FSC

Issue Description

COMMITTEE	Futuristic Security Council
ISSUE	Preventing Conflict and Instability Arising from Global Food Scarcity in 2050
SUBMITTED BY	Lili Lantos, Deputy Chair of the Futuristic Security Council
APPROVED BY	Her Excellency Anna Takács, President of the General Assembly

Introduction

By 2050, global food scarcity is projected to become one of the most serious challenges threatening international peace and security, as rising pressure on global food systems increasingly overlaps with political instability, economic inequality, and environmental stress. Rapid population growth, which is expected to push the global population close to ten billion, will substantially increase global demand for food, while climate change, environmental degradation, water scarcity, and declining soil quality will simultaneously reduce the capacity of agricultural systems to respond effectively. Extreme weather events such as droughts, floods, and prolonged heatwaves are occurring more frequently and with greater intensity, directly disrupting food production, transportation, and supply chains across multiple regions. As food becomes more difficult to grow, transport, and distribute fairly and stably, competition over limited resources intensifies, increasing the risk of social unrest, political instability, and violent conflict.

Historical experience clearly demonstrates the strong relationship between food insecurity and political instability, particularly in regions already affected by poverty or weak governance. During the 2007–2008 global food price crisis, sharp increases in the cost of staple foods such as wheat, rice, and maize triggered protests, riots, and civil unrest in more than thirty countries, especially those heavily dependent on food imports and global markets. In many cases, governments were unable to stabilize prices or guarantee sufficient access to food, exposing structural weaknesses in governance systems and social safety nets. Similarly, the 2011 Arab Spring illustrated how rising food prices, when combined with unemployment, inequality, and long-standing political grievances, can act as a catalyst for widespread unrest, regime change, and long-term regional instability.

Looking toward 2050, current projections indicate that nearly two billion people could experience chronic food shortages, with Sub-Saharan Africa, South Asia, and parts of the Middle East identified as the most vulnerable regions. These areas often face a dangerous combination of rapid population growth, limited agricultural infrastructure, water stress, and ongoing conflict, factors that significantly increase their exposure to food-related crises. The consequences of widespread food scarcity extend far beyond humanitarian concerns, as food insecurity can drive forced migration, place severe pressure on urban centers and neighboring states, weaken national economies, deepen ethnic and political tensions, and contribute to the outbreak or escalation of armed conflicts both within and between states.

The international community has attempted to address these challenges through initiatives such as the United Nations Sustainable Development Goal 2 (Zero Hunger), alongside food aid programs, development assistance, and resilience-building efforts. While these initiatives have achieved limited success in certain regions, they remain insufficient to address the growing scale and complexity of global food insecurity, particularly in conflict-affected and climate-vulnerable areas. By 2050, preventing food-related conflict will therefore require sustained international cooperation, long-term investment in sustainable and climate-resilient agricultural systems, improved global food distribution mechanisms, fair access to technological innovation, and proactive policy frameworks capable of identifying and addressing food insecurity risks before they escalate into full-scale crises.

Definition of Key Terms

Food Security- A condition in which all individuals, at all times, have physical and economic access to sufficient, safe, and nutritious food necessary to maintain an active and healthy life.

Food Scarcity- A situation in which food availability is insufficient to meet the needs of a population, often resulting in rising prices, social pressure, and an increased risk of unrest or conflict.

Climate-Smart Agriculture (CSA)- Agricultural practices designed to increase productivity, strengthen resilience to climate change, and reduce environmental harm, including greenhouse gas emissions.

Hydro-Agriculture- Agricultural methods focused on sustainable water management, such as efficient irrigation systems, rainwater collection, and water recycling.

Food Price Volatility- Rapid and unpredictable changes in food prices caused by supply disruptions, climate impacts, or instability in global markets.

Global Hunger Index (GHI)- A measurement used to assess hunger levels based on undernourishment, child wasting, child stunting, and child mortality.

Conflict Multiplier- A factor that increases the likelihood or intensity of conflict in regions already affected by political, social, or economic vulnerabilities.

General Overview

POPULATION GROWTH AND RISING DEMAND

The global population is expected to reach nearly ten billion by 2050, a demographic shift that, when combined with existing inequalities in food access and production capacity, is projected to place unprecedented and long-term pressure on global food systems across both developed and developing regions. Demand for staple crops such as wheat, rice, and maize will rise significantly, as these crops remain the primary source of nutrition for a large proportion of the world's population. At the same time, dietary patterns in many regions are gradually shifting toward higher consumption of meat and dairy products, particularly in emerging economies, a trend that requires greater inputs of land, water, and energy when compared to plant-based food production, thereby intensifying competition over limited natural resources.

Urbanization is continuing at a rapid pace, with a growing share of the global population living in densely populated cities that are geographically distant from major agricultural regions. This development has increased reliance on long and complex food supply chains involving transportation, storage, and international trade, making urban populations especially vulnerable to disruption. Climate-related disasters, political instability, trade restrictions, or logistical failures can interrupt these supply chains, meaning that local shocks may quickly result in widespread shortages. The combination of population growth, changing diets, and urban concentration therefore places additional strain on global food systems and highlights the urgent need for strategies that ensure both reliable availability and fair distribution of food.

Beyond physical availability, economic access to food is expected to become an increasingly serious concern. Even when food is present on global markets, rising prices and declining purchasing power may prevent vulnerable populations from accessing sufficient nutrition. This gap between availability and affordability emphasizes that food scarcity is not only a production issue, but also a social and economic challenge with direct implications for political stability.

CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION

Climate change is widely recognized as one of the most significant drivers of projected global food scarcity, as rising average temperatures, shifting weather patterns, and the increasing frequency of extreme weather events continue to undermine agricultural productivity. Droughts, floods, storms, and prolonged heatwaves disrupt planting and harvesting cycles, damage crops, and destroy critical infrastructure needed for food production and transport. For example, extended droughts in the Sahel region have reduced crop yields and weakened rural livelihoods that depend heavily on rain-fed agriculture, while recurring floods in South Asia continue to damage rice fields and irrigation systems.

Environmental degradation further worsens these challenges by reducing the long-term productivity of farmland. Soil erosion, desertification, deforestation, and declining freshwater availability gradually limit agricultural capacity, particularly in regions where land and water resources are already under pressure. Water scarcity is becoming a critical constraint in many arid and semi-arid areas, where agriculture relies heavily on irrigation and shared water sources. Together, these environmental pressures make food production less predictable and more vulnerable to sudden shocks, increasing the risk of shortages that can contribute to social tension and political instability.

Over time, the combined effects of climate change and environmental degradation may reduce the ability of states to achieve food self-sufficiency, increasing dependence on imports and exposure to global market fluctuations. This dependence can weaken national resilience and heighten vulnerability during international crises.

FOOD SCARCITY AS A DRIVER OF CONFLICT

Food scarcity does not automatically lead to conflict, but it acts as a powerful stress factor that can significantly intensify existing political, social, and economic vulnerabilities. In countries characterized by poverty, inequality, or weak governance, sudden increases in food prices have frequently triggered protests and civil unrest, as households that already spend a large share of their income on food struggle to cope with rising costs. As food insecurity grows, public trust in state institutions often declines, increasing dissatisfaction and reducing political stability.

In conflict-affected regions, food has at times been deliberately used as a tool of power, with armed groups restricting access to agricultural land, food supplies, or humanitarian aid to control civilian populations. At the international level, food-exporting states may impose trade restrictions during crises to protect domestic food supplies, a response that can worsen shortages in import-dependent countries and increase diplomatic tension. Competition over fertile land and freshwater resources further raises the likelihood of both internal conflict and disputes between states.

Repeated food-related crises can normalize instability, making societies more vulnerable to conflict over time, particularly when food insecurity overlaps with ethnic divisions, political exclusion, or economic inequality.

MIGRATION AND REGIONAL INSTABILITY

Food scarcity is a major driver of population displacement, as individuals and families who can no longer secure sufficient food or income are often forced to migrate in search of better conditions. Both internal displacement and cross-border migration place considerable pressure on receiving areas, particularly when host communities already face economic or political challenges. Sudden population inflows can strain housing, food supplies, employment opportunities, and public services, increasing the risk of social tension.

In many cases, food-driven migration contributes to broader patterns of regional instability, as governments struggle to manage borders, provide humanitarian assistance, and maintain social cohesion. Long-term migration from drought-affected regions of Africa illustrates the close connection between food insecurity and regional security challenges, especially when displacement becomes prolonged rather than temporary.

TECHNOLOGICAL DEVELOPMENTS AND LIMITATIONS

Technological innovation offers important opportunities to reduce the impact of global food scarcity. Developments such as vertical farming, genetically modified crops, precision agriculture, and artificial-intelligence-based resource planning have the potential to increase productivity, reduce environmental damage, and improve resilience to climate-related disruptions. When applied effectively, these technologies can support more stable food systems and reduce dependence on environmentally vulnerable agricultural practices.

However, access to such technologies remains highly uneven. Many developing countries, fragile states, and conflict-affected regions lack the infrastructure, financial resources, and governance capacity required to adopt advanced agricultural technologies on a large scale. Without sustained international cooperation and fair access to innovation, these technological gaps may widen existing inequalities and reinforce food insecurity as a long-term driver of conflict and instability by 2050.

Major Parties Involved

The United Nations Security Council: Increasingly recognizes food insecurity as a threat to international peace and security and plays a central role in coordinating international responses. The Council addresses food-related instability through conflict mediation, peace operations, and cooperation with humanitarian and development agencies.

Food and Agriculture Organization (FAO): Provides research, policy guidance, and early-warning systems to anticipate food crises. The FAO promotes sustainable agriculture, climate adaptation, and long-term strategies to improve global food security.

World Food Programme (WFP): Delivers emergency food assistance and nutritional support in conflict zones and disaster-affected regions. The organization focuses on immediate crisis response while also supporting recovery and resilience-building efforts.

United States of America: One of the world's largest food producers and exporters, with a strong influence on global food markets and humanitarian assistance. Domestic agricultural and trade policies have a significant global impact.

People's Republic of China: Faces domestic food security challenges due to population size and urbanization while investing in overseas agricultural projects to secure long-term food supply stability.

European Union: Supports sustainable agriculture, regulates food trade, and invests in climate adaptation initiatives. Plays a major role in setting international food and environmental standards.

Vulnerable Regions (Sub-Saharan Africa and the Middle East): Highly exposed to climate change, population growth, and food import dependence, with limited infrastructure and governance capacity increasing susceptibility to food-driven instability.

Timeline of Events

2007–2008 - Global food price crisis triggers protests and unrest in over 30 countries.

2011- Rising food prices contribute to political instability during the Arab Spring.

2015- United Nations adopts Sustainable Development Goal 2 (Zero Hunger).

2020-2022 - COVID-19 pandemic disrupts global food supply chains.

2020s - Increasing frequency of climate-related crop failures in Africa and Asia.

2030s - Expansion of alternative farming technologies in developed regions.

2040s - FAO warns of accelerating global food insecurity.

2048 - Global summit on food security and climate resilience calls for urgent international cooperation.

2050 - World population approaches 10 billion: food scarcity recognized as a major driver of conflict and instability.

Previous Attempts to Solve the Issue

- Sustainable Development Goal 2 (Zero Hunger): Aims to eradicate hunger by 2030. Progress has been limited by conflicts, climate change, and economic instability.

- FAO Early Warning Systems: Monitor crop yields, food prices, and climate risks to predict crises, though their effectiveness is limited in politically unstable regions.

- Humanitarian Food Aid: WFP and NGOs provide emergency assistance, saving millions of lives, but primarily address short-term needs.

- Climate-Smart Agriculture Initiatives: Promote resilient and sustainable agricultural practices, but adoption is uneven due to financial, technological, and governance challenges.

Possible Solutions and Approaches

STRENGTHENING INTERNATIONAL COOPERATION

States should coordinate food trade, avoid harmful export restrictions, and share surplus food during crises. Binding international frameworks could reduce the risk of shortages escalating into conflict.

INVESTING IN SUSTAINABLE AND RESILIENT AGRICULTURE

Support for climate-smart agriculture, hydro-agriculture, drought-resistant crops, and localized food production can reduce long-term vulnerability.

PROMOTING TECHNOLOGICAL INNOVATION

Equitable access to advanced technologies, including vertical farming, precision agriculture, and AI-based monitoring, can enhance productivity and resilience globally.

CONFLICT PREVENTION AND MEDIATION

The UN should strengthen mechanisms to prevent disputes over food and water, mediate conflicts, and ensure that food is not used as a tool of political or military leverage.

EARLY WARNING AND RAPID RESPONSE

Global monitoring of climate risks, crop yields, and food prices can allow for swift interventions before local crises escalate into regional instability.

INTEGRATING FOOD SECURITY INTO SECURITY POLICY

Recognizing food scarcity as a security issue allows governments and international bodies to include preventive measures in planning, ensuring crises are mitigated before contributing to larger conflicts.

Bibliography

https://www.fao.org

https://www.fao.org/giews

https://www.wfp.org

https://www.wfp.org/publications

https://hungermap.wfp.org

https://www.wfp.org/global-hunger-crisis

https://sdgs.un.org/goals/goal2

https://sdgs.un.org/goals

https://unstats.un.org/sdgs

https://www.un.org/development/desa/pd/

https://www.worldbank.org/en/topic/agriculture

https://www.worldbank.org/en/topic/climatechange

https://www.worldbank.org/en/topic/food-security

https://www.ifpri.org

https://www.globalhungerindex.org

https://www.ipcc.ch

https://www.ipcc.ch/srccl

https://www.fsinplatform.org

https://www.unhcr.org/what-we-do/build-better-futures/climate-change-and-displacement

https://www.sipri.org

https://www.oecd.org

https://www.ifad.org

https://www.ifad.org/en/web/latest

https://www.unep.org

https://climate.nasa.gov

https://earthobservatory.nasa.gov

https://www.journals.elsevier.com/global-food-security

https://www.journals.elsevier.com/food-policy

https://www.journals.elsevier.com/world-development