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Blog



Research priorities to achieve Africa's food security and nutrition needs

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African countries have made progress across a range of issues, but recognizing that time and resources are limited, it is essential to prioritize and focus on the areas that offer the greatest opportunity for impact. An initiative coordinated by the [African Academy of Sciences \(AAS\)](#) and the [African Union Development Agency \(AUDA-NEPAD\)](#) seeks to convene the growing number of scientific leaders in Africa and policy makers to review the scientific priorities set by the SDGs, African Union Agenda 2063, STISA 2024 and NDPs, and help build consensus around which top 10-15 scientific priorities that will give African countries the greatest return on investment. Ultimately, the aim is to direct resources towards discovering, developing and delivering game-changing interventions in priority areas that will help most people lead better lives, sooner.

Over a five-year period, the programme will be developing, publishing and disseminating to relevant stakeholders, a set of position papers and briefs communicating the top 10 scientific priorities for Africa. In this blog, Grace

Mwaura, Fellows Manager at the African Academy of Sciences (AAS) and Namukolo Covic, Senior Research Coordinator at the International Food Policy Research Institute (IFPRI) discuss the priority setting exercise for the food security and nutrition.

Read more on the [African Science, Technology and Innovation priorities by the AAS and AUDA-NEPAD](#).

- The African Academy of Sciences (AAS) is conducting a prioritization exercise to identify research priorities that will contribute to accelerating the achievement of food security and nutrition targets across the continent
- This is the first exercise of this kind by the AAS. A consultation roundtable, extensive literature synthesis and a prioritization [survey](#) will help identify key research and development questions that could help African countries focus their investments to areas with higher return on investment
- This is part of a broader initiative of the pan-African science academy to convene science leaders towards supporting achieving Africa's research and development targets. Food security and nutrition is among nine priority areas so far identified by the AAS through this initiative
- The AAS is calling upon the diverse food security and nutrition stakeholders on the continent to participate in the prioritization [survey](#) to help set research priorities for the continent that will be followed by a call for proposals through the **Grand Challenges Africa programme**.

In June 2020, the African Academy of Sciences (AAS) convened a diverse group of experts from across Africa to deliberate on research and development priorities that will accelerate the achievement of food security and nutrition targets in Africa. **The virtual consultation** is part of a series of consultative expert meetings being held by the AAS and **AUDA-NEPAD** as a platform to engage scientific leaders in Africa to review development priorities set by the SDGs, Agenda 2063 and the Science, Technology, and Innovation Strategy for Africa (STISA) 2024. The purpose of these **prioritization exercises** is to build consensus on those research and development priorities that will give African countries the greatest return on investment towards discovering, developing, and delivering game-changing interventions that will transform lives on the African continent in line with national and Pan African aspirations as outlined in Agenda 2063.

Why Prioritize Food Security and Nutrition?

Among the scientific priorities identified by the AAS is food security and nutrition which is the first priority of **STISA 2024**, the second **SDGs** goal, and first and fifth goals of **Agenda 2063** which are, in part, being addressed by many African countries through the contextualization and implementation of the Comprehensive Africa Agriculture Development Programme (CAADP) at country level and through the Regional Economic Communities (**RECs**).

The Food and Agriculture Organization of the United Nations' recent's [Report, 2020 State of Food Security and Nutrition](#), presents evidence that we are not on track to achieving SDG 2.1 (zero hunger by 2030) as the global number of undernourished people continues to increase and would exceed 840 million by 2030. The decades-long measure, prevalence of undernourishment (PoU) by the UN indicates, that 19% of the population in Africa (more than 250 Million) were undernourished in 2019. This is more than twice the world average (8.9%) and it is expected to rise to 25.7% putting Africa significantly off-track in achieving SDG 2.1 by 2030. On the other hand, Africa is also not on track to achieving SDG targets relating to malnutrition in all its forms – stunting, wasting, low birth weights, obesity, among others.

It is however known that healthy diets will contribute greatly to protecting against malnutrition in all its forms, preventing non-communicable diseases while also, accelerating the achievement of food insecurity targets. Yet, the cost of a healthy diet exceeds the international poverty index and the average food expenditures of most people in the global south. As a result, 57% of the population in sub Saharan Africa cannot afford a healthy diet.

It is therefore imperative that efforts at the continental and global level align and are supported by adequate investments to accelerate availability, accessibility, and utilization of nutritious food. In the less than ten years remaining to achieve SDG targets, and within the current environment of increasing vulnerability to climate and other shocks, and of unprecedented economic, social and political changes, AAS joins other bodies such as the UN to call on countries to identify and implement critical policy and investment changes that will transform current food systems to deliver affordable health diets that include sustainability considerations. Hence this prioritization exercise.

Consulting a multidisciplinary expert group

Given the complexity of food systems, the AAS consultation covered a range of topics including building climate-resilient food systems, market-based innovations and digitalization, food as medicine, addressing multiple burdens of malnutrition and sustainability in food systems.

To achieve climate-resilient food systems in Africa, Prof. Eliane Ubalijoro, Deputy Director of Global Data Ecosystem for Agriculture and Nutrition (GODAN) emphasized the need for African leadership, innovation and capacity to ensure that Africa adopts regenerative practices that boost the production of diverse and nutritious foods, while also protecting agrobiodiversity, and creating employment opportunities especially for the youthful yet unemployed workforce in Africa. Harnessing open data, would accelerate the achievement of food and nutrition targets by facilitating efficiency in agri-food decision support services, infrastructure development, disaster preparedness and market access. Importantly, this would bridge the digital divide by involving a new generation of actors in the agri-food value chains and spurring circular economies.

For a long time, Africa has known the hidden multiple benefits of its indigenous and traditional foods in improving nutrition and health outcomes of its population. Professor Charles Wambebe, AAS Fellow and Chair of the Scientific Working Group on Food and Nutrition, emphasized the need to increase investments in African food systems research that promotes foods, plants and animals with medicinal properties. Such efforts should include advancing the research and innovation capacity, building the value chains, and establishing regulatory and standards framework and other policy instruments relevant to commercialization of these efforts. A good example has been the efforts to promote insect rearing as an alternative source of proteins which also offers multiple benefits such as minimal land use, good feed conversion ratio, minimal water footprint, and an edible share superior to chicken, pork, and beef.

To prioritize the multiple burdens of malnutrition, Dr Namukolo Covic, Senior Research Coordinator for the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH) led by the International Food Policy Research Institute, (IFPRI) recommended research focused on improving and diversifying African diets to mitigate the multiple forms of malnutrition, undernutrition, micronutrient deficiencies, overweight and obesity. That African health systems are weak, and that overweight, obesity and related non-communicable diseases are adding to existing health burdens, the current scourge of COVID-19 had simply added yet another challenge to already overburdened health systems.

Climate and other shocks are having effects on food security and nutrition in Africa. According to Professor Sunitha Facknath, a professor of sustainable agriculture at the University of Mauritius, higher levels of carbon dioxide could lead to reduced micronutrients in crops and potentially exacerbate some micronutrient deficiencies such as zinc. On the other hand, natural disasters such as the floods in Mozambique and Zimbabwe in late 2019 to early 2020, and the locust infestation in Eastern African in 2020 have had adverse effects on food systems that have been further compounded by the COVID-19 pandemic. These effects include disruption in food supply chains, food wastage, and loss of livelihoods. This calls for strategies for response and preparedness to crises that interfere with food security and nutrition. This includes practices such as climate-smart agriculture that mitigate against climate change, focus on the health of our ecosystems hence protecting biodiversity, while also spurring innovations and generating meaningful livelihoods.

To achieve the above, multidisciplinary research will be a pre-requisite to ensure there is synergy and alignment across food systems to address the multiplex food and nutrition challenges. The multidisciplinary approach must also include identifying research capacity needs that can lead to leveraging existing institutional frameworks to strengthen capacities required to support the needed transformation to resilient agri-food systems for Africa. Market-based innovations, and especially those being driven by data and other fourth industrial revolution options, offer Africa an opportunity to advance food production, marketing and consumption patterns. Larry Umunna, Technoserve's Regional Director for West Africa echoed the need for efforts to address the research and innovation gap that aligns with industry goals and strategies for affordable, yet profitable dietary patterns high in nutrient density. In digitalization of food systems, innovators and markets must ensure that they are centred by an aspiration to match the cultures and tastes of African consumers with their food systems designs.

The consultation was attended by a diverse invited group of stakeholders from academia, industry, non-governmental organizations, and developmental agencies. Through an interactive mentimeter exercise during the webinar, the audience was asked to rank a provisional list of sub-priorities within different domains of food security and nutrition towards further informing the prioritization survey instrument. Climate-resilient food systems, technology and innovation were strongly prioritized. Also strongly prioritized were focusing on cross-cutting issues and engaging policy makers in order to drive the research and development agenda in food security and nutrition.

The prioritization survey

Following this consultation, and an ongoing literature synthesis, [a survey](#) targeting a wide variety of audiences will help the Academy and its steering committee to prioritize a list of research and development questions relating to food security and nutrition targets in Africa. Through this blog we call upon all relevant stakeholders to respond to the survey. We ask you to share this blog widely among your networks.

The identified priority areas shall inform the first Food and Nutrition Research and Innovation Call by Grand Challenges Africa whose aim is to fund bold and viable business ideas backed by science, to accelerate the achievement of food and nutrition targets in line with SDGs and STISA 2024. This call shall be administered by the AAS with financial support from the Swedish International Development Cooperation Agency (SIDA).

The outcomes of the research prioritization process outlined above supported by additional evidence from the literature will be used to develop a synthesis of evidence to inform research priorities that shall inform policies and programmes on food security and nutrition in Africa. This shall culminate in a policy paper which the AAS through AUDA-NEPAD will use to engage African governments, funding partners, researchers, private sector and other relevant stakeholders in order to attract investments towards the identified priorities. The prioritization exercise being conducted by the AAS is funded by the Bill and Melinda Gates Foundation.

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