



## Food Security Challenges Amidst Socioeconomic Instability

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**Abstract:** *Global insecurity, encompassing political unrest, warfare, and environmental shifts, has a profound impact on food security, presenting significant challenges to global food systems.*

*This review aims to examine the multifaceted effects of global insecurity on food sustainability, investigating the interconnected relationships between insecurity factors and food systems, while proposing potential solutions to mitigate these challenges. The review synthesizes insights from a range of academic journals, policy reports, and case studies, encompassing diverse geographic regions and types of insecurity relevant to food security. Global instability has detrimental effects on food production, distribution, and availability. Political unrest and conflicts lead to migration and the destruction of agricultural infrastructure, while climate change exacerbates food shortages through extreme weather events. Precision farming and genetically modified crops offer potential solutions but are dependent on significant investment and supportive policies. Effective policy interventions, including investments in agricultural infrastructure, social protection, and peacebuilding, are crucial for strengthening food systems.*

*Global collaboration and resource sharing are key to the successful implementation of these strategies. Addressing food security amidst global instability requires comprehensive and coordinated efforts. Research into agricultural resilience, technological advancements, and the integration of social protection systems will be vital in fostering sustainable food systems that can withstand the pressures of global volatility.*

**Keywords:** *Agricultural resilience, Armed conflict, Food security, Global instability, Policy interventions*

### I. Introduction

Ensuring food security is consistently acknowledged as a critical concern for policymakers and researchers, emphasizing its significance in safeguarding the welfare of global populations (Verfuert et al., 2023; Bennett & Vokoun, 2023; Katoch, 2024). Food security has evolved significantly in its understanding over the years. At first, the main focus was on producing food, but it has now broadened to cover aspects like accessibility, consumption, and safety (Chen et al., 2023; Manikas et al., 2023; Calloway et al., 2023). The 1996 World Food Summit defined food security as the continuous supply of enough, safe, and nutritious food for everyone (Mishra, 2024). This fresh perspective extends beyond just producing sufficient food to guaranteeing its accessibility, demonstrating how food security is impacted by different socio-economic and political elements (Fanzo, 2023; Mishenin et al., 2023; Shebanina et al., 2023; Nkoko et al., 2024). Food security is becoming more critical in the current global setting due to the rising uncertainties across the world (Mrabet, 2023; Deininger et al., 2023; Mishra, 2024). Oğultürk (2021), Kozielec et al. (2024), and Olorunlana & Odi (2024) point out that climate change, migration, geopolitical conflicts, economic instability, and pandemics have worsened food insecurity. These difficulties have resulted in disturbances in worldwide food systems, leading to changes in the supply and reach of food.

The COVID-19 crisis exposed the vulnerability of global food distribution networks,

emphasizing the need for strong food systems that can endure disruptions (Laborde et al., 2020; Tinuola et al., 2022).

Food security continues to be at alarming levels in most low-income countries, particularly in Africa with an estimated 61.6 million food-insecure people in East Africa and that nearly 50 million people projected to face food insecurity in Western and Central Africa.

Conflicts and climate change continue to be the primary driver of food insecurity (World Bank, 2025). Political instability, armed conflict, and climate change create widespread insecurity on a global scale, leading to major disruptions in food security and presenting serious obstacles for global food systems (George & Adelaja, 2022; Mahlatsi, 2023; Fonjong & Wanki, 2024). Political unrest and warfare interfere with food production and distribution systems by displacing people, damaging agricultural infrastructure, and causing market instability (El Bilali & Ben Hassen, 2024). Climate change worsens food scarcity by impacting agricultural productivity and water availability through extreme weather events and changing climatic patterns (Obasi & Msughter, 2023; Ahmed et al., 2023). In agriculture, technological progress like precision farming and genetically modified crops present possible answers to these issues, albeit needing significant investment and supportive policies for successful adoption.

In regions like Sub-Saharan Africa, the Middle East, and Ukraine, which are susceptible to political turmoil, the effects on food security are significant (Leal Filho et al., 2023; Bedasa & Deksisa, 2024). Frequently, these regions suffer significant disturbances in food supply and farming, resulting in continual food scarcity and an increased likelihood of famine (Kerr, 2023; Bedasa & Deksisa, 2024). In these areas, the combined impacts of climate change, like extended droughts and erratic weather conditions, worsen the difficulties experienced by vulnerable populations that are already struggling (Ahmed et al., 2023; Brenton et al., 2024). To tackle food security in these particular situations, it is essential to address the immediate and future requirements of impacted populations by focusing on building local farming capabilities and establishing strong social safety nets (Fanzo et al., 2023). This narrative review aims to examine the intricate connection between global insecurity and food security, highlighting the multifaceted aspects of food security amidst current global challenges. The main objectives of these reviews are to: (1). examine the impact of various forms of global insecurity on food security. (2). discuss policy measures and interventions aimed at enhancing food security amid global insecurity. (3). assessing the role of international Organizations and Multilateral efforts in addressing food insecurity exacerbated by global instability. (4). highlight future research directions and policy implications to ensure sustainable food security.

## II. Research Methods

### 2.1 Study Focus

This narrative review utilizes a systematic approach to examine the intersection of global insecurity and food security. The methodology included an extensive literature search, review, and selection process to discover relevant studies and documents that offer information on different aspects of food security during global insecurity. The literature search was performed using the extensive Scopus database, which is one of the largest databases for peer-reviewed literature. The search query utilized was: ("global insecurity" AND "food security"). This search aimed to encompass a wide variety of documents discussing the complex connection between global insecurity and food security, covering topics like climate change, geopolitical conflicts, economic instability, and health crises (Airaoje et al., 2024). 1,025 documents were found in the first search. To guarantee inclusivity, more records were obtained from the publication announcements in appropriate academic newsletters and from

manual searches of references mentioned in important papers. After eliminating repeat entries, there were a total of 986 unique records. The selection procedure was carried out in two phases. Initially, the titles and abstracts of all 986 records were assessed to eliminate studies not related to food security or discussing unrelated topics like technical aspects of agriculture with no link to global insecurity. The first screening led to the elimination of 521 documents.

During the next phase, the remaining 465 documents were subject to a more thorough examination. This required examining the summaries and, if needed, the complete texts to assess their alignment with the goals of the review. Special focus was given to the usage of the terms "global insecurity" and "food security" in the studies. Research that did not connect political or economic transitions to food security or discuss the relationship between global insecurity and food security was not included in the analysis. This step reduced the number of relevant documents to 112.

## **2.2 Data Extraction, Analysis, Inclusion And Exclusion Criteria**

The 112 documents were analyzed qualitatively to identify the main themes and results. This consisted of categorizing the documents according to predetermined categories like the effects of climate change, political conflicts, economic uncertainty, and emergencies of food insecurity. The coding process involved iteration, enabling the improvement of themes with the occurrence of new insights from the literature. To maintain the strength of the review, the analysis also involved evaluating the methodologies and frameworks utilized in the chosen studies. This aided in recognizing shared methods and areas lacking in the current body of literature, leading to a thorough grasp of the present status of research on food security within the realm of global instability.

Criteria for inclusion: Research focusing on how factors like climate change, conflicts, and economic instability affect food security on a global scale. Articles, reports, and policy papers in English that have undergone peer review. Research studies offer real-world data, theoretical perspectives, or policy evaluations concerning food security. Exclusion Criteria:

Studies that only focus on agricultural production without discussing food security were excluded. Documents that do not meet the necessary methodological standards or do not align with the review's specific goals, non-English articles, and unpublished materials lacking peer evaluation were also excluded.

## **III. Results and Discussion**

### **3.1 Impact of Global Insecurity on Food Security**

Climate change, unstable weather patterns, rising temperatures, and more frequent extreme weather events are additional factors that affect agricultural productivity and food supply chains (Ahmed et al., 2023). Variations in food output lead to deficits and increased costs, worsening food insecurity (Wudil et al., 2022; Mrabet, 2023; Elsheikh et al., 2023). Over time, the agricultural sector has always faced the threat of varying weather conditions, for instance, the Dust Bowl of the 1930s in the United States, caused by severe drought and poor farming practices, led to massive crop failures, food shortages, and displacement of farming communities (Paul, 2022; Stephens, 2023). Weather extremes, economic shocks, and conflict/insecurity are all significant influences on food insecurity (see Table 1). Economic shocks include the indirect impact of COVID-19 in 2020 and 2021 and the effects of the war in Ukraine in 2022. Food crises result from multiple drivers; the authors based Table 1. on the predominant driver in each country/territory from the Global Report of Food Crises (GRFC). In this account conflict/insecurity has always been the major driver than the other two factors put together.

**Table 1.** Numbers of people affected by primary driver, 2018–2023, facing high acute food insecurity

	2018	2019	2020	2021	2022	2023
Conflict/ insecurity	73.9M 21 countries	77.1M 22 countries	99.1M 23 countries	139.1M 24 countries	117.1M 19 countries	134.5M 20 countries
Weather extremes	28.8M 26 countries	33.8M 25 countries	15.7M 15 countries	23.5M 8 countries	56.8M 12 countries	71.9M 18 countries
Economic shocks	10.2M 6 countries	24.0M 8 countries	40.5M 17 countries	30.2M 21 countries	83.9M 27 countries	75.2M 21 countries

Source: FSIN, GRFC 2019–2023.

Geopolitical conflicts, like wars and territorial disputes, interrupt the production and distribution of food (Nguyen et al., 2023; Brenton et al., 2024). Conflict areas frequently experience a reduction in farming, damage to buildings and roads, and the relocation of residents, all of which impede food accessibility (George et al., 2020; Linke, & Ruether, 2021; Hishe et al., 2024). The Syrian conflict, for example, has drastically reduced the country's agricultural output and food security (Linke, & Ruether, 2021; Ibrahim et al., 2024). Similarly, during World War II, widespread conflict led to severe food shortages, prompting rationing and food aid programs to prevent famine (Muojama, 2023; Piller, 2024; Messer & Cohen, 2024). International sanctions and trade restrictions imposed during conflicts can further limit food availability, as seen in North Korea during the 1990s, where economic isolation contributed to widespread famine (Noland & Haggard, 2023; Mohammadi-Nasrabadi et al., 2023; De Souza et al., 2024; Adkanian, & Khosravi, 2024). The Gaza and Ukraine wars have significantly contributed to global inflation by disrupting supply chains and energy markets. Nevertheless, Aondover, Onyejelem, and Garba (2024), analyzed the critical role of media in resolving conflicts through balanced reporting and fostering dialogue. Table 2. presents food inflation data from February 2024 to January 2025, focusing on countries and territories with inflation rates exceeding 30%.

**Table 2.** Food inflation Feb 2024 to January 2025

Countries/Economy	Feb -24	Mar -24	Apr -24	May -24	Jun -24	July -24	Aug -24	Sep -24	Oct -24	Nov -24	Dec -24	Jan -25
Palestinian Territories	43.6	51.4	34.5	36.4	33.4	30.8	36.9	78.3	115.2	121.0	80.1	
Nigeria	37.9	40.0	40.5	40.7	40.9	39.5	37.5	37.8	39.2	39.9	39.8	
Malawi	41.9	38.8	39.9	40.7	41.5	41.9	42.0	43.5	40.3	33.7	35.6	
Haiti	31.9	37.5	38.5	40.5	40.5	42.3	42.3	38.1	33.9	35.2	36.2	
Myanmar	50.5	60.6	53.7	61.5	65.9	58.8	71.3	75.8	83.4	76.8		
Turkey	71.0	70.5	68.4	69.9	68.2	59.0	44.4	43.5	45.1	48.9	43.6	41.5
Sudan			49.0	72.2	149.6	227.4	302.3	333.7	340.1	321.6		
Argentina	303.8	308.3	293.0	289.4	285.1	275.8	236.9	201.4	183.2	147.1	94.7	
South Sudan	116.0	186.0	64.5	246.0	368.0	368.0	387.0	101.0	106.0			

Source: (Extracted from) World Bank. 2025

The instability in the economy, caused by issues like inflation, unemployment, and market volatility, also weakens food security (Idisi, 2021; Shahid, 2023; Fotakis et al., 2024; World Bank, 2025). Financial downturns can decrease people's ability to buy healthy food, creating challenges in obtaining nutritious meals. The financial crisis in 2008 greatly affected food security by raising food costs and decreasing incomes, especially in developing nations (Zhang & Broadstock, 2020; Fontan-Sers & Mughal, 2024). The connection between economic downturns and food insecurity was also brought to light during the Great

Depression of the 1930s, demonstrating how widespread unemployment and poverty resulted in malnutrition and hunger in various regions globally (Gazeley et al., 2022; Matés-Barco, 2023).

Furthermore, the COVID-19 crisis amplified the weaknesses in worldwide food systems (Laborde et al., 2021). Lockdowns, limitations on transportation, and lack of workers have resulted in food supply chain disruptions, which have led to higher food prices and limited food access (Aday & Aday, 2020; Tinuola et al., 2022; Alabi & Ngwenyama, 2023). The pandemic has worsened the current inequalities, specifically impacting the food security of marginalized and vulnerable groups more than other populations (O'Hara & Toussaint, 2021; Dabone et al., 2021). The present circumstances mirror previous pandemics like the Spanish Flu in 1918, affecting food production and distribution due to widespread sickness and death among farmers. As posited by Akanle and Olorunlana (2014), religious institution like Christianity should rise up to the humanitarian task to assist both the vulnerable and the disabled. They also argued that viable policy should be put place to mitigate adverse effect of hunger.

### 3.2 Policy Measures and Interventions

Addressing the complex issue of food insecurity, particularly in the context of global insecurity, necessitates a comprehensive set of policy measures and interventions (Smith & Glauber, 2020; Berkowitz et al., 2024). Governments, international organizations, and civil society must work collaboratively to develop and implement strategies that enhance food security and mitigate the adverse effects of insecurity (Badewa & Dinbabo, 2023; Doggett, 2024; Anandi & Azis, 2024; Olorunlana & Odii, 2024). An important aspect to concentrate on is enhancing agricultural efficiency and sustainability by encouraging the adoption of innovative agricultural techniques like precision farming, drought-resistant plants, and effective irrigation which can greatly boost food output. In India, the utilization of drought-resistant crop varieties and modern irrigation methods has enhanced agricultural production and ability to withstand climate changes (Kumar et al., 2023; Rajesh et al., 2024). Also in Africa, AGRA assists smallholder farmers by giving them access to better seeds, fertilizers, and training on sustainable farming methods, leading to increased food production and security (McAlvay & Morgan, 2023; Elhassnaoui et al., 2023; Kadzamira et al., 2024).

Strengthening food supply chains is another critical intervention (Chiffolleau & Dourian, 2020; Kunz et al., 2023). Governments can implement policies to improve infrastructure, such as roads, storage facilities, and market access, which are essential for reducing post-harvest losses and ensuring that food reaches consumers efficiently (Stathers & Mvumi, 2020; Wijewardane, 2022; Binge et al., 2023). In Brazil, the Zero Hunger program significantly improved food distribution by investing in rural infrastructure and local food markets, reducing post-harvest losses and increasing food availability in underserved areas (Memon & El Bilali, 2020; Freitas et al., 2024). Enhancing transportation networks and reducing trade barriers can also facilitate the movement of food across regions, thereby improving food availability (Rossi et al., 2021; Lajuwomi, 2024). For example, the African Continental Free Trade Area (AfCFTA) aims to reduce trade barriers and enhance regional integration, which can improve food distribution across the continent (Apiko, et al., 2020; Kuchi & Msughter, 2023; Onuwa & Adedire, 2024).

Social protection programs play a vital role in safeguarding food security, especially for vulnerable populations (Lawson-Lartego & Cohen, 2020). These initiatives may consist of food aid, monetary grants, and nutrition schemes aimed at low-earning households, kids, and senior citizens (Filmer et al., 2023). In Ethiopia, the Productive Safety Net Program (PSNP) gives cash and food assistance to needy households, aiding with food insecurity and creating asset development and agricultural growth in communities (Woldemichael & Alamirew

Alemu, 2024). In areas affected by conflict, it is crucial to have peacebuilding and conflict resolution initiatives in place to regain food security (Vos et al., 2020). International cooperation and diplomatic initiatives aimed at resolving conflicts can create a more stable environment conducive to agricultural activities and food distribution (Ramcharan & Ramcharan, 2020). For instance, the Peace and Stabilization Operations Program (PSOPs) in the Democratic Republic of Congo has focused on restoring stability, which is crucial for rebuilding agricultural infrastructure and food security (Matthews, 2022; von Schreeb & Hegre, 2024). Supporting local food production through community-based initiatives and empowering local farmers can also contribute to resilience and recovery in post-conflict settings (Chavez-Miguel, et al., 2022). In Rwanda, post-genocide agricultural programs have empowered local farmers, increasing food production and contributing to national reconciliation and stability (Bayisenge, 2023; Izza & Anisa, 2024).

### 3.3 Role of International Organizations and Multilateral in Addressing Food

Collaboration on a global scale and forming partnerships with multiple countries are essential in tackling food insecurity. Global organizations like FAO, WFP, and IFAD are crucial in coordinating, offering technical help, and gathering resources to back global food security projects (Bande, 2021; Canton, 2021). For instance, the WFP's work in Yemen has supplied vital food aid to millions of individuals dealing with acute food insecurity as a result of the continuing conflict (Citaristi, 2022). Likewise, the FAO's Global Soil Partnership operates on a worldwide scale to enhance soil management techniques, crucial for sustainable agricultural productivity and food security (Erdogan, et al., 2021). Food Security Information

Network has identified certain countries and territories level of food insecurity to have aggravated to the case of emergencies (Figure 1. Countries in state of food emergencies in Millions). This is an extremely severe situation where urgent action is needed to save lives and livelihoods. This has been described as a condition where households face large food gaps, which are either reflected in high acute malnutrition levels and excess mortality or mitigated by use of emergency coping strategies, which may entail households selling their last breeding animal or their land or house (FSIN 2024). The number of individuals, affected by food insecurity across various countries and territories under the state of emergencies are as follows: Sudan has the highest number, with 6.3 million individuals affected, Afghanistan with 6.1 million. The Democratic Republic of the Congo ranks third, with 3.9 million, while South Sudan has 2.9 million. Pakistan and Bangladesh each report 2.2 million, and Somalia with 1.9 million. Haiti records 1.8 million, Myanmar reports 1.4 million. Both Palestine (Gaza Strip) and Kenya have 1.2 million, and Nigeria has 1.1 million (see Figure 1).

SUDAN	6.3
AFGHANISTAN	6.1
DEMOCRATIC REPUBLIC OF THE CONGO	3.9
SOUTH SUDAN	2.9
PAKISTAN	2.2
BANGLADESH	2.2
SOMALIA	1.9
HAITI	1.8
MYANMAR	1.4
PALESTINE (GAZA STRIP)	1.2
KENYA	1.2
NIGERIA	1.1

**Figure 1.** Countries/territories with over 1 million people in Emergency  
Source: Food Security Information Network (FSIN). 2024

International organizations are essential in alleviating food insecurity worsened by worldwide instability. Organizations like FAO, WFP, and IFAD lead global efforts in coordinating responses to food emergencies (Rother et al., 2022). The FAO offers essential assistance in enhancing agricultural methods, increasing food output, and promoting sustainable growth in at-risk areas (Ghosh & Braun, 2020). One area of focus for the FAO in Sub-Saharan Africa involves enhancing crop yields by transferring technology and building capacity to combat food insecurity caused by climate change and conflict (Canton, 2021; Ayanlade et al., 2022). In the same way, the WFP provides emergency food aid and nutrition initiatives in regions experiencing conflict and those impacted by natural calamities, aiming to improve food availability in areas facing urgent requirements (Citaristi, 2022). Global coordination through international partnerships is crucial for effectively tackling food insecurity on a worldwide level, as it allows for the pooling of resources and expertise to better respond to crises (Guttal, 2021; Arndt et al., 2024). Initiatives like the Global Food Security Strategy (GFSS), overseen by USAID, demonstrate how collaborative programs can unite governments, NGOs, and private sector entities to tackle food security issues (Badewa & Dinbabo, 2023; Eruaga, 2024). The GFSS aims to enhance agricultural productivity, bolster food systems, and promote resilience in at-risk communities through teamwork (Ujjwal, et al., 2024). These multilateral efforts ensure that resources are mobilized efficiently and that best practices are shared across borders, enhancing the overall impact of food security initiatives.

Regional cooperation also plays a critical role in tackling food insecurity exacerbated by instability (Mamasoliev, 2024). Regional organizations like the African Union (AU) and the European Union (EU) create policies and programs designed to meet the individual needs of their member countries. The Comprehensive Africa Agriculture Development Programme (CAADP) by the AU seeks to enhance agriculture, and food security in Africa by encouraging investments, boosting regional trade, and improving policy frameworks (Unya, 2023; Abiodun & Adewale, 2024). EU's aid schemes, like the European Development Fund (EDF), back food security initiatives in unstable regions, addressing both short-term relief and lasting progress (Szent-Ivanyi, 2021; Zajackowski, 2022). Regional cooperation enables specific interventions and promotes collaboration among neighboring countries to tackle common obstacles.

### **3.4 Future Research Directions and Policy Implications**

Future studies need to prioritize comprehending the subtle effects of different forms of insecurity, like political instability, population dynamics, armed conflict, and climate change, on food systems. A key focus of the study is the ability of farming methods to withstand challenges in areas affected by conflict (Garba & Msughter, 2023; Jaime et al., 2024). Studies could examine the effectiveness of different agricultural innovations and strategies in mitigating the effects of insecurity on food production, exploring the potential of climate-smart agriculture and sustainable farming practices to enhance resilience in volatile environments would provide valuable insights (Sari et al., 2024; Vishnoi & Goel, 2024).

Another important focus is on examining how technology affects food security amidst worldwide instability (Aonover et al., 2023; Ferguson, et al., 2024). Investigating the potential of digital technologies like mobile apps for farmers, remote sensing for crop monitoring, and blockchain for transparent supply chains to enhance food security outcomes in unstable areas could be a research focus.

Moreover, it is essential to engage in interdisciplinary research that combines viewpoints from sociology, economics, political science, and environmental studies to fully understand

the complexities of food security issues. Engaging in research with people from various fields can result in customized answers for particular local problems. Policy initiatives aiming to enhance food security against the backdrop of worldwide instability should be guided by the results of forthcoming studies. Governments and international organizations should prioritize policies that promote resilience, sustainability, and inclusivity within food systems. It is essential to invest in agricultural infrastructure. Efforts to improve transportation systems, storage facilities, and market linkages can significantly reduce food waste and improve food availability. Enhancing rural infrastructure is crucial for enhancing local food production and resilience amongst small-scale farmers (Sari, et al., 2024). It is also crucial to enhance social protection systems. Financial assistance, food aid, and nutritional support policies can help reduce the immediate effects of food insecurity on vulnerable populations. Furthermore, combining social protection with agricultural and economic development initiatives can lead to a more sustainable and inclusive food system (Lopushniak et al., 2024). In areas with conflicts, policies should center on promoting peace and resolving conflicts. Global diplomatic endeavors, combined with local community projects, can aid in bringing back stability and fostering conditions suitable for farming and distributing food. Promoting local governance systems and enabling communities to efficiently oversee their resources are crucial aspects of such strategies (Sabet & Khaksar, 2024). Collaboration on a worldwide scale is essential in tackling the systemic issues related to food insecurity. Collaboration between international organizations, governments, and civil society can pool resources, exchange successful approaches, and carry out holistic plans to improve global food security (Nosike et al., 2024).

#### IV. Conclusion

In conclusion, food insecurity remains a pressing global challenge, driven by three major factors: economic shocks, adverse weather conditions, and conflict. Economic instability, including rising inflation, has plunged millions into food emergencies, diminishing their ability to access and afford basic necessities. While adverse weather conditions, exacerbated by climate change, continue to disrupt agricultural production through extreme events, then, conflict and insecurity lead to displacement and the destruction of vital agricultural infrastructure. Addressing these interconnected challenges requires innovative solutions such as human security, precision farming and genetically modified crops, underpinned by substantial investments and supportive policies. Strengthening food systems will depend on targeted policy interventions, including investments in agricultural infrastructure, social protection programs, and peacebuilding initiatives. Ultimately, global collaboration and resource sharing are essential for mitigating the impacts of these drivers to achieving sustainable food security amidst persistent insecurity.

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