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Food Security in Sub-Saharan Africa

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1. Executive Summary

Sub-Saharan Africa faces severe food insecurity driven by a complex web of challenges, including rapid population growth, climate change, economic instability, and political conflict. With nearly half of the population living in poverty and dependent on rain-fed agriculture, the region is particularly vulnerable to food shortages. Climate change further exacerbates these conditions by increasing droughts, floods, and extreme weather, all of which undermine agricultural productivity and threaten food systems. Additionally, limited infrastructure and outdated agricultural practices hinder production and access to nutritious food.

To improve food security, a multifaceted approach is essential. Investing in agricultural education and training is a priority. Building a skilled workforce capable of implementing modern farming techniques and technologies can increase food production and improve resilience against climate shocks. Empowering women, who are primary food producers in the region, through better land access, resources, and agricultural support, can also significantly enhance food security.

Supporting small and medium-sized agricultural enterprises offers another pathway. These enterprises are vital for job creation and local food production, but many lack financing options. Targeted investments in these enterprises can transform them into viable contributors to the food supply chain.

Regional collaboration on shared resources can improve resilience and address food security across borders. Additionally, embracing alternative food sources like aquaculture and urban agriculture can help diversify food supply in rapidly growing urban areas.

Combining these initiatives with strategic partnerships, including knowledge-sharing and technological support from countries like Israel, can bolster Sub-Saharan Africa's food systems. Together, these solutions offer a roadmap to build resilience, reduce hunger, and promote long-term food security across the region.

2. Introduction

Food security is one of the main global environmental security issues together with water security and energy security. This is among the top priorities of the twenty-first century. The issue of ending poverty (No Poverty) and hunger (Zero Hunger) on a global scale are among the top priorities of the UN Sustainable Development Goals (SDGs). According to the Food and Agriculture Organization of the UN (FAO), universal access to safe food is a key requirement for the 2030 Agenda for Sustainable Development Goals.

Yet, achieving this goal is dependent on dealing with other main global challenges, such as the growing global population and the rapid urbanization process associated with it, especially in the developing world, and the need to find ways to have enough food to sustain it. At the same time, the fact that population growth puts a lot of pressure on key natural



resources, i.e., water and arable land, must be taken into account. Added to these challenges is climate change, which can jeopardize food security by altering precipitation patterns, increasing temperatures and causing extreme weather events. Additionally, the global need to collectively address these effects is further complicated and perhaps even currently impossible due to ongoing conflicts such as the wars in Ukraine and the Middle East, growing tensions in the South China Sea, and the geopolitical division of the world into two main axes - the Western liberal democracies vs. the axis of China-Russia-Iran-North Korea.

Africa is the continent most affected by these global challenges. It emits the least greenhouse gases but is the most severely impacted by climate change. At the same time, it is the continent with the fastest-growing population on earth and suffers the highest rates of food insecurity, hunger and malnutrition.

The aim of this research is to describe the state of food security, or, more accurately, insecurity, in Sub-Saharan Africa as a whole. This research will not cover sub-regions, such as West Africa, East Africa, the Horn of Africa, Central Africa and South Africa, except where it is necessary to highlight current levels of food insecurity by sub-regions.

The research is divided into five parts. The first part discusses the development of the concept of food security and its key definitions. The second part describes the state of food security in Sub-Saharan Africa over the past two years. The third part addresses the African Union's vision, programs and unmet targets to end hunger in Africa. The fourth part outlines the multi-faceted challenges that make addressing food insecurity in Sub-Saharan Africa extremely difficult, and which explain why the African Union's targets have not been met. The fifth and concluding section tries to answer the question: what can be done to transform the situation?

3. Definitions of Food Security

Food security is a flexible concept because of the complexities of the technical and policy issues involved and it has dozens of definitions, of which this research will focus only on the main ones.

The concept of food security originated in 1974. Initially, the focus was on the volume and stability of food supplies. Food security was defined in the 1974 *Report of the World Food Conference*, held in Rome from November 5 to 16, as "*the availability at all times of adequate world supplies of basic food-stuffs, particularly so as to avoid acute food shortages in the event of widespread crop failure, natural or other disasters, to sustain a steady expansion of food consumption in countries with low levels of per capita intake and to offset fluctuations in production and prices.*"¹

¹ "Resolution XVII: International Undertaking on World Food Security," *Report of the World Food Conference Rome 5-16 November 1974*. <https://digitallibrary.un.org/record/701143?v=pdf>

In 1983, the Food and Agriculture Organization of the UN (FAO) expanded this concept to include securing access for vulnerable people to available supplies, implying that attention should be balanced between the demand and supply sides of the food security equation. According to the report of the eighth session of the Committee on World Food Security, "*the ultimate objective of world food security should be to ensure that all people at all times have both physical and economic access to the basic food they need. Food security should have three specific aims, namely ensuring production of adequate food supplies; maximizing stability in the flow of supplies; and securing access to available supplies on the part of those who need them.*"²

In 1986, the World Bank report *Poverty and Hunger* focused on the temporal dynamics of food insecurity. It introduced the distinction between chronic food insecurity, associated with the problems of structural poverty and low incomes, and transitory food insecurity, which involved periods of intensified pressure caused by natural disaster, economic collapse, or conflict. It defined food security as "*access by all people at all times to enough food for an active, healthy life. Its essential elements are the availability of food and the ability to acquire it. Food insecurity, in turn, is the lack of access to enough food. There are two kinds of food insecurity: chronic and transitory. Chronic food insecurity is a continuously inadequate diet caused by the inability to acquire food. It affects households that persistently lack the ability either to buy enough food or to produce their own. Transitory food insecurity is a temporary decline in a household's access to enough food. It results from instability in food prices, food production, or household incomes and in its worst form it produces famine.*"³

By the mid-1990s, the definition of food security was further broadened to include food safety and nutritional balance for an active and healthy life. This change meant that food security ceased to be a goal in itself but became a set of actions that contribute to an active and healthy life. Moreover, as the term evolved, the concepts of nutrition security and food and nutrition security also emerged. Therefore, food security is now considered part of the broader concept of food security and nutrition.

According to the 1994 *UNDP Human Development Report*, food security is only one component of human security. As such, it defined food security as "*all people at all times have both physical and economic access to basic food. This requires not just enough food to go round. It requires that people have ready access to food, that they have an 'entitlement'*

² "Report of the Eighth Session of the Committee on World Food Security (Rome, 13 – 20 April, 1983)," *Food and Agriculture Organization of the United Nations Rome*, pp. 6-7. <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://openknowledge.fao.org/server/api/core/bitstreams/32a0a374-bc3b-42cb-af54-24bd97bbf420/content>

³ "Poverty and Hunger: Issues and Options for Food Security in Developing Countries," *The World Bank*, 1986. <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://documents1.worldbank.org/curated/en/166331467990005748/pdf/multi-page.pdf>

to food by growing it for themselves, by buying it or by taking advantage of a public food distribution system. The availability of food is thus a necessary condition of security – but not a sufficient one. People can still starve even when enough food is available – as has happened during many famines. The overall availability of food in the world is not a problem... But this does not mean that everyone gets enough to eat. The problem often is the poor distribution of food and a lack of purchasing power.... Governments and international agencies have tried many ways of increasing food security at both national and global levels. But these schemes have had only a limited impact. Access to food comes from access to assets, work and an assured income. And unless the question of assets, employment and income security is tackled upstream, state interventions can do little for food insecurity downstream".⁴

The 1996 Rome Declaration on World Food Security and the World Food Summit Plan of Action adopted a more complex definition of food security at the individual, household, national, regional and global levels. It stated that *"food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. In this regard, concerted action at all levels is required. Each nation must adopt a strategy consistent with its resources and capacities to achieve its individual goals and, at the same time, cooperate regionally and internationally in order to organize collective solutions to global issues of food security. In a world of increasingly interlinked institutions, societies and economies, coordinated efforts and shared responsibilities are essential."*⁵

In 2001, FAO published a report titled *The State of Food Insecurity in the World 2021*, which stated that *"to achieve food security, three conditions must be satisfied: food must be available in sufficient quantities, taking into account domestic production, commercial and food aid imports and national stocks; household livelihoods must be adequate to provide people with access to food supplies; and the supplies available must satisfy the specific dietary and health needs of all members of the community."*⁶

Another revision to the definition of food security was made at the 2009 World Summit on Food Security, which added stability as the fourth dimension of food security – stability being the ability of food systems to withstand shocks, whether natural or man-made. The Summit also included in its definition social access to sufficient, safe and nutritious food to meet people's dietary needs and food preferences for an active and healthy life. Thus, according to this new concept, *"food security exists when all people, at all times, have*

⁴ "Human Development Report 1994," *United Nations Development Programme*, Oxford University Press, 1994.

<https://hdr.undp.org/content/human-development-report-1994b>

⁵ "Rome Declaration on World Food Security," *World Food Summit*, 13-17 November 1996, Rome, Italy.

<https://www.fao.org/4/w3613e/w3613e00.htm>

⁶ "The State of Food Insecurity in the World 2001," *The Food and Agriculture Organization of the United Nations*.

https://www.fao.org/4/y1500e/y1500e05.htm#PO_0

*physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. The four pillars of food security are availability, access, utilization and stability. The nutritional dimension is integral to the concept of food security."*⁷

Thus, the International Food Policy Research Institute (IFPRI) says that *"food security means that all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their food preferences and dietary needs for an active and healthy life."*⁸

In 2020, two further dimensions of food security were introduced by the Committee on World Food Security's High-Level Panel of Experts (HLPE) on Food Security and Nutrition. The first one is agency, which means that *"individuals or groups having the capacity to act independently to make choices about what they eat, the foods they produce, how that food is produced, processed and distributed, and to engage in policy processes that shape food systems. The protection of agency requires socio-political systems that uphold governance structures that enable the achievement of food security and nutrition for all."* The second is sustainability, which means *"food system practices that contribute to long-term regeneration of natural, social and economic systems, ensuring the food needs of the present generations are met without compromising the food needs of future generations."*⁹

In July 2024, the Integrated Food Security Phase Classification (IPC) global initiative – a partnership of various organizations at global, regional and national levels – defined a *common global scale for classifying the severity and magnitude of food insecurity and malnutrition*. According to the IPC, *"acute food security refers to a situation at one point of time, as opposed to chronic food insecurity, which refers to a persisting situation."*

The IPC distinguishes three phases of acute food insecurity:

- **IPS Phase 3 – Crisis:** Households either have food consumption gaps that are reflected by high or above-usual acute malnutrition or are marginally able to meet minimum food needs but only by depleting essential livelihood assets or through crisis-coping strategies.
- **IPS Phase 4 – Emergency:** Households either have large food consumption gaps which are reflected in extremely high acute malnutrition and excess mortality or are

⁷ "Declaration of the World Summit on Food Security," *World Summit on Food Security Rome, 16-18 November 2009*. <https://reliefweb.int/report/world/declaration-world-summit-food-security-wsfs-20092>

⁸ "Food Security," *International Food Policy Research Institute*. <https://www.ifpri.org/topic/food-security/>

⁹ "Food Security and Nutrition: Building a Global Narrative towards 2030," *The High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome, 2020*. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://openknowledge.fao.org/server/api/core/bitstreams/8357b6eb-8010-4254-814a-1493faaf4a93/content

able to mitigate large food consumption gaps but only by employing emergency livelihood strategies and asset liquidation.

- **IPC Phase 5 – Catastrophe/Famine:** households experience an extreme lack of food and/or cannot meet other basic needs even after full employment of coping strategies. Starvation, death, destitution and extremely critical acute malnutrition levels are evident. For famine classification, an area must have extremely critical levels of acute malnutrition and mortality.

The above scale of food insecurity is complemented by acute malnutrition expressed by the thinness of children or the presence of oedema. Emergency (Phase 4) is an extremely severe situation where urgent action is needed to save lives. Individual households can be in Catastrophe/Famine (Phase 5) and experience famine conditions, even if the area where they live is not classified as Phase 5. This can occur due to the time-lag between food insecurity, malnutrition and mortality, and the difficulty of assigning the causes of mortality.¹⁰

Despite these additions from recent years, the main definitions of food security used by the main international organizations are based on the 1996 Rome Declaration on World Food Security. The Food and Agriculture Organization of the UN (FAO) states, "*Our goal is to achieve food security for all and make sure that people have regular access to enough high-quality food to lead active, healthy lives.*"¹¹

According to the World Bank, "*based on the 1996 World Food Summit, food security is defined when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meet their dietary needs and food preferences for an active and healthy life.*" The four main dimensions of food security are:

1. **Physical availability of food:** Food availability addresses the supply side of food security and is determined by the level of food production, stock levels and net trade.
2. **Economic and physical access to food:** An adequate supply of food at the national or international level does not in itself guarantee household level food security. Concerns about insufficient food access have resulted in a greater policy focus on incomes, expenditure, markets and prices in achieving security objectives.
3. **Food utilization:** Utilization is commonly understood as the way the body makes the most of various nutrients in food. Sufficient energy and nutrient intake by individuals are the result of good care and feeding practices, food preparation, diverse diet, and

¹⁰ "Conflict-induced acute food crises: potential policy responses in light of current emergencies," *High Level of Experts on Food Security and Nutrition*, July 2024. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.fao.org/docs/devhlpelibraries/default-document-library/hlpe-fsn-issues-papers_conflicts-and-fsn.pdf?sfvrsn=823378b6_3

¹¹ "About FAO," *Food and Agriculture Organization of the United Nations*. <https://www.fao.org/about/about-fao/en/>

intra-household distribution of food. Combined with good biological utilization of food, this determines an individual's nutritional status.

4. **Stability of the other three dimensions over time:** Even if food intake is adequate today, a person is still considered to be food insecure if they face periodic inadequate access to food, risking a deterioration in nutritional status. Adverse weather conditions, political instability, or economic factors (e.g., unemployment, rising food prices) may impact food security status.

For food security objectives to be realized, all four dimensions must be fulfilled simultaneously.¹²

Finally, a few more terms are relevant to this paper. The first is **undernourishment**, which FAO defines "*as the condition of an individual whose habitual food consumption is insufficient to provide, on average, the amount of dietary energy required to maintain a normal, active and healthy life. The indicator is reported as a prevalence and is denominated as 'prevalence of undernourishment' which is an estimate of the percentage of individuals in the total population who are in a condition of undernourishment.*"¹³

The second is **food insecurity**. FAO defines food insecurity as measured by the Food Insecurity Experience Scale (FIES) as "*limited access to food, at the level of individuals and households, due to lack of money or other resources... FAO provides estimates of food insecurity at two different levels of severity: moderate and severe food insecurity. People affected by moderate food insecurity face uncertainties about their ability to obtain food and have been forced to reduce, at times during the year, the quality and/or quantity of food they consume due to lack of money or other resources. Severe food insecurity refers to situations when individuals have likely run out of food, experienced hunger and, at the most extreme, gone for days without eating. The prevalence of moderate or severe food insecurity is the combined prevalence of food insecurity at both severity levels.*"¹⁴

In the context of food insecurity, FAO differentiates between chronic food insecurity, which it defines as "*food insecurity that persists over time, largely due to structural causes in all countries on a regular basis*" and acute food insecurity, which it defines as "*any*

¹² "What is Food Security?" *World Bank Group*. <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update/what-is-food-security>

¹³ "Annex II: Definition of Food Security and Nutrition Indicators," *Africa: Regional Overview of Food Security and Nutrition 2023: Statistics and Trends*. <https://openknowledge.fao.org/server/api/core/bitstreams/dca947e8-08ca-47df-a686-48499811a2e5/content/sofi-statistics-africa-2023/annex-02.html>

¹⁴ "Annex II: Definition of Food Security and Nutrition Indicators," *Africa: Regional Overview of Food Security and Nutrition 2023: Statistics and Trends*. <https://openknowledge.fao.org/server/api/core/bitstreams/dca947e8-08ca-47df-a686-48499811a2e5/content/sofi-statistics-africa-2023/annex-02.html>

manifestation of food insecurity at a specific point in time that is of a severity that threatens lives, livelihoods or both, regardless of the causes, context or duration."¹⁵

Last but not least is the cost and affordability of a **healthy diet**. FAO defines this as "the cost of purchasing the least expensive locally available foods to meet requirements for energy and food-based dietary guidelines for a representative person within energy balance at 2,330 kcal/day. The cost of a healthy diet is converted to international dollars using purchasing power parity (PPP). Indicators of the affordability of a healthy diet measure the percentage and the number of the total population unable to afford a healthy diet. A healthy diet is considered unaffordable in a country when its cost exceeds 52% of household income. This percentage accounts for a portion of income that can be credibly reserved for food, based on observations that the population in low-income countries spend, on average, 52% of their income on food, as derived from the 2017 national accounts household expenditure data of the World Bank's International Comparison Programme (ICP)."¹⁶

¹⁵ "Chapter 2: Food Security and Nutrition around the World," *The State of Food Security and Nutrition in the World 2024*. <https://openknowledge.fao.org/server/api/core/bitstreams/a0159056-2843-44c2-91e6-601ec4704fb8/content/state-food-security-and-nutrition-2024/ending-hunger-food-security.html#gsc.tab=0>

¹⁶ "Annex II: Definition of Food Security and Nutrition Indicators," *Africa: Regional Overview of Food Security and Nutrition 2023: Statistics and Trends*. <https://openknowledge.fao.org/server/api/core/bitstreams/dca947e8-08ca-47df-a686-48499811a2e5/content/sofi-statistics-africa-2023/annex-02.html>

The Evolution of Food Security Definitions

Year	Defined by	Core Definition
1974	The World Food Conference Report	Ensuring constant global availability of basic food supplies to prevent shortages, support consumption growth in low-intake countries, and stabilize production and prices.
1983	Food and Agriculture Organization of the UN (FAO), Report of the Eighth Session of the Committee on World Food Security	All people at all times have both physical and economic access to the basic food they need.
1986	World Bank Report: Poverty and Hunger	Everyone always has enough food for a healthy life, relying on food availability and access. Food insecurity, either chronic or transitory, is the lack of this access – chronic being long-term and transitory referring to temporary declines in access due to various reasons.
1994	UNDP Human Development Report	All people at all times have both physical and economic access to basic food
1996	Rome Declaration on World Food Security and the World Food Summit Plan of Action	All people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.
2001	Food and Agriculture Organization of the UN (FAO) Report: The State of Food Insecurity in the World	To achieve food security, food must be sufficient, accessible, and meet the dietary needs of all community members.
2009	World Summit on Food Security	The four pillars of food security are: availability, access, utilization and stability. The nutritional dimension is integral to the concept of food security.
2020	The Committee on World Food Security's High Level Panel of Experts (HLPE) on Food Security and Nutrition	Two new dimensions were added: agency and sustainability. Agency refers to individuals or groups having the capacity to act independently and make choices about what they eat, the foods they produce, how that food is produced, processed and distributed, and engage in policy processes that shape food systems. Sustainability is ensuring that the food needs of the present generations are met without compromising the food needs of future generations.
2024	The Integrated Food Security Phase Classification (IPC) Global Initiative	Acute food security refers to a situation at one point in time, as opposed to chronic food insecurity, which refers to a persisting situation. The IPC defines a common global scale for classifying the severity and magnitude of food insecurity and malnutrition.

4. The Current State of Food Security in Sub-Saharan Africa

A. Africa: Regional Overview of Food Security and Nutrition 2023 – Statistics and Trends

In recent years, Africa has been facing an unprecedented food crisis. A report jointly published on December 7, 2023, by FAO, the African Union Commission (AUC), the UN Economic Commission for Africa (ECA) and the World Food Programme (WFP) highlights alarming statistics on food insecurity and malnutrition. According to this report, titled *Africa: Regional Overview of Food Security and Nutrition 2023 – Statistics and Trends*, "after a long period of improvement between 2000 and 2010, hunger has worsened substantially and most of this deterioration occurred between 2019 and 2022. In 2022, nearly 282 million people in Africa (about 20% of the population) were undernourished, an increase of 57 million people since the COVID-19 pandemic began. About 868 million people were moderately or severely food-insecure and more than one-third of them – 342 million people – were severely food-insecure. More than two-thirds of the population in Central Africa, Eastern Africa and Western Africa faced moderate or severe food insecurity, meaning they did not have access to adequate food".

Moreover, according to this report, in 2022, Eastern Africa had the largest number of undernourished with 134.6 million people, compared to 62.8 million in Western Africa, 57 million in Central Africa and 7.6 million in Southern Africa. At the country level, undernourishment affected 10% or less of the population in 14 countries in Africa. It affected at least one-third of the population in nine countries, including the Central African Republic, Lesotho, Madagascar and Somalia, where the prevalence of undernourishment exceeded 45%, as well as Liberia, Guinea-Bissau, Zimbabwe, Uganda, Rwanda, Mozambique, the Democratic Republic of Congo, the Republic of Congo and Chad, where the prevalence of undernourishment exceeded 30%.

This report also includes, for the first time, estimates of the cost and affordability of a healthy diet, which are useful indicators of people's economic access to nutritious foods and healthy diets. It said that the majority of Africa's population, about 78% – or more than one billion people – are unable to afford a healthy diet, compared to 42% at the global level, and this number is rising. The average cost of a healthy diet has been increasing over time and was at 3.57 purchasing power parity (PPP) dollars per person per day in 2021, which is much higher than the extreme poverty threshold of \$2.15 per person per day. This means that not only the poor but also a substantial proportion of people defined as non-poor cannot afford a healthy diet in Africa. Western Africa and Eastern Africa had the largest cumulative increases in the cost of a healthy diet between 2019 and 2021. It also predicted that "millions are expected to be at risk of worsening hunger in the near future due to the rippling effects of the war in Ukraine, which are compounding the devastating impacts that conflicts, climate variability and extremes, economic slowdowns and downturns, and the aftereffects of the COVID-19 pandemic are

having on the most vulnerable. In this context, social and gender inequalities are also on the rise, with women and girls being among the most affected by these shocks."

Africa bears the heaviest burden globally in this respect. This report noted, as mentioned above, that Africa was home to 282 million hungry people in 2022, representing more than 38% of the estimated 735 million people who faced hunger globally.

B. Food Insecurity in Africa Nearly Double the Global Average

The above data is supported by a report jointly published in 2024 by FAO, the International Fund for Agricultural Development (IFAD), UNICEF, the World Food Programme (WFP) and the World Health Organization (WHO). This report, titled "The State of Food Security and Nutrition in the World 2024: Financing to End Hunger, Food Insecurity and Malnutrition in All Its Forms", stated that *"between 713 and 757 million people may have faced hunger in 2023 – one out of 11 people in the world, and one out of every five in Africa. Hunger is still on the rise in Africa, but it has remained relatively unchanged in Asia, while notable progress has been made in the Latin American and Caribbean region."*

The report goes into detail and says that *"Africa remains the region with the largest estimated proportion of the population facing hunger – 20.4%, compared with 8.1% in Asia, 6.2% in Latin America and the Caribbean and 7.3% in Oceania. It is projected that 582 million people will be chronically undernourished at the end of the decade and that more than half of them will be in Africa... Going beyond hunger, the prevalence of moderate or severe food insecurity remains above pre-pandemic levels, with little change in four years. In 2023, an estimated 28.9% of the global population – 2.33 billion people – were moderately or severely food insecure... In 2023, the prevalence of moderate or severe food insecurity in Africa (58%) was nearly double the global average, whereas in Asia, Latin America and the Caribbean and Oceania, the prevalence is closer to the global estimate... The prevalence of moderate or severe food insecurity remained virtually unchanged in Africa from 2022 to 2023... It is projected that 10 million more people (18%) of the population will be facing chronic hunger by 2030."*

As for Africa itself, the report specifies that *"hunger has been rising steadily since 2015. More than one person out of five living in Africa may have faced hunger in 2023. Hunger increased in most subregions of Africa from 2022 to 2023, with the exception of Eastern Africa and Southern Africa... Still, nearly half of the people facing hunger in Africa in 2023 live in Eastern Africa... In Central Africa, the prevalence of undernourishment rose sharply from 2022 to 2023, increasing by 3.3 percentage points -the largest percentage point increase in any subregion of the world – to reach 30.8% (62.2 million people) in 2023..."*

The situation also deteriorated in Western Africa, reaching 16% (70.4 million people) in 2023."

According to the same report, "in Africa, 58% of the population was moderately or severely food insecure in 2023, and 21.6% faced severe food insecurity. Central Africa had the highest prevalence of moderate or severe food insecurity (77%, or 157 million people), making it the subregion with the highest level in the world. It is followed by Eastern Africa (64.5%, or 270 million people) and Western Africa (61.4%, or 270 million people). One quarter of the population of Southern Africa (17.3 million people) was affected by moderate or severe food insecurity in 2023. Central Africa is also the subregion with the highest level of severe food insecurity in Africa and in the world – 38% in 2023. In Eastern Africa, 24.2% of the population is severely food insecure, followed by Western Africa (18.8%) and Southern Africa (10.9%). From 2022 to 2023, the proportion of the population experiencing moderate or severe food insecurity increased at least marginally in most subregions of Africa, especially in Southern Africa, where it increased by 2.1 percentage points. However, improvements were seen in Eastern Africa – one of the most affected subregions – with a 2.6 percentage-point decrease from 2022 to 2023. That is equivalent to more than 4 million fewer people facing moderate or severe food insecurity in Eastern Africa in one year".

Overall, these two reports show that although global levels of hunger and food insecurity have not changed dramatically in the last two years, they have increased in Sub-Saharan Africa.

5. The African Union's Unsuccessful Programs to End Hunger

The two above mentioned reports also highlight the failure of the African Union to address the urgent need to build resilient and sustainable food systems. This need is manifested in African Union programs from the last twenty years calling to end hunger and build a prosperous, peaceful and secure Africa, based on inclusive agricultural growth and transformation, as well as on inclusive growth and sustainable development.

A. The Maputo Declaration

In July 2003, at the Second Ordinary Assembly of the African Union in Maputo, African Heads of State and Government endorsed the “*Maputo Declaration on Agriculture and Food Security in Africa*”. This declaration welcomed and endorsed the Comprehensive Africa Agriculture Development Programme (CAADP), previously prepared by the FAO in cooperation with the New Partnership for Africa's Development (NEPAD). According to the declaration, the bases for an immediate improvement of Africa's agriculture, food security and trade balance are:

- Extending the area under sustainable land management and reliable water control systems and improving land management in those areas.
- Improving rural infrastructure and trade-related capacities for market access.
- Increasing food supply and reducing hunger by accessing improved technology and improving farm support services, pilot projects targeted at poor communities, and a supportive policy environment.
- Achieving an immediate impact on hunger by ensuring that production related investments are complemented by targeted safety nets in order not to derail long-term development.
- Promoting agricultural research, technology dissemination and adoption to achieve accelerated productivity gains.

The declaration further specified that the CAADP's implementation would be undertaken at the regional level in cooperation with regional economic organizations and unions, as well as at the national level. It also included a commitment to allocate at least 10 percent of national budgetary resources to agriculture and rural development policy implementation within five years.¹⁷

B. The Malabo Declaration

In June 2014, heads of state and government participating in the African Union (AU) Summit in Malabo, Equatorial Guinea, reaffirmed that agriculture should remain high on the continent's development agenda. They issued "*the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods.*" This declaration contains a set of concrete agricultural goals to be attained by 2025. It recommitted to the principles and values of the CAADP process and committed to enhancing investment finance – both public and private – in agriculture and to ending hunger in Africa by 2025. According to the declaration, this goal will be achieved through:

- Accelerating agricultural growth by at least doubling agricultural productivity levels by 2025.
- Halving the current levels of post-harvest losses by 2025.
- Integrating measures for increased agricultural productivity with social protection initiatives focusing on vulnerable social groups.
- Improving nutritional status, particularly the elimination of child undernutrition in Africa to reduce stunting to 10% and underweight by 5% by 2025.

¹⁷ "AU 2003 Maputo Declaration on Agriculture and Food Security: Comprehensive Africa Agriculture Development Programme," *African Union and New Partnership for Africa's Development*, July 2003.

<https://www.nepad.org/caadp/publication/au-2003-maputo-declaration-agriculture-and-food-security>

- Halving poverty by 2025 through inclusive agricultural growth and transformation by sustaining annual agricultural GDP growth of at least 6%.
- Harnessing markets and trade opportunities locally, regionally and internationally by tripling intra-African trade in agricultural commodities and services by 2025.
- Enhancing resilience of livelihoods and production systems to climate variability and other related risks through ensuring that at least 30% of farm, pastoral and fisher households are resilient to climate and weather-related risks by 2025.

The African heads of state and government also expressed grave concerns about vulnerabilities to external factors, such as climate change and global economic and political shocks.¹⁸

C. Agenda 2063

In January 2015, African Union heads of state and government met in Addis Ababa and adopted Agenda 2063 as a plan for Africa for the next 50 years. Some of its stated goals included:

- A high standard of living, quality of life and wellbeing for all citizens, with poverty, inequality and hunger as priority areas.
- A prosperous Africa, based on inclusive growth and sustainable development with a focus on healthy and well-nourished citizens; sustainable and inclusive economic growth; modern agriculture for increased productivity and production; a blue ocean economy for accelerated economic growth; and environmentally sustainable and climate-resilient economies and communities.¹⁹

Some of its transformational outcomes include:

- The incidence of hunger, especially amongst women and youth, will be reduced to just 20% of 2013 levels.
- Malnutrition as of 2013 will be reduced by half.
- Labor-intensive manufacturing, underpinned by value addition to commodities and the doubling of total agricultural factor productivity, will be attained by 2023.
- 30% of farmers, fisher folks and pastoralists will be practicing climate resilient production systems.
- The volume of intra-African trade, especially in agricultural value-added products, was to increase three-fold by 2023.
- All obstacles related to women owning/inheriting property were to have been removed by 2023.

¹⁸ "Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods," *African Union Website*, August 10, 2016. <https://au.int/en/documents/20160810/malabo-declaration-201411-26>

¹⁹ "Goals and Priority Areas of Agenda 2063," *African Union*. <https://au.int/agenda2063/goals>

- At least one in five women will have access to and control of productive assets.²⁰

D. Africa Common Position on Food Systems

In July 2021, within the context of the UN Decade of Action to achieve the Sustainable Development Goals (SDGs) by 2030 and ahead of the Extraordinary UN Food Systems Summit, the African Union issued the “*Africa Common Position on Food Systems*”. This document provided a synthesis of member states' views, perspectives and priorities as well as ambitions on key issues shaping both African and global food systems. It stated that AU member states should assess progress in the implementation of their CAADP-Malabo commitments every two years through the CAADP biennial review exercise and report. According to the latest biennial report of 2019, Africa was not on track to achieve the CAADP goals and targets of ending hunger by 2025, noting a deterioration in food and nutrition security on the continent since the inaugural report in 2017. Thus, Africa is searching for solutions that will help to accelerate the implementation of the CAADP-Malabo declaration.²¹

Given both the current status of food insecurity in Sub-Saharan Africa and the failed attempts of the African Union to significantly transform the situation, the question asked is *what are the drivers contributing to high levels of hunger and food insecurity in Sub-Saharan Africa*.

6. Factors Contributing to Food Insecurity in Sub-Saharan Africa

A. Introduction

Several complex, multi-faceted and interrelated historical, economic, social, cultural, geographical, demographic, health, geopolitical and environmental factors contribute to food insecurity in Sub-Saharan Africa. These factors can be divided into structural factors and compounding factors— such as climate change, the COVID-19 pandemic and the war in Ukraine – that exacerbate the situation even further.

First and foremost, it is important to know that almost half the population in Sub-Saharan Africa lives below the poverty line. Livelihoods are based on rain-fed agriculture, herding or fishing, making them dependent on the climate. People living in poverty lack the resources to access sufficient and nutritious food, leading to chronic undernutrition and micronutrient deficiencies. These conditions alone make solving food insecurity a significant challenge.

²⁰ "Key Transformational Outcomes of Agenda 2063," *African Union*. <https://au.int/agenda2063/outcomes>

²¹ "African Common Position on Food Systems," *African Union and African Union Development Agency*, July 2021. <https://www.nepad.org/publication/african-common-position-food-systems>

B. The Historical Context

Understanding the historical context is critical to transforming food insecurity in Sub-Saharan Africa. Prior to colonialism, Sub-Saharan Africa was food secure. When scarcity occurred, it was temporary and caused by drought, floods, pests or conflicts. Food security was enabled by endogenous agricultural, social, and trading systems that prioritized diversity, adaptability, mobility, and connecting different ecological zones.

However, during colonial times, growing demand from industries in Europe and North America drove exponential growth in export crops at the expense of food security. The area dedicated to export crops in Sub-Saharan Africa increased by 56% during the 1800s and a further 136% from 1900 to 1960. As exports expanded, labor was diverted from household food production, reducing manpower availability for food production. As labor availability diminished, deficiencies in food supplies became endemic, distribution systems were dismantled, and important livestock production was marginalized.

At the time of independence, there were about 33 million small-scale farms in Africa, individually cultivating less than five hectares accounting for over 80% of farms and approximately 90% of agricultural production. Despite this, these farms remained under-resourced. Thus, even though most post-colonial African countries were net exporters of agricultural products, African governments continued the expansion of non-value-added exports. As a result, reduced food production created a dependency on imports and foreign aid.²²

C. Gender Inequality

Interrelated with the historical factors is the issue of gender inequality, which is socially and culturally inherent in many Sub-Saharan African countries. Women play a fundamental role in food and nutrition security at all stages of the food chain. African women's involvement in every stage of the food system is crucial; in subsistence farming, as practiced in Africa, women are the primary food producers. Sub-Saharan African women have the highest average agricultural labor force participation rate globally and are key stakeholders in backyard poultry farming systems. Moreover, in Sub-Saharan Africa, most of the food processing infrastructures are traditional and women are the key stakeholders in such systems as well.

Based on traditional knowledge, rural women process food and pass this knowledge down to the next generation through their daughters. Modern food processing infrastructures are rare in both urban and rural areas and most processed foods are

²² Vibeke Bjornuld, Henning Bjornlund and Andre van Rooyen, "Why food security persists in Sub-Saharan Africa: A review of existing evidence," in ed. Serge Savary, *Food Security: The Science, Sociology and Economics of Food Production and Access to Food*, Volume 14, February 2022, pp. 845 – 864.
<https://link.springer.com/article/10.1007/s12571-022-01256-1>

imported. Despite their critical role in food security, women do not have the same rights as men and must often balance domestic duties with agricultural work, such as sowing, weeding, harvesting and collecting firewood and water. Additionally, it can be more difficult for women to produce as much as men do in the farm setting, due to poor access to land, agricultural extension services and technologies. Women own a significantly lower percentage of farmland compared to men. Land rights discrimination stemming from social, economic and cultural factors impacts their productivity.²³ The African Union has acknowledged this problem and according to the *Africa Common Position on Food Systems*, "lack of tenure and access rights to land, water and forests has constrained business and practices essential for building and sustaining resilient food systems for frontline players majority of them are small and medium-sized enterprises, informal as well as characteristically women and youth."²⁴

D. Underperformance of the Agricultural Sector

Sub-Saharan Africa's agricultural sector has been underperforming for some time. From the early 1960s to the present, agricultural production per capita in Sub-Saharan Africa has increased only modestly and the region remains unable to feed itself despite possessing most of the world's uncultivated farmland. One reason for this is that the Sub-Saharan African countries cannot reach their full potential for irrigation agriculture because of decades of underinvestment, underuse, and neglect of public infrastructure.²⁵

Ken E. Giller, Emeritus Professor of Plant Production Systems at Wageningen University, whose research has focused on smallholder farming systems in Sub-Saharan Africa, presents what he calls the "food security conundrum." Giller defines it as the nexus of three issues. First, national food security in African countries requires an abundant supply of affordable and nutritious food for burgeoning rural and urban populations. Second, agriculture accounts for 20%-50% of GDP in most Sub-Saharan countries and is the main source of employment and agricultural exports. As a result, the sector attracts more government attention than support for smallholders, even though smallholder farms produce the vast majority of food in Sub-Saharan Africa. Third, rural households

²³ Eriola Marius Chariot Adenidji and Orhan Özçatalbaş, "A View of Sub-Saharan Africa from the Perspective of Food Security and Gender," in ed. Orhan Özçatalbaş, *Sustainable Rural Development Perspective and Global Challenges*, Intechopen, 2023. <https://www.intechopen.com/chapters/83360>; Abdulazeez Hudu Wudil, Muhammad Usman, Joanna Rosak-Szyrocka, Ladislav Pilar and Mortala Boye, "Reversing Years for Global Food Security: A Review of the Food Security Situation in Sub-Saharan Africa (SSA)," *International Journal of Environmental Research and Public Health*, November 2022, 19 (22). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9690952/>.

²⁴ "African Common Position on Food Systems," *African Union and African Union Development Agency*, July 2021. <https://www.nepad.org/publication/african-common-position-food-systems>

²⁵ Abdulazeez Hudu Wudil, Muhammad Usman, Joanna Rosak-Szyrocka, Ladislav Pilar and Mortala Boye, "Reversing Years for Global Food Security: A Review of the Food Security Situation in Sub-Saharan Africa (SSA)," *International Journal of Environmental Research and Public Health*, November 2022, 19 (22). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9690952/>

lack sufficient land or economic incentives to invest in agriculture given the fact that mineral fertilizers, along with crop residues and organic manures, are required to make soils fertile. Moreover, even if crop yields were increased to the maximum feasible extent, households with small farmland areas would still not be able to produce enough calories to be food sufficient.

Given the risk of crop failure in the face of drought and floods, there is little incentive to invest in inputs in small plots given the poor profitability of most crops. Often the poorest farmers sell much of their produce at harvest when prices are low in order to meet their immediate cash needs and buy back food later in the year when prices are high. Thus, a large proportion of rural households are net consumers of food and depend more on purchasing food or exchanging labor for food than on consuming what they produce on their own farms.²⁶

E. Aquatic Systems

In addition to agriculture, aquatic ecosystems are also under-valued and under threat. According to the *Africa Common Position on Food Systems*, "aquatic foods provide an essential yet often under-valued contribution to Africa's food systems and contribute significantly to livelihoods, food security, and nutrition..."

*The African continent is adjacent to some of the highly productive large marine ecosystems and endowed with networks of productive rivers and lakes that provide abundant opportunities for aquatic food production systems and blue economy development in the continent. The total fish production is estimated, as of July 2021, at about 12.5 million metric-tonnes, which constitutes about six percent of global fish production. The fish sector currently contributes 1.26 percent of the GDP, and per capita, fish consumption is about 9.6 kg which is less than half the global average (20.5 kg). The fish sector creates employment for about 12 million people with women constituting about 27 percent of the total employment. African fisheries and aquaculture play significant roles in international and regional trade. Africa imports about US\$5 billion worth of fish annually and exports about USD 7 billion. Artisanal producers account for more than 60 percent of Africa's fish production; over 90 million fisherfolk depend on fishing as the main part of a diversified livelihood strategy. Despite the importance of blue foods to Africa's food systems, aquatic ecosystems and their capacity to produce food and other ecosystem services are under threat from climate change, harmful activities, and degradation and contamination of aquatic ecosystems."*²⁷

²⁶ Ken E. Giller, "The Food Security Conundrum of Sub-Saharan Africa," *Global Food Security*, Volume 26, September 2020. <https://www.sciencedirect.com/science/article/pii/S2211912420300857>

²⁷ "African Common Position on Food Systems," *African Union and African Union Development Agency*, July 2021. <https://www.nepad.org/publication/african-common-position-food-systems>

F. Access to Improved Technologies and Innovation

Moreover, access to improved technologies and innovation across the entire food systems value chains remains too low, making Africa's agriculture and food industry uncompetitive in the global markets in many instances.

According to the *Africa Common Position on Food Systems*, as of July 2021, "the adoption rate of improved technologies in Africa stands at about 35 percent. While this shows an improvement from 20 percent ten years ago, it is still far less than the potential. Only an estimated 33 percent per cent of arable land is grown for improved crop varieties on the continent. For instance, African seed systems are still struggling to produce and distribute high-quality varieties in sufficient quantities to reach a critical mass of smallholder farmers. Similarly, Africa's aquaculture industry is challenged by a lack of access to quality seed and feed for increased production".

Additionally, the level of mechanization of Africa's food systems – from production through to processing and value-addition is still extremely low.

According to the *Africa Common Position on Food Systems*, as of July 2021, "food producers across Africa have 10 times fewer mechanized tools and technological innovations per farm area than farmers in other developing regions, and access has not grown as quickly as in other regions. Also, the development of agricultural equipment markets remains impeded by constraints related to importing or manufacturing capacities. Irrigation use is also low in Africa."²⁸

Therefore, Sub-Saharan African countries spent about \$43 billion in 2019 for food imports. The majority of Sub-Saharan Africa's net agricultural import bill comes from four countries: Nigeria, Angola, the Democratic Republic of Congo and Somalia. The African Development Bank estimated that by 2030, Africa's food import cost will reach \$90 billion.²⁹

G. Low Economic Growth

On top of all these economic challenges, another factor contributing to food insecurity is low economic growth. Sub-Saharan Africa has the world's most volatile economic growth rate and is highly vulnerable to internal and external economic shocks.

²⁸ "African Common Position on Food Systems," *African Union and African Union Development Agency*, July 2021. <https://www.nepad.org/publication/african-common-position-food-systems>

²⁹ Abdulazeez Hudu Wudil, Muhammad Usman, Joanna Rosak-Szyrocka, Ladislav Pilar and Mortala Boye, "Reversing Years for Global Food Security: A Review of the Food Security Situation in Sub-Saharan Africa (SSA)," *International Journal of Environmental Research and Public Health*, November 2022, 19 (22). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9690952/>

Poverty and food insecurity persist over much of the continent despite recent improvements in economic growth rates. Projections indicate that the growth gap between Sub-Saharan Africa and the rest of the world will worsen through 2028.

Whereas the cumulative per capita GDP growth for Sub-Saharan Africa during 2020–2025 period is predicted at 3.6%, the projected growth rate for the rest of the world is 14%.³⁰ Furthermore, in 2022, food prices increased by double digits on average across Sub-Saharan African countries, with some countries, such as Zimbabwe, seeing increases of more than 180%.

From June to August 2022, rising food prices and prolonged conflict were considered to be the cause of food insecurity for more than 38 million people in West and Central Africa. Due to below-average outputs in 2021–22 and disrupted trade flows in Central Africa, rising food prices were at or near record highs, especially for staple products.³¹

H. Food Insecurity and Violent Conflict

In Sub-Saharan Africa, food insecurity and violent conflict are intrinsically linked, particularly because conflict has a detrimental effect on food production, as farmland and surrounding rural areas often become focal points of conflict.

Armed groups frequently attack and destroy the means of production, confiscate land and displace, injure or kill farmworkers and other food industry laborers. Violent conflict also hampers the distribution and marketing of food. Elevated transport risks and related distribution delays reduce or interrupt supply. Thus, violent conflict can have lasting negative effects on food systems. Food insecurity can also contribute to violent conflict, starting with food shortages resulting from the effects of climate change and other environmental stresses and ending in conflict when shortages cannot be alleviated. Also, rising food prices, specifically of basic staples such as wheat, and food price volatility are strongly associated with social unrest. In several regions in Sub-Saharan Africa, drought and erratic rainfall lead pastoralists to change their mobility patterns, taking their herds outside of traditional boundaries in search of water and pasture. This is a coping strategy for the pastoralists but can lead to inter-communal conflict over resources between them and farmers. Thus, as climate change affects the

³⁰ Abdulazeez Hudu Wudil, Muhammad Usman, Joanna Rosak-Szyrocka, Ladislav Pilar and Mortala Boye, "Reversing Years for Global Food Security: A Review of the Food Security Situation in Sub-Saharan Africa (SSA)," *International Journal of Environmental Research and Public Health*, November 2022, 19 (22).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9690952/>

³¹ Abdulazeez Hudu Wudil, Muhammad Usman, Joanna Rosak-Szyrocka, Ladislav Pilar and Mortala Boye, "Reversing Years for Global Food Security: A Review of the Food Security Situation in Sub-Saharan Africa (SSA)," *International Journal of Environmental Research and Public Health*, November 2022, 19 (22).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9690952/>

availability of key natural resources, food and income in rural areas, disputes and grievances can emerge as conflicts over access to land.

Food insecurity, violent conflict and climate change have generated a steady increase in forced migration in Sub-Saharan Africa since 2011. In 2021, more than 32 million Africans were internally displaced, refugees or asylum seekers. An estimated 95 per cent of those displaced remain in Africa. Migration often increases pressure on resources in host areas, which can produce intergroup tensions and conflict, particularly in areas with a history of violence and pre-existing competition over resources.³²

Thus, conflict is a key contributor to food insecurity for many Sub-Saharan African countries, including Burkina Faso, Cameroon, the Central African Republic, Chad, the Democratic Republic of Congo, Ethiopia, Mali, Niger, Nigeria, Rwanda, Somalia, South Sudan, and Uganda. Some 18 African countries have been severely impacted by war and other forms of violence, such as community clashes, civil war, terrorism, banditry, political instability, and armed robbery – all of which have contributed to widespread poverty and food insecurity in the region.³³

I. High Population Growth

One factor that will make it harder to solve problems of food insecurity, inequality, hunger, and malnutrition in certain regions of Sub-Saharan Africa is high population growth. Sub-Saharan Africa's population is growing three times faster than the rest of the world with an average of 4.6 births per woman in 2021.

The region is projected to continue to be the fastest growing in the world, with a population increasing from 1.2 billion in 2021 to 2.1 billion in 2050. Rapid population growth has deep implications for development, exacerbating social, economic and environmental challenges – from food insecurity and gender inequity to environmental degradation.³⁴ Most of this population growth is concentrated in some of Africa's poorest countries, including Angola, Burundi, the DRC, Malawi, Mali, Niger, Somalia, Uganda, Tanzania, and Zambia.³⁵ High population growth puts significant pressure on

³² Caroline Delgado, Kristina Tschunkert and Dan Smith, "Food Insecurity in Africa: Drivers and Solutions," *SIPRI Research Policy Papers*, January 2023. <https://www.sipri.org/publications/2023/policy-reports/food-insecurity-africa-drivers-and-solutions>

³³ Abdulazeez Hudu Wudil, Muhammad Usman, Joanna Rosak-Szyrocka, Ladislav Pilar and Mortala Boye, "Reversing Years for Global Food Security: A Review of the Food Security Situation in Sub-Saharan Africa (SSA)," *International Journal of Environmental Research and Public Health*, November 2022, 19 (22). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9690952/>

³⁴ "World Population Prospects 2022: Summary of Results," *United Nations Department of Economic and Social Affairs*, 2022. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.un.org/development/desa/pd/sites/www.un.org.development.desa.pd/files/wpp2022_summary_of_results.pdf

³⁵ Abdulazeez Hudu Wudil, Muhammad Usman, Joanna Rosak-Szyrocka, Ladislav Pilar and Mortala Boye, "Reversing Years for Global Food Security: A Review of the Food Security Situation in Sub-Saharan Africa (SSA)," *International*

dwindling basic non-renewable natural resources, such as arable land and water, which are critical in the struggle against food insecurity.

J. Climate Change

In 2017, the United Nations Environment Programme (UNEP) identified Africa as the region most vulnerable to climate change due to its limited financial, scientific, and technological capabilities to adapt to the dangers posed by climate change, as well as its reliance on climate-sensitive and fragile economic sectors, such as rain-fed agriculture. Many of Africa's poorest countries depend heavily on agriculture for their economies, and climate change is widely recognized as one of the greatest threats to agricultural output and food security in the 21st century.

Climate change threatens to wreak havoc on food production by increasing the frequency and severity of extreme weather events and depressing agricultural yields. Floods are inundating agricultural land, drought is making crop cultivation impossible, and pests and insects are wiping out entire crop fields. Increasing climate variability, and extreme weather events such as droughts have led to crop failure, high food prices, disappearance or dwindling of water resources and poor health.

Moreover, climatic extremes may affect the availability of food in Africa by reducing the area of viable arable land suitable for crop production, thus leading to an increase in the incidence and number of undernourished individuals in Africa. Climate change also heightens the likelihood of locust plagues, which pose a serious risk to food security and livelihoods. The 2019–20 desert locust plague in East Africa – the worst of its kind in more than 70 years – was probably exacerbated by shifts in rainfall patterns and rainfall intensity, as well as heavy cyclone activity in late 2019.³⁶

K. The COVID-19 Pandemic

The COVID-19 pandemic exposed the chronic and systemic vulnerability among the poor and marginalized in Sub-Saharan Africa.

According to the Africa Common Position on Food Systems, "the COVID-19 pandemic has helped expose the intensification in poverty and inequality *with most households*

Journal of Environmental Research and Public Health, November 2022, 19 (22).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9690952/>

³⁶ Abdulazeez Hudu Wudil, Muhammad Usman, Joanna Rosak-Szyrocka, Ladislav Pilar and Mortala Boye, "Reversing Years for Global Food Security: A Review of the Food Security Situation in Sub-Saharan Africa (SSA)," *International Journal of Environmental Research and Public Health*, November 2022, 19 (22).

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9690952/>; Caroline Delgado, Kristina Tschunkert and Dan Smith, "Food Insecurity in Africa: Drivers and Solutions," *SIPRI Research Policy Papers*, January 2023.

<https://www.sipri.org/publications/2023/policy-reports/food-insecurity-africa-drivers-and-solutions>; Kevin Okotho Ouko and Mudock Oketch Odiwuor, "Contributing factors to the looming food crisis in Sub-Saharan Africa: Opportunities for policy insight," *Cogent Social Sciences*, 9 (1), 2023.

<https://www.tandfonline.com/doi/full/10.1080/23311886.2023.2173716#abstract>

balancing delicately efforts to put food on the table meal after meal. The COVID-19 control measures, especially the lockdown implied immediate inability for many householders to put food on the table."³⁷

Indeed, the COVID-19 pandemic created one of the worst production shocks to the food economy in Sub-Saharan Africa. The mitigation and suppression efforts employed as a result of the pandemic created both direct and indirect effects on Africa's food systems. Immediate consequences on the price of basic food items were profound. Food shortages resulting from disrupted global supply chain networks were the initial setbacks to a Sub-Saharan African food system that is not resilient to external shocks. The situation was adversely compounded by job losses, making it hard for households to earn the income necessary to purchase food. The combination of high prices and labor shortages consequently reduced agricultural production in the region. Beyond the immediate effects, the economic shocks triggered by the pandemic are expected to exacerbate food and nutrition security in countries affected by environmental disasters prior to the outbreak of the pandemic.³⁸

L. The War in Ukraine

The ongoing war in Ukraine, which began in February 2022, has led to historically sharp increases in the price of staple food items and it is likely to jeopardize the implementation of the Sustainable Development Goals, notably SDG 1 (No Poverty), SDG 2 (Zero Hunger), and SDG 12 (Responsible Consumption and Production). Russia and Ukraine are major global food producers and exporters. Both Russia and Ukraine account for 14% of global wheat production and provide nearly 30% of global wheat exports. Russia is the leading global exporter of wheat while Ukraine is the fifth largest. As a result, the Russia–Ukraine war has led to high food prices worldwide and exacerbated hunger in many countries in Africa.

Ukraine and Russia are key strategic trade partners to most countries in Sub-Saharan Africa through grain and fertilizer exports. Africa is the major destination for the 30% of global wheat exports by these two countries. Wheat is a hugely important food import for Africa, accounting for half of the continent's \$4.5 billion trade ties with Ukraine and 90% of Africa's \$4 billion trade with Russia. Moreover, 25 African economies import at least one-third of their wheat from Ukraine and Russia, 15 of which import more than

³⁷ "African Common Position on Food Systems," *African Union and African Union Development Agency*, July 2021. <https://www.nepad.org/publication/african-common-position-food-systems>

³⁸ Kevin Okotho Ouko and Mudock Oketch Odiwuor, "Contributing factors to the looming food crisis in Sub-Saharan Africa: Opportunities for policy insight," *Cogent Social Sciences*, 9 (1), 2023. <https://www.tandfonline.com/doi/full/10.1080/23311886.2023.2173716#abstract>; Caroline Delgado, Kristina Tschunkert and Dan Smith, "Food Insecurity in Africa: Drivers and Solutions," *SIPRI Research Policy Papers*, January 2023. <https://www.sipri.org/publications/2023/policy-reports/food-insecurity-africa-drivers-and-solutions>

half their wheat from these two countries. Russia and Ukraine also account for 12.5% of global maize supply and other items such as rapeseed, sunflower seed and oil.

The impact on food prices caused by disruptions to exports from these two major food-producing countries has been exacerbated by disruption to food production elsewhere caused by climate change-related weather extremes. Furthermore, the price spikes come on top of already rocketing food prices due to the Covid-19 pandemic, which caused unprecedented chokepoints and delays in global supply chains, further worsening the situation in Sub-Saharan Africa, the most vulnerable region globally.³⁹

Massive population growth, climate change, the COVID-19 pandemic and the war in Ukraine all demonstrate the fragility of Sub-Saharan African food systems.

7. Summary and Recommendations

Establishing food security is important for millions of people facing hunger and malnutrition in Sub-Saharan Africa and is crucial for the region's long-term prosperity in the 21st century, particularly in the face of climate change and rapid population growth. Yet, there are no easy solutions. The solution to food insecurity should be comprehensive and must take into account all contributing factors; as a result, achieving food security in Sub-Saharan Africa will take a long time – if at all possible.

However, some actions can be taken in the short term that may improve food security in Sub-Saharan Africa as a whole, or, at least, in specific countries or regions:

- A. Education and Training:** Human resources are a key to making progress in addressing food security since one of the challenges in working on food security in Africa has been the shortage of trained personnel. An educated and informed population is critical to the success of any policies and strategies targeting the contributing factors to food insecurity, especially in low-income and food-deficit African countries. Information, education and training allow farmers to make use of new farming knowledge and technologies. Therefore, Israeli companies, government, and research institutions can train and share knowledge with African farmers and African research centers and institutions on new irrigation technologies, food systems, and innovations in these fields and others related to food security.

³⁹ Kevin Okotho Ouko and Mudock Oketch Odiwuor, "Contributing factors to the looming food crisis in Sub-Saharan Africa: Opportunities for policy insight," *Cogent Social Sciences*, 9 (1), 2023.

<https://www.tandfonline.com/doi/full/10.1080/23311886.2023.2173716#abstract>; Caroline Delgado, Kristina Tschunkert and Dan Smith, "Food Insecurity in Africa: Drivers and Solutions," *SIPRI Research Policy Papers*, January 2023. <https://www.sipri.org/publications/2023/policy-reports/food-insecurity-africa-drivers-and-solutions>

- B. Growth of Small and Medium Farmers:** Small and medium-sized agricultural enterprises are another key factor in transforming food systems and improving food security in Sub-Saharan Africa. On the one hand, these enterprises are the region's largest employer, but three-quarters of them lack access to formal bank financing and are too large for microfinance. There is potential to transform subsistence small farmers into entrepreneurs with some training and investment. Israeli companies, government, and research institutions can specifically invest in these small and medium enterprises and farms and equip small farmers with the necessary tools to become entrepreneurs.
- C. Programs for Women:** Empowerment of women is another key factor to improving food security in Sub-Saharan Africa, as it is mostly women who are involved in all stages of food production. By elevating their value in society and providing them with the education and resources they need to manage their small farms, conditions can be created through which African women will be able to grow more food, feed a greater number of people and share their knowledge with others. Israeli companies, government, and research institutions can specifically target African women and provide them with the training and knowledge they need.
- D. Tehnological Transformation:** Improving soil quality and preserving fertile lands through modern irrigation and innovative technologies is another key factor to enhancing food security in Sub-Saharan Africa. Israeli companies, government, and research institutions can contribute by selling technologies and providing training in these areas. Fifth, developing alternative methods of food production, such as aquaculture, urban agriculture, seeds, etc., is also important in order to improve food security, especially in view of the region's high population growth and rapid urbanization process. Israeli companies, government, and research institutions can contribute by selling technologies and providing training in these areas. Israel should consider the establishment of a joint R&D fund with one of the African nations, and/or a third country (such as the USA, UAE or India), together with regional or international organizations who already fund similar programs.
- E. Regional Collaborations Initiatives:** Any of the countries in Sub-Saharan Africa share trans-boundary natural resources, such as rivers, lakes, pastureland, arable land, etc. that are subject to similar climate change impacts on livelihoods. In these circumstances, regional collaboration offers the best strategy for working together to safeguard common trans-boundary ecosystems. This approach can serve as a flexible and cost-effective solution for addressing food security problems as it strengthens the ecological foundations of food systems, increases the resilience of the systems to adverse impacts, and protects and restores critical natural resources that communities depend on. Cross-border coordination enables the development and implementation

of region-specific knowledge and tools. This approach corresponds with the Maputo Declaration and the Malabo Declaration and the objectives of CAADP. Israeli companies, government, and research institutions can contribute to or participate in the implementation of such regional or sub-regional projects in Sub-Saharan Africa.

- F. **Lean in:** Certain countries, such as Mauritius, Seychelles, and Rwanda, to name a few, are making progress in decreasing dependency on food imports. Israeli companies, government, and research institutions can support these efforts.

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