1. Introduction: towards a reassessment of food deprivation in Africa

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Why do images and reports of starving and malnourished Africans pop up so often in the media? What are the actual dimensions of the problem? What has trade and climate got to do with it? These are among the questions this book seeks to answer, in an effort to explain why Africa struggles with food availability and stability that are the essential pillars of food security, and what can be done about it. The intersection between trade and agriculture policies and a changing climate is fundamental to the enquiry.

The scale of food deprivation in Africa is sobering. The United Nations (UN) estimated that a fifth of the African population, some 280 million people, were undernourished in 2022. In the same year, even more people, 340 million Africans, a quarter of the population, lived with the uncertainty of access to food and sufficient consumption that is the day-to-day experience of severe food insecurity (FAO et al. 2023).

The book is appearing at a time of a surge in food prices that followed the Covid-19 pandemic and turbulence in global food markets. Adding fuel to the inflationary spiral was the war that started with Russia's invasion of Ukraine, two major suppliers to world food and fertiliser markets. The Food and Agriculture Organization of the United Nations (FAO) Food Price Index (FFPI) registered 159.7 points in March 2022, a few weeks after the war started. This was the highest value of the FFPI in 22 years, reaching well above earlier peaks during the 2007–2008 financial crisis and the 2011 commodity price surge (Shahbandeh 2024). The rising cost of food as well as increased frequency of extreme weather events that impact agricultural production has seen a tightening of export stocks against increased import demand. World Trade Organization (WTO) surveillance of Group of 20 (G20) economies that together account for 75 per cent of global trade revealed that these countries had 19 export restrictions on food, animal feed and fertilisers in place as of

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May 2023 (WTO 2023). Since most African countries are net food importers, their access to food is largely dependent on global markets. The UN Conference on Trade and Development (UNCTAD) estimates that 82 per cent of African countries' basic food comes from outside the continent (UN Trade & Development UNCTAD n.d.). African households in the poorest countries are especially vulnerable to global price shocks and supply volatility.

Food insecurity in Africa is spreading in step with poverty, demographic and urbanisation trends. In 2015, 206 million Africans, or 17 per cent of the 1.2 billion population, were severely food-insecure. By 2022, this had increased to a quarter of the 1.4 billion population. While all of Africa's five regions – North, West, Central, Eastern and Southern – had more severely food-insecure people in 2022 than in 2015, West and Eastern Africa had the largest increases in the share of people affected. The number of severely food-insecure people in West Africa more than doubled between 2015 and 2022, from 41 to 95 million. In Eastern Africa, it increased by a quarter, from 87 to 132 million people (FAO et al. 2023). This partly reflects rising poverty rates and vulnerabilities to desertification in West Africa's Sahel and recurring droughts in the Horn and adjacent areas in Eastern Africa.

The headline data on severe food insecurity mirrors data on the prevalence of undernourishment as an indicator of hunger which in Africa as a whole has risen steadily since 2010. Africa has relatively high global shares of low birth weight, stunting and child wasting (a life-threatening condition caused by insufficient nutrient intake and poor nutrient absorption; affected children are dangerously thin, with weakened immunity and a higher risk of mortality). Child obesity is spreading as a mainly urban and peri-urban phenomenon (FAO et al. 2023). This is part of an emerging trend in which access, availability and consumption of highly processed foods in African urban settings is playing a part in the rise of non-communicable diseases (Malhotra and Vos 2021). This mirrors the global trend in the prevalence of non-communicable diseases that has been observed in middle and high-income countries (Kang, Kang and Lim 2021).

1.1 Defining, measuring and monitoring hunger

Several UN agencies, notably FAO, the International Fund for Agricultural Development (IFAD), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP) and the World Health Organization (WHO), work together to systematically monitor progress towards ending hunger and the state of access of all people to safe, nutritious and sufficient food. These agencies are also part of the UN Committee on World Food Security that among other remits is tasked with quantifying and evaluating hunger and food security across the world. An important initiative spawned by the work of the UN agencies is the data-packed annual *State of Food Security and Nutrition in the World*. This exercise in tracking nutritional and food security

targets is integral to the work of the UN on Sustainable Development Goal 2, which is concerned with eliminating global hunger.

Global monitoring of the status of nutrition and differentiating between levels of food security is erected on foundational clarity on the meaning of these concepts. In the UN system, food security is defined as when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. This characterisation is built upon four dimensions that are integral to food security (Resnick and Swinnen 2023).

Physical *availability* of food is concerned with the 'supply side' of food security and is determined by the level of food production, stock levels and net trade. Since the various factors affecting food production and consumption are unevenly distributed across time and space, trade between countries and regions can help to adjust to changing conditions affecting food production including to climate change (FAO 2022). Economic and physical *access* to food is concerned with household level food security in relation to the role of incomes, expenditure, markets, prices, public and humanitarian support programmes in achieving food security objectives. Food *utilisation* or consumption is concerned with the sufficiency of energy and nutrient intake by individuals in relation to intra-household distribution of food, which combined with the biological utilisation of food consumption determines the nutritional status of individuals. And food *stability* is concerned with the stability of the other three dimensions.

1.2 The food system, challenges and global response

The determinants of nutritional status and food security are embedded in the food system that is in place. A food system is defined as the sum of policies, resources, actors, capacities and interactions along the food value chain – from input supply and production of crops, livestock, fish and other agricultural commodities to marketing, transportation, processing, wholesaling, retailing, preparation of foods, consumption and disposal (AGRA 2022). A 2021 UN summit on food systems recognised its broad impact on employment, incomes and development as a whole. Built into this understanding of the multifaceted impact of food systems is that enabling policy environments, cultural norms around food, and environmental sustainability are essential for the functioning of food systems. The International Food Policy Research Institute (IFPRI) estimates that food systems account for as much as 34 per cent of greenhouse gas emissions stemming from up- and downstream agriculture-related activities, with two-thirds of this arising from agriculture, forestry and other land use, or AFOLU (IFPRI 2022).

Africa's difficulties with undernourishment and hunger are related to challenges with the continent's food system. These challenges include but are not limited to: dominant smallholder farming practices, limited commercialised

agriculture and low productivity; policy failure; resources, institutional and capacity gaps in agricultural markets; uneven penetration of technologies that enable agricultural productivity and engender a green revolution; distortions in global food markets underpinned by inequitable trade rules; climate vulnerabilities; and political instability, conflict and demographic trends.

To the extent that access to food is a universal human right, the UN plays a leading role in the global response to hunger everywhere. To this end, there are three organisations that lead the UN's work on food security, based together in Rome. The FAO is the UN specialised agency that leads international efforts to defeat hunger and improve nutrition and food security. IFAD was created as the UN's funding arm to mobilise investments in rural infrastructure and farm extension services, and build resilience against climate change across the developing world. WFP is leading the UN's humanitarian effort in delivering food aid to vulnerable communities, especially in conflict situations, climatic catastrophes and other emergencies. This includes its heroic role in making food available to vulnerable communities during the Covid-19 pandemic. The work of the WFP was recognised in the award of the 2020 Nobel Peace Prize. Prominently displayed at its headquarters in Rome is the citation that accompanied the prize, which says in part that the honour was given for its 'efforts to combat hunger, for its contribution to bettering conditions for peace in conflict-affected areas and for acting as a driving force in efforts to prevent the use of hunger as a weapon of war and conflict' (The Nobel Peace Prize 2020 n.d.). Today, UN member states put the WFP at the heart of global humanitarian response efforts: as of 2022, the WFP accounted for 24 per cent (about $12.2 billion) of the UN operational budget worldwide. The efforts of the FAO to align its technical support with African agricultural policies and of the WFP to source food aid from within Africa where possible to avoid undermining production systems are outlined in Chapter 4.

Another key organisation in the global response to tackle undernourishment and hunger is the Geneva-based WTO. Restrictions on international food trade can raise food prices and hit developing countries hardest. Subsidies in countries that can afford them contribute to global food availability but disincentivise production in poorer countries through price suppression. The WTO is where discussions take place to limit restrictions, subsidies and related complications, and to facilitate international food trade flows (Pangestu and Van Trotsenburg 2022). The role of the WTO in international food trade is discussed in Chapter 9.

1.3 Research focus and the book in outline

The first task of the research team that came together to examine the nexus between trade, food security and climate risks under the auspices of the Africa Trade Policy Programme at the London School of Economics and Political Science (LSE) Firoz Lalji Institute for Africa was to clarify *what* Africa eats,

the basic foods with the highest contribution to calorie intake across the continent. It is understood that the average person needs a minimum of 1830 kcal per day to avoid undernourishment and 2360 kcal per day for optimal health (UN Trade & Development UNCTAD 2024).

As the discussion evolved, and following a thorough literature review, the research team investigated a number of further specific questions. How might a conceptual and quantitative approach be framed for depicting the relationship between food security, food trade and climate risks? What is the regional breakdown in the production and consumption of the food products identified as Africa's basic foods? How does Africa fare in terms of comparative yields and productivity with other parts of the world in the production of these food products and what are the climate risks related to their production? What is the implementation record of agricultural policies such as the Comprehensive African Agriculture Development Programme and the Malabo Declaration that were adopted within the framework of the African Union (AU) to boost production and productivity? How is implementation impacted by resources or lack of resources invested in African agriculture? How effective in terms of capacities are the various actors and institutions that operate within Africa's food system? How and where do the basic foods feature in intra-African trade flows? What is the likely impact of the African Continental Free Trade Area (AfCFTA) on intra-African food trade? Do the AfCFTA Agreement and Protocols contain specific provisions on agriculture? How could they be leveraged to enhance Africa's food security? If non-tariff barriers are more important than tariffs as obstacles to intra-African food trade, what should be done about them? To the extent that Africa as a whole is a net food importer, what are the main features of Africa's food trade with countries outside the continent? Which are these countries or bilateral food trade partners? The WTO is the global trade regulator – do its rules help or hinder the achievement of food security in Africa? These are the questions that occupied the research team. Over 18 months of research, two workshops were organised at LSE to review initial findings. Experts from the FAO, the WTO, CGIAR, IFPRI, the Institute for Agriculture and Trade Policy, the International Institute for Sustainable Development, the Economic Commission for Africa of the United Nations, the African Development Bank, Friedrich Ebert Stiftung, ODI Global and the LSE Grantham Research Institute on Climate Change and the Environment participated in these discussions, offering insights and advice.

The deconstruction of *how* Africa eats is the overriding objective of this book. Following this introductory chapter, the second chapter provides a conceptual approach for thinking about food trade, food security and climate risks. It uncovers exactly what Africa's food trade is, first by looking into Africa's agricultural exports and imports broadly before narrowing down to examine the trade flows at the product level driving such food trade. This is to help the reader understand exactly what is meant in this book by Africa's 'food trade', the consequences of this trade for food security and the attendant climate risks.

Chapter 3 focuses on what Africa eats and entails a review of eight key products that form the basket of foods that are essential for Africa's food security (wheat, yams, cassava, maize, rice, poultry, meat and fish), drawing upon FAO data on production and consumption, volume and value, with regional breakdowns. This is complemented by some illustrations of climate risks related to both emissions in production and the effect of changing weather patterns.

Chapter 4 assesses implementation of the AU-adopted agricultural policies in relation to resources from public budgets, private investment, foreign direct investment, foreign aid flows and climate finance for adaptation and mitigation in the agricultural sector. The capacities of various actors and institutions operating in Africa's food systems are also brought into focus. Chapters 5 and 6 analyse intra-African food trade flows, with the former focusing on recent trends and regional aspects of how the basic foods feature in intra-African trade flows. The latter undertakes a detailed partial equilibrium modelling exercise to assess the expected impact of the AfCFTA on intra-African food trade flows at the product level. Chapter 7 investigates the extent to which provisions in the AfCFTA Agreement and Protocols support agricultural development and the opportunities offered by this continental legal framework for advancing food trade and food security including through disciplines on non-tariff barriers. Chapter 8 reviews bilateral food trade flows (i.e. those between Africa and its non-African partners), their composition, the trade policies and some problematic issues that underpin these flows. Chapter 9 examines the WTO regulatory framework on agriculture and implications for food security in Africa. Relevant aspects of WTO climate and sustainability discussions are also brought into the focus. Chapter 10, the concluding chapter, highlights the main insights from the preceding chapters as a call to action by African policymakers, stakeholders and campaigners on ending hunger and development partners.

It is our expectation that the book will contribute to the current knowledge base on the policy landscape that impacts trade, food security and climate risks in Africa for more informed deliberations at various levels of policymaking, advocacy and scholarly and pedagogical pursuits

1.4 Open access publication

As was the case with the Africa Trade Policy Programme's previous book, *How Africa Trades* (2023), published by LSE Press, this book is being made available on an open access basis. All the datasets used in our analysis are, where possible, publicly available (not behind paywalls), with sources detailed in the reference sections at the end of each chapter. Where website addresses are liable to change, we have used Harvard's perma.cc resource to preserve online sources and ensure they are permanently available to readers. Aside from the inherent virtue of putting the result of social science research within the reach of any reader anywhere in the world, open access publication is

especially beneficial to readers in Africa, where the relative cost of books and periodicals is high. Moreover, apart from the output of the UN agencies, the development banks and other international organisations, very little independent research is being carried out and published on Africa's food security in relation to trade and climate. Comments and feedback provided by readers are welcome and useful, and advance open social science. Please send this to Africa@lse.ac.uk. Engaging with the material covered in the book through posts on LinkedIn, X (formerly Twitter) (@AfricaAtLSE), Facebook and other social media is also welcome.

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