

Starvation Amidst Strife: The Rise of Food Insecurity in Conflict Zones

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Abstract

The Geneva Academy monitors 110 ongoing armed conflicts, most lasting over 50 years. Disputes take many forms in international conflicts; however, this literature review will primarily focus on the food insecurity crisis in international armed conflicts, namely the Russo-Ukrainian and Israel-Hamas Wars. International armed conflicts affect food insecurity in various ways, from economic restrictions to farmer displacement and soil pollution. This literature review analyzes the history of the aforementioned international conflicts and the role of food insecurity in them. It also identifies countermeasures currently being implemented to combat food insecurity and potential solutions to mitigate the stress it causes. Several themes in the food insecurity crisis of our international conflict target regions were identified through research, which concludes that global conflicts contribute to food insecurity in various ways. Many policies are currently being implemented to increase food access and production in the targeted areas, some more effective than others. Of all the policies being implemented, foreign aid designated for agricultural organizations and cultivating programs has shown to be the most practical and efficient solution. In addition to foreign aid, agricultural strategies of bio-engineering, including breeding biodiversity, incorporating seed banks, and utilizing aquaponics in households, along with protective economic policies, were solutions that could have promising results in the struggle against food insecurity.

Introduction

Food insecurity and malnutrition are among the leading causes of death in today's global landscape. It occurs when civilians lack food with sufficient nutrition to meet basic health needs. Food insecurity is a complex issue due to the numerous factors surrounding it: political, socio-economic, cultural, and environmental. Due to various food insecurity crises caused by recent wars, civilians have been starved, malnourished, and impoverished, worsening the consequences of international armed conflicts.

Food insecurity in armed conflicts is often overshadowed due to the devastation and war casualties of international disputes. However, while public facilities can be reconstructed and injured people can be healed, starvation and rising food prices take ample time and effort to return to their regular rates, which are scarce in these regions. Food prices have surged since the invasion due to the high demand and low supply from farmland destruction and pollution.

This paper analyzes research articles on international armed conflicts to propose

practical solutions that can be applied to global conflicts. In addition, documents focused on the Russo-Ukrainian will be examined to identify recurring motifs of food insecurity and solutions that are being implemented. Factors of foreign international aid, agricultural bioengineering, and protective economic policies will then be explored as possible implementations to help food insecurity in deprived areas. Policy benefits and limitations will also be considered when evaluating a solution's effectiveness. These steps help identify the extent to which international armed conflicts impact food security and the scarcity of civilians residing in the areas, as well as sustainable agricultural strategies that can be implemented to address these challenges.

Problem Statement

The Sustainable Development Goals (SDGs) were established during the United Nations Conference on Sustainable Development in Rio de Janeiro 2012. The United Nations created these goals to address environmental, economic, humanitarian, and political problems by 2030. The SDGs include general goals such as “No Hunger” and “No Poverty,” as well as complex objectives including “Responsible Consumption & Production,” “Partnership for the Goals,” and “Industry, Innovation, and Infrastructure,” which will require a comprehensive and coordinated effort (United Nation [UN], n.d.). Food insecurity contradicts the fundamental objectives of the “No Hunger,” “Good Health & Well Being,” and “No Poverty” goals established by the UN (UN, n.d.).

International armed conflicts have detrimental effects on civilians and contribute to problems such as food insecurity and resource scarcity. These challenges are exacerbated by a lack of sustainable agricultural strategies to ensure food security for those in need during emergencies. The discourse of food insecurity is crucial as it should not impede an individual’s access to food, regardless of prevailing political, economic, and social circumstances. Starvation has adverse impacts, as the human body cannot function optimally without proper nutrition. All individuals need access to adequate nutrition to live a healthy life, even in times of conflict.

Methods

Several complex factors contribute to the difficulty of addressing food insecurity in armed conflicts. First, the search of databases such as Google Scholar and EBSCO Information Services was used to narrow the search for civilian treatment during war-related emergencies. The keywords to search in these databases were “starvation,” “food insecurity,” “government,” “agriculture,” and “aid.” Quotations around these terms are crucial as they provide articles that directly contain them. After gathering relevant information from databases, the next step was to brainstorm the process to map out thoughts on diagrams. The Fishbone Diagram helped define the causes of food scarcity among civilians in armed conflicts as it encouraged in-depth analysis of why food scarcity exists and the factors that can benefit or worsen the conditions of the conflict.

On the other hand, the Force Field Analysis helped to analyze different solution ideas by separating the reasons for and against each solution. It was advantageous because it

allowed active thought to weigh the pros and cons. The findings presented in this paper are derived from scholarly reviews and research articles that have influenced the proposed strategies to address food insecurity.

Background

The start of the recent Russo-Ukrainian conflict and the Israel-Hamas conflict date back to the end of major wars in the 1900s. Although these two conflicts are similar in this sense, the progressions of how past tensions led to the current wars are very different. The two wars have also led to food insecurity, both within the countries involved in the conflict and globally, which is an issue to address.

The History of the Russo-Ukrainian War & How it Worsened Food Insecurity

The Russo-Ukrainian War, which officially began with Russia's invasion on February 24, 2022, started with tensions between the two nations from the end of the Cold War (Masters, 2023). During the Cold War, Ukraine was essential to the Soviet Union. Ukraine's vast lands of black soil, specifically Chernozem, the world's most fertile soil, played a crucial role in agricultural production. However, when Ukraine announced its independence from the Soviet Union in 1991, the Ukrainian government wanted their nation to align closely with Western institutions such as the European Union (EU) and North Atlantic Treaty Organization (NATO). This decision led to an internal division within the country, with a side that supported the integration with Western institutions and a side in Eastern Ukraine that wanted to remain close to Russia. In 2014, Russia invaded Crimea, a peninsula in Ukraine, to arm and aid the pro-Russian separatists. Russia was able to take control over this area, and since then, they have been continuing to provoke the border along Ukraine. Then, on February 24, 2022, Russia launched a full-scale invasion in hopes of ending Ukraine's Western integration.

The United Nations Food and Agriculture Organization predicts that they will not be able to meet their "Zero Hunger" goal by 2030 because of the war's impact around the world. Since the start of the war, the Food Security Information Network's Global Report on Food Crises reports that 11 million Ukrainians have struggled with food insecurity since 2022. Food insecurity has also risen in other countries, especially those in the Middle East and North Africa that rely heavily on Russia and Ukraine's exports. For example, Lebanon is a significant wheat importer of Russia and Ukraine, and the war has heightened their food inflation and hunger (Yazbeck, 2022). Findings from a study on war-caused food insecurity in Lebanon show that the majority of Lebanese households eat fewer than two meals a day and that one in four households suffers from severe food insecurity. Before the war, Ukraine was a major exporter for over 400 million people, with numerous crops such as wheat, corn, and barley that grew on over 100 million acres of land. However, Russia has been targeting Ukraine's agricultural production infrastructure, including farmland, warehouses, and fields, since the war started. The UN estimates that the total damage to Ukraine's agriculture is around \$40.2 billion. This total also includes the war's prevention of Ukrainian farmers growing crops and exporting them to other countries.

Currently, the Ukrainian government is trying to address food insecurity caused by the

war. One of the major projects is the humanitarian demining project that aims to clear landmines off of fields used for agricultural production so those areas can be safe to use again (Riquier & Garbino, 2023). The landmines discourage farmers from producing crops because of soil contamination caused by the mines and the fear of getting injured. The State Emergency Service of Ukraine (SESU), the Ministry of Defence, and the State Transport Special Service have collaborated to combat this issue and restore agricultural production. Ukraine's government plans to establish 300 demining teams under SESU and deploy around 4,750 personnel from the Ministry of Defence for demining operations, which are crucial for ensuring safe crop production and bolstering food security.

The History of the Israel-Hamas War & How it Worsened Food Insecurity

Since 1922, Palestine has been controlled by Great Britain. However, after World War II, Britain withdrew their control, and together with the UN, they decided to split Palestine into two and establish one area as Israel for a Jewish community (Global Conflict Tracker, 2024). This split was part of the plan called the United Nations Resolution 181, and although it was passed to create peace, it sparked territorial tension that led to the Israel-Hamas War today. In 1948, when Israel was first established, there were many other religious groups living alongside the Jews. These groups included an Arab majority and other minorities, including Christians. They referred to themselves as Palestinians as they did not want to give up their land to establish Israel, a Jewish state. Their strong rejection of Israel led to a war. However, Palestine lost the war and ended up with less land than originally planned. Today, Palestinians mainly live in two areas, the Gaza Strip and the West Bank, which were areas captured by Israel in 1967. The Israeli government has authority over these two areas, including the Gaza Strip, where it is heavily controlled, according to the Human Rights Organization (Global Conflict Tracker, 2024). In 2006, a group known as the Harkat al-Muqawama al-Islamiya (Hamas) won local elections and rose to power to control the Gaza Strip. The United States and several other countries, including the United Kingdom, considers Hamas as a terrorist group. Hamas does not recognize Israel as a country and denies its existence as they believe Palestine should cover the whole area.

The ongoing conflict in the Gaza region has resulted in food shortages among civilians, mainly attributed to blockades at strategic points. Food insecurity has increased since the start of the conflict in Gaza, and they are experiencing shortages of water and medicines. The need for humanitarian assistance for Gaza is a continued topic for discussion (Global Centre for the Responsibility to Protect, 2024). It is found that 97% of groundwater in Gaza is deemed not consumable for humans, and 339 hectares of greenhouses in Gaza have been destroyed. The ability to produce food has been severely limited. (United Nations, n.d.).

From June 2007 until now, Israel has imposed a blockade on the Gaza Strip after hostilities with Hamas. This significantly restricted the existing movements of the Gaza Strip in terms of land, sea, and air as it limited the number, specified categories of people and goods allowed through the Israeli-controlled crossings. For example, the volume of truckloads entering Gaza in the first five months of 2022 was around 8,000 per month, about 30% below the monthly average for the first half of 2007, before the blockade. This is an issue as the population has grown by more than 50% since then. Israeli forces have restricted access to

areas within 300 meters of the Gaza side of the perimeter fence with Israel (UNICEF, 2022). This causes food insecurity because areas beyond the perimeter by several hundred meters are deemed unsafe, preventing and discouraging agricultural activities (OCHA, 2015). In addition, Israeli forces have restricted access off the Gaza coast, which currently only allows fishermen to access 50% of the fishing water. Coupled with only being allowed to fish six nautical miles or less offshore, most of the fish are at least nine miles out at sea (UNICEF, 2022). From the blockade imposition in 2007 through 2022, 292 of the water wells in Gaza used for both domestic consumption and farmlands were damaged or destroyed. Approximately 81% of the water extracted from Gaza aquifers did not meet the World Health Organization's water quality, inhibiting water usage in agriculture to grow crops (UNRWA, n.d.). This violates goal number six of the United Nations' SDGs, which is to ensure the availability and sustainable management of water and sanitation for all.

Comparison of the Two Conflicts' Current Food Insecurity Situation

There are several similarities alongside the many differences between the Russo-Ukrainian and Israel-Hamas Wars, as they both have an effect on food insecurity for numerous people around the world. A notable similarity of the combat aspect of the war is the bombing tactic used to ruin the lands to grow crops. Agricultural land is an integral part of the lifestyles of civilians and the economy, and its destruction because of bombings led to hardships in gaining access to food in both conflicts. During the 2014 Gaza War, which is known as one of the deadliest conflicts of the Israel-Hamas war, thousands of acres of farmland and other agricultural sectors were destroyed. This was not a mere coincidence, as agricultural land is constantly being targeted for military operations because of its grand impact on civilians. Similarly, since Ukraine is primarily an agrarian economy, ruining agricultural productivity with bombs takes away the primary source of their revenue. This causes Ukraine to depend on its European neighbors for more food, leading to trade imbalances. Russia targets this since trade imbalances cause tensions that will slowly encourage Ukraine's European allies to lose their support.

Russo-Ukrainian War Current Situation

Food and fertilizer prices have remained high since the initial increase in 2022, making it much harder for local Ukrainians to afford the necessary resources to cultivate crops independently (Abay et al., 2023). Additionally, the once-fertile soil has been polluted by the leaking chemicals of weapons, adding to the economic challenges (Filho et al., 2023). Trade has been reduced from what it once was in 2022 since more efforts are being focused on the military front of Ukraine. As of June 20, 2024, North Korea allied with Russia, supporting Russia's actions in Ukraine. The alliance will significantly increase opposing military presence in Ukraine, exacerbating the issues of weaponry pollution and reduced agricultural presence.

Russo-Ukrainian War Present Solutions

Economic solutions are being implemented to combat food insecurity in Russia and Ukraine. Economists have suggested that citizens avoid panic buying and purchasing, as they

correlate well with spiking food prices (Hellegers, 2022). Additionally, economists have advised that the Russian and Ukrainian governments avoid self-sufficiency solutions due to their dependence on exports for revenue and resources (Abay et al., 2023). The global market is more stable than a national market because of its diverse sectors, mitigating the risk of economic crashes. Keeping food prices low minimizes the severity of the food insecurity crisis. Still, it fails to entirely counter the diminished food production caused by farmer displacement.

Israel-Hamas War Current Situation

In July 2024, the war still rages on for control of the Gaza Strip, with each attack harming public infrastructure and communities. The reciprocating retaliation damages hospitals and food banks, killing and wounding Palestinian and Israeli civilians while limiting access to food. Moreover, the political instability in West Asia has diminished food production in Palestine and Israel through farmer displacement and soil pollution from weapon debris and chemical leakage.

Israel-Hamas War Present Solutions

The Israel-Hamas War has resulted in casualties and displacement, which, similar to the Russo-Ukrainian, halts agricultural cultivation in favor of safety. Nevertheless, solutions have been implemented to limit the damage of conflict-driven food insecurity. For example, nutritional interventions are integrated into the national food and health sectors' response plans, which target and better assess the impact of aid. The plans include initial rapid assessment, regularly mapping service needs, food security, and nutrition surveillance for humanitarian settings (Hasoun et al., 2024). The interventions allow for extensive treatment of food insecurity issues in Palestine and Israel by identifying areas that need rapid treatment and then efficiently directing humanitarian efforts to those areas. While these solutions may not eliminate food insecurity in Israel and Palestine, they do successfully limit some damage in both territories.

Solutions

The environment in which armed conflicts occur must be evaluated in food-insecure areas. Soil disruption in conflict areas lowers cultivation rates and decreases agricultural production. These unstable conditions for growing foods jeopardize the stability and health of civilians. Civilians continue to suffer from the lack of resources, impacting their country's long-term development. Therefore, civilians must rely on international organizations and foreign aid to support them. They should also consider investing resources in bioengineering methods and economic protective measures.

Solution 1: Foreign Aid Organization Projects

World Food Programme (WFP)

The World Food Programme (WFP) is a UN humanitarian organization that assists people who live in areas recovering from conflict by combating global hunger (World Food

Program, 2024). It also works to donate and fund acts of support to these places, such as providing monetary assistance for developing countries. The WFP's efforts contribute to facilitating the recovery of rural lands owned by families to restore agricultural stability (World Food Programme, 2024).

WFP's Involvement in Ukraine

Reestablishing agricultural spaces is essential for the stable growth of Ukraine's fertile lands. The conflict exacerbates the lack of nutritional resources as weapons and military vehicles ravage them. In order to combat limited resources, the WFP provides strategies to support the development of more sustainable agricultural spaces in Ukraine. Ukraine's once flourishing soil and land have been transformed into severe nutrient-depleted lands. Plant and animal habitats have been destroyed, with soil and groundwater being depleted. The WFP has made efforts to clear mines and explosive remnants from the agricultural lands.

The WFP aids Ukrainian civilians by making and sending food packages to those who have trouble accessing food. They provide food to civilians and work to strengthen the economy simultaneously by supporting local businesses (Yang, 2024). Eighty percent of the distributed food comes from partnerships with local Ukrainian farmers and shops, which aims to stabilize the economy that the war has hurt. One of the bakery owners who partners with the WFP in transporting bread to Ukraine civilians says, "We deliver to villages where there is no electricity, gas or water, to people in destroyed villages left without anything. We see how much value our bread has for these people" (Bryant, 2023).

In its efforts to assist conflict-affected areas, the WFP tries its best to remain impartial. This allows them to help more people with their humanitarian needs. Excluding discrimination, the WFP provides anyone and everyone with food and other life-saving supplies. Aiding people with supplies, regardless of their views on conflicts, is one of their main principles.

WFP's Involvement in Gaza.

The WFP is aiding civilians in Gaza, although they are facing more struggles compared to Ukraine. This program has been providing food deliveries to civilians in Gaza because there is a great extent of food insecurity in that region, where 96% of the population is struggling to find access to food (WFP, 2024). However, it has been challenging for the WFP and other aid agencies to reach civilians because of blockades and the continuous fighting in the area.

The WFP has been assisting one million people in Gaza every month. Additionally, they use methods to aid people affected by the Hamas-Israel War by organizing donations for supply boxes. For example, the WFP launched a program where a month's worth of food is donated for \$75 worth of donations in Gaza. The program supplies people who are food insecure, ensuring that civilians have relatively straightforward access to food. On April 13, 2024, Gazans were able to eat bread for the first time after six months because of the WFP when they supported four local bakeries by providing them with ingredients such as flour,

sugar, and yeast.

In order to prevent casualties, drones are used as a tool for agricultural strategies for the WFP. Drone technology is being analyzed to monitor crops and livestock to support local smallholder farmers. (World Food Programme, 2024). This strategy helps preserve the agricultural system efficiently since drones can monitor crops and livestock much faster than manual labor. This method also helps prevent the risk to human lives since the drones would be going out in the conflict zones instead of workers.

Food Producer Network (FPN)

The Food Producer Network (FPN) is another organization that aids smallholder farmers, fishers, and other food businesses by constructing resilient local food systems through crop diversification. Creating a resilient local food system helps agricultural stability and food security. Supporting farms in times of conflict will give chances for long-term food production and provide greater agricultural yield.

World Central Kitchen (WCK)

The World Central Kitchen is another organization that helps with food insecurity by establishing field kitchens in food-insecure areas. Meals are distributed to people experiencing humanitarian and climate crises. The WCK provides refugees with meals prepared by restaurant chefs to combat food insecurity by implementing projects to relieve the dire need for food. Their efforts show dedication by ensuring everyone has access to meals with nutritional benefits (World Central Kitchen, 2024).

WCK's Involvement in Ukraine.

The WCK partnered with Ukrainian chefs to prepare local dishes and meals for their community in a project called “#ChefForUkraine.” This project, along with other fundraising efforts from the WCK, raised 25 million meals for civilians in Ukraine (World Central Kitchen [WCK], 2022). Serving local foods eliminates cultural differences in food production, enabling WCK to understand civilian dietary needs without the limitations of cultural food preferences. Additionally, the WCK supplies local restaurants with ingredients to cook hot meals (World Central Kitchen, 2023). Supplying fresh meals to civilians helps weaken the hold that food insecurity has on people and provides them with more resources to recover from the aftermath of the conflict.

WCK's Involvement in Gaza.

The WCK recently restarted its operations after the attack on April 1, 2024, that killed seven members of the organization. Despite this setback, WCK continues its operations in Gaza. Blockades in transportation systems that enter Gaza have consistently prevented WCK from providing meals to civilians directly. Instead, Southern and Central Gaza field kitchens have been established to distribute food, which is similar to how WFP has placed field kitchens in those areas. More than 70 community kitchens were built. Despite the circumstances of the

blockades, the WCK has provided 50 million meals in Gaza by also utilizing the air and sea which avoids land blockades (World Central Kitchen, 2024).

Additionally, the WCK works with the Food Producer Network (FPN) to improve food security sustainability by reducing food waste, optimizing resource usage, and strengthening food economies (World Central Kitchen, 2022). Despite the conflict, sustaining economies would help enforce stronger control over agricultural developments.

Furthermore, by utilizing the previous projects in which foreign organizations have participated in, the proposal of a project is given to minimize the effects of food waste and decrease food insecurity in conflict areas. A potential strategy to limit the amount of food insecurity is to utilize cosmetically imperfect fruits and vegetables. The size, shape, and lack of physical blemishes are the standards that allow the produce to get to markets. More than 20 billion pounds of fruits and vegetables are wasted in the U.S. because they do not meet an excessive standard. Unapproved fruits and vegetables are thrown out, producing carbon emissions as they rot. A theoretical solution is suggested to limit wasting food. The WFP and WCK could redirect perfectly healthy produce to field kitchens as ingredients for meals that could be provided in conflict zones.

Changes in produce inspections could create issues for unsafe pathogens. Nevertheless, 40% of U.S. produce is thrown out only for cosmetic reasons and not for safety reasons (Kateman, 2020). Another complication of this project is that organizing this idea requires more hands than WFP and WCK can acquire. Considering these limitations, this idea is theoretical and has yet to be applied to combat food insecurity in conflict areas.

Limitations of Foreign Aid

A limitation of applying foreign aid to conflict areas is the loss of autonomy in a government, taxpayer funding, and resources the organization could use to help itself. An increase in foreign aid correlates with an increase in reliance. In contrast, the WFP is a part of the UN, and its resources are used towards the SDGs. This means that the legal agreement of the SDGs is a main priority to the UN.

Solution 2: Agricultural Bioengineering

Foreign aid in the form of food delivery is insufficient for the amount of agricultural developments that need to be implemented. A more long-term solution should be proposed, which is where the International Fund for Agricultural Development becomes crucial for the ability to progress.

International Fund for Agricultural Development (IRAD)

The International Fund for Agricultural Development (IRAD) has an ongoing program to aid the West Bank's economic growth in rural production. The agricultural cultivation and marketing opportunities for the profitability of smallholders are trying to be more developed. The program's goal is to help with the adaptation of agricultural practices of land and water.

After IRAD evaluated the impacts of the changing climate, the effects of COVID-19, and quickly rising inflation, food insecurity was spotlighted. The IRAD developed the Crisis Response Initiative (CRI) to support producers affected by the conflict in Ukraine. The CRI helps access information needed to maintain food security, including agricultural tactics. The CRI could inform local farmers to utilize methods that are effective in nutrient-depleted soils.

Furthermore, organizations like the Agriculture Resilience Initiative (ARI) apply great efforts into helping agricultural production and exports to help food insecurity in Ukraine. The ARI could invest their time with local seed banks in cultivating information on breeding techniques for genetic diversity. The Union of Agricultural Work Committees (UAWC) expands plant biodiversity by using bio-engineering, which could create resilient seeds that can be grown locally.

The IRAD invests in improving soil and rainwater-harvesting facilities. They should work with treated wastewater (TWW) programs. TWW could help recycle contaminated water from the conflicts to irrigate crops in a greater quantity. Rainwater facilities could be used to recycle contaminated water for the conflicts. TWW increases production, stating, “Using treated wastewater increases crop quantity and quality while improving the market. TWW irrigation of crops is highly beneficial in water-scarce countries.” (Al-Khatib, Alsa'di, Mahmoud, 2024). Many of the listed organizations should theorize about applying their services to each conflict. However, there are limitations to the solutions mentioned. The amount of labor needed from the UN could be considered irrational. Although this limitation is considered, the UN has financial funds of \$3.59 billion that could be contributed to this project (United Nations, 2023).

Agreements on Safe Spaces for Agricultural Development

Despite the disagreements of blockades in transporting goods, negotiating safe zones for agricultural growth should be examined for feasible success. Possible negotiations of safe spaces or areas for agricultural and livestock spaces could alleviate food insecurity in the Russo-Ukraine and Israel-Hamas conflicts; if both sides of the conflict could create an agreement on a space for growing produce, overall food insecurity would decrease. While no safe spaces have been negotiated for agriculture specifically, the al-Mawasi region of Gaza was designated as a safe space for Palestinian civilians (Reed, 2024). The prospect of safe spaces for cultivation is applicable, as Israel-occupied territories in Gaza were designated by Israeli occupation forces for safety. This shows the possible practical efforts of this strategy. Although, we understand that specific conflicts may make negotiations an unavailable concept.

Alternative Growing Medium

When the environment's soil is unfit for growth, growing in water is a possible solution that could be examined. Aquaponics is the process of growing plants and fish in the same system. The fish's waste is used as fertilizer for the plants to grow, so portable aquaponics for an agricultural growing method is suggested, along with vertical farming for less land need and an access-controlled environment. Farmers can cultivate crops without heavily relying on high-priced fertilizers and instead use natural fertilizers in fish biowaste.

Additionally, the Food and Agriculture Organization of the United Nations (FAO) has tested aquaponics methods in the Gaza Strip. The climate conditions and unsteady access to irrigation in Gaza prevented active cultivation in the soil. With that information, aquaponics were implemented in households from January 2012 through January 2013. The program's results seemed successful, except for limited informative knowledge of agricultural methods for the households, which affected the productivity of the growing produce. (Food and Agriculture Organization of the United Nations [FAO], 2016).

Solution 3: Proposed Protective Economic Policies

National governments could implement Protective Economic Policies to combat food insecurity. Protective Policies have already been introduced in Ukraine and Russia, such as avoiding panic purchasing and hoarding food products. The success of these policies is not limited to the Russo-Ukrainian War and can be expanded to the Israel-Hamas conflict by implementing solutions. For example, international trade sanctions should not be applied to fertilizer and crops due to the importance that they hold in this issue; these countries rely on exporting goods like crops, oil, and natural gas for agricultural resources. Imposing international sanctions will intensify the food insecurity crisis, something that should be avoided (Abay et al., 2023). Additionally, countries affected by food insecurity should reduce tariffs to weaken tariff barriers, encouraging other countries to trade with them (Filho et al., 2023). Both solutions foster international trade, increasing the Gross Domestic Product (GDP). A higher GDP allows countries to invest more funding into other solutions, like aquaponics. These protective economic policies will help reduce poverty and starvation rates in affected countries, assisting in the first two Sustainable Development Goals of No Poverty and Zero Hunger.

Limitations of Proposed Protective Economic Policies

While it is plausible that these policies can reduce the effects of food insecurity, some restrictions need to be acknowledged. To start, the higher rates of international trade depend on the willingness of foreign countries. If countries refuse to get involved in trade in favor of remaining neutral, then the proposed economic measures will be ineffective. For example, India epitomizes this concept, refusing to get involved with Russia and Ukraine (Pandey, 2022). Additionally, countries may impose trade restrictions out of spite for a country rather than support for another country. Since these countries won't have the interests of the opposing country in mind, both nations will suffer from this hatred. These restrictions, while they may seem far-fetched, are likely to happen, given the complex nature of the international political economy.

Conclusion

Food insecurity and hunger are humanitarian crises that must be addressed because all humans deserve appropriate food access to live healthily. Not having access to these resources violates the “No Poverty,” “Zero Hunger,” and “Health and Well-being” set by the UN Sustainable Development Goals (UN, n.d.). However, solutions to these crises include foreign aid organizations delivering food, agricultural engineering in diversification in seed breeding,

and cooperative safe zones for agriculture, which are plausible solutions to food insecurity. These solutions align with the UN's goals: "Responsible Consumption & Production," "Peace, Justice, & Strong Institutions," and "Partnerships For The Goal." (UN, n.d.) The resolution of this issue will take considerable time and dedication. Nevertheless, it is imperative that this dedication is directed toward establishing a conducive environment for individuals inhabiting conflict-ridden regions, as they did not choose a dearth of essential resources amid widespread devastation.

Looking ahead, future research should explore alternative cultivation options. Not many of the articles encountered focused on other agricultural methods, like livestock. For example, farm animals like cows, sheep, and goats would be able to produce dairy and meat products in exchange for crops, so further research would help evaluate whether this trade-off is worth the price. The expanding agricultural sector, coupled with scientific advancements, means that more solutions that could significantly combat food insecurity are yet to come.

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