetables and other crops, livestock and fish (including aquaculture) to increase access to nutrient dense foods with the aim to reduce the burden of all forms of malnutrition, particularly deficiencies in iron, folate, and vitamins A and B12 will be expanded. Universities have also worked with school feeding/nutrition programmes, women’s networks, co-ops, to improve nutrition outcomes and household incomes. RUFORUM universities will synthesize lessons learned to design and teach new and improved courses; upscale proven research methods and outreach programmes that are yielding results at community/field level and leverage digital technologies for delivering educational/informational content on food production, sustainable use of indigenous biodiversity and nutrition-related topics.

**UNFSS Track 2: Shift to Sustainable Consumption**
**RUFORUM Game Changer**

RUFORUM universities will co-develop models to analyse present and predict future consumption trends for tackling under-nutrition and the growing obesity and NCD crisis in Africa. There is insufficient understanding of the role of traditional African diets, dietary diversity and dietary trends and traditional foods in household nutrition and tackling nutrition related diseases in Africa. Traditional diets have been marginalized as the shift to more Westernized diets which rely on the access to highly processed imported foods high in salt, sugar and fats has occurred. Increasing demand for imported poultry, red meats and dairy products is of concern. Multi-disciplinary teaching and research connecting agriculture and nutrition disciplines is required so that traditional African foods, produced in a sustainable manner are an integral part of healthy diversified diets.

**UNFSS Track 3: Boost Nature-positive production**

**RUFORUM Game Changer**

RUFORUM universities will build public-private-producer-university partnerships (PPPs) to intensify the shift from learning in controlled classroom and laboratory environments to on-farm learning (e.g. crops, livestock, fisheries) in small-holder systems and in-situ industry internships in agro-based SMEs. This is to ensure that faculty and students consider the real-life constraints these actors encounter, and pilot and evaluate best-fit options that enhance the performance of Africa’s food system. Special attention will be paid to studying traditional agro-ecology, soil/carbon capture and circular-economy (reuse of waste) practices to develop and test models that reduce costs, boost productivity and contribute to environmental sustainability and reduction in green-house gas emissions. The rights of smallholders, pastoralists, SMEs and indigenous communities to benefit from their traditional knowledge will be protected.

Advanced science and technologies including genomics, precision agriculture and digitization that enable smallholders and SMEs to increase productivity and income potential will be explored and lessons from research, including ethical considerations and IPR related issues will be integrated into designing new university teaching and research programmes.
UNFSS Track 4: Promote full and productive employment

**RUFORUM Game Changer**

RUFORUM universities will build capability of local entrepreneurs by supporting agribusiness incubation hubs that link students and faculty with private sector, financial, government and civil society representatives. This will help to develop a knowledge base on Africa’s agro-SMEs as the universities work with and observe enterprises as they help them to innovate, sustain and grow markets, provide employment opportunities and contribute to reducing social tensions. Special attention will be paid to the inclusion of disadvantaged youth, women, refugees or physically handicapped persons.

UNFSS Track 5: Build resilience to vulnerabilities, shocks and stress.

**RUFORUM Game Changer**

RUFORUM will advocate for increased access to reliable and affordable energy including renewable energy for improving production efficiency, value addition and reducing losses along various stages in food chains in Africa. Focus will be on locations which offer significant potential for economic growth of specific food chains; or in protracted crises settings e.g. refugees/host communities requiring food storage capacity; or where residues from the rearing of crops and livestock are not being optimised (e.g., animal feed) but can be reused for biomass energy; or where land is limited and high-tech production is possible (e.g., hydroponics, vertical farming in the Gulf States). Meeting energy needs especially reusable energy – solar, wind and water will be prioritised.

RUFORUM’s Expectations from the 2021 UN-Food Systems Summit

RUFORUM Vice Chancellors urge the Summit to endorse our efforts for securing long-term and focused investment from governments and development partners to support African universities to deliver high-quality tertiary education, research, innovation and outreach programmes to realise our collective agenda for food systems transformation in Africa. These game changes will be successful if powered by access to modern infrastructure including state-of-the art digital platforms and highly motivated faculty and students. African universities are committed to contribute to reducing hunger and poverty, improving nutrition outcomes and incomes, greater equity,
environmental sustainability and resilience especially of communities that depend on agriculture for food and livelihoods.