

CHALLENGES TO ACHIEVING ZERO HUNGER BY 2030: THE IMPACT OF ARMED CONFLICT ON GLOBAL FOOD SECURITY WITH A FOCUS ON THE RUSSO-UKRAINIAN WAR

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ABSTRACT

Objective: This study examines the impact of armed conflicts, particularly the Russia and Ukraine War, on achieving the United Nations Sustainable Development Goal 2: Zero Hunger. The analysis explores how escalating conflicts post-2015 has undermined global efforts toward ending hunger and ensuring food security by 2030.

Method: The research employs a qualitative approach, analyzing data on global armed conflicts and food insecurity rates from 2015 to 2023. It particularly focuses on the escalation of the Russo-Ukrainian War and its implications for global food supply chains. The study integrates reports from the United Nations, various NGOs, and other authoritative sources to assess the broader impacts of armed conflicts on food security.

Results: Since the adoption of the 2030 Agenda, the number of armed conflicts has significantly increased, correlating with heightened global food insecurity. Specifically, the ongoing conflict in Ukraine has directly resulted in 1.7 billion people experiencing hunger and 276 million facing severe food insecurity worldwide. This conflict has disrupted agricultural production and global food supply chains, exacerbating the food crisis.

Contribution: The findings highlight the severe challenges that armed conflicts pose to achieving global food security. With less than a decade remaining until the 2030 deadline, it is imperative to intensify diplomatic efforts to mitigate conflicts, thereby safeguarding progress toward Zero Hunger. The study underscores the necessity of integrating peace-building strategies into the broader framework of sustainable development.

Keywords: Armed conflict, War, Zero-hunger, SDGs

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1. Introduction

Access to sufficient, safe food is a priority for all human beings. This is why the second Sustainable Development Goal (SDG-2 Zero hunger) is prominent among the 17 Sustainable Development Goals (SDGs). It is designed specifically to eliminate hunger, enhance nutrition, foster sustainable agriculture, and guarantee food security (Cheo & Tapiwa, 2021; United Nations, 2019). A few years from the end of the 2030 Agenda, we have to admit that many of the objectives, and of course the achievement of zero hunger, are far from being a shared reality in all regions of the world. According to Fleche, (2023); it is less likely the world will achieve zero hunger by 2030. Although many efforts have been made and continue to be made, certain key factors are attempting to undermine them and make the situation of food insecurity in the world even more serious

Among the key factors aggravating the situation of food insecurity in the world, many research studies conclude that conflict and insecurity are by far the main causes while extreme weather events, economic shocks, and soaring food prices all contribute to this severe food and malnutrition crisis (Fleche, 2023; World Food Program, 2021). The strong correlation between conflict and hunger is well-documented, proven, and clear. Conflicts have always resulted in the deterioration of the food security situation not only in the regions where they take place but also in localities as far away as those in which the conflicts take place.

Since their adoption in 2015, the world's geopolitical situation has become increasingly turbulent, creating new zones of tension and escalation in areas already under high tension. The number of armed conflicts worldwide has been rising steadily since 2003 (Feindouno & Wagner, 2020). This increase in the number of conflicts is therefore correlated with the number of people suffering from severe food insecurity, which is also rising sharply.

Many regions of the world have suffered, and some continue to suffer, from the damaging effects of armed conflict. For decades, conflicts in Asia, the Middle East, Central Africa, the Sahel, the Horn of Africa and, more recently, Ukraine and the Israeli military operation in the Gaza Strip have been exacerbating the deteriorating living conditions of millions of people around the world. Among these various conflicts, the Russia and Ukraine conflict will be the particular focus of this document. This conflict, unlike any other, deserves special attention, as it involves two key players in the world's agricultural and energy sectors. The war in this area not only has a direct impact on the populations of these two zones but also has repercussions throughout the world, especially in countries heavily dependent on Russo-Ukrainian exports. This research aims to review the literature on conflicts in the world since the adoption of the 17 SDGs and to document the link between the Russia and Ukraine conflict and the global food security situation.

2. METHODOLOGY

A qualitative approach was used to achieve the various objectives of this study. First of all, the websites of international organizations offering a database on the various conflicts

in the world were consulted. Also, the websites of organizations working on food security or famine in the world were accessed. In this way, we were able to observe the evolution of armed conflicts and famine in the world. For simplicity's sake, we took 2003 as our starting point. The year 2015 (the year of adoption of the 2030 Agenda) was the pivotal point. So we then counted conflicts before and after the adoption of the SDGs. It should also be noted that only conflicts that have acquired the status of war have been considered.

To analyze the global influence of armed conflict, and in particular, the war in Ukraine, on world food security, reports from international organizations, NGOs, and scientific articles were consulted. We then accessed these documents by searching for "armed conflict" or "war" and "food security". We then targeted titles in the references of the various documents consulted. To get an overview and compare different points of view on the situation of the Russian invasion of Ukraine, we also consulted the official websites of various international media and newspapers.

3. RESULTS

3.1. Armed conflicts around the world and their impact

This research will focus on major armed conflicts that have reached the status of war, and more specifically on the Russia and Ukraine conflict.

Escola de Cultura de Pau., (2022); defined armed conflict according to its impact and its objective. An armed conflict is any confrontation between armed groups that causes a minimum of 100 battle-related deaths in a year, leads to massive territory destruction, and aims to achieve identity issues.

Obermeier & Rustad, (2023); distinguished four types of conflict; state-based conflict, non-state conflict, one-sided violence, and war. These authors defined war as a conflict that causes at least 1,000 battle-related deaths in a year. According to this same research, the number of state-based armed conflicts has remained consistently high since 2014.

In this document, we'll be paying particular attention to conflicts that have reached wartime levels. In 2016 the number of countries experiencing violent conflict is higher than ever in the past 30 years. A total of 47 internal state-based violent conflicts were recorded in 2016. It was the second-highest number in the post-Cold War era after 2015. However, at the same time, the UCDP (Uppsala Conflict Data Program) recorded 51 violent state-based conflicts. In 2007, the number of conflicts that reached the threshold of war has more than tripled (United Nations and World Bank, 2018). More recently using data from the UCDP, Obermeier & Rustad, (2023), found that only In 2022, 55 conflicts were recorded in 38 conflict-affected countries.

Most conflicts are broadly concentrated in low-income countries located in regions like Africa, the Middle East, and South Asia, but neither wealth nor income renders countries immune (United Nations and World Bank, 2018). According to Obermeier & Rustad, (2023), currently, there are eight war zones: Burkina Faso, Ethiopia, Myanmar, Mali, Nigeria, Russia and Ukraine, Somalia, and Yemen. But with current events constantly evolving and conflicts

still ongoing, the Israeli military operation in the Gaza Strip occupies an important place in the debate, causing more death and destruction in a short space of time than in many previous war zones.

All these conflicts, causing massive population displacements and seriously disrupting the way communities and regions function, are undoubtedly the main causes of the increase in famine worldwide. The impact of conflict can be direct or indirect. Directly, armed groups obstructing access to food and essential services or more precisely using starvation as a weapon of war. Indirectly, conflicts cause livelihood disruption and food production, internal and external population displacement, mine contamination, destruction of production means, and restricting access to health care. All these behaviors constitute breaches of humanitarian law when they occur during a period of armed conflict (Fleche, 2023).

3.2. Conflict before SDGs

Before Agendat 2030 was adopted, many conflicts were already underway. Some of them have been de-escalated and lost their war status, while others have continued to the present day, with the addition of new conflicts caused by escalation in areas already under high tension.

In this section, we will list the conflicts (wars) that ended or decreased in intensity in 2015. For the sake of simplicity, we will concentrate on the period 2003-2015.

Table 1: Number of conflicts before the SDGs

	Name of the war	Started	Ended
1	Iraq War	2003	2011
2	Central African Republic Bush War	2004	2007
3	Chadian Civil War	2005	2010
4	Iraqi Civil War	2006	2008
5	Lebanon War	2006	2006
6	War in Somalia	2006	2009
7	Russo-Georgian War	2008	2008
8	Gaza War	2008	2009
9	Second Ivorian Civil War	2010	2011
10	First Libyan Civil War	2011	2011
11	2014 Gaza War	2014	2014

Source: List of wars: 2003-present-Wiki

3.3. Conflicts after SDGs

This section will focus on conflicts that began in 2003 and continued beyond 2015, and new conflicts from 2015 to the present day.

Table 2: Number of conflicts (war) post SDGs adoption

	Name of the war	Started	Ended
1	War in Darfur	2003	2020
2	Mexican drug war	2006	Ongoing
3	Somali Civil War	2009	Ongoing
4	Syrian civil war	2011	Ongoing
5	Mali War	2012	Ongoing
6	Central African Republic Civil War	2012	Ongoing
7	South Sudanese Civil War	2013	2020
8	War in Iraq	2013	2017
9	Russo-Ukrainian War	2014	Ongoing
10	Second Libyan Civil War	2014	2020

11	Yemeni Civil War	2014	Ongoing
12	Tigray War	2020	2022
13	Myanmar civil war	2021	Ongoing
14	Russian invasion of Ukraine	2022	Ongoing
15	War in Amhara	2023	Ongoing
16	War in Sudan	2023	Ongoing
17	Israel–Hamas war	2023	Ongoing

Source: List of wars: 2003-present-Wiki

The number of conflicts classified under war status has risen sharply since 2015 the year the 2030 agenda was adopted. Indeed, this is what the analysis of our two present tables reveals. Before 2015, there were 11 conflicts (wars). After 2015, there were 17 conflicts. This corresponds to some extent to the evolution of the number of people affected by food insecurity in the world. Although they differ in terms of severity and duration, these conflicts always have a major impact on the populations affected and can result in large numbers of victims and humanitarian crises (Escola de Cultura de Pau., 2022).

According to Obermeier & Rustad, (2023) the war between the Ethiopian government and the TPLF, which killed more than 100,000 people, and Russia's invasion of Ukraine, which led to more than 81,500 combat deaths in 2022; are that have caused the most important battle-related deaths. But the recent Israeli offensive in the Gaza Strip, according to many sources, is about to break records, with between 10,000 and 13,000 Palestinians already dead.

3.4. The Russia and Ukraine conflict and its impact on global food security

Russia and Ukraine are considered both 'global breadbaskets' and are important producers and exporters of vital agricultural commodities, minerals, fertilizers, and energy, where exportable resources are often concentrated in a few countries (OECD, 2022). According to Lin et al., (2023), Ukraine and Russia are two important grain producers and exporters in the world, accounting for 12% and 17% of the world's wheat exports, respectively. As a conflict between two major agricultural powers, the Russia and Ukraine war has various negative socioeconomic impacts that are now being felt internationally and might worsen, notably, for global food security (Ben Hassen & El Bilali, 2022).

Today, almost two years after the start of the war, the situation hardly seems to be improving, as the outcome of the war remains uncertain. It is therefore becoming very important to reassess the impact of this war on global food security, which has already been weakened by the Covid 19 pandemic (Cucato, Bizarrias, Goulart da Silva & Ferreira, 2022). The United Nations has warned that the combination of the COVID-19 pandemic and the Russia-Ukraine crisis has led to the biggest food crisis after World War II, i.e., as many as 1.7 billion people are in hunger and poor, the level of which is at a new high at present.

3.5. Global Impact

On a global scale, the strategic importance of Ukraine and Russia is having dramatic consequences for various industries around the world. According to the OECD, (2022) and World Bank, (2022), the war has inflicted a significant blow to commodities markets,

especially food and energy, affecting global patterns of trade, production, and consumption in ways that will maintain prices at historically high levels until the end of 2024, thus threatening global food security. Considering the role of Russia and Ukraine in agricultural input sectors including oil, natural gas, and fertilizers, especially Russia, the trade blockade caused by the conflict will give rise to prices by 10%, and 30% and welfare decline by 15 to 25% for most affected countries.

Furthermore, the war triggered a panic buying movement at the country and individual levels. The conflict would put as many as 1.7 billion people in hunger and 276 million people in severe food insecurity. Food shortages, energy shortages, and inflation have spread to many countries like dominoes which have fallen into trouble one after another with social unrest day after day (Bizarrias, 2024). According to World Food Programme, (2021) with the conflict in Ukraine, the number of people who are acutely food insecure or at high risk has soared to a record high of 345 million people in 2022 in 82 countries with WFP operational presence and where data is available. This is an increase of almost 200 million people compared to pre-pandemic levels. Then according to Ben Hassen & El Bilali, (2022); the war may jeopardize the implementation (Ribeiro, Espuny & Hermes ,2023) of the Sustainable Development Goals (SDGs), notably SDG 1 (No poverty), SDG 2 (Zero hunger), and SDG 12 (Responsible consumption and production).

Lin et al., (2023) using the general equilibrium trade model on analysis of the potential impacts of the conflict on the global wheat market found that the conflict would lead to a 60% trade drop, 50% soaring wheat prices, and severe food insecurity with above 30% decreased purchasing power for wheat in the most severe scenario, especially for countries that heavily rely on wheat imports from Ukraine, such as Egypt, Turkey, Mongolia, Georgia, and Azerbaijan. The conflict is also having disastrous consequences in many other countries in particular in import-dependent countries in the Middle East and North Africa (MENA) region and sub-Saharan Africa, which rely heavily on Russian and Ukrainian wheat. Disruptions to exports from the Black Sea region and high prices are further destabilizing food security in these regions (Glauben et al., 2022).

3.6. Impact on Russia and Ukraine

We have just reviewed the consequences of this atrocious war for the world. We must not lose sight of the fact that these two countries in conflict remain the most negatively impacted. The most obvious and terrible case is undoubtedly the invaded Ukraine.

According to many sources, the conflict has led to Ukraine's economic collapse. This is due to the effects of the war on various sectors of the country's economy. The conflict between Russia and Ukraine may greatly impact Ukraine's wheat production and exports as well as Russia's wheat exports. Lin et al., (2023), very early, two months after the beginning of the war, by satellite observations showed signs of wheat production reduction in Ukraine in the season 2021-2022. Further, four months into the war, Ben Hassen & El Bilali, (2022), found that the war resulted in immediate and far-reaching cascading consequences on global food security. Access to vital agricultural products such as fertilizers is also constrained. The

rising fertilizer costs may reduce their use and crop yields. Due to mine contamination, access to agricultural land is also restricted.

Ukraine's export capacity has been hampered due to the loss of economic ports in the Azov and Black Seas as we know before the war, roughly 70 percent of all Ukrainian exports and imports and 98 percent of its grain exports moved through these ports. More than 6.5 million Ukrainians have fled the country, while more than 8 million have been internally displaced. Conscription and population displacement caused labor shortages in the country. Russian forces have conquered at least 20 percent of Ukrainian territory and destroyed or badly damaged many Ukrainian cities and towns. Many thousands of Ukrainians including innocent civilians are dead or badly wounded (Mearsheimer, 2022).

According to the findings of an assessment on the impact of the war on rural livelihoods conducted by FAO in September and October 2022, around 25 percent of rural households have either reduced or entirely stopped agricultural production due to the war (FAO, 2023).

Like Ukraine, Russia is also suffering heavy consequences from its special operation in Ukraine. Russia is subject to numerous packages of economic sanctions from Western countries. According to Bergmann et al., (2023), Russia is now the most sanctioned country in the world. These sanctions are directed at Russia's financial sector, aviation, and shipping, strategic sectors of the economy such as defense, aerospace, and energy, individuals close to the Putin regime, and those facilitating Russia's invasion of Ukraine, including actors in third countries (Mills, 2024; Russell, 2022).

The sanctions imposed on Russia are slow to produce the expected results. Although their long-term negative effects on the Russian economy are beyond doubt, it has to be said that the sanctions appear to have been ineffective so far. The Russian economy has even improved since the start of the war, becoming Europe's leading economy by 2023 according to the World Bank.

On the material front, given that the war is taking place on Ukrainian soil, material damage is minimal on the Russian side. The little damage recorded on Russian soil is due to sporadic, small-scale Ukrainian incursions. In terms of loss of life, sources point to huge losses of troops on the Russian side, compared with those on the Ukrainian.

3. FINAL CONSIDERATIONS

In this paper, we aim to clarify the close link between increasing armed conflict and food insecurity, and more specifically the impact of armed conflict on SDG-2. We also took a close look at the Russia and Ukraine war and its serious repercussions on food security.

The number of armed conflicts is constantly on the rise, causing disruption to international trade, interrupting agricultural production and exports, and so on. So it's clear that it will be difficult to eradicate world hunger by 2030. The war in Ukraine is a palpable example of this, with its repercussions on the entire global economy. It is therefore essential to find ways of significantly reducing the impact of armed conflict on the agricultural and related sectors. However, we have to recognize that the war is still going on, with offensives

and counter-offensives on both sides, in other words, with an uncertain outcome, so it's extremely difficult to accurately predict its future impact on food security.

Thus, much research has proposed an increase in agricultural production, especially of cereals, in regions of the world with potential. In their research, Lin et al (2023) suggest that to fill the huge gap in the world food supply caused by the war in Ukraine, countries including the United States, China, India, Canada, Australia, France, Argentina, and Germany would increase their wheat production and exports for the reconstruction of the global wheat supply pattern. Furthermore, the conflict-induced global wheat crisis and food insecurity can be notably alleviated if these countries increase their production by 2%, and 3% in 2022-2023 and unnecessary trade restrictions should be exempted.

According to Glauben et al., (2022); to deal with crises and mitigate the risks of food shortages global food systems and competitive international trade structures are needed. At a micro level, FAO, (2023); suggests that small and medium-sized farmers should be urgently supported with seeds to sustain agricultural production and to mitigate the decline in their profitability.

Today, more than ever, although it is important, even urgent, to provide humanitarian assistance to populations in precarious situations (Lima, & Ribeiro, 2023) in conflict zones, it is more sensible to actively seek ways of establishing peace in all conflict zones. This means first and foremost prioritizing diplomatic channels and halting actions that seek to fan the flames of conflict in areas already under high tension.

Finally, given the shock caused by the war in most African countries, it's very important to militate for greater self-determination for the continent to achieve autonomy in terms of agricultural production, to no longer depend on foreign export fact Africa has large areas of undeveloped arable land, abundant labor, and is the world's second-largest block of tropical rainforest (Maltitz et al., 2009). So, better than any other region in the world, the African continent must be self-sufficient in food.

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